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INTERNATIONAL INSTRUMENTS ON MARINE LIFE PROTECTION AND GAPS IN INDIAN LAW¹.

AUTHORED BY - TANVEEN KAUR

INTRODUCTION:

Every country is bestowed with rich marine life because of the coastlines that envelop them and India also accords with it. The sheer acknowledgment of having mere pieces of legislation that encompasses these marine laws are deficit. The Third United Nations Conference on the Law of Sea faced the task of preparing a legal framework for international cooperation necessary to save the oceans². There are some or the other lacunas that at least Indian marine laws have because of which marine pollution is on the rise.

In this research paper, the authors have tried to trace the historical development of the laws and explore the momentum of their effectiveness. The paper will highlight the milestones that have been purcubined at the international level such as that of the United Nations Convention on Law of Sea (UNCLOS) and the Convention on Biological Diversity and some Indian coastal management rules and the program, CMLRE has organised on Marine Living Resources (MLR) with an inbuilt component on Societal Services to support the fisher folks of Lakshadweep Islands³ which will harmonize of what more is to be added in laws to have better strategies to address emerging threats to the marine environment.

Marine litter constitutes a significant and pressing issue for the world's oceans and seas, with far-reaching consequences for the communities and economies reliant on these resources⁴. Plastic marine litter, in particular, poses a substantial environmental threat and presents complex regulatory challenges. Current estimates suggest that a staggering 20 million tons of plastic marine litter are introduced into the ocean annually. This plastic waste accounts for a substantial portion of our overall waste stream and is characterized by its persistence in marine environments,

¹ Tanveen Kaur (Christ deemed to be University) Pune, Lavasa

² Jose Luis Vallarta, Protection and preservation of the Marine Environment and Marine Scientific Research at The Third United Nations Conference on Law of Sea, 46(2) LACP, 147–154 (1983).

³ Conserving Marine resources, PIB India, <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1796916>.

⁴ Marine plastic debris and microplastics. (2016). <https://doi.org/10.18356/0b228f55-en>

as it does not readily biodegrade. Furthermore, it exerts profoundly detrimental effects on marine life, coastal economies, fisheries, and, notably, human health.

An increasingly prevalent trend involves the integration of durable plastic materials into single-use items and various products that have become integral to our daily lives. The widespread mismanagement of these plastic materials on a global scale has exacerbated the escalating international marine litter crisis.

A pristine, secure, and healthful environment is a fundamental prerequisite for the overall well-being of every individual. The Indian judiciary has championed an inventive approach to environmental rights within the nation. Judicial activism has served as a catalyst for campaigns against a multitude of environmental pollution issues that have arisen in recent times. Through the interpretation of Article 21, the Indian judiciary has extended its scope to encompass the right of every citizen to access a clean, secure, and healthful environment.

The judiciary, with a profound interest in environmental matters affecting various facets of human life, has issued pertinent orders, directives, and writs against individuals or entities that adversely impact the environment. The Parliament of India, in tandem with these efforts, has made strides in safeguarding and conserving the marine environment by ratifying a range of international agreements, treaties, and conventions. At present, initiatives are underway at the local, national, and international levels to establish Marine Protected Areas (MPAs)⁵. Local communities are also asserting their right to a wholesome environment and addressing concerns related to the accumulation of plastics and other noxious substances in the oceans.

Nevertheless, a substantial amount of work remains to be done in the realm of ocean conservation. This encompasses the development of laws designed to oversee fisheries, mitigate land-based pollution, establish Marine Protected Areas (MPAs), institute stringent controls on various hazardous industrial activities and processes, enact anti-dumping legislation, and introduce regulations governing coastal waste management. Furthermore, the deficiency in environmental awareness among the citizenry stands as a significant barrier in the arena of marine environment conservation and requires comprehensive attention and resolution.

⁵ A Study on Legal Aspects of Marine Environmental Protection in India. (2019). An International Peer-Reviewed Open Access Journal of Social Sciences.

Marine protected areas (MPAs) are a vital instrument for accomplishing objectives related to human well-being and biodiversity conservation, such as enhancing climate resilience and providing fair access to the outdoors. They play a key role in the American aim to preserving at least 30% of its waters by 2030. Long-term nature conservation is an MPA's principal objective by definition, however not all MPAs offer the same ecological and societal advantages. The best MPA system in the country to serve national goals is one that is representative, equitable, well-managed, connected, and contains regions at a degree of protection that can produce desired results. Utilizing The MPA Guide, a recently developed MPA framework, we evaluated the degree of protection and establishment stage of the 50 largest U.S. MPAs, which make up 99.7% of the total U.S.⁶.

Protecting marine life is not just an environmental concern; it is also a moral obligation that we all have to uphold in order to preserve the wonders of the deep blue and the health of our planet. Additionally, some experts have proposed that methods such as marine upwelling and ocean fertilization may be utilized to boost fish populations. There is an amazing range of life in our oceans and seas, ranging from the greatest whales to the smallest plankton. These ecosystems are essential to sustaining the health of our planet in addition to serving as habitat for many species. The creation of marine protected areas, environmentally friendly fishing methods, and campaigns to lessen plastic pollution are all part of efforts to safeguard marine life. These actions will help to guarantee that the rich tapestry of life in our oceans continues to thrive for generations to come⁷.

LITERATURE REVIEW:

1. The research paper titled *The Role of Law in Protecting Marine Mammals*⁸ explores the vital role that laws have in protecting marine creatures. The author examines many facets of this subject, highlighting the significance of both national and international legislation for the preservation of marine mammal species. The paper examines

⁶ Sullivan-Stack, J., Aburto-Oropeza, O., Brooks, C. M., Cabral, R. B., Caselle, J. E., Chan, F., Duffy, J. E., Dunn, D. C., Friedlander, A. M., Fulton-Bennett, H. K., Gaines, S. D., Gerber, L. R., Hines, E., Leslie, H. M., Lester, S. E., MacCarthy, J. M. C., Maxwell, S. M., Mayorga, J., McCauley, D. J., Grorud-Colvert, K. (2022). A Scientific synthesis of marine protected areas in the United States: status and recommendations. *Frontiers in Marine Science*, 9. <https://doi.org/10.3389/fmars.2022.849927>

⁷ Randall S Abate, "Ocean Iron Fertilization and Indigenous Peoples' Right to Food: Leveraging International and Domestic Law Protections to Enhance Access to Salmon in the Pacific Northwest" (2016) 20 *UCLA J Intl L & Foreign Aff* 45; Proelss & Hong, *supra* note 166 at 372

⁸ *Ibid*(4)

cetacean conventions, its aboriginal exceptions, and remaining problems along with applications of general fisheries conventions to marine mammals. Development following the United Nations Conference on Human Environment 1972 is included in the paper with reference to the global and regional conventions. It is stated that although measures are adequate, there is a lack of implementation and the measures taken only reflect the political and economic compromises on scientific advice. The results of the paper focuses on the non-integration of the legal framework for the protection of marine mammals and that it is not fully effective. It states that the species and areas given in more than one convention overlap and on the other hand there exists some gaps wherein certain mammals find no place in the lists. The various advantages and disadvantages of International and regional instruments on the protection of marine mammals are talked about and it was stressed upon that various member states to different conventions do not take an active part in combating the issues discussed with regard to protecting marine life.

2. The research paper titled *Protection and Preservation of the Marine Environment and Marine Scientific Research*⁹ examines the particular debates, decisions, and consequences of UNCLOS III¹⁰ pertaining to safeguarding and conserving the marine environment. It also discusses how UNCLOS III's rules on scientific research and maritime environmental preservation are being implemented, including the manner in which institutions and enforcement mechanisms are being set up. Different ways of pollution have been briefed upon such as land-based sources, pollution resulting from seabed activities within national jurisdictions and in international areas beyond the limits of national jurisdictions, pollution by dumping, from or through the atmosphere, and lastly from ships. Under marine scientific research, international conventions and the change in the legal regime of marine scientific research undertaken on the continental shelf has been discussed in depth. The paper also examines the obligation of developing coastal states to grant their consent. The development before and after UNCLOS III and its rules have also been discussed by the author. Uniquely, certain specific sovereign rights of the coastal states for exploring and exploiting marine resources have also been briefly mentioned.

⁹ Vallarta, J. L. (1983). Protection and Preservation of the Marine Environment and Marine Scientific Research at the Third United Nations Conference on the Law of the Sea. *Law and Contemporary Problems*, 46(2), 147–154

¹⁰ United Nations Convention on the Law of the Sea III, 1973

3. The research paper titled *Protecting International Marine Biodiversity: International Treaties and National System of Marine Protected Areas*¹¹ starts by giving a primer on the relevance of marine environmental preservation in India, highlighting the problems that marine ecosystems confront, their ecological value, and the necessity for legal frameworks to solve these problems. It provides a thorough analysis of pertinent material on maritime environmental preservation in India, including scholarly studies, official government publications, and international agreements. The paper discusses overfishing and its result in marine biodiversity decline. It stresses the need for marine reserves and the promotion of MPAs while ensuring no complete shift in regulation immediately. With regard to marine diversity, the author gives explanations for two knowledge gaps. One, that marine system is difficult for exploration, and two, regarding the paradigm of inexhaustibility. Quantitative data on marine mammals and species has also been provided. Evidence of loss of marine biodiversity has been mentioned along with several indicators, one of which is the growth of the human population. The traditional exploration of marine pollution is discussed and oil pollution and major incidents like the Torrey Canyon oil spill in England have been talked about. Overfishing has been discussed in brief and the different ways in which it contributes to the loss of marine diversity including the basic biology and life cycles of targeted species.
4. The research paper titled *International Protection of the Baltic Sea Environment against Pollution: A Study in Marine Regionalism*¹² presents a general overview of the Baltic Sea ecosystem, highlighting its biodiversity, ecological value, and special concerns with regard to pollution threats and ecological relevance. It examines the idea of marine regionalism and the ways that nations work together to combat marine pollution in the Baltic Sea. Firstly, the Baltic marine environment is explained in depth along with its vast history, its geography, hydrography, and its significance. Secondly, the increase in pollution in the Baltic Sea is elaborated upon including its technicalities. Oil pollution causes the most damage in the area. Thirdly, a review of unilateral rules and policies is done that deals with the Baltic environment and whether legislations are

¹¹ Craig, R. K. (2005). PROTECTING INTERNATIONAL MARINE BIODIVERSITY: INTERNATIONAL TREATIES AND NATIONAL SYSTEMS OF MARINE PROTECTED AREAS. *Journal of Land Use & Environmental Law*, 20(2), 333–369.

¹² Boczek, B. A. (1978). *International Protection of the Baltic Sea Environment Against Pollution: A Study in Marine Regionalism*. *The American Journal of International Law*, 72(4), 782–814.

enforced by surveillance, monitoring, and inspection. The author also provides ways in which legislative gaps can be addressed. Fourthly, international global and subregional agreements are discussed along with positions before and after the Baltic Convention, 1974. A history of explaining the chronological order in which different countries, starting with the Nordic countries took initiative in combating pollution in the Baltic area. Various factors of the Baltic Convention including the geographic scope, participation, pollution control, institutional framework, responsibility for damage and settlement of disputes, and review of enforcement mechanisms are given reference to in detail.

5. The research paper titled *International Law and Marine Bioengineering*¹³ provides an analysis of maritime geoengineering, its different applications, and the rationale for its use in combating climate change. This research investigates the governance and regulatory aspects of maritime geoengineering, as well as the underlying environmental dangers and ethical dilemmas. Firstly, the author explains the purpose of marine geoengineering activity including research activities, and how marine geoengineering addresses climate change and enhance marine productivity. Secondly, various facets of where, how and by whom the activities will be concluded are noted down. It talks about factors such as location and membership in key international agreements. Thirdly, the likely environmental impacts of marine geoengineering activity are discussed wherein the author dives into the international law on transboundary environmental impacts and international law on environmental harm. Lastly, the question of whether states or other actors can be held liable for harm is attempted to be answered by discussing state responsibility and its responsibility in the enforcement of rules under international law. Various diagrams and tables have been used in helping to understand the application of the London Convention and London Protocol to marine geoengineering, which is a key instrument governing marine geoengineering. Tables containing global agreements and sector agreements are a part of this paper. Overall, the paper is enough to get a good understanding of the concept of marine geoengineering and its significance.

¹³ Brent, K., Burns, W., & McGee, J. (2019). International Law and Marine Geoengineering. In *Governance of Marine Geoengineering* (pp. 17–42). Centre for International Governance Innovation.

METHODOLOGY:

The research methodology applied in writing this paper is purely doctrinal, based on a descriptive and detailed analysis of legal rules found in primary sources. The author has used secondary data like scopus indexed articles, journals, International Treaties and Conventions, Indian Statutes and Regulations which the government has circulated, the Government reports, and various other library resources.

ANALYSIS AND FINDINGS:

International conventions:

Throughout the annals of history, the seas have played a pivotal role in facilitating human communication, trade, and sustenance. Unfortunately, as a consequence of its immense expanse, humanity has, over the centuries, tended to perceive the sea and its resources as boundless and immune to depletion or pollution, irrespective of the volume of resources extracted or the quantity of pollutants discharged into its waters. Article 1(1)(4) of the United Nations Convention on the Law of the Sea (UNCLOS) provides a precise definition of 'marine pollution':

"Marine pollution" refers to the introduction, whether directly or indirectly by human activities, of substances or energy into the marine environment, encompassing estuaries. This introduction is characterized by its potential to result in harmful effects such as damage to living resources and marine ecosystems, risks to human health, impediments to marine activities, including fishing and other lawful uses of the sea, degradation of seawater quality, and diminishment of its amenity¹⁴.

This definition is quite similar to the definition of "Pollution" under Article 1(4) of the 1996 Protocol to the London Dumping Convention, 1972, which states; "Pollution means the introduction, by man, directly or indirectly, by human activity, of wastes or other matter into the sea which results or is likely to result in such deleterious effects as harm to living resources and marine ecosystems, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of

¹⁴ United Nations Convention on the Law of the Sea, opened for signature 10 December 1982, 1833 UNTS 3, (entry into force 16 November 1994), Art 1(1)(4).

amenities”.¹⁵

International Convention for the Prevention of Pollution from Ships (MARPOL)-

The primary international convention pertaining to the prevention of ship-related or unintentional pollution of the marine environment is the International Convention for the Prevention of Pollution from Ships (MARPOL)¹⁶.

On November 2, 1973, the IMO adopted the MARPOL Convention. A series of tanker incidents in 1976–1977 led to the adoption of the Protocol in 1978. The 1978 MARPOL Protocol incorporated the parent Convention since the 1973 MARPOL Convention had not yet come into effect. On October 2, 1983, the merged instrument became operative. A new Annex VI was added to the Convention in 1997, and on May 19, 2005, the Protocol amending the Convention came into effect. Over time, MARPOL has been modified with new changes.

There are certain annexures in this convention which were enforced with changing years, these annexures relate to regulating the control of Pollution by noxious Liquid substances in bulk, Prevention of pollution by harmful substances carried by Sea in packaged form, Prevention of Pollution by sewage from ships, Prevention of Air pollution from ships (enforced in the year 2005). All these related to preventing the pollution by any means in the marine environment which can cause problems for marine life.

United Nation Law of Sea Convention (UNCLOS)-

This historic international convention regulates how the oceans and their resources are used and managed. UNCLOS, which was ratified in 1982 and came into effect in 1994, provides a thorough framework for dealing with a range of marine-related issues, including environmental protection and territorial rights. The UN’s groundbreaking work in adopting the 1982 Law of the Sea Convention stands as a defining moment in the extension of international law to the vast, shared

¹⁵ Nordquist, M. H., & Rosenne, S. (1985). United Nations convention on the Law of the Sea, 1982: A commentary. Martinus Nijhoff Publishers.

¹⁶ International Maritime Organization

([https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx#:~:text=The%20International%20Convention%20for%20the,2%20November%201973%20at%20IMO.](https://www.imo.org/en/about/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx#:~:text=The%20International%20Convention%20for%20the,2%20November%201973%20at%20IMO.))

water resources of our planet. The convention has resolved several important issues related to ocean usage and sovereignty, such as:

- Established freedom-of-navigation rights
- Set territorial sea boundaries 12 miles offshore
- Set exclusive economic zones up to 200 miles offshore
- Set rules for extending continental shelf rights up to 350 miles offshore
- Created the International Seabed Authority
- Created other conflict-resolution mechanisms (e.g., the UN Commission on the Limits of the Continental Shelf)¹⁷

With 320 articles and 9 annexures the whole document of UNCLOS¹⁸ provides in working for states following some principles which are as follows-

- *Exclusive Economic Zones (EEZs) and Territorial Seas:* The United Nations Convention on the Law of the Sea (UNCLOS) defines territorial seas as areas 12 nautical miles out from a coastal state's baseline, within which it exercises sovereignty. It also presents the idea of exclusive economic zones (EEZs), which are 200 nautical miles out from the baseline and provide coastal states exclusive rights to natural resources.
- *Unconstrained Navigation:* The freedom of navigation on the high seas is ensured by UNCLOS, which permits ships and airplanes from any state to fly over international waters unhindered.
- *Preservation of the Marine Environment:* Under UNCLOS, governments are required to take action to avoid, limit, and control pollution from ships and land-based sources in order to safeguard and preserve the marine environment. Additionally, it requires the creation of marine protected zones and the preservation of marine life.
- *Mining Under the Seabed:* Through the International Seabed Authority (ISA), UNCLOS oversees deep seabed mining operations outside of national borders, guaranteeing that the advantages of these resources are distributed fairly among all countries.
- *Dispute Resolution Procedures:* The International Tribunal for the Law of the Sea (ITLOS) and the International Court of Justice (ICJ) are two examples of the peaceful conflict resolution procedures included in the convention.

¹⁷ United Nations, Peace, Dignity, and equality on healthy planet (<https://www.un.org/en/global-issues/oceans-and-the-law-of-the-sea>)

¹⁸ United Nation Convention on Law of Sea 1982

Legal Framework Preceding 1972 Stockholm Environment Conference (UNCHE)¹⁹.

Prior to 1972, the majority of international agreements pertaining to marine mammals were restricted to the application of fishing convention methods. Scientific needs were not widely recognized, fishing methods were less advanced, and the fundamental laws governing the seas only allowed coastal states to reserve small, known as territorial seas, for their exclusive use. The rest fell under the doctrine of freedom of the seas and was considered high seas. All were free to fish and navigate; it was believed that marine mammals were fish, and states were sovereign and could only be subjugated with their permission. The 1958 UN Geneva Convention on the Law of the Sea codified this legal position.

In an effort to establish a fundamentally shared perspective on how to tackle the problem of protecting and improving the human environment, Stockholm served as a first assessment of the worldwide impact of humans on the environment. Consequently, rather than elaborating on specific normative positions, the Stockholm Declaration primarily promotes general environmental policy goals and objectives. Nonetheless, both international environmental lawmaking and public awareness of environmental issues rose sharply after Stockholm²⁰.

Rio Principle 22 highlights the "essential role of indigenous people and their communities and other local communities" in environmental conservation and sustainable management because of their traditional knowledge and ways of life. The recommendation that follows is for States to "acknowledge and duly support their identity, culture, and interests and enable their effective participation in the achievement of sustainable development."²¹

Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution²²:

In an effort to combat pollution and save the marine ecosystem in the Mediterranean, Mediterranean nations have come together to form the Barcelona Convention. It is an essential

¹⁹ P. Birnie. (1986). The Role of Law in Protecting Marine Mammals. *Ambio*, 15(3), 137–143. <http://www.jstor.org/stable/4313237>

²⁰ Audiovisual Library of International Law (<https://legal.un.org/avl/ha/dunche/dunche.html>)

²¹ Ibid 19

²² Barcelona Convention for Protection of the Mediterranean Sea against Pollution. (https://www.gov.il/en/departments/guides/barcelona_convention_mediterranean_marine_and_coast)

tool for maintaining the Mediterranean Sea's natural integrity and advancing sustainable development. The Barcelona Convention's main goal is to shield the Mediterranean region's coastal areas and marine ecosystems from different types of pollution. In addition to encouraging the sustainable development and use of marine and coastal resources, it aims to prevent, reduce, and control pollution of the Mediterranean Sea and its coastal areas.

The Convention contains a number of protocols, such as the Protocol on Integrated Coastal Zone Management in the Mediterranean, the Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Case of Emergency, and the Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft.

The main regional legally binding Multilateral Environmental Agreement (MEA) in the Mediterranean is the Barcelona Convention and its seven Protocols, which were adopted within the scope of the Mediterranean Action Plan (MAP)²³.

The parties to the Barcelona Convention have committed to taking all necessary steps, either individually or collectively, in compliance with the provisions of the Convention and the operative Protocols to prevent, mitigate, combat, and ultimately eradicate pollution in the Mediterranean Sea Area. Additionally, they aim to safeguard and improve the marine environment in the region, thereby promoting sustainable development. They collaborate in the creation and ratification of Protocols, which specify accepted guidelines, practices, and standards for carrying out this Convention.

International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC)²⁴.

This pivotal international treaty deals with both preventing and responding to incidents of marine oil pollution. The OPRC Convention is a component of a global framework of agreements meant to lessen the effects of oil spills on the environment and the economy. Adopted in 1990, the OPRC Convention became effective in 1995. It was created in response to growing worries about oil

²³ UN Environment Programme, Mediterranean Action Plan Barcelona Convention (<https://www.unep.org/unepmap/who-we-are/barcelona-convention-and-protocols>)

²⁴ United Nations — Treaty Series, Nations Unies — Recueil des Traités 1995 International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC)

pollution incidents and the requirement for a coordinated global response to lessen the effects they had on the environment. plays a vital part in global initiatives to stop and address incidents of marine oil pollution. It promotes international cooperation, backs readiness and response plans, and helps shield coastal communities and marine environments from the damaging effects of oil spills.

Article 6²⁵ of this convention provides that States shall establish a national system for responding promptly and effectively to oil pollution incidents. The OPRC Convention aims to achieve the following main goals:

- Preparation: Ensuring that nations have efficient systems in place for anticipating and handling situations with marine oil contamination.
- Reaction: To minimize environmental harm and promote international collaboration in the wake of major oil spill disasters.

London Convention and London Protocol²⁶-

The London Convention covers both the intentional disposal of wastes or other materials from ships, airplanes, platforms, and other man-made structures at sea as well as the intentional disposal of the ships, airplanes, platforms, and other man-made buildings themselves at sea. The London Convention's Contracting Parties committed to regulating programs that evaluate the necessity and possible effects of dumping in order to restrict the practice. In general, the London Convention forbids the dumping of certain hazardous items at sea and requires Contracting Parties to issue permits for the disposal of wastes and other materials.

The London Convention's Contracting Parties completed discussions in 1996 to create the London Protocol²⁷, a new free-standing agreement that would eventually upgrade and supersede the London Convention. In 2006, the London Protocol came into effect.

The goal of the London Protocol is to safeguard the marine environment more thoroughly. The export of garbage and other materials for the purpose of ocean dumping, as well as incineration at sea, is specifically forbidden by the London Protocol. With the exception of the materials

²⁵ Ibid 20

²⁶ EPA United States Environmental Protection agency. (<https://www.epa.gov/ocean-dumping/ocean-dumping-international-treaties>)

²⁷ 1996 Protocol to the Convention on the Prevention of Marine Pollution by dumping of wastes and other matter, 1972 (as amended in 2006)

specified in Annex I of the London Protocol, the disposal of trash and other materials is forbidden under the terms of the protocol.

Other International conventions include the 1992 Convention on Biological Diversity²⁸, and the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora²⁹ and Articles 192 and 194(5) of UNCLOS³⁰. The South China Sea Arbitration³¹ also relates to the protection of the marine environment in two categories of conduct: fishing practices and construction activities³².

OSPAR Convention³³-

The Oslo Convention of 1972 on waste disposal at sea and the Paris Convention of 1974 on land-based sources of marine pollution served as the foundation for the Convention for the Protection of the Marine Environment of the North-East Atlantic (also known as the "OSPAR Convention"). On September 22, 1992, Luxembourg and Switzerland, along with all the Contracting Parties to the original Oslo or Paris Conventions, signed it. At the parent Conventions' Ministerial Meeting on March 25, 1998, it was ratified and went into effect. The work under the Convention is guided by the Ministerial Declarations and Statements made during the Convention's adoption and at the Ministerial Meetings of the OSPAR Commission. However, the choices, suggestions, and other accords reached at the parent Conventions are still in effect until they are terminated by newly adopted measures under the new Convention.

The OSPAR Convention seeks to safeguard the maritime environment from the damaging effects of human activity while also preventing and eliminating pollution.

1. Preventing and eradicating pollution of the marine environment is the primary goal of this convention.

²⁸ Convention on Biological Diversity, opened for signature 5 June 1992, 1760 unts 79, (entered into force 29 December 1993) (cbd).

²⁹ Convention on International Trade in Endangered Species of Wild Fauna and Flora, opened for signature 3 March 1973, 993 unts 243 (entered into force 1 July 1975) (cites).

³⁰ Ibid 17

³¹ South China Sea Arbitration (Republic of the Philippines v. People's Republic of China), pca Case No 2013-19, Judgment, 12 July 2016.

³² Kojima, C. (2015). South China Sea Arbitration and the Protection of the Marine Environment: Evolution of UNCLOS Part XII Through Interpretation and the Duty to Cooperate. In S. Lee, H. E. Lee, & L. Bautista (Eds.), Asian Yearbook of International Law: Volume 21 (2015) (Vol. 21, pp. 166-180). Brill. <http://www.jstor.org/stable/10.1163/j.ctvbqs7d3.12>

³³ Coastalwiki([https://www.coastalwiki.org/wiki/OSPAR_Convention_\(Convention_for_the_Protection_of_the_Marine_Environment_of_the_North-East_Atlantic\)_and_OSPAR_Commission](https://www.coastalwiki.org/wiki/OSPAR_Convention_(Convention_for_the_Protection_of_the_Marine_Environment_of_the_North-East_Atlantic)_and_OSPAR_Commission))

2. Guard the maritime region from the negative impacts of human activity to preserve and, if possible, restore the impacted marine areas while also safeguarding human health and the marine ecosystem.

The Convention also seeks to guarantee sustainable management of the affected area. "Sustainable management", as stated in the treaty's preamble, involves "management of human activities such that the marine ecosystem, the legitimate uses of the sea can continue to wear and can continue to meet the needs of present and future generations."

Gaps in Indian law:

India has a long coastline, and its marine habitats are extremely important for ecology, economy, and culture. The nation's marine resources are vital to millions of people's livelihoods, supply vital food, and preserve natural equilibrium. However, a number of shortcomings and difficulties have raised questions about the efficacy of Indian maritime conservation legislation. The coastal population of India depends on the resources from the huge marine ecology and biodiversity that India possesses. This marine ecosystem supports a multitude of species. The necessity to preserve this ecosystem has been recognized on a global scale, and the 1982 UNCLOS mandates that the Coastal States be responsible for maintaining and safeguarding the maritime environment and its related resources. The Government is able to take action to protect the maritime environment because of the Maritime Zones of India Act of 1976. The Indian Coast Guard is tasked with maintaining and protecting the marine environment as well as controlling marine pollution, according to the Coast Guard Act of 1978. As a result, the ICG was proposed in 1986 to serve as the Central Coordinating Authority for responding to oil spills³⁴.

Gaps and challenges in Indian law with regard to marine protection can be explained with the help of the following subheads:

1. Inadequate implementation and enforcement: India has a number of rules and regulations pertaining to maritime protection, however, they are frequently not enforced or implemented. As a result, destructive activities like pollution and illicit fishing persist uncontrolled.
2. Non-coordination between agencies: The Ministry of Environment, Forests, and Climate

³⁴ Marine Environment Protection: Indian Coast Guard. (n.d.). (https://indiancoastguard.gov.in/content/246_3_MarineEnvironmentProtection.aspx#:~:text=The%20Maritime%20Zones%20of%20India,of%20the%20Indian%20Coast%20Guard)

Change, the Ministry of Shipping, and the Ministry of Agriculture and Farmers Welfare are just a few of the government organizations in charge of different facets of marine conservation. These organizations frequently have conflicting duties, which results in inefficiency and a dearth of all-encompassing strategies.

3. Lack of a comprehensive marine legislation: The Marine Law of India is disjointed, comprising multiple acts and regulations that oversee several different aspects of marine conservation. Examples of these are the Coastal Regulation Zone (CRZ) Notification³⁵, the Wildlife Protection Act of 1972, and the Water (Prevention and Control of Pollution) Act of 1974. A thorough, cohesive legislative framework that addresses every facet of marine preservation must be established.
4. Insufficient protection of marine biodiversity: Marine biodiversity frequently gets less attention than terrestrial biodiversity, even though laws and regulations are in place to safeguard it. Mangroves and coral reefs are examples of marine ecosystems that require stronger legal protection since they are essential to the ecological balance.
5. Inadequate response to marine pollution: The legislation pertaining to oil spills and releases of hazardous substances is inadequate, despite the fact that marine pollution poses a serious threat to Indian waters. For the purpose of controlling and reducing marine pollution, a thorough legal framework is necessary.
6. Weak penalties and deterrents: There is limited deterrence with frequent light penalties for offenses related to the marine environment. Stricter penalties for illicit activities, such as overfishing and marine area pollution, may contribute to a reduction in these kinds of practices.
7. Insufficient public participation: There is little public input into decisions pertaining to marine protection. For marine resource management to be sustainable, there needs to be greater participation from stakeholders and local communities.
8. Incomplete regulations on shipping and port operations: In Indian waters, the shipping sector is a major source of pollution. Regulations are in place, but it's essential to make sure they're strictly followed and updated on a regular basis to address new environmental issues.³⁶

³⁵ Welcome to environment. Available at: <https://environmentclearance.nic.in/writereaddata/S-O-4789-E-DATED%2018-11-2021.pdf>

³⁶ Verma, A. (1970) Law of environment in India: Problems and challenges in its enforcement, Research Ambition: An International Multidisciplinary e-Journal. Available at: <https://www.redalyc.org/journal/7039/703973419003/html/#:~:text=Lots%20of%20the%20standards%20have,enforcement%20of%20laws%20in%20India>).

Issues with the fishing community in India:

The designation of Protected Areas (PA) and the inclusion of wild species on protected lists, both made possible by the Wild Life (Protection) Act (WLPA), 1972, have become the most popular methods for the conservation of terrestrial wildlife. Although community reserves were created as a new category in 2003, not many have been declared. The majority of PAs are classified as either National Parks or Wildlife Sanctuaries, with the goal of limiting local human habitation and resource use inside their borders. The rigid nature of the exclusionist approach to terrestrial area management, particularly as demonstrated by the limited choices provided by the terrestrially oriented WLPA, contrasts sharply with the application of context-specific strategies like some localized practices of small-scale fishing communities. These include changes to fishing gear, rules governing crafts, and temporal and spatial restrictions such as fishing zones and seasonal prohibitions. There needs to be an environmentalism or treatment created for the particular context when separating terrestrial and marine social-ecological systems.

Coastal areas are used by multiple fishing communities at the same time and are far more densely populated than most forests. Conventional community-based fisheries management systems include limitations on fishing gear, closed seasons in particular regions, or prohibitions on specific types of fishing, like dynamite or night fishing. The livelihoods of these communities and coastal ecosystems were threatened in the late 1970s by modern fishing methods because mechanized craft and gear—primarily bottom trawlers—had a detrimental effect on fishing stocks. In response, several coastal states in India passed Marine Fisheries (Regulation) Acts in the early 1980s, establishing a framework of spatiotemporal fishing regulations to protect the interests of artisanal fishermen. The purpose of these laws is not to keep people out of their marine environments. These conservation efforts seem to acknowledge that marine species have historically been "used" or consumed by humans. Therefore, fisheries management calls for changes to the range, intensity, and type of fishing activity in addition to conservation options that permit human presence and activity. In spite of this, India's marine conservation has been dominated by the system of establishing MPAs and carrying them out through state forest departments. Fishing communities have responded by objecting to the total prohibition of human presence in these formerly open-access areas; the nature of the conflicts will vary depending on how strictly these prohibitions are enforced. Apart from their incapacity to sufficiently safeguard marine species, MPAs as envisioned and implemented by the WLPA also fall short on another front. The law simply ignores development threats that come from outside MPA boundaries

because its primary focus is still on protecting the habitats within boundaries.³⁷

CONCLUSION:

In conclusion, maintaining the ecological health of our planet and securing the welfare of present and future generations requires more than simply following laws and regulations. It is our shared responsibility to protect our marine environments. Our oceans are not unbounded and untouchable, and pollution, overfishing, and habitat destruction can have disastrous effects. Concerning marine scientific research, the existing customary international law is in the process of being replaced by either conventional law of the sea through the LOS Convention or by completely new customary international law. This study examines India's legal framework for protecting the marine environment, evaluating its efficacy in maintaining the nation's diverse coastal and marine ecosystems, and identifying any gaps that require immediate attention. It emphasizes the need for improved enforcement procedures, stakeholder involvement, and integrated coastal management strategies to address emerging threats to the maritime environment. The study's findings contribute to the ongoing debate about the preservation and wise use of India's marine resources in light of changing environmental issues. Also, It is significant that the Indian government, along with several non-governmental organizations, is consistently striving to enhance the legal frameworks pertaining to marine protection. Therefore, in order to obtain a more current understanding of the current state of marine protection in India, it is advisable to consult with the most recent regulations and initiatives. We should resist the urge to replace one totem with another and instead engage with the dynamic perspectives that drive resource use and foster compliance, even though these arguments may help us shape conservation philosophies and modify policy.

³⁷ 3sc (2021) Marine Parks in India – a case for maritime environmentalism, Current Conservation. Available at: (<https://www.currentconservation.org/marine-parks-in-india-a-case-for-maritime-environmentalism-2/>)