

A STUDY ON THE STRATEGIES FOR CONSERVATION OF MARINE ECOSYSTEM IN INDIA

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Abstract

Our planet's marine ecosystem faces a significant number of environmental concerns that can only be handled through international cooperation. Environmental challenges are accompanied by an awareness that **ecological interdependence** transcends national borders and that issues that were previously deemed domestic in nature now have international ramifications. International law and regulation are frequently the only way to address the consequences, which might be bilateral, regional, or global. All contracting parties had to agree to the common environmental aims. The declining (and less discriminatory) harvest of fish that is sweeping the oceans poses a serious threat to global fish stocks. The benefits that marine ecosystems bring, as well as the enormous biodiversity of **pelagic and benthic ecosystems** outside of state control, are becoming more widely recognised, Especially in marine protected areas and on the high seas. In the **Vellore Citizens Welfare Forum case**, the entire corpus of environmental law, as well as its various Principles and their application to the national scene and the evolution of environmental jurisprudence on both a national and international level, New legal and regulatory measures will have little impact unless local communities and other interested parties perform an active and alert role in marine biodiversity conservation and preservation. As a result, communities must be educated on current laws and encouraged to participate in their enforcement.

Key Words: *Ecological Interdependence, High Seas, Marine Protected Areas, Pelagic and benthic ecosystems, Vellore Citizens Welfare Forum case.*

Introduction

The Increasing demand for food, proliferation of distant water fleets, and technological achievements, such as explosive harpoon warheads, faster chase boats, factory ships, helicopters and sonar devices have disrupted the balance between man and marine species with which humans can sweep the seas for ever-declining (and less discriminate) catches of fish, make overexploitation of the world's fish populations, which contributes a major threat to the marine biological diversity. The UN Food and Agriculture Organization estimate that virtually every commercially exploited species has been depleted overexploited or fully exploited.¹The International community should concern itself with the preservation of ocean animals. The justifications for this concern can be classified as economic, ecological, aesthetic, and moral. These rationales may sometimes work at cross-purposes, but each provides a compelling basis for international attention. The Scientific knowledge about marine species is limited. For instance, the critical populations (the term "critical population" or "critical minimum population" refers to that level below which the species cannot naturally survive in the wild) of marine species, that number, below which the species is inevitably doomed, remains undiscovered.²

Furthermore, biotechnology firms are increasingly using marine a genetic database for the research and development of new pharmaceuticals, as well as for agricultural reasons. It is one way of exploitation of the above said sources, wherein the maximum good is not secured, further it is also against the notion of international order. The International scholars have also in this regard questioned the object of all these actors.³ The International legal framework for the conservation and sustainable use of components of marine and coastal biodiversity within national jurisdiction will be determined by the relevant provisions of existing international legal mechanisms, while the legal framework governing marine and sea areas beyond national jurisdiction will be governed solely by existing international legal frameworks. Existing instruments are suggested to have either a global but

¹ Suzanne Iudicello and Margaret Lytle (1994-1995), *Marine Biodiversity and International Law: Instruments and Institutions that can be used to Conserve Marine Biological Diversity Internationally*, Tulane Environmental Law Journal, Volume No.8, pp. 124-161.

²Gregory M. Travaglio and Rebecca J. Clement (1978-1979), *International Protection of Marine Mammals*, Columbia Journal of Environmental Law, Vol. 5, pp.199-235.

³ Gaetanverhoosel (1998), *Prospecting for Marine and Coastal Biodiversity: International Law in Deep Water*. International Journal of Marine and Coastal Law, Volume 13 No. 1, pp. 90-103."

sectoral reach or a holistic but localized approach. It is suggested that these existing mechanisms may have a global but sectoral scope, or they may have a holistic but regional approach. In fact, environmental problems may require a collective response.

Methodology Adopted

This research study is aimed to examine India's legal framework for protecting Marine Ecosystems, as well as ways for ensuring their effective protection. Further the role of Indian Judiciary through various landmark judgements in the protection of Environment and Marine Biodiversity in particular are analysed in this paper. This descriptive study will make use of both primary and secondary sources available on the subject. The primary sources includes international legal instruments concerned with the subjects, relevant resolutions of the organs of the UN and the judgements given by the international judicial organisation such as the ICJ, ITLOS, WTO etcetera on the subject matter. The secondary sources include books articles and review of case laws on the subject matter. Journals and internet sources have also been availed for the goal of study.

Environmental Protection and the United Nations

The United Nations⁴ initially addressed environmental issues at the 45th sessions of the Economic and Social Council (ECOSOC), which suggested that the United Nations General Assembly consider calling a United Nations Conference on Human Environment in resolution 1346 (XLV) of July 1968. With the assistance of several subsidiary authorities and specialised agencies, all regulatory measures, such as the UN Convention on the Law of the Sea, are forced to enter. Major UN bodies such as the United Nations General Assembly and the International Court of Justice are tasked with passing resolutions, making recommendations, and taking action in their respective sectors (such as marine species protection). The United Nations General Assembly, in a resolution⁵ entitled "Principles for the management of the sea and ocean floors and their subsoils beyond national jurisdiction," declared these specific areas to be humanity's shared heritage.⁶ In accordance with principle 11 of the resolution, an international framework should be developed for the following activities in the above-mentioned areas:

- (a) *Pollution and other dangers to the maritime environment, including coastlines, as well as disturbances to the marine environment's biological balance;*
- (b) *Protection and conservation of the area's natural resources, as well as prevention of damage to the marine environment's flora and fauna.*

In the law of the sea, both custom and codification are used to determine and describe authority over the oceans. The oceans are divided into the following sections under the **United Nations Convention on the Law of the Sea III, 1982 (UNCLOS III)** to create unique maritime zones for each country. The following are some of them:

- *Territorial sea*
- *Contiguous zone*
- *Internal waters*
- *Exclusive economic zone*
- *Continental shelf*
- *High seas*

The High seas are either sea area that is not part of a state's Exclusive Economic Zone (EEZ), territorial sea, or internal or archipelagic waters, according to the United Nations Convention on the Law of the Sea (Article 86). The seafloor, ocean floor, and subsoil are examples of "areas" not even under state jurisdiction (UNCLOS, Article 1). In this aspect, India has exclusive economic zone sovereignty, which includes territorial development and marine resource conservation. 12 nautical miles from the baseline is the territorial sea. The territorial sea is under the control of the coastal state.

⁴ The Advent of the UN in the international arena has marked a new chapter in the history of codification of International Law. In this regard the work of the International Law Commission is emphatic for its contribution. The notable works of the body include the Law on Diplomatic Relations; Law of the Treaties; Law on the State Succession. The UN is considered to be the successor of the League of Nations. The UN enjoys the support of almost all the countries of the world (more than 190 countries are members). The UN law inter alia majorly consists of the Charter of the UN and the Statute of the International Court of Justice, the activities of its Principal organs and their legal understandings. In other words the UN law constitutes an integral part of the International Law, in principle the difference being that the former gets its authority partly from its Member States whereas in the case of the latter the allegiance flows from the States.

⁵ The Question whether United Nations General Assembly Resolutions are binding requires a scholarly dialogue. In the substantive sense they are considered to be soft laws however in the practical view some of the resolutions adopted as declarations have been elevated to rules of customary international law, wherein they have a binding effect. To add further, they also give an extension to the sources of international law. "

⁶ "Exploration and exploitation of the territory's resources should be carried out for the benefit of humanity as a whole, regardless of whether the area is landlocked or coastal. UNGAR 2749 (XXV) of December 17, 1970, Principle 7. Available at www.un.org."

Legal Framework for the Conservation of Marine Eco-system

India's coastline is vast and tortuous with diverse ecosystems. At the same time, reliance on population and concerns about urbanization, industrialization and commercial activity all have direct impacts on coastal ecology and the marine environment. The legislative framework of coastal India consists of multiple authorities and ministries and is heavily fragmented.

At times, judicial interpretations, delegated legislation, and the evolution of national policy have all played a role in this situation. In order to assess the total efficacy of the protection afforded to fragile coastal and marine ecosystems, protected area designation must be assessed in the context of other applicable rules. This must be resolved in the context of international law, both in/ terms of obligations and normative rules. At the same time, any regulation of a coastal zone must take into account the legal rights and responsibilities of the populations involved. The Constitution's particular provisions on environmental preservation are also a result of the land's dynamic nature and ability for growth. The preamble of our constitution guarantees human dignity and a socialist social system. This involves a comfortable standard of living and a clean environment.

Article 21 of the constitution states that no one's life or personal liberty may be taken away unless it is done in compliance with legal procedure. Since the Supreme Court's decision in **Maneka Gandhi v. Union of India**⁹, Article 21 has been liberally construed on a number of occasions. The right to life is established as a fundamental human right in Article 21. It involves the right to an infection-free and disease-free environment. The right to a healthy environment is an important part of the right to a decent living.

"In the case of **Rural Litigation and Entitlement Kendra v. State of UP &Ors**⁷, the right to develop in a healthy environment was first recognized as a component of Article 21 of the Constitution". The Supreme Court recognized the right to live in a pollution-free environment as part of Article 21 of the Constitution's fundamental right to life in **M.C. Mehta vs. Union of India**⁸. **Article 48A** of the Indian Constitution, which deals with environmental conservation and improvement as well as the preservation of forests and wildlife, states, "The State should try to maintain and develop the environment and to conserve the forests and wildlife of the nation".

Similarly, **Article 51A(g)** addresses every Indian citizen's basic responsibilities, stating: "Every Indian citizen has the responsibility to maintain and improve the natural environment, including forests, lakes, rivers, and wild life, with compassion for all beings." **Article 253** of the Indian Constitution empowers the Indian Parliament to enact laws for the entire or a portion of India's territory in order to carry out any treaty, agreement, or convention with any other country or countries, or any decision reached at any international conference, association, or other body.⁹This clause allows the Central Government to take acts to carry out international treaties, even though the subject matter falls within the legislative competence of the states.

Pursuant to **Article 73** of the Constitution, the executive power of the Union extends to areas where Parliament has legislative powers, and the Government of India may exercise these rights, powers and jurisdiction under any convention or agreement. Furthermore, according to **Article 297(3)** of the Constitution, the maritime boundaries will be modified and adjusted in accordance with legislation passed by Parliament.¹⁰

There are a plethora of legal tools and methods that may be used to construct and protect marine zones. Animal, coastal, environmental, forest, and fisheries regulations all safeguard marine environments in different ways. However, no one instrument can provide enough protection in isolation. A lot is dependent on the local environment, such as the types of hazards and community opinions of current and future marine zones.

Any attempt to create marine protected areas without detailed ground-based assessments are futile. Coastal areas are increasingly threatened due to increased industrialization, many of which are businesses that do not necessarily depend on the coastline. Traditional fishing grounds are already protected, and coastal communities are seeking access to them. Port projects, petrochemical complexes, power projects, tourism projects and various other commercial activities have created conflicts between people who depend on the sea for a living and the heads of new commercial enterprises. Any plan to establish and develop new

⁷AIR 1988 SC 2187

⁸AIR 1987 SC 1086

⁹This has two implications:

- i. First, it imports the rules, responsibilities, and obligations of international agreements to which India is a party, as well as the decisions rendered under such treaties.
- ii. Second, the Centre would be responsible for enacting legislation to execute the instruments to which India has agreed. This is important in the quasi-federal structure of India, where the legislative powers are distributed between the Centre and the States."

¹⁰The Territorial seas, continental shelf, and exclusive economic zone are defined under Article 297 of the constitution. Article 297 arose from a debate in the constituent assembly about the definition of territory as only land. In conformity with international rules, the constitution-makers decided on the geographical limits of coastal states and their territorial waters."

marine protected areas must take into account the realities of the coastal areas mentioned above, as the establishment of marine protected areas as nature reserves alone will certainly lead to further marginalization of coastal populations. Traditional conservation laws and policies are difficult to adapt to marine habitats, as illustrated by the **Wildlife (Conservation) Act 1972**, which was created with terrestrial issues and concerns in mind.

Many parts of the act aim to create protected areas in the terrestrial landscape. After the revision, some requirements to include marine areas in its scope were added, mainly to meet international obligations. As legal research has shown, treating territorial areas as protected areas is problematic from the perspective of community rights and long-term conservation goals. **The Coastal Regulation Zone Notification** protect marine habitats, ie coastlines. Some activities are governed by regulations applicable to sea areas designated as **Category IV**, including territorial seas, although they are not sufficient to manage the different hazards that exist.

On the other hand, foreign warships may enter, pass and transit in accordance with the provisions of Article 4(2) of the Act with the permission of the Central Government. The central government may revoke the right of innocent passage for the well-being of the country, removing the necessary announcements in the official gazette. In order to enable global trade, Indian ships take advantage of the right of innocent passage. Jurisdiction issues play an important role in the working nature of environmental protection.

“The Indian states' authority over its own territorial waters is declared by the **Territorial Seas, Continental Shelf, Exclusive Economic Zone, and Other Maritime Zones Act of 1976**”.¹¹ Under Section 11 of the Act, violating the Act's requirements is punishable by up to three years in jail or fine, or both. With the authorization of the central government, foreign ships, submarines, battleships, and other vessels are allowed to use territorial waters.¹²

Furthermore, the Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act of 1981 was passed in part to prevent foreign fishing vessels from fishing in India's exclusive economic zone. Then it continued to defend the riches of India's exclusive economic zones against Indians and foreign boats functioning without permission or licence in Indian territorial seas. Violations of permits and licences given under Sections 4 and 5 of the Act can result in up to three years in prison or a fine of up to Rs. 15 lakh, or both, if they occur within the nation's territorial seas. If it is violated within India's exclusive economic zone, a penalty of not more than ten lakh rupees is imposed.

Indian Judiciary's response towards protection of Marine Ecosystem

The Indian judiciary has contributed for the of the environment much more than legislative measures. By way of judicial activism¹³ both Supreme Court India and Courts India responding **Public Interest Litigations** dealing with environment to guarantee the fundamental human rights as the liberal interpretation of the Constitution of India. The First case which analysis the Indian Environment Law by the Indian Judiciary¹⁴ the **Vellore Citizens Welfare Forum case**. In this case **Justice Kuldip Singh, Faizan K. Venkataswami**, entire corpus of the environmental law along with its various Principles its application the national scenario and to the development of the environmental jurisprudence both national and international level.¹⁵ While dealing with the **Blue Lady Ship breaking case**¹⁶ the Hon'ble Supreme Court discussed the matter in a balanced way between the environment and the employment with the basis of the principle of Sustainable Development to protect the environment and to increase the National Economy. Recycling is an important part of sustainable development, and the removal of asbestos has been regulated in accordance with international norms.

¹¹In terms of territorial waters, contiguous zones, continental shelf, exclusive economic zones, and other maritime zones, an agreement is required under Section 9(1) of the Act to determine the ideal maritime borders between India and any State with a coast that is adjacent to India.

¹²Section 3 of the Territorial Seas, Continental Shelf, Exclusive Economic Zone, and Other Maritime Zones Act, 1976.”

¹³The Concept of Judicial Activism is basically associated with two theories that is (i) The theory of Social Vacuum: (ii) the theory of Social Want. As per the theory of Social Vacuum, whenever, the Principal Organs of the government, that is the legislative and executive fail in their respective duties and create a vacuum, the judiciary steps in and tries to fill the gap created by such vacuum. The judiciary plays the role of an activist and fulfills the duties. In care of the theory of Social Want, whenever there is a call of the society, due to the non-addressed or non-response of law, the judiciary steps in tries to work and satisfy the wants of the society. The Classical example is the introduction of Curative Petition.

¹⁴In a number of decisions, the Supreme Court of India has emphasised the importance of the monistic conception of international law, in which national and international law coexist or play a supporting role. The Indian judiciary has shown a keen interest in adopting and expanding the principles of international human rights and international environmental law, and has attempted to develop national law along the lines of international law, with the only safeguard being that the part of international law is consistent with the Constitution. To give an example, the Supreme Court of India has reacted strongly/positively to all International Environmental Law Mechanisms, particularly all of its Principles (such as the Precautionary Principle and Polluter Pays Principle).

¹⁵ Vellore Citizens Welfare Forum v. Union of India, AIR (1996) 5 SCC 647.

¹⁶Research Foundation for Science, Technology and Natural Resource Policy v. Union of India & Ors, AIR 2007 SC (Supp), Page No.852, The Environment (Protection) Act (29 of 1986) Section 21 and the Ports Act (15 of 1908) Section 3 control the Ship breaking-environmental dangers and grant authorisation for Ship breaking, which is also considered in this case.”

After citing, among other things, the principles developed at various international conferences and the concept of Sustainable Development, a three-judge Bench of his Court held in **Vellore Citizens Welfare Forum v. Union of India** that the precautionary principle and polluter pays principle have now emerged and govern the law in our country, as is clear from **Articles 47, 48-A, and 51-A(g)** of our Constitution, and that, in fact, in the various environmental statutes enacted by our government, the precautionary principle. It was also acknowledged as a component of customary international law, therefore incorporating them into our domestic legislation should be simple. It's also worth mentioning that both international and state law acknowledges the **Principle of Good Governance**. It was mentioned in **Article 7** of the proposal on the Prevention of Transboundary Damage from Hazardous Activities endorsed by the Working Group of the International Labour Conference, 1996. The Principle of Proportionality, which is based on the notion of lance, must be kept in mind when adopting the concept of "Sustainable Development." It's a balancing act between development and environmental preservation.¹⁷

The Hon'ble Supreme Court used an easy example to explain the purpose of adjudicating between substances identified as **'minerals'**, containing minerals (for example, bones contain large amounts of calcium and phosphate, as well as some carbonate), and substances that are the original source of minerals (for example plants after being subjected to of years of geological processes ultimately become coal). The situation, the mineral categorization is straightforward. Although they include or eventually result in a mineral, the bones in the second and third classes cannot be considered minerals. Calcium carbonate is found in many minerals, including bones, as a result of geological processes in minerals like limestone. A seashell, however, cannot be considered mineral in its natural state.¹⁸

Mechanized craft such as catamarans, country craft canoes and purse seines, ring purse seines and pelagic trawling mid-water trawling gear are used to fish in the state's territorial waters. To understand the nature of the problem, it is necessary to know certain facts about the social life of the state, its territorial waters, and the scope and purpose of the rules that the state has established to manage fishing in its territorial waters.

Oil sardines and mackerel are the most common pelagic fish likely to be found in territorial waters. According to section 3(2) of the **Maritime Zones Act, 1976**, the boundary of a country's territorial sea is any point within 12 nautical miles of the relevant baseline. Only pelagic fish can be caught using purse seines. As such, mackerel and sardines are the only fish that can be caught by purse seiners in the country's territorial waters.¹⁹

The Decision regarding the marine species decided **Judge Murugesan** in the prohibition export the Seafans'. The decision based on Wildlife (Protection) Act, 1972, **Section 2 (36)** deals with the definition, which comes under the prohibited to trade in export, based on the Export Import policy. The Seafanis not included as one of the wild animal in the Schedule. Hence, calling the seafan as wild animal for the purpose of imposing ban on the same for export would be outside the scope of the said section. In this case even though the seafans are not included in the Schedule of the Act as the important marine specie it has to be conserved on the environmentalists.²⁰In India the courts deals with the environmental protection as per implied way of interpretation²¹ on the basis of the Constitution of India.²² Hence the marine species conservation also in the situation of worrying. There is no way in the seas like protecting the environment in the terrestrial species.

Conclusion and Suggestion

The international community has become more conscious of the variety of benefits provided by marine ecosystems, as well as the immense biodiversity of pelagic and benthic ecosystems outside of state control, particularly on the high seas and in the Marine Protected Area, in recent years. The majority of UN members have ratified UNCLOS. The United States of America, as well as a number of other major fishing nations such as Peru and Venezuela, have yet to join. The creation of Marine Protected Areas (MPAs) is a critical step in the preservation and conservation of the oceans. Deep sea ecosystems including seamounts, cold-water coral formations, and hydrothermal vents store huge pools of unknown species and support highly migratory fish stocks and marine animals. In locations where little is known about ecosystem features and functioning, Marine Protected Areas can serve as

¹⁷ A.P. Pollution Control Board v. Prof. M.V. Nayudu, AIR (1999) 2 SCC 718."

¹⁸V. P. Pithupitchai and another v. Special Secretary to the Government of Tamil Nadu, AIR 2003 SC 2455.

¹⁹State of Kerala v. Joseph Antony, AIR 1994 SC 721."

²⁰M/s J.P. Samuel and Co., v. Union of India and others, AIR 2002 Madras 14.

²¹ The Judiciary in any legal system is considered to be the chief architect of interpretation or interpretation (explain. explore) in particular, in matters of Constitution of India there are two methods of interpretation (i) the methodical/mechanical interpretation; (ii) organic interpretation. As per the methodical approach of interpretation the words are seen with rigidity and no departure is permissible in the case of the organic method, constitution being an organic instrument it receives a liberal approach. The second method is relied popularly then Article 21 of the Constitution of India has been constructed to a high degree, wherein at present it includes human rights norms, where in the scope of environment finds a larger reference, which is more practical to achieve the object of the conservation of human environment.

²² The Regulation of Fishing by Foreign Vessels Act, 1981, Coastal Regulation Zone Notification, 1991 (last amended in 2011), Wild Life (Protection) Act, 1972. These are some other legislations in India for the protection of the marine life."

a key buffer against irreversible biodiversity loss. Marine Protected Areas (MPAs) can be used to safeguard not only what is recognized to be essential now, but also what might become so in the future.

The provisions of the Environment (Protection) Act of 1986, in particular the power to declare Ecologically Sensitive Areas, provide for flexibility because the detrimental impact on traditional communities' livelihoods is minor while attaining broad environmental conservation goals. Ecologically Sensitive Areas, on the other hand, have benefits and drawbacks that must be considered, as indicated in the research. A major focus on enabling citizens to enforce marine conservation rules and regulations, in addition to the construction of Marine Protected Areas and the declaration of Ecologically Sensitive Areas, is critical. The National Green Tribunal (NGT) was formed by an Act of Parliament to provide efficient and effective environmental adjudication. Its goal is to make decisions on any "important environmental concerns" that affect the entire community.

It is worth noting that the National Green Tribunal has the power to make ecological restoration and environmental damage compensation decisions under the polluter-pays principle. Ultimately, new legislation and regulatory measures are unlikely to have a meaningful impact unless local populations and other concerned individuals and organizations are actively and vigilantly involved in the protection and maintenance of marine biodiversity. Therefore, the community must be educated about the existing laws and encouraged to take an active part in their implementation.

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