



Balancing Coastal Development and Environmental Protection: A Jurisprudential Study of CRZ Regulations and Environmental Impact Assessment in India

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Abstract

The Coastal Regulation Zone (CRZ) framework is a key area in India where development objectives and environmental conservation meet. Given India's extensive coastline and ecological sensitivity, the purpose of CRZ regulations is to safeguard coastal habitats while regulating human and economic activities. Courts have regularly used basic environmental legislation to become involved in disputes pertaining to CRZ. According to court decisions, coastal lands are ecologically delicate areas that the state retains in trust for present and future generations. Because of this, courts have often adopted a conservation-centric approach, prioritising environmental protection over unchecked commercial and developmental interests, especially when irreversible ecological harm is about to occur. Simultaneously, the judiciary has acknowledged that development cannot be completely stopped and has advocated for a balanced strategy based on sustainable development. By allowing controlled development that does not jeopardize ecological integrity, this balance aims to balance economic growth with environmental preservation. This paper looks at how the Indian judiciary has shaped CRZ jurisprudence over time, examining how environmental doctrines have been used in court to balance development and conservation. It contends that the judiciary's role as a protector of environmental rights and ecological sustainability is strengthened by the judicial prioritization of environmental interests within CRZ areas, which reflects a long-term vision of sustainable coastal management.

Keywords: Coastal Regulation Zone; Precautionary Principle; Public Trust Theory; Polluter Pays Principle; Sustainable Development Principle and Environmental clearances

Introduction

India has a coastline stretching over 7,517 km, covering 9 state and 2 Union Territories. In addition to making a substantial economic contribution, India's coastline area serves as defenses against extreme weather. However, India's growing coastal vulnerability patterns have resulted in the deterioration of marine and coastal ecosystems, which has had direct and disproportionate effects on marginalized coastal populations that are already vulnerable to threats associated with climate change. The Intergovernmental Panel Climate Change projects that the temperatures in India would rise by 1-4°C by 2030, with coastal areas seeing the biggest increase. Sea level rise and other extreme weather event are predicted to occur more frequently and intensely in the Arabian sea and Bay of Bengal. These trends demonstrate critical necessity for a balanced approach which prioritize environment over development.

To control and protect coastal areas, the Indian legislature has passed a number of legislation and regulations, such as Coastal Regulation Zone (CRZ) Notifications. However, the implementation and enforcement of these policies have remained a challenge, undermines the goals of coastal protection legislation. This paper examines the evolution of the CRZ notification and explores how the Indian judiciary has interacted with environmental laws, laying foundation for building coastal resilience.

Evolution of Coastal Regulation Zone framework in India

India, being a participant in the UN Conference held at Stockholm in 1972, took several appropriate steps for the protection and improvement of the environment by implementing various provisions and Acts. In 1981, Prime Minister Indira Gandhi emphasized coastal protection by expressing a strong conviction that no development should be permitted within 500 meters of the High Tide Line in order to safeguard coastal areas. This marked the beginning of serious coastal protection measures, which culminated in the issuance of the Coastal Regulation Zone Notification, 1991, under the Environment Protection Act, 1986, Section 3(1) empowers the Central Government to take all appropriate measures for the protection and improvement of the environment. Section 3(2) provides that such measures may be taken in respect of various matters without prejudice. Section 3(2)(v) specifically authorizes the Government to restrict areas in which industries, operations, or processes shall not be carried out, or shall be carried out only subject to certain safeguards.

Under the 1991 notification, coastal areas were classified into four zones:

- a. CRZ-I: ecologically sensitive areas of high biological, environmental and historical importance.
- b. CRZ-II: Developed area where construction and reconstruction are permitted subject to existing laws.
- c. CRZ-III: underdeveloped areas with limited construction and was declared as no development zone.
- d. CRZ-IV: Areas covering Andaman and Nicobar Island, Lakshadweep and other small island.

These regulatory provisions have been actively interpreted and enforced by the judiciary through various landmark judgment on of such Maradu Apartment Demolition Case, is a significant supreme court ruling concerning CRZ infractions. In this instance, the court ruled that no activities that interferes with natural resources and coastal ecology should be allowed in environmentally vulnerable areas. The court held the wrongdoer accountable for environmental loss and order the removal of unlawful structure. Highlighting the strict enforcement of CRZ regulation and reinforces the importance of environmental protection in coastal areas. In another important judgement, the Bombay high court in Goa Foundation v. Goa State Coastal Zone Management Authority held that authorities had violated CRZ regulations by disregarding legal standards. The court emphasized the need to consider biodiversity and equitable distribution of natural resources and called for stricter procedures for CRZ clearance, post clearance monitoring and effective pollution management in coastal areas.

This judgment highlighted the need to address the issue related to the coastal area management and strengthen procedure safeguards, leading to the introduction of CRZ Notification, 2011 aimed at conserve coastal ecosystem, encourage sustainable economic activity, and protect the livelihoods of fisherfolk communities. It brought projects under the ambit of EIA notification 2006, strengthening clearance procedures and mandate the establishment of Coastal Zone Management Authorities in state and UTs. Additionally, it emphasized active local community participation of Coastal Zone Management Plans. A significant reform under this notification was the expansion of CRZ-I to cover ecologically sensitive areas like bird nesting, turtle nesting and etc.

The Sailesh Nayak committee reviewed the implementation of CRZ 2011 Notification and recommended stricter, science-based regulation, focusing on the identification and conservation of ecologically sensitive areas while maintaining a balance between environmental protection an economic development. Subsequently CRZ 2011 Notification was replaced by the CRZ 2019. The CRZ Notification, 2019 aimed to promote coastal economic activities to enhance employment and growth in coastal communities. It clarified that projects in CRZ-II and CRZ-III would be regulated at the State level under Central supervision, while projects in CRZ-I and CRZ-IV would require approval from the MEFC. The Notification also emphasized conservation, cautioning that uncontrolled. Another major reform under CRZ2019 Notification was the mandatory to obtain environmental clearance for construction activities in the CRZ areas. The application for permissible activities under CRZ 2019 Notification is examined by the state and UTs CZMA in accordance with the Coastal Zone Management Plans. The review process includes verification of all required submission, such as the rapid and comprehensive Environment Impact Assessment report, cumulative impact studies, risk assessment and disaster management plans and relevant consent from the Pollution Control Board.

Role of Judiciary in Strengthening Coastal Regulation

India's coastal regions are ecologically sensitive area where even limited industries and human activities can disturb the environmental balance, asserting that development cannot be pursued at the cost of ecological degradation. The judiciary has often emphasized the need for balanced approach. This is evident in the landmark ruling of Rural Litigation and Entitlement Kenra v. State of Uttar Pradesh, where the court recognized that although economic growth is necessary, it must be regulated to avoid environment damages.

After a shift in judicial approach, the traditional concept of locus standi has been considerably relaxed with the emergence of Public Interest Litigation (PIL). This has enabled public-spirited individuals to approach the courts to safeguard public health and address issues affecting the environment. The judiciary has played a revolutionary role through PIL, especially in the development of environmental jurisprudence.

Through a broad interpretation of Article 21 of the Indian Constitution, the Supreme Court has held that the right to life includes the right to live in a clean and healthy environment, and is not limited to mere animal existence. Any act that degrades environmental quality and affects human life amounts to a violation of Art. 21. This interpretation empowers citizens to approach the SC under Art. 32 for legal remedies against pollution and environmental threats. In order to strengthen environmental protection within the domestic legal framework, the SC of India has gradually applied various international environmental principle and foreign doctrines while interpreting Article 21 of the constitution, treating them as part of Customary International law.

Notable fundamental norms recognized by the court;

i. The Precautionary Principle.

The Supreme Court consistently applied the Precautionary Principle in environmental matters. In *Vellore Citizen Welfare Forum v. UOI*, the court held that activities that degrade the environment cannot be justified by the lack of scientific assurance. It emphasized that potentially harmful activities must be regulated unless adequate preventive and remedial measures are adopted and that economic benefits cannot outweigh ecological damage and risk to public health. This principle has been reaffirmed in several subsequent judgments, reflecting the judiciary's commitment to environmental protection. Further, in *Taj Trapezium Zone case*, which dealt with industrial pollution affecting the Taj Mahal, the Supreme Court reiterated the precautionary principle and ruled that authorities must act in advance to prevent environmental harm rather than responding only after irreversible damage has occurred.

ii. The Polluter Pay Principle

According to the Polluter Pays Principle, any person or entity that causes pollution is legally obliged to bear the cost of preventing, controlling, and remedying the damage caused to human health and the environment. It holds the polluter accountable for environmental harm and ensures that the burden of restoration does not fall on the public. The Indian judiciary has firmly endorsed this principle, recognizing it as a crucial component of sustainable development and an extension of the doctrine of absolute liability.

In *Indian Council for Enviro-Legal Action v. Union of India*, the Supreme Court held industries responsible for the environmental damage caused by their operations. The Court directed them to compensate affected individuals and bear the full cost of restoring Bichhri village and its surrounding areas. This judgment made it clear that polluters cannot evade their responsibility and that environmental restoration and protection are essential elements of sustainable development.

iii. The Doctrine of Public Trust

According to the Public Trust Doctrine, certain natural resources such as air, water, forests, and seas are held by the State in trust for public use and cannot be transferred for private ownership. The State acts as a trustee and is responsible for protecting and managing these resources for present and future generations, ensuring environmental justice and intergenerational equity.

In *M.C. Mehta v. Kamal Nath*, the Supreme Court applied this doctrine by cancelling illegal leases over ecologically sensitive land and directing restoration and compensation. Similarly, in the *Vedanta University case*, the Court rejected land acquisition for private purposes as it violated the public trust. These judgments reaffirm that natural resources are meant for collective benefit and cannot be exploited for private gain. Through the expanded interpretation of Article 21 and the application of the above principles, the Indian judiciary has strengthened the coastal regulatory framework. Judicial interventions have ensured that coastal development is balanced with ecological protection and sustainable growth. By emphasizing environmental sustainability and community welfare, the courts have reinforced the need to preserve fragile coastal ecosystems for present and future generations. Accordingly, development must conform to the principles of sustainable development and intergenerational equity, reflecting both a moral and legal duty to protect the environment.

Coastal Resilience and Disaster Management Framework

Resilience refers to the ability to anticipate, respond to, and recover from risks quickly and effectively. Coastal resilience involves the capacity of ecosystems and dependent social systems to endure disruptions, recover from their impacts, and maintain their essential functions. In recent years, the increasing frequency and severity of coastal disasters have highlighted the need for comprehensive resilience strategies. India's delicate and interdependent coastal ecosystems are highly vulnerable to natural disasters. As a member of the Indian Ocean Rim Association, India is obligated to strengthen ocean and community resilience. The Disaster Management Act, 2005, plays a crucial role in disaster prevention, mitigation, rehabilitation, and restoration. A major shift from a relief-centric approach to a proactive framework was introduced in the 2009 National Policy, emphasizing the integration of disaster risk reduction into development planning.

Resilience can only be achieved through long-term growth and sustained well-being, as it enables communities to recover from shocks. Strengthening coastal resilience requires integrating disaster risk reduction into development and coastal management policies. Although progress has been made, developing effective resilience mechanisms

remains challenging without long-term strategies that prioritize ecosystems and community welfare. Therefore, policies based on the precautionary principle are essential to ensure that coastal ecosystems remain resilient and capable of natural recovery. Such frameworks promote the balanced use of coastal resources while preventing overexploitation and environmental degradation.

Challenges in Coastal Regulation and Governance

"CRZ 2019 was projected as a reformist statute, but it shattered the trust built over decades between the law and local communities, between the state and the coast"

Although 2019 Notification was introduced with the objective for promoting economic development in practical implementation has faced several issues. For instance, by granting greater regulatory authority to the Central Government, CRZ 2019 limited the powers of State Governments in preparing Coastal Zone Management Plans, thereby weakening the federal structure. Further, the removal of the hazard line and the reduction of the No Development Zone from 200 meters to 50 meters have compromised coastal protection and threatened biodiversity and sustainable resource use.

The reduction of CRZ boundaries in CRZ-III A and backwater islands has encouraged real estate and tourism activities in traditional fishing areas, increasing community vulnerability to climate change, sea-level rise, erosion, cyclones, and tsunamis. The destruction of mangroves and fragile ecosystems has further weakened natural disaster protection mechanisms. Unlike CRZ 1991 and 2011, which strongly protected traditional rights, CRZ 2019 permits regularization of violations and allows ecotourism and land reclamation in sensitive areas, leading to the loss of intertidal zones and traditional filtration ponds. Therefore, CRZ 2019 requires urgent review through stakeholder participation, improved coordination, and the adoption of sustainable coastal management practices.

Conclusion and Recommendation

India's environmental jurisprudence has benefited greatly from the judiciary and legislative framework. Despite this there are obstacles to their effective implementation and enforcement. Marine ecosystems have experienced habitat destruction, erosion, and pollution as a result of frequent industrial operations, uncontrolled tourism, coastal infrastructure projects, and the exploitation of legal loopholes. These flaws show a failure to learn from previous environmental catastrophes and have eroded public trust in regulatory bodies. Key to addressing problems between coastal conservation and economic growth is still sustainable development. In addition to being essential for trade, tourism, and industrial growth, coastal areas also sustain fisheries, biodiversity, and coastal inhabitants means of subsistence. In light of rising sea levels and growing cyclone-related dangers, governments must prioritize environmentally vulnerable areas and encourage climate-resilient design. Additionally, using contemporary technology like drone surveillance, satellite monitoring, and real-time pollution control systems might improve adherence to CRZ standards. It is equally important to establish green belts and buffer zones surrounding dangerous enterprises. Sustainable development and the long-term preservation of India's coastal environment require an integrated and balanced strategy.

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