

# **Protection of the Indian Coastal Ecosystem through CRZ Notifications: An Analysis**

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## **Abstract**

The Indian subcontinent is characterised by its lengthy peninsular coastline, home to a large and rich diversity of flora and fauna. However, increasing urbanisation, industrialisation, tourism, recreation, and other developmental activities have taken a toll on one of the world's most delicate ecosystems by severely disturbing the ecological equilibrium. While these coastal regions are of great importance to the economy, they usually receive little attention from the ecological point of view. Until 1991, the activities carried out in the coastal areas were unregulated. Hasty clearances, rampant norm violations, and the unchecked and uncontrolled establishment of thermal and nuclear power plants, ports, ship-breaking yards, shrimp farms, etc., have unsurprisingly destroyed the fragile coastal ecosystem. This has led to the salinisation of groundwater as well. Massive deforestation for industrialisation and urbanisation around these areas has made them further susceptible to flooding and other environmental calamities, including climate change. Most developmental activities in the coastal areas, including the No Development Zone (“NDZ”), are unscientific and unsustainable. Though the Coastal Regulation Zone (“CRZ”) Notifications have been aimed at addressing the coastal ecosystem's concerns and balancing conflicting interests, they have not yielded the desired results. In light of this background, this paper aims to evaluate the efficacy of these notifications by comparing the various CRZ areas in these notifications. Considering the proactiveness shown by the adjudicating forums and the civil society in safeguarding the coastal ecosystem, the authors would provide comprehensive and realistic suggestions for better conservation of CRZ.

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## **Introduction to the Coastal Area Ecosystem & its Significance**

A 'coast' is an area that integrates land with sea. It is characterised by open space and high economic productivity.<sup>1</sup> Generally, the 'coastal region' is marked by abundant resources. Similarly, the Indian Coastal Zone features a rich and unique ecosystem consisting of "coral reefs, sand dunes, mangroves, seagrasses, and estuaries."<sup>2</sup> Richness in biodiversity marked by a myriad of flora and fauna in the coastal ecosystems, a wide variety of minerals, and other resources present in these waters portray the immense significance of coastal stretches to humankind.<sup>3</sup> While maintaining the climate cycle, the coastal ecosystem supports the fisheries and facilitates the establishment of some specific industries.<sup>4</sup> Marine products are exported for various industrial and pharmaceutical uses, which signifies the economic importance of these coastal ecosystems.<sup>5</sup> Coasts have also enhanced global trade with marine waters, providing major international trade routes, thus highlighting that the economy derives a great deal of its Gross Domestic Product from the riches of these waters. However, this ecologically rich and economically profitable region faces specific inherent threats. The Indian coasts include significant low-lying coastal areas that are sensitive to frequent cyclones and other

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<sup>1</sup> Frank Ahlhorn, *Integrated Coastal Zone Management: Status, Challenges and Prospects* (Springer Vieweg Wiesbaden 2018) 3.

<sup>2</sup> Govt. of India, Ministry of Environment and Forests, 'Report of the Expert Committee on Coastal Regulation Zone Notification 1991' (9 Feb 2005) New Delhi <[http://iomenvis.in/pdf\\_documents/MSS\\_Report.pdf](http://iomenvis.in/pdf_documents/MSS_Report.pdf) > accessed 12 Sep 2021; and also see for detailed discussion on the significance of mangroves and need for protecting the same, M. Sakthivel, 'Protection of Mangroves: A Study with Special Reference to India' (2010) 5 *Madras Law Journal* 52; Coral reefs can be defined as large underwater structures composed of the skeletons of colonial marine invertebrates called coral. Sand dunes can be defined as mounds of sands formed by wind along the beach or desert. Mangroves may mean trees or shrubs with long and thick roots that grow in coastal intertidal zones. Sea grasses are plants that grow in the sea and are similar to grass. Estuaries are areas where a freshwater river meets the ocean and resultantly the water becomes brackish.

<sup>3</sup> Timothy Beatley, David J. Brower and Anna K. Schwab, *An Introduction to Coastal Zone Management* (2nd edn, Island Press 2002) 2.

<sup>4</sup> Ahlhorn (n 1) 9.

<sup>5</sup> Bert W Hoeksema, 'Biodiversity and the Natural Resource Management of Coral Reefs in Southeast Asia' in Leontine E. Visser (ed), *Challenging Coasts: Transdisciplinary Excursions into Integrated Coastal Zone Development* (Amsterdam University Press 2004), 51.

natural disasters. They are vulnerable to rising sea levels.<sup>6</sup> In addition to being an area of enormous productivity, coasts are natural buffers against tall winds and waves resulting from natural calamities.<sup>7</sup>

When left to itself, the coastal ecosystem can recover and maintain its equilibrium amidst natural pressures, but the external anthropogenic pressure negatively affects the very dynamics of the coastal area.<sup>8</sup> The physical alteration of coastal areas by tourism, industrialisation, rapid urbanisation, lack of planning, and excessive pollution tilts the coastal equilibrium.<sup>9</sup> Climate change, algal blooms caused by eutrophication, and other human factors degrade coastal ecosystems.<sup>10</sup> The ever-increasing pulls from tourism and urbanisation dilute the uniqueness of coastal landscapes. The scenic beauty of coastal waters has suffered a setback by the activities often quoted as being *pro bono publico*. They also threaten the natural habitats of species thriving in the marine ecosystems, damaging the coastal equilibrium. These natural and anthropogenic pressures, coupled together, threaten the very existence of the coastal ecosystem and make it susceptible to disasters; thereby, the livelihood of the coastal population has been substantially influenced.<sup>11</sup>

### **The Need for the Protection of Coastal Areas**

Given the changing circumstances, there is an ever-increasing need to focus on preserving coastal areas. One cannot shun the use of new and rare resources derived from coastal areas in *Toto*, but the ecological cost and irrevocable changes that hasty and impulsive actions entail in terms of prolonged damage to the rare coastal ecosystem cannot be ignored either. Hence, the sustainable utilisation of resources

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<sup>6</sup> Swarna Latha S and Bala Krishna Prasad M, 'Current Status of Coastal Zone Management Practices in India' in Ramanathan A.L., Bhattacharya P., Dittmar T., Prasad M.B.K., Neupane B.R. (eds), *Management and Sustainable Development of Coastal Zone Environments* (Springer, Dordrecht 2010) 48.

<sup>7</sup> Beatley (n 3) 1–4.

<sup>8</sup> Ibid.

<sup>9</sup> Food and Agriculture Organization, 'Legislative Study 93 on Integrated Coastal Management Law: Establishing and Strengthening National Legal Frameworks for Integrated Coastal Management' (2006).

<sup>10</sup> Latha S (n 6) 42.

<sup>11</sup> Beatley (n 3) 7.

should be the guiding principle for meeting present and future needs.<sup>12</sup> As interpreted by the Supreme Court of India (“SCI”), the right to life includes the right to live in a clean and healthy environment, and the same can be extended to include the “right to clean and healthy coastal areas,”<sup>13</sup> Thus, it can be argued that protecting and maintaining coastal areas is a constitutional mandate.

Initially, at the international level, during the Earth Summit 1992, deliberations opened upon integrated coastal area management and protection of coastal areas under Agenda 21, Chapter 17.<sup>14</sup> In the Indian context, besides the existing constitutional mandate, the earliest step in protecting coastal areas was initiated in 1981, by which states were directed not to carry out developmental activities within the 500-metre range from the High Tide Line (“HTL”).<sup>15</sup> This effort could be termed the first stern directive issued to conserve coastal waters and is the genesis of the 1991 notification (“1991 Notification”).<sup>16</sup> Abrupt clearances, unbridled establishment of thermal power plants, widespread ports, and ship-

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<sup>12</sup> *Karnataka Industrial Areas Development Board v. Sri C. Kenchappa* 2006 (6) SCC 371.

<sup>13</sup> In many cases related to ‘right to life’ under the Indian Constitution, the SCI has ruled that ‘life’ is not a mere animal existence. It is something beyond that. For the detailed discussion, see *Francis Coralie Mullin v. The Administrator, Union Territory of Delhi* AIR 1981 SC 746; *Maneka Gandhi v. Union of India* AIR 1978 SC 597.

<sup>14</sup> Ahlhorn (n 1) 35; United Nations, ‘Technical Report of Agenda 21 - United Nations Conference on Environment and Development,’ Rio de Janeiro (3–14 June 1992).

<sup>15</sup> Govt. of India, Ministry of Environment and Forests, Centre for Environment Education, ‘Report of the Public Consultation with Fisherfolks and Community to Strengthen Coastal Regulation Zone (CRZ) Notification, 1991’ (March 2010) New Delhi; Mrs. Indira Gandhi, then Prime Minister, wrote a letter to Chief Ministers of coastal states in November 1981 and extracted portion reads as: “The degradation and misutilisation of beaches in the coastal States is worrying as the beaches have aesthetic and environmental value as well as other values. They have to be kept clear of all activities at least up to 500 metres from the water at the maximum high tide. If the area is vulnerable to erosion, suitable trees and plants have to be planted on the beaches without marring their beauty. Beaches must be kept free from all kinds of artificial development. Pollution from industrial and town wastes must also be avoided totally.”; *Indian Council for Enviro Legal Action v. Union of India* (1996) 5 SCC 281; Claude Alvares, C, ‘Towards Ruin: The Coast Is Finally Clear’ *Outlook* (5 Feb 2022) <<https://www.outlookindia.com/magazine/story/towards-ruin-the-coast-is-finally-clear/270032>> accessed 31 Dec 2021.

<sup>16</sup> Manju Menon, Meenakshi Kapoor, Preeti Venkatram, Kanchi Kohli and Satnam Kaur, ‘CZMAS and Coastal Environments: Two Decades of Regulating Land Use Change on India’s Coastline’ (2015) *Centre for Policy Research-Namati Environmental Justice Program* <<https://namati.org/resources/czmas-and-coastal-environments/>> accessed 31 Dec 2021.

breaking activities were the norm in India before the introduction of the CRZ Notification in 1991.<sup>17</sup>

Several violations in apparent disregard of regulations corrupted the marine environment, affecting fisheries and deteriorating the quality of coastal waters.<sup>18</sup> This was a corollary of weak implementation of the rules due to the lethargic attitude of authorities and ignorance of the notification by state governments.<sup>19</sup> Unsustainable development practices and bypassing of norms for narrow interests were the conventions until the SCI intervened through public interest litigation (“PIL”).<sup>20</sup> After that, owing to external pressures from the aviation and tourism sectors, the Government of India overrode the first notification and introduced an amended CRZ Notification in 2011. This facilitated the construction of greenfield airports and the flourishing of tourism activities in the CRZ areas.<sup>21</sup> In 2019, an altogether new notification was brought forth to facilitate more developmental activities in coastal areas. It is, therefore, pertinent to evaluate the efficacy of these notifications by comparing the various CRZ areas in these notifications.

### **Comparison of Protection of Coastal Areas Notifications**

India is part of the limited group of countries that have afforded some degree of protection to the coastal ecosystem by introducing the CRZ Notifications.<sup>22</sup> As stated, the CRZ Notification in 1991, notified by the Central Government, is an inceptive step towards protecting coastal areas in the country.<sup>23</sup> Many committees

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<sup>17</sup>S. Gopikrishna Warriar, ‘The Coasts Need Science-Based Policy Action’ *Mongabay* (11 May 2018) <<https://india.mongabay.com/2018/05/commentary-the-coasts-need-science-based-policy-action/>> accessed 31 Dec 2021.

<sup>18</sup> Govt. of India (n 15).

<sup>19</sup> Equations, *Coastal Regulation in India, Why do we Need a New Notification?* (Equations, Bangalore 2008) 4.

<sup>20</sup> See detailed discussion in subsequent paragraphs of the paper, *Indian Council for Environment-Legal Action v. Union of India* (1996) 5 SCC 281; *S Jagannath v. Union of India* AIR 1997 SC 811; *Piedade Filomena Gonsalves v. State of Goa* AIR 2004 SC 3112; *Vaamika Island (Green Lagoon Resort) v. Union of India* (2013) 8 SCC 760.

<sup>21</sup> Equations (n 19) 29.

<sup>22</sup> Latha S (n 6) 50; Mascarenhas, A. ‘Coastal Sand Dune Ecosystems of Goa: Significance, Uses and Anthropogenic Impacts’ (1998) *Current Science* 43.

<sup>23</sup> Section 3 of the Environment Protection Act 1986. It confers the power on the Central Government to issue the same.

were constituted between 1992 and 2005 to change the 1991 Notification.<sup>24</sup> Various amendments to the original 1991 Notification have been carried out chiefly to cater to the needs of tourism and other specific sectors based on those committees' recommendations.<sup>25</sup> As many as 25 amendments were carried out in the 1991 Notification.<sup>26</sup> After that, a new notification was brought in, specifically in 2011, for coastal zone regulation. Furthermore, in 2019, the earlier one was replaced by a new notification in the domain. Let us examine the same in detail based on the CRZ categories.

## I. Objectives of CRZ Notifications

While examining the paramount objective(s) of the CRZ notifications, it is evident that the 1991 Notification did accord a certain level of protection to the coastal

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<sup>24</sup> At first, B. B. Vohra Committee was constituted on 01.01.1992 to study the 1991 Notification and its implications *vis-a-vis* coastal tourism. Based on the Vohra Committee recommendations, an amendment was carried out vide SO 595(E), Ministry of Environment, Forest, and Climate Change of India ("MoEFCC") dated 18 August 1994. Secondly, Prof. N. Balakrishnan Nair Committee was constituted on 30 December 1996. Based on the Nair Committee's suggestions an amendment was carried out on 9 July 1997 vide SO 494(E). Thereafter, Fr. Saldanha Committee (I) was constituted on 5 December 1996. Based on Saldanha Committee's recommendations, the notification got amended by permitting mining of sand in CRZ. Subsequently, Dr. Arcot Committee was constituted which submitted its report in 1996. However, no action was taken on this report. Later Fr. Saldanha Committee (II) was constituted on 26 June 1997 to examine specific issues pertaining to CRZ and it submitted its report in September 1998. However, no action was taken on this report either. Soon after, D. M. Sukthankar Committee(s) I & II were asked to examine the issues with respect to Mumbai and Navi Mumbai as well as to prepare a National Coastal Zone Policy of India. However, no action was taken on both these reports. Finally, Dr. M. S. Swaminathan Committee was constituted in 2004 for a comprehensive review of the 1991 Notification. Swaminathan Committee recommended a departure from regulation to management emphasising the integrated management zone model. Based on these recommendations, a draft notification was circulated. However, the same was abandoned. See Govt. of India, Ministry of Environment and Forests, Department of Environment, Forests and Wildlife, Report of the Committee chaired by Prof. M. S. Swaminathan to review the Coastal Regulation Zone Notification 1991 (February 2005); Also see Equation (n 19) 59–62.

<sup>25</sup> Manju Menon, Sudarshan Rodriguez, and Aarthi Sridhar, 'Coastal Zone Management Notification '07 – Better or bitter fare?' (2007) 47(38) *Economic and Political Weekly* 3838–3840 <<https://www.jstor.org/stable/40276415>> accessed 31 Dec 2021.

<sup>26</sup> V Sundararaju, 'Why We Need a Coastal Zone Protection Act' *Down To Earth* (18 Jan 2019) <[www.downtoearth.org.in/blog/environment/why-we-need-a-coastal-zone-protection-act-62876](http://www.downtoearth.org.in/blog/environment/why-we-need-a-coastal-zone-protection-act-62876)> accessed 31 Dec 2021; Ashoo Gupta, 'Coastal Regulation Zone Notification 2011: An Evaluation' *Business Standard* (20 Jan 2013) <[https://www.business-standard.com/article/economy-policy/coastal-regulation-zone-notification-2011-an-evaluation-111032600092\\_1.html](https://www.business-standard.com/article/economy-policy/coastal-regulation-zone-notification-2011-an-evaluation-111032600092_1.html)> accessed 31 Dec 2021.

ecosystem. The original 1991 Notification declared “coastal stretches of seas, bays, estuaries, creeks, rivers, and backwaters which are influenced by tidal action (in the landward side) up to 500 metres from the High Tide Line (HTL) and the land between the Low Tide Line (LTL) and the HTL as Coastal Regulation Zones.”<sup>27</sup> Further, it aimed to place restrictions on establishing and expanding industries, operations, or processes in CRZs.

However, CRZ Notification, 2011 (“2011 Notification”) overruled the 1991 Notification. The objective of the 2011 Notification was to invoke management practices that were sustainable and backed by scientific principles while considering the potential hazards, along with conserving pristine resources.<sup>28</sup> It is worth pointing out that the 2011 Notification was based on inputs from the M. S. Swaminathan committee.<sup>29</sup> The committee recommended integrated management against regulation and instilling coastal management zones in place of coastal regulation zones.<sup>30</sup> Further, the 2011 Notification envisaged creating a Coastal Zone Management Authority (“CZMA”) to achieve the objectives. However, the Committee drew flak, even though it aimed to deploy scientific principles into the regulations, as it failed to obtain and consider the views of the coastal communities.<sup>31</sup>

The third and latest notification on the subject, the CRZ Notification, 2019 (“2019 Notification”), has been introduced due to the Shailesh Nayak Committee, 2014.<sup>32</sup> The Committee's recommendations on conserving coastal stretches were

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<sup>27</sup> Govt. of India, Ministry of Environment and Forests, Department of Environment, Forests and Wildlife, Coastal Regulation Zone Notification, SO 114 (E) (19 Feb 1991) <<https://envisjnu.tripod.com/envlaw/legislation/crz/crz1.html>> accessed 31 Dec 2021.

<sup>28</sup> Govt. of India, Ministry of Environment and Forests, Department of Environment, Forests and Wildlife, Coastal Regulation Zone Notification, SO 19 (E) (06 Jan 2011) <<http://faolex.fao.org/docs/pdf/ind143981.pdf>> accessed 31 Dec 2021.

<sup>29</sup> The Committee was constituted primarily to review the elementary 1991 Notification, its successive amendments, and to identify and fill the lacuna therein, so as to bring the norms and rules relating to the coastal ecosystem in tune with scientific principles.

<sup>30</sup> Latha S (n 6) 52.

<sup>31</sup> Latha S (n 6) 53.

<sup>32</sup> The Committee was constituted in 2014 to examine the concerns raised by various states, Union Territories and other stakeholders regarding the earlier notification precisely relating to sustainable development in coastal areas including ecotourism, coastal ecosystem management and conservation. Govt. of India, Ministry of Environment, Forest and Climate Change, Coastal

considered, and changes have been introduced accordingly in the 2019 Notification.<sup>33</sup> The objective of the latest notification is to conserve the coastal ecosystem by emphasising “sustainable development based on scientific principles” along with securing the livelihood of the local population.

## **II. Classification of CRZ and Limits of Permissible and Prohibited Activities**

A common characteristic of all three notifications is that they classify the CRZ areas based on the vulnerability of the areas bounded by coastal waters into the following four categories: CRZ - I, CRZ - II, CRZ - III, and CRZ - IV. However, these areas have been further classified in the evolution of the coastal legal framework. Let us examine the classification of the coastal areas under these three notifications in depth.

### **A. CRZ - I**

Under the earliest 1991 Notification, ecologically sensitive areas including marine parks, coral reefs, mangroves, hubs of biological resources, and areas between Low Tide Line (“LTL”) and High Tide Line (“HTL”) found a place under CRZ - I. Further, the notification prohibited new constructions within the 500 metres of HTL and between HTL and LTL.<sup>34</sup> Besides certain exceptions, there was a near-complete ban considering the susceptibility of these ecologically important areas.

In the 2011 Notification, ecologically sensitive areas and geomorphological features maintaining the coastal integrity were clubbed under CRZ - I. These included mangroves, sand dunes, mudflats, salt marshes, turtle nesting grounds, seagrass beds, heritage sites, and the area between LTL and HTL, among others. There could not be any new construction except such activities relating to government works, including the atomic energy projects, pipelines, and greenfield airport in Mumbai, among other specified activities. Furthermore, in the non-ecologically sensitive areas falling between LTL and HTL, exploration of natural

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Regulation Zone Notification, GSR 37 (E) (18 Jan 2019)  
<<https://faolex.fao.org/docs/pdf/ind213892.pdf>> accessed 31 Dec 2021.

<sup>33</sup> Ibid.

<sup>34</sup> Govt. of India (n 27).



gas and its extraction, salt harvesting, desalination plants, trans harbour sea links, and other things were permitted, with safety measures being taken. Unlike the previous two notifications, the most recent 2019 Notification has sub-categorised CRZ - I into CRZ - I-A and CRZ - I-B; the former consists of environmentally fragile areas such as mangroves, coral reefs, national parks, sand dunes, turtle nesting grounds, horseshoe crabs' habitats, heritage sites, etc.; the latter comprises intertidal areas between LTL and HTL.

As a general rule, no developmental activities are permitted in CRZ - I-A. In comparison to the 1991 Notification, certain exceptions like ecotourism activities are allowed, provided an ecotourism plan is in an approved Coastal Zone Management Plan ("CZMP"). Similarly, activities relating to public utilities, like laying pipelines and transmission lines, are allowed in mangrove buffers. For defence, strategic purposes, and public amenities, laying highways and roads on stilts is allowed through land reclamation in these areas. Further, the Notification mandates an Environment Impact Assessment to be carried out to undertake the developmental activities. Additionally, it advocates for initiating afforestation measures if the developmental activities fall within the mangrove areas. In the intertidal areas of CRZ - I-B under the 2019 Notification, activities such as land reclamation for defence and other purposes requiring foreshore facilities are allowed. Further, it permits power generation through renewable energy resources and the development of cargo facilities in the selected ports, alongside salt harvesting and desalination plants, among other activities.

When comparing the 2019 Notification with previous ones, it is evident that the activities permitted within the CRZ - I areas are more detrimental to the fragile ecosystem, which would undermine the very intent of the CRZ notification. In particular, activities like land reclamation, which can potentially hamper the equilibrium of the coastal areas, have been given the go-ahead for sea links and other activities.<sup>35</sup> Furthermore, the activities allowed in the name of defence, public interest, or public purpose projects and the abovementioned ecotourism activities cause severe and irreparable damage to the CRZ areas. Based on the above discussion, it is worth summarising here that the 2019 Notification is more diluting

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<sup>35</sup> Han Lindeboom, 'The Coastal Zone: An Ecosystem under Pressure' in John G. Field, Gotthilf Hempel and Colin P. Summerhayes, *Oceans 2020 Science, Trends, and the Challenge of Sustainability* (Island Press 2002) pt. 1, 49.

in nature. Hence, it could also be pointed out that the permitted activities are against the sustainable utilisation approach.

## **B. CRZ - II**

Under the 1991 Notification, developed areas proximate to the coastal stretches formed part of this category. This category included substantially built-up places within the urban areas. In CRZ - II, some restrictions were placed for constructing new buildings and laying down roads, and compliance with local bodies' regulations was necessitated for these activities; the design of the buildings also had to be consistent with the landscape.<sup>36</sup> Like the 1991 Notification, the 2011 Notification also covered the developed areas with infrastructure and sanitation facilities proximate to the shoreline. It also imposed some restrictions while undertaking the construction and infrastructure developmental activities in this area, subject to some specific conditions.<sup>37</sup>

Under the latest 2019 Notification, this category contains the developed urban areas near the shoreline. Unlike the previous notifications, the 2019 Notification mandates developed areas of land having more than 50% of constructed areas that are provided with basic civic amenities for inclusion within this category.<sup>38</sup> Developmental activities given the go-ahead in CRZ - I-B are also allowed in CRZ - II in the 2019 Notification. Similarly, structural units could be created subject to municipal regulations. Further, any developmental activity for tourism has also been regulated in the 2019 Notification. As per this Notification, in case of any change in the Floor Space Index ("FSI"), the urban local body shall approach the MoEFCC through the State Coastal Zone Management Authority ("SCZMA"). Then, the SCZMA would bring the same to the notice of the National Coastal Zone Management Authority ("NCZMA"). It can very well be seen that the FSI can be increased under the 2019 Notification to expand tourism activities in these areas.

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<sup>36</sup> Govt. of India (n 27).

<sup>37</sup> Govt. of India (n 28).

<sup>38</sup> Govt. of India (n 32).

### C. CRZ - III

Under the 1991 Notification, relatively undisturbed areas belonging to neither of the two categories, CRZ - I and CRZ - II, were classified and clubbed under this category. In this zone, an area up to 200 metres was described as an NDZ, within which structural units were not allowed. These areas could be utilised only for agriculture, gardens, parks, salt manufacture, etc., between 200 and 500 metres of the HTL. However, the establishment of resorts and motels was permitted upon approval by the MoEFCC. The construction of dwelling units by the native residents as part of their customary land use practices was also subject to certain conditions.<sup>39</sup> Nevertheless, in the actual 2011 Notification, those undisturbed areas belonging to neither CRZ - I nor CRZ - II, in both rural and urban, as well as developed and underdeveloped areas were brought under this category. This category contained an NDZ which extended up to 200 metres from the HTL. However, a range of activities were permissible in NDZ, including mining rare minerals, weather radars, construction of schools, community toilets, etc., on a case-to-case basis, and greenfield airport development at Navi Mumbai. Furthermore, areas falling between 200 and 500 metres were allowed to be used for storage of non-hazardous cargo and renewable energy generation, among other activities. Furthermore, NDZs were made inapplicable for the excluded port areas through notification.

As per the 2019 Notification, relatively undisturbed areas not falling under CRZ - II form a part of CRZ - III. It further introduces a sub-categorisation of CRZ - III-A and CRZ - III-B; the former refers to a zone with a human density exceeding 2,161 per sq. km., and the remaining areas fall under the latter.<sup>40</sup> According to the 2019 Notification, densely populated areas (CRZ - III-A) have been granted more developmental opportunities by reducing the NDZ from the earlier 200 metres to 50 metres from the HTL. Hence, the NDZ has been drastically cut. This change translates to more construction activities near the HTL. This increases the vulnerability of the coastal population to natural events.<sup>41</sup>

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<sup>39</sup> Govt. of India (n 27).

Govt. of India (n 27).

<sup>41</sup> Kukreti Ishan, 'Coastal Regulation Zone Notification: What Development Are We Clearing Our Coasts For' *Down To Earth* (04 Feb 2019)

This category also permits similar activities that could be carried out in CRZ - I-B. In NDZ, activities like agriculture, construction of schools, bridges, public toilets, units for domestic sewage treatment, temporary tourism facilities where national highways or state highways pass through the NDZ, and mining of atomic minerals, among others, are permitted subject to regulations.<sup>42</sup> Streamlining the activities outside the NDZ includes establishing beaches, hotels, tourism, airports, construction of dwelling units, limestone, atomic minerals mining, and drawing groundwater by local communities.

#### **D. CRZ - IV**

The 1991 Notification defined the “coastal stretches in Andaman & Nicobar, Lakshadweep, and small islands” apart from those designated under the above three zones as CRZ - IV.<sup>43</sup> As per the initial notification, in these areas, construction could not be raised within 200 metres of the HTL, and restrictions were placed on the design, construction, height, and area of the buildings that could come up between 200 and 500 metres from the HTL.<sup>44</sup> Prohibitions were placed on the use of corals and sand. Further, in some islands, categorising coastal stretches into CRZ - I, II, and III could be done with prior approval from the MoEFCC. For Lakshadweep and other small islands, similar restrictions were placed on the design, height, etc., of the buildings that could come up in CRZ, and the distance from the HTL for construction depended on the size of the island.

As per the 2011 Notification, CRZ - IV areas included water areas from the LTL to 12 nautical miles on the seaward side and the water areas of the tidal-influenced water body from the mouth of the water body, at sea, up to the influence of tide measured as five parts per thousand during the driest season of the year. In CRZ - IV areas, certain activities like shipping, oil pollution, gas exploration, and mining were regulated. However, no restriction was placed on traditional fishing. Furthermore, certain coastal areas were identified as requiring special

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<<https://www.downtoearth.org.in/coverage/governance/coastal-regulation-zone-notification-what-development-are-we-clearing-our-coasts-for-63061>> accessed 31 Dec 2021.

<sup>42</sup> Govt. of India (n 32).

<sup>43</sup> Govt. of India (n 27).

<sup>44</sup> Ibid.

consideration in the 2011 Notification. These included CRZ areas of Mumbai, Kerala, Goa, and other vulnerable ecosystem regions, like Sundarbans, identified under the EPA in 1986.

Under the 2019 Notification, CRZ - IV consists of the water area and has been sub-categorised. CRZ - IV-A includes “the water area and the sea bed area between the Low Tide Line up to twelve nautical miles on the seaward side,” whereas CRZ - IV-B refers to “the water area and the bed area between the LTL at the bank of the tidally influenced water body to the LTL on the opposite side of the bank and extending from the mouth of the water body at sea up to the influence of the tide...”<sup>45</sup> Regulation of activities like traditional fishing, land reclamation, atomic energy projects, weather radar, construction of monuments and memorials, etc., can be found under the 2019 Notification, and the public hearing can be dispensed with under certain conditions. Under the 2019 Notification, greater autonomy is granted to the state authorities. The 2019 Notification has streamlined the process of obtaining CRZ clearances. The MoEFCC has the exclusive jurisdiction to deal with clearances for the projects falling under the CRZ - I and CRZ - IV areas, and State governments and the State CZMA give clearances for the remaining two categories.

From the above discussion, a trend of systematic toning down of the efficiency of CRZ norms through the amendment process can be very well observed. This is evident in the exempted developmental and recreational activities under these notifications. Compared with the 1991 Notification, in the 2019 Notification, the number of exemptions is much higher. Similarly, in 2011, the number of exemptions was higher. This gradual onslaught on the vulnerable coastal stretches has further complexed the fragile area. There is no evidence to corroborate that these developmental and other recreational activities allowed in a phased-out manner are either scientific or sustainable. Many stakeholders, including civil society, are alleging that these developmental activities are merely to reap the economic benefits.

Furthermore, the authority to alter the essence of these notifications is in the hands of the executive through a simple notification. The delegated power given

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<sup>45</sup> Govt. of India (n 28).

to the executives to amend these notifications rather than subjecting them to the rigorous legislative amendment process may easily pave the way for the further dilution of these notifications to accommodate commercial short-term interest-oriented projects. However, the judiciary has aptly intervened and safeguarded the coastal areas in many such circumstances. In this regard, it is worthwhile to highlight the contribution of the Indian adjudicating forums in the conservation of the coastal environment with the help of a few landmark decisions.

### **The Judiciary on the Protection of Coastal Areas**

Environmental jurisprudence has been on a roller coaster in the run-up to the debate on environment versus development. It has evolved over the past three decades, undergoing many upswings and downturns. Environmental law has received its present form after facing many historic episodes. The judiciary has shaped Public Interest Environmental Litigation by taking recourse to many revolutionary steps. These include relaxing the *locus standi* and incorporating international laws and principles relating to the environment in the municipal legal system.<sup>46</sup> In its pilgrimage on the environment protection route, the SCI has often expressed sharp criticism towards the government's inaction on implementing notifications and regulations concerning the protection of coastal areas.<sup>47</sup> Indian Courts have been at the forefront of environmental protection and have served as a harbinger of environmental justice. However, sometimes they have been guided by the policy of self-restraint, and thereby larger projects were green signalled in the name of public importance while keeping environmental concerns at the backseat.<sup>48</sup> Courts later pushed forward the cause of environmental justice and reprimanded the central and state governments in dilly-dallying with implementing the notifications and playing with the ecology of sensitive areas.

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<sup>46</sup> Jona Razzaque, 'Linking Human Rights, Development, and Environment: Experiences from Litigation in South Asia' (2007) 18 *Fordham Environmental Law Review* 587.

<sup>47</sup> For the detailed discussion, see *Indian Council for Enviro-Legal Action* and *S Jagannath* (n 20).

<sup>48</sup> Sakthivel M, 'Larger Projects v. Environment Protection: An Analysis of Judicial Trends in India' (2020) 15 *Ambedkar University Law Journal* 179–198.

Taking inspiration from various international environmental documents, the Indian Judiciary has circumferenced the environmental jurisprudence in India.<sup>49</sup> The judiciary has incorporated these vital international documents in the environmental sphere into municipal laws.<sup>50</sup> One of the earlier cases is the *Konkan Railway* case, wherein the Bombay High Court dealt with constructing a railway line passing over rivers, creeks, etc., sans clearance.<sup>51</sup> The High Court observed that development is bound to affect the ecology, and the extent of damage in the present case was negligible in contrast to the advantages offered by the impugned project. The Court invoked the rule of ‘later will prevail over the earlier’ and held that since Section 11 of the Railways Act, 1989 was passed subsequent to the Environment Protection Act, 1986 (“EPA”), the construction/maintenance of a railway line in the ecologically fragile ecosystem which comprises of the coastal area too would not attract the provisions of the EPA.<sup>52</sup>

The *Indian Council for Enviro-Legal Action* case constitutes a significant breakthrough in the discourse on the protection of coastal areas.<sup>53</sup> The instant case arose out of a PIL filed to enforce the 1991 Notification alleging a violation of the 1991 Notification due to the mushrooming of industries illegally, damaging the ecology of the coastal areas. The MoEFCC had taken no further steps beyond the issuance of the notification. Further, it was alleged that the 1994 amendments to the 1991 Notification, which were incorporated after the Vohra Committee report, if implemented, would be against the principles of scientific development. In response, the full bench of the SCI issued clear directions to the government to implement the 1991 Notification. While deviating from its previous practice of judicial restraint, the Supreme Court held that it is very well within its domain to pass necessary directions and orders to protect fundamental rights relating to a clean environment. Nevertheless, the day-to-day enforcement falls in the

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<sup>49</sup> World Commission on Environment and Development, ‘Our Common Future’ (1987) <<http://www.un-documents.net/our-common-future.pdf>> accessed 31 Dec 2021; United Nations, ‘Transforming Our World: the 2030 Agenda for Sustainable Development’ (2015) <<https://sustainabledevelopment.un.org/post2015/transformingourworld>> accessed 31 Dec 2021; United Nations (n 14).

<sup>50</sup> There are many instances in which the Indian judiciary has ruled that they are part of the law of the land. For illustration, see *Vellore Citizens Welfare Forum v. Union of India* 1996 (5) SCC 647.

<sup>51</sup> *Goa Foundation v. The Konkan Railway Corporation* AIR 1992 BOM 471.

<sup>52</sup> *Ibid.*

<sup>53</sup> *Indian Council for Enviro-Legal Action* (n 20).

executive's domain, and thus the amendments were upheld.<sup>54</sup> It was further held that allegations concerning infringement of the main notification would be taken up before the respective High Courts, and the erring states would be directed to submit CZMP within one year.

Soon after, in the *S Jagannath* case, a petition was filed by the Gram Swaraj Movement to enforce the 1991 Notification and stop the rigorous prawn farming in the ecologically sensitive areas near the coast.<sup>55</sup> The Court ruled that any shrimp or aquaculture industry in the ecologically fragile CRZ areas should pass an environmental test since the precautionary principle and the polluter pays principle had gained acceptance under Indian laws. It was further held that a specially established authority would conduct the test by applying the twin principles and the intergenerational equity principle, and calculate the compensation for the affected people.<sup>56</sup> The onset of the 21st century witnessed some landmark cases that have shaped jurisprudence in this area. Furthermore, the discourse has gained acceleration in present times due to the vast repercussions being felt worldwide due to climate change. There is an inundation of environment-related pleas before Indian courts on account of greater awareness.

Foremost among them is the *Goa Foundation* case, wherein the judgment of the Bombay High Court allowing a holiday resort that was alleged to be falling within the CRZ area was questioned before the SCI. The High Court had cited that a balance had to be struck between preserving the ecology and permitting hotels for the State's economic development. It dismissed the writ, declaring that the permission granted was not illegal. It was alleged before the Supreme Court that the clearances had been obtained in contravention of the provisions of the EPA. It was argued that the area where the hotel was to come up should have been classified as CRZ - I and that allowing hotels to develop in such areas would result in irreversible damage to the pristine sand dunes present. After going through the approved State plans and relevant notification, the Supreme Court ruled that the area for the hotel's construction fell within CRZ - III, so the sanctions were termed to be rightfully obtained.<sup>57</sup>

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<sup>54</sup> Ibid.

<sup>55</sup> *S Jagannath* (n 20).

<sup>56</sup> Ibid.

<sup>57</sup> *Goa Foundation, Goa v. Diksha Holdings Pvt. Ltd.* AIR 2001 SC 184.



In yet another case, the Supreme Court reiterated the much-celebrated *Vellore Citizens* case findings and ruled that proper care and attention should be given to coastal areas.<sup>58</sup> This particular case is related to the Dahanu Taluka of Maharashtra, the last surviving green zone between Bombay and Surat, declared an ecologically fragile coastal area under the 1991 Notification. There was a deviation from the original developmental plan approved by the Central Government, resulting in the mushrooming of industrial activity, and the same was challenged. While deciding the case, the Court mandated establishing the authority under Section 3(3) of the EPA and implementing the 1991 Notification.<sup>59</sup>

In the *Piedade* case, the Supreme Court vehemently criticised the illegal construction activities in the prohibited areas in violation of the CRZ notification. The respondent alleged that the structural unit in question was falling well within the ambit of an NDZ. Further, it was alleged that the new construction was raised over the old without permission from the CRZ authorities. Speaking sternly, the Court ruled that the constructions raised contravened the CRZ regulations, and such obvious violations could not be condoned.<sup>60</sup>

Similarly, in the *Vaamika Island* case, specific constructions violated the 1991 and 2011 notifications in an island named Vettilla Thuruthu in the Vembanad Lake, a critically vulnerable coastal area in the State of Kerala.<sup>61</sup> It was observed that the Vembanad lake and the adjacent areas (wetland) were brought within the purview of the Ramsar Convention in 2002.<sup>62</sup> The Court also opined that India, being a party to the Convention, is obligated to protect this vulnerable wetland that is socio-economically important and use it wisely.<sup>63</sup>

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<sup>58</sup> *Vellore Citizen* (n 50); *Bittu Sehgal v. Union of India* (2001) 9 SCC 181.

<sup>59</sup> *Ibid.*

<sup>60</sup> *Piedade* (n 20).

<sup>61</sup> *Vaamika Island* (n 20).

<sup>62</sup> The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, 1971. In general wetland sites that are of international significance are designated as Ramsar sites as per the 1971 Convention. For further details about the Vembanad Lake, please see: <<https://rsis.ramsar.org/ris/1214>>accessed 21 Jan 2022.

<sup>63</sup> *Vaamika Island* (n 20).

*DLF Universal* case is an interesting judgment. In the present case, DLF, without obtaining prior clearance due to delayed permission by the relevant authorities, proceeded to construct a housing project based on a deemed clearance under Clause 8(3) of the Environmental Impact Assessment (EIA) Notification, 2006. The Court severely criticised the lethargic approach of the authorities and observed that if such an approach were permitted, it would cause grave uncertainty. Thus, by taking cognizance of the same, the Court imposed a fine of Rs. 1 crore, and warned and mandated the authorities to comply with the CRZ notifications. The Court also directed that prior clearances and necessary clarifications should be issued well within the time limits prescribed.<sup>64</sup>

Concerning constructions carried out in an NDZ without obtaining permission from the relevant authorities, the SCI in the *Maradu Municipality* case recently took a complex view and ordered the demolition of such illegal structure(s) constructed in the CRZ area.<sup>65</sup> While disposing of the case, the Court reiterated that the notification forms a part of the law of the land and thus should be strictly complied with.<sup>66</sup> As per the CRZ notification, construction of structural units in the designated coastal areas could only be permitted upon the prior approval of the Appellate Authority constituted by the Government of India. In the present dispute, construction activities on the shores of the backwaters were challenged. The construction area was a part of the tidally-influenced waterbody, and no construction could be carried out in that area as per the coastal notification. It was alleged that permissions were granted in clear violation of the legal framework governing coastal areas and that these construction activities were taking place in highly susceptible areas of CRZ - III. Hence, citing the illegalities in granting permissions, the court revoked the approval given by the local body and mandated the concurrence of the respective SCZMA as a precondition.<sup>67</sup> While ordering the

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<sup>64</sup> *The Secretary, Kerala State Coastal Management Authority v. DLF Universal Ltd.* 2018 (2) SCC 203.

<sup>65</sup> *The Kerala State Coastal Zone Management Authority v. Maradu Municipality* (2019) 7 SCC 248.

<sup>66</sup> *Ibid*; the dispute was related to construction activities on the shores of the backwaters in Ernakulam, a biological diversity hotspot and one of the most extensive wetlands in the State of Kerala.

<sup>67</sup> *Ibid*; a three-member committee was constituted by the SCI to report upon the legality of the construction and under what category the area fell. The committee submitted that the Maradu area fell under CRZ - III, an NDZ.

removal of the structures, the Court emphasised the landmark *Indian Council for Enviro-Legal Action* case, under which crucial directions were issued by the SCI for the formation of appellate authorities, and other measures for coastal protection were also spelled out.<sup>68</sup>

In the *Conservation Action Trust* case, environmental clearance by the MoEFCC for the up-gradation of the existing shipyard for recycling was under challenge before the National Green Tribunal (NGT).<sup>69</sup> In this case, NGT ruled that sustainable development should be carried out using the principle of proportionality. The NGT took a cue from Paragraph no. 35 of *T. N. Godavarman* case, wherein the Court had ruled that the benefit to a large section of the people resulting from a commercial venture has to be given primacy over difficulty resulting to a small number of people.<sup>70</sup> Employing the principle of proportionality, the tribunal stated that shunning ship-breaking activities altogether would do no good; instead, the activity needed strict and proper regulation and monitoring.

A significant judgment on mangrove protection was passed in the *Kachchh Camel Breeders* case,<sup>71</sup> whereunder the violation of the 2011 Notification by rampant mangrove clearance in the habitat of Kharai Camel living in the mangrove regions in Kachchh was alleged. The NGT emphasised the importance of mangroves as a productive ecosystem performing diverse functions, including carbon storage, water filtration, and the prevention of coastal erosion. While observing that the construction of bunds across creeks for creating salt pans had led to the death of mangroves, the tribunal directed the removal of obstruction in creeks and assessment of the quantum of the damage by the relevant authorities.<sup>72</sup>

Thus, from the above discussion, it is crystal clear that because of necessary judicial directions, the 1991 Notification was actually implemented. Every attempt to further dilute the existing CRZ protection standards has been addressed by the judiciary, and thereby, at least a minimal degree of protection has been ensured for

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<sup>68</sup> *Indian Council for Enviro-Legal Action* (n 20).

<sup>69</sup> *Conservative Action Trust v. Union of India* Appeal No. 49 of 2018.

<sup>70</sup> *T. N. Godavarman Thirumalpad v. Union of India* 2002 (10) SCC 606.

<sup>71</sup> *Kachchh Camel Breeders Association v. Union of India* Original Application No. 111/2018 and I.A. No. 20/2019.

<sup>72</sup> *Ibid.*

these vulnerable coastal stretches. At times, the judiciary has also cleared larger projects in these CRZ areas, considering the public interest involved. It is a fact that the judiciary can merely intervene and monitor the effective implementation of the CRZ notifications if warranted. However, there are inherent limitations to bridging the inadequacy of the CRZ notifications as they fall within the domains of the legislature and executive. At this juncture, it is equally essential to critically examine the adequacy of these CRZ notifications in addressing the concerns of the coastal area in detail.

### **Analysis of the CRZ Notifications**

More than a quarter-century has passed since the introduction of the first set of rules for protecting the Indian coastal ecosystem. India's long coastline of 7,500 km marks the significance of coastal areas against ever-increasing anthropogenic and development activities.<sup>73</sup> India has the distinction of being among the few countries to take steps towards protecting coastal areas by formulating a notification as early as 1991, by which several activities have been restricted in different coastal zones. However, this first notification was subjected to around 25 amendments within its lifespan of 20 years, and the scope of activities, especially in NDZs, was also expanded.<sup>74</sup> This resulted in the proliferation of environmentally unsound policies and practices.

A committee of experts headed by Prof. Swaminathan was formed after that to review the 1991 Notification and suggest integrated coastal zone management on scientific lines.<sup>75</sup> The report preached for a change from regulation to management of the coastal zones, but it was not robust enough and fell short on many grounds. However, it also pointed out the flaws in implementing the earliest notification and recommended addressing the issues and concerns of the coastal communities. In addition, it served as a harbinger for the coming of an altogether new notification in 2011.

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<sup>73</sup> Govt. of India (n 2).

<sup>74</sup> Govt. of India, Ministry of Environment and Forests, 'Final Frontier-Agenda to Protect the Ecosystem and Habitat of India's Coast for Conservation and Livelihood Security: Report of the Expert Committee on the draft Coastal Management Zone (CMZ) Notification' *Indian Environmental Portal* (16 July 2019) <[https://moef.gov.in/wp-content/uploads/2018/04/cmz\\_report\\_2.pdf](https://moef.gov.in/wp-content/uploads/2018/04/cmz_report_2.pdf)> accessed 31 Dec 2021.

<sup>75</sup> Govt. of India (n 2).

The Shailesh Nayak Committee report was revealed to the public through a right-to-information application 18 months after its submission. The report argued for the decentralisation of regulatory powers by empowering the state and local bodies over the coastal stretches.<sup>76</sup> The mandate of the committee was to scrutinise the discrepancy and complexities in the 2011 notification along with other pertinent issues of coastal states concerning this new notification.<sup>77</sup> The recommendations have been put forth to boost a range of developmental and recreational activities, including tourism and port construction.<sup>78</sup> Considering the complexities of the 2011 Notification relating to jurisdiction and definitions, it advocated for a new notification. Thus, the 2019 Notification has been brought in.

Even the 2019 Notification has been aimed at advancing tourism and recreational activities in the sensitive ecosystem like the 2011 Notification, and thus it perpetuates unsound development in CRZs.<sup>79</sup> The *raison d'être* of carrying out recreational and tourism activities in vulnerable areas amid rising tensions on water resources is unknown.<sup>80</sup> What public good can the so-called pro bono development activities bring when no good results from the excessive harms attached to activities in the long run, given the present vulnerabilities of our earth's climate? Environmentalists have raised concerns about the efficacy of the coastal protection framework as it is often diluted through amendments. Recently, an environmental action group called *Vanashakti* challenged the constitutionality of the 2019 Notification. The PIL claimed that the 2019 Notification decreased the area falling under the NDZ and reduced the prohibited activities, thereby increasing the vulnerability of coastal zones and doing away with EIAs for a range of

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<sup>76</sup> Shreshan Venkatesh, 'Sailesh Nayak Committee Report on Coastal Zone Regulations Released 18 Months After Submission' *Down To Earth* (21 June 2016) <<https://www.downtoearth.org.in/news/governance/sailesh-nayak-committee-report-on-coastal-zone-regulations-released-18-months-after-submission-54482>> accessed 30 Dec 2021.

<sup>77</sup> Govt. of India, Ministry of Environment and Forests, 'Report of the Committee to review the issues relating to the Coastal Regulation Zone Notification, 2011' <<https://www.indiaspend.com/wp-content/uploads/2020/06/Shailsh-Nayak-Committee.pdf>> accessed 30 Dec 2021.

<sup>78</sup> Ibid.

<sup>79</sup> Ishan (n 41).

<sup>80</sup> Ibid.

constructions.<sup>81</sup> However, the petitioner was asked to approach NGT as the Government of India finalised CZMP during the pendency of proceedings.<sup>82</sup> Though the 2019 Notification has received negative reviews from industrialists and environmentalists, the Government has expressed that the new notification is based on sustainable development; thus, it respects ecological concerns and empowers the state to green signal developmental activities supporting the economy.

Further, the Government is deliberating on exempting prior clearance requirements for exploratory drilling operations in intertidal areas and has invited comments from the public.<sup>83</sup> It is also attempting to retain provisional and impermanent structures with adequate safety measures. In this regard, SCZMA would grant clearances to stand-alone jetties, breakwaters, groynes, salt works, slipways, and manual erosion control bunds.<sup>84</sup> If such exemptions are brought, it will further dilute CRZ protection norms and would cause a severe threat to the fragile ecosystem.

Considering the susceptibility of the terrestrial environment adjoining coastal stretches, it is needless to point out that science and not economics should guide policymakers to bring about a just and environmentally sound regulation. Today, our society is knowledge-based, as put forth in the Earth Summit in 1992, and human activities in different areas are interconnected.<sup>85</sup> Hence, policymakers are to tread with extra care and, therefore, consider and envision the varied

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<sup>81</sup> Express News Service, 'NGO filed PIL in Bombay High Court against 2019 Coastal Regulation Zone Notification' *The Indian Express* (Mumbai, 2 April 2021) <<https://indianexpress.com/article/cities/mumbai/ngo-filed-pil-in-bombay-high-court-against-2019-coastal-regulation-zone-notification-7254907/>> accessed 30 Dec 2021.

<sup>82</sup> *Vanshakti v. Union of India* PIL No. 28 of 2021.

<sup>83</sup> Mohan Vishwa, 'Government Moots Exempting Exploratory Oil Drilling from prior CRZ nod' *The Times of India* (19 Nov 2021) <<https://timesofindia.indiatimes.com/india/government-moots-exempting-oil-drilling-from-prior-crz-nod/articleshow/87788753.cms>> accessed 30 Dec 2021; See Govt. of India, Ministry of Environment and Forests, Department of Environment, Forests and Wildlife, Coastal Regulation Zone Notification, SO 4547(E) (01 Nov 2021), <<https://moef.gov.in/en/s-o-4547e-date-01-11-2021-seeking-public-comments-on-proposed-amendments-in-coastal-regulation-zone-crz-notification-2019/>> accessed 30 Dec 2021.

<sup>84</sup> *Ibid.*

<sup>85</sup> United Nations (n 14).

ramifications of different policies in the environmental domain.<sup>86</sup> The need of the hour is an inclusive process taking the views and concerns of all the stakeholders connected with the CRZ.<sup>87</sup>

### **Conclusion**

A range of curative steps could be considered for the wise use of CRZs. Priority should be given to the formulation and finalisation of CZMP for the meaningful implementation of CRZ Notification after consultation with all the stakeholders, including coastal communities. Also, there is a need to strengthen the CZMA by providing them with the power to prosecute and punish the violators appropriately. It may be noted that repeated changes to the coastal legal framework have toned down its efficacy, and thus, development activities have been permitted without any scientific basis. The continuous amendment process should be halted for certainty in CRZ conservation. This uncertainty in coastal protection, clubbed with the non-implementation of the prevailing provisions, has induced the judiciary to step in for the conservation of the coastal ecosystem. Considering the lacunas in the existing CRZ notifications, as discussed above, policymakers may consider enacting exclusive legislation on coastal zone protection by introducing punitive measures, which are patently lacking in the current framework. The world is to go green now as there is a more substantial need today than ever for sustainable developmental activities. The only way forward is for environmental protection and industrial growth to go hand in hand for the ultimate benefit of humanity in the long run.

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<sup>86</sup> Frank Ahlhorn, *Long Term Perspective in Coastal Zone Development: Multifunctional Coastal Protection Zones* (Springer-Verlag Berlin and Heidelberg GmbH & Co. Kg 2009) 165; United Nations (n 13).

<sup>87</sup> Ahlhorn (n 86); Richard Munton, 'Deliberative Democracy and Environmental Decision-Making' in F. Berkhout, M. Leach and I. Scoones (eds), *Negotiating environmental change: New Perspectives from Social Science* (Edward Elgar 2003) 109–136.