

Role of Judiciary in Addressing Contemporary Constitutional Challenges of the Blue Economy

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Abstract

In the transforming modern world, the development is the foremost one which never change. World has witnessed so many transformations in the context of technological development, while it is on the one side, it costs the environment on the other side. The environmental protection with sustainable development is the need of the hour. Blue economy is one of the ocean-based development the human society has witnessed in recent years. Blue economy has various components and the impacts caused by the blue economy sectors are various viz., ecosystem loss, coastal erosion also the risk associated with Global warming, Climate change, Ocean depletion etc., Water scarcity, hunger, poverty, and climate change are all interconnected problems that need for comprehensive solutions. Human survival and well-being depend on the balance and proper operation of the Earth's natural systems, which we preserve and restore through ecosystem restoration. For present and future generations, we can surely build a more resilient and prosperous society by adopting sustainable habits and policies. In protecting the destruction of environment and preserving it for future generations

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... of Judiciary in addressing....

Judiciary plays a significant role. This chapter discusses about the concept of Blue economy, sectors of blue economy, environment as pillar of blue economy, it's impact on environment, blue economy and constitution and role of judiciary in protecting environment and promoting sustainability.

Keywords: Blue economy, Impacts of Blue economy, Constitution and blue economy, Judiciary and blue economy, Pillar of Blue economy.

Introduction:

Over 95% of the biosphere is found in the oceans, which make up 72% of the surface of our blue world. The seas are where life first began, and they still endure all life by producing oxygen, absorbing carbon dioxide, recycling nutrients, and controlling the temperature and climate of the planet. 80% of world trade is carried out by oceans, which also supply food and livelihoods to a sizable section of the world's people. At the Conference Held at "Rio +20"¹ at the centre of the discussion was the idea and application of a "green economy." However, during the planning phase, a number of coastal nations expressed doubts about the "green economy's" suitability for them and made compelling arguments for a "blue economy" strategy to be given more attention, based on the idea that seas and oceans are essential to the transition to low-carbon, sustainable, resource-efficient, and inclusive development patterns. The UN 2030 development plan established goals for the preservation and sustainable use of oceans, seas, and marine resources (SDG 14)² at the global level in 2015 through a number of conferences, including the Paris Climate Agreement and the New York Sustainable Development Goals (SDG).³ Even though the concept of blue economy is a resource-efficient, circular, low-polluting economy built on sustainable patterns of production and consumption that

1. United Nations Conference on Sustainable development held at Rio de Janeiro 2012.
2. Life below water
3. Raffaele Mancini, with the contribution of Arnaud Comolet, Blue economy in the mediterranean: case studies, lessons and perspectives, plan bleu UNEP/map Regional Activity Centre, Paper 19, January 2020.

improves social justice and human well-being, creates jobs and economic value, and drastically lowers ecological hazards and scarcities it also creates certain hazards to humanity while expanding its phase. It also impacts the environment which leads to global warming, climate change etc., the activities of humans expanding the horizon under blue economy had been controlled and regulated by judiciary internationally and also nationally.

Blue Economy - Concept

Blue Economy is the concept of the sustainable use of ocean resources to create jobs, better livelihoods, and economic growth while maintaining the health of ocean ecosystems. It makes sure that activities don't harm the maritime environment by highlighting the need to strike a balance between environmental sustainability and economic development. The idea was first presented by Gunter Pauli in his book "The Blue Economy: 10 Years, 100 Innovations, 100 million Jobs" from 2010. It is the sustainable use of ocean resources for better jobs and livelihoods, economic growth and the health of the ecosystem. It emphasizes how crucial it is to combine social inclusion with creative economic strategies in order to guarantee that the advantages of ocean resources are shared fairly and that marine ecosystems are preserved. Sustainable Development Goal (SDG) Goal 14 embodies this strategy by urging the preservation and sustainable use of seas, oceans, and marine resources. The Blue Economy represents a transformative approach for utilising ocean resources sustainably while promoting economic growth and ecological balance. It underscores the importance of integrating innovative business models with environmental stewardship to ensure that the benefits derived from ocean resources are equitably distributed while maintaining marine ecosystem health.

Sectors of Blue economy

There are so many sectors coming under blue economy. Marine biotechnology, offshore wind farms, fishing, aquaculture, maritime transportation, and coastal tourism are some of the industries that make up the blue economy. These factors support both economic expansion and marine ecological preservation. Fisheries and Aquaculture, Maritime Transport, Coastal Tourism and Hospitality,

Offshore Renewable Energy, Marine Biotechnology, Marine and Coastal Infrastructure, Shipping and Ports, Ocean Exploration and Research, Underwater Mining, Marine Conservation and Biodiversity, Water Sports and Recreation, Desalination and Water Management, Marine Renewable Resources, Shipbuilding and Repair, Ocean Education and Training, Marine Pollution Control, Coastal Zone Management, Ocean Governance and Policy, Marine Insurance and Finance, Sustainable Seafood Production, Marine Technology and Innovation, Ports and Logistics and Cruise Tourism.⁴ There are three pillars which are interrelated in blue economy they are economic, social, and environmental and are frequently used to symbolize it. It aims to strike a balance between environmental protection, social equality (including employment and poverty alleviation), and economic prosperity. Long-term sustainability is guaranteed by this trilateral strategy. The economic, social, and environmental facets of the blue economy are the three interrelated pillars that support sustainable development. In the context of our seas and coastal regions, these pillars offer a thorough framework for striking a balance between social justice, economic progress, and environmental preservation.

Amidst environmental protection and preservation being the main motive while development the threats faced by the sea are many more viz., sea-borne terrorism includes armed robbery and piracy, maritime terrorism, illegal arms and crude oil commerce, drug and people trafficking and contraband smuggling among other things. Each year, cyclones, hurricanes, typhoons, tsunamis, and other natural disasters leave millions of dollars' worth of property destroyed and thousands of people stranded. The stability of the maritime realm is still at risk due to oil spills and climate change.

The climate change will cause danger to marine life, habitats, and the communities that depend on them and they are at high risk due to changes in water temperature and acidity. Excess nutrients from untreated sewage, agricultural runoff, and marine debris like plastics are all sources of marine pollution. Illegal, unreported, and

4. Alvaro de la Maza, The Blue Economy: definition, opportunities and problems, December 2024.

unregulated extraction of marine resources is known as overexploitation and this also forms one of the major threats to the marine ecosystem and biodiversity.

International Legal context of Blue Economy and ITLOS⁵

A set of international legal tools that seek to strike a balance between environmental sustainability, economic growth, and the fair use of marine resources serve as the foundation for the governance of the blue economy. Foremost among that is the United Nations Convention on the Law of the Sea (UNCLOS)⁶, which is frequently referred to as the "Constitution of the Oceans," outlining governments' rights and obligations with regard to the use of marine resources, UNCLOS creates a complete legal framework for the world's seas. It emphasizes responsibilities for the preservation and sustainable management of the maritime environment while regulating important areas such as territorial seas, exclusive economic zones (EEZs), the high seas, and the continental shelf. Additionally, UNCLOS offers dispute resolution procedures through organizations like the Permanent Court of Arbitration (PCA)⁷ and the International Tribunal for the Law of the Sea (ITLOS)⁸. The Convention on Biological Diversity (CBD)⁹ is a supplement to UNCLOS that promotes biodiversity conservation, sustainable biological resource use, and fair benefit-sharing from genetic resources, especially those found in coastal and marine environments. A supplemental accord to the CBD, the Nagoya Protocol¹⁰ supports the blue economy's sustainable growth by concentrating on genetic resource availability and equitable usage. In a similar manner, the International Maritime Organization (IMO)¹¹ is essential to reducing marine pollution and guaranteeing safe maritime operations through its agreements, such as the

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5. International Tribunal for Law of Sea.
 6. Adopted on 1982.
 7. Established at Hague Conference on 1899.
 8. Establishment of UNCLOS to settle disputes.
 9. Signed on Earth Summit 1992.
 10. Adopted on October 2010.
 11. Specialised agency of United Nations established in 1948.

London Protocol¹² (which regulates ocean dumping) and the MARPOL Convention¹³ (which addresses marine pollution). By addressing the effects of climate change on marine ecosystems, such as ocean acidification and sea-level rise, the United Nations Framework Convention on Climate Change (UNFCCC)¹⁴ also touches on the blue economy. Climate resilience must be incorporated into blue economy strategy through the implementation of Paris Agreement initiatives including nature-based solutions and blue carbon projects. Furthermore, sustainable development principles are emphasized in the Stockholm Declaration (1972) and the Rio Declaration (1992), which emphasize the necessity of balancing economic endeavours with environmental preservation in maritime governance.

Additional specialized instruments that address particular marine conservation and pollution control measures include the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)¹⁵, and regional agreements such as the Barcelona Convention and Bonn Agreement. Additionally, "Life Below Water," the fourteenth Sustainable Development Goal (SDG) of the UN, explicitly promotes the sustainable use of seas, oceans, and marine resources. These global legal tools work together to create a strong foundation for advancing an inclusive and sustainable blue economy. These tools allow countries to exploit maritime resources while preserving social and environmental interests for the now and the future by offering legal guidelines, enforcement tools, and forums for international collaboration.

In order to handle infringements and guarantee compliance, judicial enforcement of international agreements has been essential. When interpreting domestic environmental laws and resolving conflicts involving marine resources, national courts frequently rely

12. Agreed on 1996.

13. The international convention for the prevention of pollution from ships adopted on 1973.

14. Adopted on Earth Summit 1992.

15. Adopted on March 1975.

to UNCLOS and CBD regulations. For example, courts have applied concepts stated in these treaties, such as the precautionary principle and the polluter pays principle, in cases involving illicit sand mining, overfishing, and marine pollution. The International Tribunal for the Law of the Sea (ITLOS) and other international judicial organizations have also played a significant role in dispute resolution. Famous instances such as the South China Sea Arbitration¹⁶ and the *Enrica Lexie* Arbitration¹⁷ show how UNCLOS procedures are applied to settle cross-border disputes while striking a balance between state sovereignty and international environmental obligations.

An important marine incident that emphasizes the relationship between jurisdictional disputes, international law, and environmental principles is the *Enrica Lexie* case. Two Italian marines on board the Italian oil tanker *Enrica Lexie* are accused of shooting and killing two Indian fishermen off the coast of Kerala in February 2012 after mistaking them for pirates. Complex issues of jurisdiction, state sovereignty, and states duties under international maritime law including those pertaining to environmental governance and the sustainable use of marine resources were brought up by this occurrence. While the *Enrica Lexie* case did not specifically involve environmental damage, it did highlight the judiciary's broader role in enforcing accountability and discouraging actions that could harm the environment or livelihoods dependent on it. The judiciary is the guardian of environmental principles like the precautionary principle and the polluter pays principle, which are essential to ensuring sustainable development in the maritime sector. The precautionary principle emphasizes preventive measures to avoid potential environmental harm; in maritime disputes, this could involve mandating better surveillance systems, environmental risk assessments, and stricter operational protocols for vessels operating in sensitive ecosystems. In cases of environmental harm, courts hold violators accountable for remediation and compensation.

6. *Philippines Vs China* Case No 2013-19, PCA, 2016.

7. *Italy vs India*, Case No: 2015-28, PCA, 2012.

One of the most important maritime conflicts of the twenty-first century was settled in 2016 under the Permanent Court of Arbitration (PCA) in the South China Sea Arbitration. The case brought to light important environmental issues and emphasized the judiciary's responsibility in preserving marine ecosystems, even though its primary focus was on territorial claims and maritime rights under the United Nations Convention on the Law of the Sea (UNCLOS). The court's crucial role in resolving environmental issues within the parameters of international law is demonstrated by the South China Sea Arbitration. The panel reaffirmed the significance of protecting maritime ecosystems in disputed areas by embracing the principles of sustainable development, environmental protection, and state accountability. However, the case also underscores the limitations of judicial mechanisms in enforcing rulings, emphasizing the need for global cooperation and stronger institutional frameworks to protect the world's oceans effectively. The South China Sea dispute thus serves as a critical example of the judiciary's potential and challenges in safeguarding the marine environment amidst geopolitical conflicts.

National laws of Blue Economy

The blue economy is governed by national laws that balance economic development, environmental protection, and social equity while ensuring the sustainable use of ocean resources. These laws cover a wide range of topics, such as fisheries management, renewable energy, climate change adaptation, and maritime zone regulation. For example, India's Territorial Waters, Continental Shelf, Exclusive Economic Zone, and Other Maritime Zones Act, 1976 defines jurisdiction over marine resources, while the Coastal Regulation Zone (CRZ) Notification, 2019 and Environment Protection Act, 1986 protect coastal and marine biodiversity, and the Merchant Shipping Act, 1958 prevents marine pollution in accordance with international conventions like MARPOL.

In order to preserve marine ecosystems and the means of subsistence for coastal communities, the Marine Fishing Regulation Act of 1978 and the National Policy on Marine Fisheries of 2017 encourage sustainable fishing methods. India's National Offshore

Wind Energy Policy, 2015, promotes the construction of offshore wind farms as a renewable energy source, supporting green energy projects. Furthermore, by combining ecological and economic concerns, frameworks such as the Integrated Coastal Zone Management Plan (ICZM) guarantee the comprehensive regulation of coastal and marine ecosystems.

Indian Constitution and Blue economy

The Indian Constitution integrates the concepts of social justice, sustainable development, and environmental preservation to offer a thorough foundation for advancing the blue economy. It promotes a fair approach to managing maritime resources through its Directive Principles, Fundamental Duties, and court rulings. The Constitution guarantees that India's blue economy supports economic progress while protecting marine habitats for future generations by bringing national legislation into compliance with international agreements such as UNCLOS and highlighting the rights of coastal populations. The judiciary interprets its provisions to be consistent with international agreements like the Sustainable Development Goals (SDG 14) and the United Nations Convention on the Law of the Sea (UNCLOS), while the government is empowered to enact laws pertaining to the seas, oceans, and environmental sustainability.

Directive Principles of state Policy (DPSP)¹⁸ highlight the state's obligation to manage resources and protect the environment and gives the state instructions to preserve the nation's woods, rivers, and wildlife as well as to conserve and enhance the environment. This clause covers coastal and marine environments¹⁹ also resources, including marine resources, be distributed fairly in order to promote sustainable development and the well-being of all citizens²⁰. The Constitution's Part IVA²¹ requires citizens to safeguard natural resources that is every person has a fundamental responsibility to preserve and enhance the natural environment, which includes forests, rivers, lakes, and wildlife. This obligation can be understood

18. Part IV of Constitution of India 1950.

19. Article 48A of Constitution.

20. Article 39(b) of constitution.

21. Fundamental duties.

to encompass marine and coastal resources²² Maritime and coastal issues are covered under the Union's and State's Legislative authority²³ Under Union List²⁴ the central government can enact laws pertaining to offshore resources, the continental shelf, the Exclusive Economic Zone (EEZ), and fishing outside of territorial seas. State List²⁵ indicates that the states have the authority to regulate fishing and fisheries within territorial waters (up to 12 nautical miles) Concurrent List²⁶ Laws pertaining to economic development and environmental preservation involving marine and coastal resources may be passed by the Union or by states. The blue economy depends on the environmental protection framework of the Indian Constitution and according to the Supreme Court of India, the right to a clean and healthy environment is a part of the right to life²⁷. In situations involving the preservation of marine and coastal ecosystems, this interpretation has proven crucial. The rights and means of subsistence of coastal people, especially traditional fisherman is implicitly safeguarded by the constitution. Tribal and indigenous communities are given protection under Constitution²⁸ which can be expanded to include coastal communities' Local government is empowered to manage natural resources, especially coastal areas, by the Panchayats (Extension to Scheduled Areas) Act, 1996 (PESA). The blue economy depends on the Constitution's emphasis on social justice and economic growth. In order to ensure that coastal and marginalized communities benefit from the use of marine resources the state has to reduce income and resource distribution disparities²⁹ the freedom to engage in any trade or profession, including fishing and aquaculture, as long as appropriate limitations are put in place to protect the environment also guaranteed³⁰ A method for integrating international treaties

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22. Article 51A(g).
 23. VII Schedule of Constitution.
 24. Entry 21 and 24.
 25. Entry 21.
 26. Entry 17A & Entry 20.
 27. Article 21 of Constitution.
 28. V and VI Schedule of Constitution.
 29. Article 38 of Constitution.
 30. Article 19(1)(g) of Constitution.

into domestic law is provided by the Constitution which gives Parliament the authority to enact laws pertaining to foreign accord, treaties, and conventions, such as UNCLOS, in order to govern India's maritime areas and bring them into compliance with international norms.³¹ India's adherence to international frameworks by directing the state to promote respect for international law and treaty obligations is also supported by the provision of the constitution³².

Role of Judiciary in protecting environment under blue economy

Judiciary plays a crucial role in the development and upholding of environmental jurisprudence, through its interpretation and application of environmental legislation making sure that it is in accordance with both scientific advancements and community demands. By acknowledging the right to a healthy environment as an essential component of fundamental human rights, courts have greatly broadened the scope of environmental rights. Even in the absence of specific legislation, they frequently use judicial activism to address environmental issues. Courts have given citizens, Non-Governmental Organisations (NGO), and others a forum to pursue remedies for environmental harm through Public Interest Litigation (PIL). The blue economy, which emphasizes the sustainable use of ocean resources for economic growth, better livelihoods, and the health of ocean ecosystems, is shaped in large part by the judiciary. Courts have a crucial role in interpreting and upholding legislation pertaining to pollution prevention, sustainable fishing, marine conservation, and coastal protection. They make sure that operations like shipping, fishing, and offshore drilling adhere to environmental laws and don't permanently damage marine ecosystems. In order to prevent the growth of the blue economy from compromising social justice or environmental integrity, courts are essential in settling disputes involving maritime borders, transboundary pollution, and the rights of coastal communities. Courts also support worldwide efforts to preserve oceans and marine biodiversity by upholding international agreements and treaties through their decisions. The

³¹ Article 253 of Constitution.

Supreme Court of India has interpreted Article 21 of the constitution as a part of its judicial activism to guarantee environmental rights thereby directing the state to ensure sustainable development and environment protection.

Doctrines of Environmental Jurisprudence

The Judiciary has played a vital role in determining environmental law through various doctrines. The **Precautionary Principle** places a strong emphasis on preventive action when the situation turns uncertain. The courts recommend taking preventative action to stop environmental degradation even in cases where there isn't any solid scientific proof of harm. In the famous **Vellore Citizens' Welfare Forum v. Union of India**³³ case, the Supreme Court upheld this idea, especially when it came to the scenario that how industry affected the environment. The **Polluter Pays Principle** states that the party causing pollution or environmental damage must cover the costs of the damages. It guarantees that individuals who damage the environment or take advantage of natural resources will be held financially responsible. In the case of **Indian Council for Enviro-Legal Action v. Union of India**³⁴, the Supreme Court used this theory to mandate that the polluting businesses compensate for the harm caused by hazardous waste. The need for development that satisfies current wants without jeopardizing the capacity of future generations to satisfy their own needs has been underlined by the courts on a regular basis. An example of a case where the Supreme Court upheld the idea that development activities shouldn't interfere with the environment is **T.N. Godavarman Thirumulpad v. Union of India**³⁵ which promoted a balance between economic development and environmental preservation. i. e. the concept of **sustainable development** It highlights how important it is to incorporate environmental factors into development planning.

The idea of **Intergenerational Equity** emphasizes how future generations have a right to inherit a sustainable and healthy

33. 5 SCC 647 (1996).

34. 5 SCC 281 (1996).

35. 2 SCC 267 (1997).

environment. The Supreme Court stressed the importance of protecting the environment for future generations in *M.C. Mehta v. Union of India*³⁶, emphasizing that it is the responsibility of the current generation to protect natural resources for future generations.

The **Public Trust Doctrine** states that the government holds some resources, such as the air, water, and sea, in trust for the benefit and use of the general people. The government must safeguard and administer these resources for the benefit of all citizens, according to court rulings, and they cannot be transferred to private ownership. The Supreme Court used this theory to stop unlawful developments and encroachments on the banks of the Beas River in *M.C. Mehta v. Kamal Nath*³⁷ case.

The rights of coastal communities, particularly traditional fishermen, in the sustainable use of marine resources have been highlighted by the Supreme Court. Through the application of constitutional principles of justice and equity, the Court has made sure that vulnerable communities are not disadvantaged by development in coastal areas. In *S. Jagannath v. Union of India*, the Court stepped in to control shrimp farming along the shore, protecting local fishing communities' rights and preventing industrial operations from negatively impacting their means of subsistence³⁸.

*National Coastal Zone Management Authority v. State of Tamil Nadu*³⁹, Tamil Nadu government's disregard for CRZ regulations in the state's coastal regions. The Supreme Court emphasized that unapproved building or construction within CRZ zones is illegal and needs to be strictly controlled, and it ordered the state government to take the required actions to execute CRZ laws in Tamil Nadu.

In *Union of India v. Goa Foundation*⁴⁰, Illegal mining and

36. AIR SC 1086 (1987).

37. 1 SCC 388 (1997).

38. 2 SCC 87 (1997).

39. SCC Online SC 494, 2019.

40. SCC Online SC 2398, 2018.

Development in Goa's coastal areas are said to have violated CRZ notifications. The Supreme Court ordered the removal of regulated operations and unlawful constructions along Goa's coastline. The Court reaffirmed the necessity of rigorous adherence to CRZ notifications for sustainable coastal management, especially in environmentally sensitive areas.

These environmental doctrines have become cornerstones of Indian environmental jurisprudence by ensuring that environmental protection is included into legislative frameworks, developmental initiatives, and court decisions. Particularly in the context of the blue economy, the judiciary's proactive involvement in interpreting and upholding these principles emphasizes how crucial it is to strike a balance between ecological preservation and socioeconomic advancement. Environmental concepts like the Polluter Pays Principle, Precautionary Principle, and Public Trust Doctrine must be strictly adhered to in order to support the blue economy, which places an emphasis on the sustainable utilization of ocean and coastal resources for economic growth. By balancing economic goals with environmental preservation, the court has been instrumental in preventing industrial and development operations in coastal and marine areas from endangering delicate ecosystems.

Conclusion

In order to protect the environment and guarantee the blue economy's long-term growth, the role played by judiciary is essential. Courts have created a strong framework to handle environmental issues and encourage accountability through seminal rulings, such as those highlighting the Polluter Pays Principle, Precautionary Principle, and Public Trust Doctrine. The judiciary has consistently acted as a guardian of constitutional provisions like Article 21, which guarantees the right to a clean and healthy environment, and has interpreted these rights in the context of preserving marine and coastal ecosystems. In the context of the blue economy, the judiciary has been instrumental in balancing economic growth with ecological preservation. By enforcing Coastal Regulation Zone (CRZ) notifications, addressing issues such as illegal fishing, coastal erosion, and pollution, and directing

adherence to international treaties like UNCLOS and CBD, courts have reinforced the importance of sustainable practices. Judicial interventions have further ensured the equitable use of marine resources, protected the livelihoods of coastal communities and preserved biodiversity. As India is surrounded by ocean on the three sides, it pursues the blue economy as a key driver of growth, the judiciary's role in upholding environmental laws, preventing exploitation, and promoting sustainable resource management remains crucial. By integrating global environmental commitments into national jurisprudence and emphasizing the principle of intergenerational equity, the judiciary continues to act as a powerful institution ensuring that economic ambitions do not compromise environmental integrity. The evolving legal framework shaped by judicial activism serves as a foundation for building a resilient and sustainable blue economy. The judiciary's proactive stance in balancing environmental sustainability with economic development serves as a guiding force for the implementation of policies and programs under the blue economy framework. By protecting ecological integrity for current and future generations, it guarantees that India's economic aspirations in the maritime and coastal sectors be pursued responsibly.

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Important Suggested Materials And Links

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