

# Chapter 4 An appraisal of Coastal Regulation Law in tsunami-affected mainland India

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## Introduction

The Indian coastline is a contested space. Tremendous pressure drives development activities aimed at meeting livelihood requirements of coastal communities and the growth of a developing economy. Coastal and marine ecosystems are the backbone of a fisheries economy that supports livelihoods of millions directly and several more indirectly. The Indian coastline draws an increasing number of tourists both domestic and international driving the augmenting of tourist infrastructure each year. The location of ports and harbours makes the coasts a favoured location for situating industries attracted by transportation facilities. The country's burgeoning populations follow these coastal locations, Mumbai and Chennai having nearly run their course in being able to support more people. With different stakeholders contesting usage rights over the coast, official legislation has been introduced as proof of the State's resolution of the development-conservation stalemate.

The coast is governed by several official legislations that regulate 'development' activities including construction, industrial activity and coastal infrastructure. Some of these legislations have an explicit mandate to protect coastal ecology and available natural resources of the region. Other laws govern the establishment of projects and schemes that use these resources for the growth of the local and national economic growth. One such protective legislation is the CRZ Notification that was promulgated in 1991 using the provisions of the Environment (Protection) Act, 1986 and the Environment (Protection) Rules, 1986. Through such a notification, the coastline of the country was identified as an ecologically sensitive area, where development activities were regulated.

This report has been prepared as part of the Post-Tsunami Environment Initiative<sup>1</sup> (PTEI) to examine the functioning of the Coastal Regulation Zone Notification, 1991, introduced specifically to regulate development activities on the Indian coast. The coastal areas in the tsunami-affected states have been used over several years in a manner that has created lasting and significant impacts on flora, fauna and geomorphologic structures many of which may be irreversible (see Chapter 1). Anthropogenic activities on the coasts have resulted in loss of open beaches, degradation of mangroves and sand dunes, destruction of coral reefs and seagrass beds thus impacting fisheries and other marine life (See Chapter 3c). In addition, the coastline also faces natural phenomena such as cyclones, storm surges and tidal waves, which exacerbate risks to infrastructure and people's lives.

## Post-tsunami interest in the CRZ Notification

Although the legislation came into force in 1991, the implementation of the law has suffered tremendously for reasons that this study explores. The problem of poor implementation is acknowledged each time a disaster occurs on the coast (Anon, 2005a). The 2004 Indian Ocean tsunami however, precipitated attention at national and international scales on the subject of implementation. Connections were being made between non-implementation and violations of the CRZ Notification and impacts on

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coastal areas in the face of the disaster.<sup>2</sup> The recently released Comptroller and Auditor General of India report states in paragraph 5.1.1, 'The Ministry of Environment and Forests did not enforce the Coastal Regulation Zone Notification effectively resulting in extensive destruction in coastal areas due to industrial expansion' (Comptroller Auditor General of India, 2006).

In Kerala, the tsunami impacted the districts of Ernakulam, Alapuzha and Kollam the most. For some years now, the Kerala state government is alleged to have vacillated on the CRZ Notification even claiming that it was not 'practical' for the state, in light of the high population density on its coasts. The government is known to have sought the dilution of the regulatory clauses as well as reduction in setbacks.<sup>3</sup> However, post-tsunami, there has been a re-think on this and an all-party meeting in January 2005 decided that rehabilitation would not be undertaken between the sea and coastal roads. In the post-tsunami context, the need for better implementation of the CRZ appears to have found agreement among the bureaucrats of the state as well as non-governmental organisations and trade unions.<sup>4</sup>

In Tamil Nadu, the tsunami ravaged extensive areas in 13 coastal districts with Nagapattinam, Cuddalore and Kanyakumari being the worst hit. It has been established that the impact of the tsunami was maximum in areas that are low and flat and devoid of any vegetation (Anon. 2006a). Low-lying areas such as Nagapattinam are prone to inundation by the sea. The Government of Tamil Nadu has set itself the task of enhancing protection to the coast and the coastal people through a series of measures including the erection of sea walls, 'bioshields', preparing coastal vulnerability maps, water quality monitoring, bio-remediation of coastal water bodies and capacity building for coastal management, and to implement the provisions of the CRZ Notification. The Tamil Nadu Government has begun the execution of some of these projects through the World Bank funded Emergency Tsunami Reconstruction Project (Anon, *ibid*).

While coastal areas in Andhra Pradesh did not experience the devastating impacts of the tsunami that Tamil Nadu did, it certainly sparked concerns about the implementation of the coastal law in this state. There were demands from sections of fisherfolk for pucca houses to be provided on the seashore for fishing communities and that larger violations of the CRZ should be tackled first instead of harassing fishing groups (Anon. 2005b). While fisher groups from other parts of the coast have echoed this sentiment as well, after the tsunami, civil society groups in Andhra Pradesh have continued to send petitions demanding the implementation of the law and opposing moves to dilute it (Anon. 2005c; Anon. 2005d). This analysis of the law tries to piece together the manner in which the CRZ Notification played a role in coastal protection in these states and the various reasons for this.

The Government of India embarked on making changes to the CRZ Notification even prior to the 2004 tsunami. However the content and direction of any legislative change mandates a thorough analysis of problems with the existing legal framework. This analysis provided here is a beginning in this direction.

### Analytical framework and methodological notes

Several approaches are available to examine the functioning of laws and these vary with the theme under study. Within the nine-month project period, two simple aims were identified for the policy studies. The CRZ Notification was selected for a policy framework analysis in the affected states in the first phase of the PTEI. The first aim was to construct a scenario on the performance of the CRZ Notification in the tsunami-affected states of the Indian mainland, using available literature and through a round of interviews and discussions with key informants. The second endeavour was to make public, the available

information collected from dispersed sources, on the experience of CRZ implementation in the affected states, via the PTEI website ([www.ptei-india-org](http://www.ptei-india-org)).

The CRZ Notification can be regarded as an official 'conservation' law primarily since it is derived from the Environment (Protection) Act, 1986 whereby it regulates activities and use of coastal spaces, through a system of regulation, employing a specific approach of governance. In order to assess how the law performed as a conservation law, it was necessary to examine specific parameters related to environment protection / conservation, the overall governance design that it would employ and finally a closer examination of telling signs of its efficiency.

The questions of the study were related to the performance of the CRZ Notification, through the indices of **1) Environment Protection, 2) Governance and 3) Efficiency**. These questions directed the research effort and were guided by certain parameters that defined each of indices.

*QI. How did the CRZ Notification in the affected-states function as an environment protection/ conservation law since its promulgation? The parameters examined were:*

1. Genesis of the law:

- Arguments, demands & public discussions from civil society, political representatives & people's groups.
- Discussions in parliament and submissions to parliament.
- Response from political leaders, correspondence between the central and state governments and civil society.
- Discussions on draft legislations if any.

2. Stated objectives / disposition of the law:

- What is the law's stated objective and purpose as identified from its clauses?
- Problems or threats identified in the legal text, means to address these, clauses that promote or strengthen environmentally positive development / use practices on the coast?

3. Consistency and clarity of objective (as stated in specific legal clauses/ measures)

4. Flexibility and adaptability:

- To address changing development needs on the coast
- Growing scientific information on the coast

5. Scientific basis (socio-economic and ecological)

- Extent to which information from social science informs decisions of implementing agencies, government committees and legislation review committees
- Composition of committee members working on legal implementation

6. Approach and design for protection

- What role does the committee envisage for various stakeholders in implementation, specifically for state agencies and for local communities?

*QII. How was the implementation of the CRZ Notification conducted with respect to specific governance related parameters, namely, a) transparency, b) accountability, c) participation and d) capacity? The parameters examined were:*

1. Transparency:

- Policy drafts placed in the public domain
- Access to relevant data, documents, and analysis on which draft policies are based

- Evidence of comments solicited from civil society
- Efforts made to incorporate views from vulnerable / disadvantaged communities
- Transparency in decision-making processes

## 2. Accountability

- Provisions within the law to prevent conflict of interest
- Existence of appellate redressal agencies in the implementation framework
- Access to redressal agencies

## 3. Participation

- Existing avenues and procedures therein for public participation
- Degree of public involvement in decision-making, opportunities for hearings, feedback on results
- Presence of non-official members in policy-making bodies

## 4. Capacity

- Capacity within states to ensure the implementation of laws
- Capacities with civil society groups to effectively participate in law-making
- Assessments of skills and expertise among policy makers and implementers
- Extent of information with and awareness of stakeholders regarding the law
- Level of participation of stakeholders in policy implementation

*QIII. What were the provisions of the law and experiences in implementation that inhibited or contributed to its overall efficiency as a conservation law? The parameters examined were:*

### 1. Coherence in legal text

### 2. Consistency in emphasis

### 3. Schema for implementation (including planned and actual implementation)

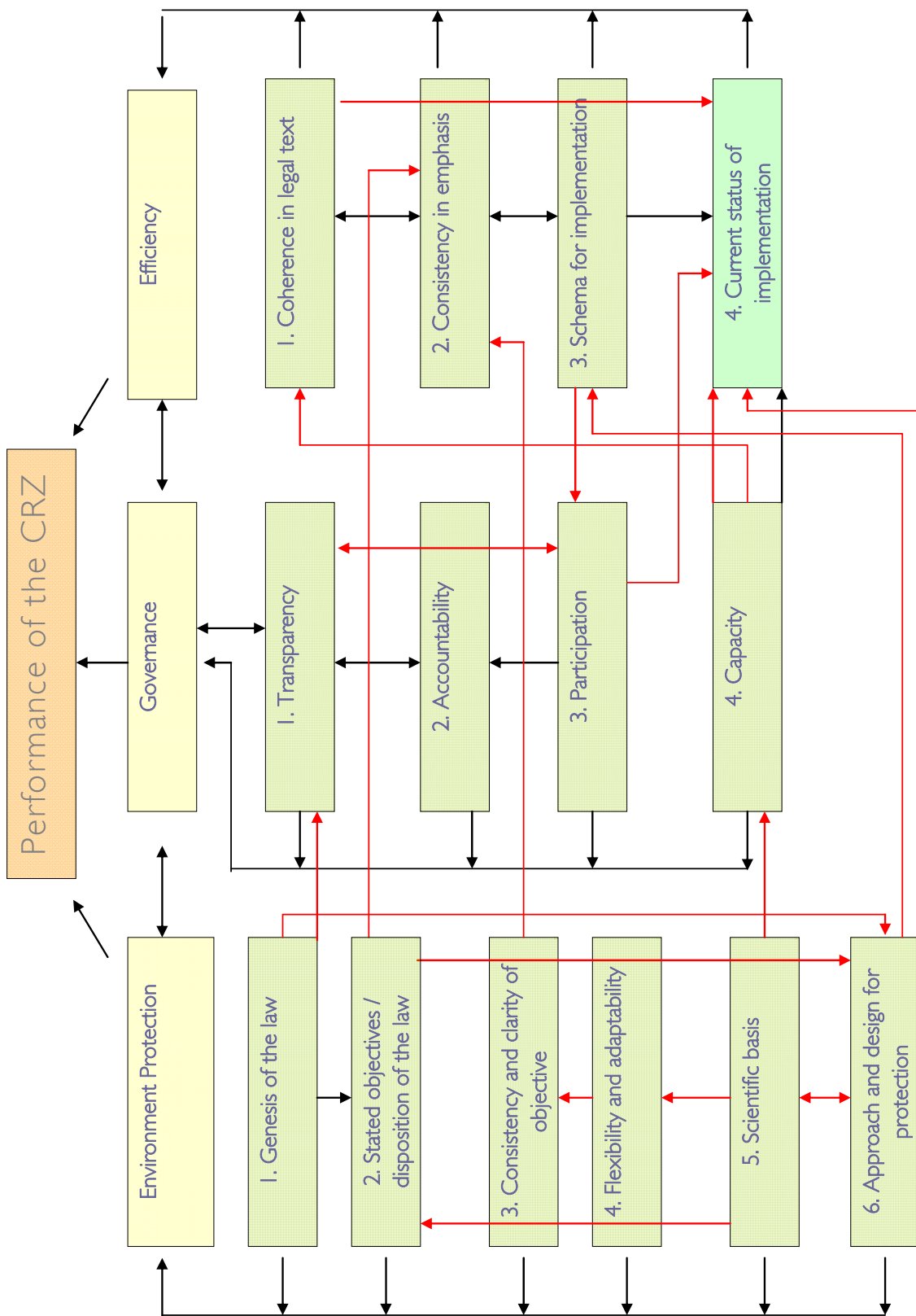
- Financial allocations
- Institutional arrangements
- Monitoring and compliance

### 4. Current status of implementation

## Diagrammatic representation

Figure 1 presents the analytical framework through a diagrammatic representation. The study design presumes that information on the parameters under the three indices of environment protection, governance and efficiency, would eventually illustrate the law's performance as a conservation law. These parameters also influence each other in certain straightforward ways, which were anticipated at the beginning of the study. For example, it was anticipated that the genesis of the law would determine its stated objectives. Similarly, greater transparency would signify greater accountability and vice versa. The black arrows in Figure 1 indicate the interplay of the parameters and indices, which the study anticipated and which are explicated in the analysis. Besides these linkages, the study itself brought to light certain other interactions between these parameters, which are indicated by the red arrows. The details of these interactions are explained in the different analytical sections of this document. The study was able to provide information on each of these factors, some in greater degree than others.

Figure 1: Diagrammatic Representation



## Methods

Field trips were conducted only in the states of Tamil Nadu and Kerala for this study. Secondary data was gathered from the MoEF website, government departments, NGOs and individuals and from personal collections of the researchers. The data thus compiled included the primary notification and the amendments made to it from 1991 to 2005, committee reports on review of the CRZ Notification and recommendations made thereto, communication by NGOs to committees, ministries and government agencies regarding CRZ related issues, petitions filed by public interest groups and court orders and judicial documents. Recent media reports mostly dating from 2005 from internet sources were compiled and examined for the purpose of this report.

In addition to secondary information, primary data was obtained from key informants, comprising a selection of environmental NGO representatives, environment lawyers, and experts in the social and natural sciences. Discussions were also held with members of State Coastal Zone Management Authorities - the institutions set up to oversee the implementation of CRZ at the state level. Semi-structured interviews were conducted, and the data therein was matched with each of the parameters associated with the indices of environment protection, governance and efficiency.

## Limitations

The study provides only a broad overview of how the CRZ Notification performed as a conservation law. However, in order to satisfactorily answer some of the questions outlined above, a more detailed and rigorous research design would be required, encompassing both qualitative and quantitative methods and would need to construct a detailed analysis of secondary and primary data on each of the parameters. The timeframe and resources available at the disposal of the researchers was not adequate to conduct a study of this scale. Nevertheless, this study makes a beginning for more detailed research and provides a useful framework to embark on.

Researching controversial subjects comes with problems that become inherent to it. The topics being discussed are not apolitical and have generated a fair amount of controversy, even prior to the tsunami. This directly limits the amount of information researchers are given access to, either in interviews or even by means of documents and records. The study therefore could not apply in its analysis the vast amounts of data contained in inaccessible government files, minutes of meetings of CRZ implementing agencies and importantly, the rich information revealed in interviews that were strictly off the record. The researchers have utilised information obtained by environmental groups in the country using the Right to Information Act, which has been valuable.

## I. Environment protection by the CRZ

The crux of the Environment (Protection) Act, 1986 and its Rules from which the CRZ Notification is derived is that it substantially empowers the Centre [the concerned ministry being the Ministry of Environment and Forests (MoEF)] to take actions 'for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution'. This includes the promulgation of specified notifications for this purpose. The CRZ Notification was issued under Section 3(1) and Section 3(2)(v) of the Environment (Protection) Act, 1986. These clauses outline the powers of the Central Government to protect and improve the quality of the environment and take preventive measures to control and abate environmental pollution. This includes the power to delineate areas where anthropogenic activities can be regulated and restricted (Sridhar, 2005). A copy of the notification compiling amendments until 24th July 2003 is available at [www.ptei-india.org](http://www.ptei-india.org).

## 1.1 Genesis and initial objectives

### Fishing communities and the CRZ

There is very little documentation on the genesis of the CRZ Notification and the roles played by fisher community leaders, NGOs, environmentalists, government agencies and politicians in this process. The information detailed below on the role of fisher groups in the drafting of this law is pieced together from discussions and interviews with fisherfolk representatives and from available secondary data.

There are no detailed studies that explain the relations between fisher communities and coastal lands that we could base further discussions or analysis on. Most studies on fisher communities only mention the absence of any official legal ownership rights for fishers over coastal lands (Kurien & Paul, 2001; Bavinck, 2001; Southwold-Llewellyn, 2006). Kurien and Paul, in their studies on social security of fisher communities in Kerala state, '*One of the paramount reasons for the poor quality of life and the sub-standard conditions of habitat of the marine fishing communities in Kerala State is the crowding of the whole community on a narrow strip of land along the length of Kerala's coastline. This is a result of the highly dispersed nature of the fishery resource and the consequent decentralised nature of fishing operations using beach landing crafts. Every fisherman prefers to live on the seafront near the point where he lands his craft and from where he can observe the sea. As a result the population density in marine fishing villages was around 2652 persons per square kilometre. This is in comparison to the state figure of 742 per square kilometre, which is already one of the highest in the country.*' (Kurien & Paul, 2000; Kurien & Paul, 2001: 12). They report that in the early 1980s, a large section of fisher households built thatched huts on land even beyond the cadastral survey. This would later have implications on whether their lands were considered 'authorised constructions' under the CRZ Notification or not. Kurien's brief comparison between the habitats of fishing communities and that of the rest of Kerala, is one of the few references in literature on the nature of fisher settlements (Kurien, 1995).

In general, the traditional occupation of fishing seems to demand a closer association with the sea than with the land. This general view was endorsed by T.S.S. Mani an activist representing the interests of fishing communities in Tamil Nadu and an advocate of several fisherfolk causes. He states:

*The fisher people have been the traditional inhabitants of the coast. Their occupation of the land adjoining the sea was entrenched in their association with the sea. They never felt it necessary to prove their occupation of coastal lands through land pattas. In many areas they did not feel the need for this also because all their shore areas were in the trusteeship of temples or community institutions.5*

The insignificance that fishers accorded to land-based regulations began to affect them as coastal lands began to be taken over for development projects. Large commercial ports, harbours and industries were the first to be located on coastal lands in all the states. In 1968, the Slum Clearance Board was handed over the land belonging to Nochikuppam in Chennai. The slums were moved and small apartments were constructed for fisher families. It was at this time that the significance of having recorded rights began to be appreciated by the fisher leaders of this region. In subsequent years, other fishing hamlets further south of Chennai saw the establishment of the VGP and MGM beach resorts and entertainment complexes on community lands belonging to the fisherfolk. T.S.S Mani states that the hamlet panchayats in these regions were instrumental in facilitating the handover of these lands by the community.

There were several threats to the coastal lands around the time when the CRZ Notification came into force such as artificial shrimp farms, chemical plants, commercial harbours, power projects and the nuclear reactor at Kalpakkam. The people in this region and many other areas did raise concerns about

displacement and environmental impacts although they did not initially pose strident resistance or opposition against development projects per se.<sup>6</sup> These experiences made it evident to policy makers and other civil society groups that development projects had lasting impacts on both the coastal environment and traditional rights of the fisher people and therefore needed regulation.

While fisher peoples' organisations such as the National Fishworkers' Forum (NFF) have campaigned on various coastal environmental issues, details on their involvement in the demand for this coastal law or on the initial lobbying efforts could not be gathered from this study's interviews or in available literature.

#### *Environmental activism and the CRZ*

Since the early 1980s environmental lobbies in the country (distinct from the mass-based fisher organisations) have been strident in articulating the need to protect the coast and petitioned the Late Prime Minister of India, Mrs. Indira Gandhi who was well known for extending her sympathies on green matters.<sup>7</sup> This initiated the legislating process for coastal protection.

The concept of coastal zone management through the regulation of development activities was thus introduced in the country in 1981, when Mrs. Indira Gandhi, wrote to the Chief Ministers of all the coastal states to keep the beaches clear of all activities within 500m of the High Tide Line.<sup>8</sup> The intention was to prevent all kinds of unregulated development in the coastal areas. She was sensitive to concerns in industrial coastal cities and explicitly stated the need for a total prohibition on dumping of industrial waste in this environmentally sensitive area. That problems of coastal pollution from dumping continued long after Mrs. Gandhi's directive and even after the CRZ Notification was introduced<sup>9</sup> is telling of the chasm between legislating and implementing. However, many state that during Mrs. Gandhi's time, the directive was taken seriously and better respected, than the present CRZ Notification that followed it.<sup>10</sup>

Though the Prime Minister's directive had questionable legal backing, it still had considerable impact. Firstly, the *Environmental Guidelines for Siting of Industry* brought forth by the Ministry of Environment and Forests in 1985 stipulated that a distance of "at least ½ km from high tide line" be avoided for the location of industry. The *Environmental Guidelines for Thermal Power Plants (TPS)* brought forth in 1987 went much further. It stated, "In order to protect coastal areas above 500 m. of the HTL, a buffer zone of 5 km should be kept free of any TPS".

Subsequent to her letter, which was considered to be more in the nature of a directive, a seven member Working Group (later expanded to nine members) under the chairmanship of Dr. Nilay Choudhuri, Chairman, Central Board for the Prevention and Control of Water Pollution was appointed. The brief of the Working Group was to prepare appropriate guidelines for environmental management of beaches and development on or near beaches (Chainani, *unpublished*).

This Working Group noted that "the Department of Environment has been advising the concerned States to prepare a status report in respect of 500 metres area (sic) and then follow it up with a master plan for development and control, along with a compatible development beyond the limits in the hinterland areas." Regarding the direct impact of developmental activities on the land-sea interface they stated, "adverse direct impact is possible within 500 metres from the high water mark or beyond two kilometres from it" (Chainani, *ibid*).

Based on the findings of the Working Group, in 1983, the Central Government circulated *Environmental Guidelines for the Development of Beaches* to all coastal states and Union Territories

(Thomas, 2006). By the definition in the guidelines, beaches were inclusive of all coastal areas of the country. The Department of Environment also asked State Governments to get Coastal Zone Management Plans (CZMPs) prepared for their respective coastal stretches. The state governments did not respond; except for very few coastal stretches, no CZMPs were prepared<sup>11</sup> and it is speculated that this is possibly due to the absence of a statutory basis at that time (Chainani, *ibid*).

The period of the 1980s saw a lot of development planning for the Extended Bombay Metropolitan Region. Coastal protection efforts during this time, armed with Mrs. Gandhi's directive, was part of the planning agenda owing to the fastidious efforts of the activists from the Bombay Environment Action Group and responsiveness of several bureaucrats to these concerns. The experience gained by BEAG in this process was to set the tone for their active role in the promulgation of the notification.

When Rajiv Gandhi became Prime Minister, pressure mounted to relax Mrs. Gandhi's directive. Relaxations were especially requested for tourism facilities in areas such as Goa, Puri-Konark, Madras-Mahabulipuram and Trivandrum. In June 1986, the government set up an inter-ministerial committee to consider proposals for tourism projects within the 500 metres limit at the above locations. The Committee evolved certain guidelines of which the most important was that no construction would be permitted on the sandy stretches or within 200 metres of the high tide line (Chainani, *ibid*). Other safeguards were also recommended and these were to be factored into the CRZ Notification, which took shape in subsequent years. In this manner, various coastal issues came to enter the consciousness of law-makers and those lobbying for these legal protection measures.

There were repeated requests from states to relax the guidelines mainly for unhindered tourism development. Simultaneously, efforts were stepped up by environmentalists to legalise Mrs. Gandhi's directive by declaring areas upto 500 m from the HTL as a 'restricted area' under section 3(2)(v) of the Environment (Protection) Act, 1986. A draft notification was gazetted for the first time and opened for public comment on 27th July 1990, and instead of the usual 60 days prescribed by the Act, comments were solicited up till November 1st 1990. A public hearing was held on Nov 14th 1990 (Chainani, *ibid*). However, it is not known if detailed discussions were held with all state governments.<sup>12</sup> The notification was re-gazetted after being altered on 15th December 1990. More than 500 objections were received during the twin rounds of gazetting (Chainani, *ibid*). Ironically, this practice of inviting public comment on the notification was dropped in subsequent amendments of this law.

It was in 1991, between changes in the political parties in power at the centre, and bureaucratic reshuffling that the Ministry of Environment and Forests finally gazetted the Coastal Regulation Zone Notification.<sup>13</sup> The notification was designed to provide graded protection to regions based on zonation and the degree to which they were already developed. Areas which are categorised as CRZ I have the highest degree of protection, followed by CRZ III which are underdeveloped areas (both rural and urban spaces). CRZ II comprises all 'developed areas'<sup>14</sup> and requires a lesser degree of protection.

The period of the 1980's was also a time when the NFF and other fisher unions were slowly beginning to get organised. Chainani's detailed piecing together of the genesis of the CRZ notification does not make any indication of the participation of this constituency that was growing in strength, in the drafting process of this law. In fact there were other fisher groups who did not share the view that the CRZ was going to be a beneficial law for fishers. In Kerala, the National Fishworkers' Forum and the Kerala Swatantra Matsya Tozhilali Federation (Kerala Independent Fishworkers' Federation) strongly supported the CRZ. Their leaders state that at that time, all the other trade unions representing fisher

issues in Kerala, opposed it stating that the notification prevented fishers from building their residences on the coast. These other unions appear to have either not understood the provisions of the law or had adopted only a politically motivated position.<sup>15</sup> It was through awareness programmes and training sessions by groups such as EQUATIONS, Bangalore and the Coastal Action Network in Tamil Nadu in the early 90s that NGOs and community groups working on coastal issues understood the importance of the CRZ.

The CRZ Notification was a shot in the arm to civil society groups in Tamil Nadu, which were struggling against the impacts of development activities especially the shrimp industry. The resistance against the shrimp industry at the national level in India began in 1992 and gained momentum between 1993-94. Community groups came together under the banner of People's Alliance Against Shrimp Industries (PASI).<sup>16</sup> As a result of the growing movement against this industry, the High Court of Tamil Nadu issued a ban on all the shrimp farms violating the Coastal Regulation Zone (CRZ) Notification, which was later upheld by the Supreme Court of India in 1996 (also known as the 'Jaganath case').<sup>17</sup> In effect, all shrimp farm activities within 500m of high tide level (except those defined as traditional and improved traditional type) in the country were declared illegal.<sup>18</sup>

### **1.2 Subsequent changes in objective**

The CRZ Notification specifically aimed at protecting coastal habitats through clauses that regulate or prohibit the use of these areas or resources in ways that could cause harm or destroy these habitats. Over time, changes through amendments and divergence in interpretation of these clauses diluted this original objective. The provisions of the notification for the protection of certain ecosystem components is detailed below:

*Mangroves* – The CRZ Notification does include mangroves in CRZ-I, and all states are required to demarcate these areas in their CZMPs. The MoEF in its conditional approval letter dated 27th September 1996, stated as one of its conditions that all mangroves having an area over 1000 sq.km should be considered as CRZ –I areas with a buffer area of at least 50 metres. Many State Governments interpret this as excluding all mangroves having an area less than 1000sq m from CRZ -I. Therefore many fringing mangrove areas find themselves excluded from the CRZ –I category.

*Sand Dunes and Open Beaches* - dressing or altering of sand dunes, natural features including landscape changes for beautification, recreational and other such purposes are prohibited by the notification. Extraction of sand, levelling or digging of sandy stretches except for the structural foundation of buildings is prohibited. Swimming pools are also not permitted for hotels, resorts within 500 metres of the High Tide Line in CRZ III areas. Mining of sands, rocks and other substrata materials except those rare minerals not available outside the CRZ areas and exploration and extraction of Oil and Natural Gas are not permitted (except in the Andaman & Nicobar Islands). The mining of rare minerals not found elsewhere is permitted. The upper time limit for the use of sand from the beaches for construction purposes has been repeatedly extended until 2003 in the Andaman & Nicobar Islands (ANI). This is otherwise a prohibited activity under CRZ.

*Coral Reefs* - The use of corals from the beaches and coastal waters for construction and other purposes is illegal in the CRZ. Dredging and underwater blasting in and around coral formations is not to be permitted in CRZ IV.

*Coastal Forests* – These are not mentioned specifically in the notification. However, if coastal forests were Reserved Forests located within the CRZ then they would be protected by the notification. Therefore the CRZ does not include forests on private lands or under other classifications.

*Ground Water* – Drawing ground water is completely prohibited within 200m of the CRZ. Within 200-500m manual drawing of ground water is permitted (exception for the ANI region).

One of the functions of the CZMAs is to identify areas, which are ecologically sensitive so that these can be demarcated in the CZMP and provided adequate protection under the CRZ Notification. However, interviews did not reveal whether the CZMA was at all involved in either identifying such areas to be included in the CZMPs or whether they undertook any other similar initiatives.

The disposition of the law was originally to protect the environment. The text of the law and the legal clauses from where it derives its powers make this explicit. In addition, this interpretation is also available in the 1996 judgement of the Supreme Court,<sup>19</sup> which explains the objective of the CRZ Notification clearly. It is meant to control ecological damage to coastal areas through pollution, maintain coastal livelihood security, uphold the traditional rights of fishermen and maintain the aesthetic value of the coast.<sup>20</sup> The literature analysing the CRZ legislation also ascribes similar objectives to the law. With subsequent amendments, the objective is no longer recognisable in the text of the law and the original purpose appears to be disposed off by these dilutions (See section 1.3 on Flexibility and adaptability of the law). The most striking change is that the original law envisioned permitting only activities requiring the waterfront or foreshore in the CRZ area, but each dilution permitted new industries (not necessarily 'coastal' in nature) into this sensitive zone (Goenka, 2000;<sup>21</sup> Divan and Rosencranz, 2001; Upadhyay and Upadhyay, 2002; Sridhar, 2005). Annexure 1 indicates the activities that can be allowed within the CRZ by obtaining permissions from specified agencies.

The earlier section on the objectives of the CRZ Notification alludes to the role the law played in effecting environment protection on the coast. However, it appears that the very spirit of the notification underwent significant transformation, and in its present form is unidentifiable from its text.

### ***1.3 Flexibility and adaptability of the law***

The CRZ Notification is a highly flexible legislation given the manner in which it is worded, and the fact that as a notification the MoEF can amend it. However, this flexibility has not at all been beneficial to meet environmental challenges and has seldom been used to respond to the need for changing protection and regulation needs. On the contrary, the notification's flexibility has been used significantly to allow for increasing developmental activity on the coastal stretch without any studies on carrying capacity or environmental damage on which to base these decisions.

There have been 19 amendments to the notification since 1991 and these have mainly been in the following areas.

- The clause stating that creeks and river bodies need to be at least 100 m was changed by the August 1994 amendment, which reduced it to 50m. This was later reverted to 100m by order of the Supreme Court dated April 1996.
- The NDZ was reduced in the Andaman and Nicobar Islands (ANI) and the Lakshadweep Islands for tourism. Building relaxations were also introduced with this amendment in July 2003.
- The demolition or reconstruction of buildings of archaeological/historical importance /public use was made permissible with MoEF clearance since the April 2003 amendment.
- Repeated extensions for sand mining in the ANI have been granted by the MoEF through amendments in January 1997, April 1998, September 1998, September 2000, October 2001 and January 2003. In the original notification, sand mining was to be phased out on a permanent basis making it a prohibited activity after a first deadline of 3<sup>rd</sup> March 1998.

- Projects for power generation from non-conventional energy sources, desalination plants, airstrips, storage of non-hazardous cargo all became permissible with the amendment in October 2002.
- Non-polluting units such as Information Technology and other service sector units have been allowed in the CRZ of SEZs since May 2002.
- Department of Atomic Energy projects, pipelines and related constructions have been permitted; provisional permissions have been given to projects for the receipt and storage of petroleum products, LNG and facilities for regasification through the April 2001 amendment.
- Land reclamation in certain cases has been allowed since April 2001. The original clause allowed this only for anti-erosion measures/maintenance of waterways etc.
- Mining was allowed as part of Oil and Natural Gas exploration/extraction by the April 2001 amendment.
- Operational constructions for ports and harbours and light houses and constructions for activities such as jetties, wharves, quays and slipways, pipelines, conveying systems, transmission lines were added to the list of permissible activities that need MoEF clearance through the April 2001 amendment.

It should be emphasised that enhanced monitoring or impact assessments accompanied none of these relaxations. Nor did any of these amendments contribute to greater procedural clarity.

The only amendments that have been made to clarify issues that were ambiguous in the notification are the following:

- The December 1998 amendment made some effort at standardising the method for HTL demarcation and also provided a definition of the HTL. The May 2002 notification stated that the CRZ for rivers and creeks was to include areas up to the point in the river where salinity was 5ppt and above.
- The Central Government's rationale for introducing the 22nd April 2003 amendment was that large sized projects were being implemented without clearance from the MoEF and that this resulted in the destruction of mangroves, depletion of ground water and certain other activities involving ecological damage. However, there were other motivations for this amendment than what was stated. The amendment actually does little to stem the ecological destruction alluded to in its rationale. What this amendment merely did was include one more item on its list of activities requiring permission from the Centre. The amendment stated, that the demolition or reconstruction of buildings of archaeological or historical importance, heritage buildings and buildings under public use (defined in the amendment as including 'use for purposes of worship, education, medical care and cultural activities). This came at a time when the then Chief Minister Dr. J.Jayalalitha of the ruling All India Anna Dravida Munetra Kazhagam (AIADMK) party planned on demolishing the Queen Mary's College on the Chennai coast for the construction of a new government secretariat. The opposition party Dravida Munetra Kazhagam (DMK) is alleged to have orchestrated the introduction of this new amendment through the then Minister of Environment and Forests, T. R. Baalu who belonged to the DMK as well.<sup>22</sup>

#### **1.4 Scientific basis (social and ecological)**

##### *Environmental and ecological basis*

Various constituencies have questioned the scientific validity of the CRZ Notification at various times. The question of its scientific validity has been prompted by different motivations with environmentalists, industry even the Ministry of Environment and Forests raising this issue. In fact the constitution of the Swaminathan Committee to review the CRZ Notification was a barefaced admission by the MoEF that its

own notification could not stand the scrutiny of science. But the criticism of the law on these grounds is not fair without stating that the CRZ Notification was not designed to be a law grounded in the natural sciences. The section of the CRZ genesis earlier indicates that in its initial evolution, it was planned along the lines of zoning law with the idea of regulating known development threats (such as industry or tourism) here. The design of the law itself was perhaps guided by those who placed greater emphasis on firstly finding acceptance for the notification with the Ministry of Environment and Forests and using the political climate to apply this on the coastal states. Some analysts of the law opine that perhaps the current climate of coalition politics and development pressure would pose greater challenge for the acceptance of such a law by the states.<sup>23</sup>

The 500m distance from the HTL, which defines the CRZ area was arrived at arbitrarily. However, the zonation of areas into CRZ categories is left to the CZMP process. This process had it been undertaken in a well planned and participatory manner, could have produced a robust scientific document to guide development along the coast. The planning process could be supported by a series of assessments on the environmental sensitivity of specific areas, the carrying capacities for polluting activities, areas that are vulnerable to natural disasters due to their environmental (both natural and human made) characteristics. But this was not the case, and owes more to the factor of political will just drafting oversight.

There were seven committees set up by the MoEF to look at the CRZ Notification and suggest changes to it. Based on their recommendations, the notification went through a series of amendments. While the rationale for most of them can only be inferred from the content of the amendment, the few amendments for which a rationale has been stated do not indicate any scientific environmental research guiding these changes. Although the ostensible reason for setting up the Swaminathan committee was to recommend changes to the regulation along scientific lines, reviews of this Committee report reveal that its recommendations also lack scientific rigour (Sridhar *et al.*, 2006). Notwithstanding the growing concern with the Swaminathan Report, it continues to drive legislative change and is telling of the MoEF's seriousness about science-driven management.

It is not clear whether projects located within the CRZ are themselves being undertaken following an adequate scientific understanding of impacts. The environment clearance process under the CRZ Notification, at the level of the MoEF, does not require that the impact assessment studies be made public. At the level of the SCZMAs, detailed environment impact assessments are not even expected. Therefore projects are cleared without a full understanding of their potential implications. If the experience with CRZ implementation were an indicator of the role of science in environmental decision-making, it would be assigned a marginal, and likely token, role.

#### *Social science basis*

The CRZ Notification is completely devoid of any understanding of the socio-cultural dynamics on the coast. The fisher communities who occupy the area governed by the CRZ Notification did not have any role to play in its creation as seen from the earlier section on its genesis. At the time when the notification came into force, they were being pushed to the margins by large-scale acquisition of coastal lands. Despite that, the notification did not make a clear statement regarding the protection of coastal lands for the well being of a community whose primary and in some cases sole dependence, was on the natural productivity of coastal areas.

This poor reflection of socio-cultural aspects of fisher communities and their modes of community organisation and economy resulted in a notification that was imposed upon them rather than

one which emerged from their needs. The simple statistics available about these communities such as number of fishing villages, settlement patterns, demographics, and other livelihood related data were not adequate for appropriate planning, as noted by their near absence in the Coastal Zone Management Plans prepared by state governments. As a result, the CRZ Notification governs areas that are community owned and under traditional governance institutions for managing occupations that evolved through generations. The lawmakers unfortunately accorded no role for these institutions and did not even attempt to understand the strengths and weaknesses of communities in coastal management.

### 1.5 Approach and design for protection

The discussion on the approach of the notification is limited by the fact that there was no clear articulation on this aspect, and much needs to be inferred from the experience of implementation. It can be argued that the intended approach was participatory, scientific and inclusive (if we use the CZMP processes as a reference), but the effected approach (evident from the text, its amendments and the implementation) tells another story.

The section on the genesis of the notification indicates the design that the notification adopted for protection. The CRZ Notification was meant to protect the coastal areas from industrial threats and, this is evident from Mrs. Gandhi's involvement in this matter. Industrial threats and unregulated development in urban areas followed by concerns for rural coastal environments, such as those in Maharashtra, provided the anvil for shaping this law. The above sections show that early in the drafting process itself, specific lobbies or interest groups (such as the tourism lobby) helped influence the regulations in this law. As seen from later amendments, the environmental lobbies that were responsible for the promulgation of this law were sidelined in favour of industrial and development lobbies (both private and governmental) that systematically steered the law's course. The notification outlines a series of dos and don'ts for the state governments to follow in their implementation. Without providing explicit space for civil society participation in its implementation or planning, the law assigned this task to the exclusive domain of government bureaucrats. The nexus that developed between sections of the bureaucracy and development lobbies (clear from the nature of amendments to the law) appears to have become impregnable to environmentalists and fisher organisations. The possibility to effect any intended approach of participation or inclusion also quickly dissipated over the years.

## 2. Parameters of efficiency in the CRZ Notification

The notification's text was examined against certain parameters that would indicate its potential to be an effective environment protection legislation. These are outlined below:

### 2.1 Coherence in legal text

The notification is ridden with ambiguous terminology such as 'traditional inhabitants', 'customary uses and rights'. The phrases and words used in the notification are common rather than legal terms such as 'roads' and 'buildings'. This leaves the clauses open to interpretation, which could have been avoided, had the notification used legally acceptable terminology. The CRZ Notification makes a rather unorthodox departure from the standard format employed by most legislations, doing away with definitions anywhere in its text.<sup>24</sup> Clear definitions could have prevented ambiguity and indecision, but a contrary situation resulted in enduring non-implementation and legal violations. For example, in the notification, the operation of regulations is based on the presence or location of roads. The word 'road' however has no definition in the notification. This would be an unremarkable observation, if not for evidence that there are at least two instances where the word 'road' has been interpreted to include even pathways or walkways close to the High Tide Line (HTL). In Kerala the Kochi Marine Drive had a

pathway close to the HTL that was indicated as a road in the CZMP and therefore all constructions on the landward side of this 'road' have been consequently allowed. There is also a contrary opinion, that leaving some of the clauses undefined actually assists in greater environmental protection since it provides space to make arguments based on specific cases rather than rely on a static definition of terms (T. Mohan,<sup>25</sup> *pers comm.*).

The notification has been amended 19 times since 1991 upto the July 2003 amendment.<sup>26</sup> Several clauses have been added and changes brought into existing clauses. Yet, the MoEF has not issued a consolidated notification with all the amended text incorporated in it, thus making reading the notification not just tedious but quite impossible to comprehend. Added to this are the multiple interpretations of certain clauses in various legal cases and by implementing authorities. This impacts implementation and also stymies the involvement and participation of NGOs and community groups in the monitoring process. It is well recognised that informal monitoring by community groups can lead to better implementation (Pargal *et al.*, 1997) but a protracted and ultimately confusing law inhibits legal awareness.

The CRZ is called a subordinate or delegated legislation as the MoEF drafts the notification.<sup>27</sup> The Parliament promotes delegating the function of drafting law to the bureaucracy when it believes it lacks adequate expertise in a particular subject. In such cases, even the Ministry of Law does not focus too much on the text of the notification but relies on the wisdom of bureaucracy.<sup>28</sup> Some of the problems with the text of the notification explicated in the earlier section, could have been avoided if it had gone through the formal law-making process, benefiting from the rigour of legal drafting.

## 2.2 Consistency in emphasis

This is assessed not just in the text of the original notification, but also through the various amendments made to it over the years. The very fact that there has been a drastic change in the spirit of the CRZ Notification through its 19 amendments (up to July 2003) seems to suggest a dramatic shift in the emphasis of protection in the law. There is however a consistency in some of the amendments though not necessarily towards protection. For example there has been a regular extension in the relaxations given for sand mining in the Andaman and Nicobar Islands amounting to 7 extensions in all (Sridhar, 2005).

## 2.3 Schema for implementation

### 2.3.1 Institutional arrangements

The notification involves a land zonation exercise and requires the states to be involved in critical aspects of implementation. In the initial years of the notification, the states were not interested in the implementation of this central law. It was only after the Supreme Court intervened in 1996 on the matter of non-implementation that special authorities called the Coastal Zone Management Authorities were set up at the national and state levels.<sup>29</sup> Today, the implementation of the CRZ Notification broadly depends on a three-tier hierarchical structure that comprises of the Ministry of Environment and Forests at the top, the National Coastal Zone Management Authority (NCZMA) occupying a lower rung although at the centre, and the State Coastal Zone Management Authorities (SCZMA) at the bottom.

While several critical responsibilities of planning, management, enforcement and monitoring are vested with the SCZMAs and the NCZMA, very little attention is paid to the constitution, composition and functioning of these authorities. The Kerala CZMA was first constituted in November 1998 for a

period of two years. Once this expired, a new CZMA was not constituted until the High Court of Kerala ordered that a new CZMA be appointed in response to a public interest litigation (Sahasranaman, et al., 2005). The new CZMA was established in November 2002. For the period between November 2000 and 2002, there was no functioning Kerala CZMA. It is not known if the CZMAs of Tamil Nadu and Andhra Pradesh also faced such time lags between the completion of the committee's terms and the constitution of new committees.

The CRZ Notification does not lay down any guidelines regarding the composition of CZMAs. Citizens have questioned the composition of the CZMA as it lacks adequate expertise from the environment field (NST, 2002; Sridhar, 2003).<sup>30</sup> John Kurien, a member of the present Kerala CZMA says that as the lone social scientist in the Authority, and with long agendas points at each meeting, it is almost impossible to pay adequate attention to the potential social impacts of each project that is presented for clearance. Without adequate human resources, expertise and time to appraise impacts of projects, the Authorities are in danger of becoming a 'rubber stamp' for clearances.

The composition of the CZMAs is grossly inadequate. The notification is presently characterised by numerous amendments, the possibility for multiple interpretation of clauses, the growing body of case law (comprising numerous orders and judgements passed in cases directly related to implementation of the notification) and the existence of other planning and development related laws overlapping this notification's jurisdiction. It therefore becomes essential that every CZMA have a person trained in environmental and planning law. Poor legal understanding especially of procedures and protocols despite the presence of technical expertise in the CZMAs led to the suggestion that the Authority should be headed by a judge.<sup>31</sup>

The composition of each Authority also points to the degree of autonomy that it functions with. In Kerala, the Authority is housed in the State Council for Science, Technology and Environment. In Tamil Nadu, it is under the State Department of Environment. The Kerala CZMA is seen as being free and unhindered in taking decisions since it is only housed within the Council for logistical purposes.<sup>32</sup> How this happens is not clear since the CZMAs include bureaucrats and officials from departments such as Ports and Industries, whose activities or projects are to be cleared by the CZMA, but who may have proposed or already given departmental permissions to these projects. This creates an environment for conflict of interest within the implementing agency itself.

There has also been a lot of criticism regarding the functioning of the CZMAs. A Kerala court order once mentioned that CZMAs are all about 'meeting, eating and cheating the public'.<sup>33</sup> In a Writ Petition filed by environmental lawyer P.B. Sahasranaman in 2005 to challenge the Kerala State Government's plans to rehabilitate tsunami-affected families in the No Development Zone (NDZ) of the CRZ, the Kerala CZMA has been called non-functional and also responsible for the degree of the tsunami impact on the coastal people of Kerala. He states in his interview that the Authority has a mandate to ensure that prohibited activities are not undertaken. It also has the duty of informing the public of these prohibitions through simple actions such as putting up boards mentioning CRZ areas, but the Kerala CZMA failed to pay any attention to the performance of any their duties.<sup>34</sup> In analysing the functioning of an Authority such as the CZMA, which has the responsibility of taking decisions regarding grant of clearance to projects involving substantial investments, a concern has been the extent to which the Authorities are influenced or limited by political pressures. Advocate P. B. Sahasranaman is

of the opinion that protection should be given to the CZMA as in the judge's protection code, so that they can take decisions objectively without fearing political or other pressures.

Ironically, though unsurprisingly, no CZMA member mentioned having faced any pressure to clear projects that were considered negative by the Authority in the interviews conducted. However, this does not discount such pressures from existing, and could only be a gap in the information shared with us officially. In any case, it is important to study carefully documents and recorded correspondence on decisions taken by the Authority on large development projects and actions directed by them for the implementation of the notification and against violations. This analysis was not possible since even minutes of CZMA meetings and related information was not available with the authority to share with the authors readily. Without an accurate plan and a robust authority to implement it, the mere legal structure of the CRZ Notification for coastal regulation/management is of no use.<sup>35</sup> The Coastal Zone Management Plan (CZMP) is the single document on which the entire implementation of the notification depends. Unfortunately, the quality of CZMPs that have been used until now has come under severe criticism, from NGOs and public interest groups as well as academics and institutions that have themselves been part of the process of their formulation. While several problems of the CZMPs can be attributed to the archaic mapping and documentation technology employed by these agencies, a significant reason for the poor quality of the CZMPs is also due to the processes followed in their formulation. The Tamil Nadu CZMP is a good case to understand this.

In its current form, all CZMPs are inadequate for planning.<sup>36</sup> Several areas that should have been demarcated for protection do not appear in the CZMPs. In Kerala, having identified some CRZ areas on the village level cadastral maps, the comparison of their depiction in the state CZMP shows that "all the mangroves demarcated in the cadastral maps are missing in the CZMP" (Anitha & Thomas, 2006). The zoning process itself has been faulty (for eg. all gram panchayat areas were identified as CRZ III other than those which were specifically mentioned as CRZ I) As per the requirements of the notification, the Indian coast should have 80% of its area under CRZ III, and 10% each under CRZ I and II.<sup>37</sup> The CZMPs have been criticised on the ground that they were done in a hurried manner due to which areas which should have been demarcated as CRZ I and having maximum protection have been listed as CRZ III, thus allowing industrial activities (Anon, 2004; Anon, 2005a; Sridhar, 2005).

The scale of maps in the CZMPs makes it impossible to use it as a primary document for the implementation of CRZ. The Plan must necessarily have plots identified by survey numbers if they are to be used for CRZ implementation. The alteration of the existing CZMP maps to include survey numbers is a tedious exercise that will require time and financial resources. Detailed CRZ maps in cadastral scale (1:4000) are being prepared for many development sites in Kerala following the guidelines in the CZMP (Anitha and Thomas, 2006). When considering the earlier fact mentioned by Kurien (Kurien and Paul, 2001) that several fisher settlements were located outside the cadastral limits, one finds evidence to corroborate allegations of poor drafting and design for implementation.

### *2.3.2 Financial allocations*

The problems of the State having to implement a central legislation are felt most by the SCZMAs. They do not have adequate funds for various tasks that they should take up in order to create awareness about the CRZ Notification. Nor are funds adequate to undertake or commission independent studies for the effective implementation of the notification.<sup>38</sup> A scrutiny fee is charged by the KCZMA for the processing of applications for CRZ clearance.

Scrutiny fees in Kerala		Scrutiny fees in Tamil Nadu <sup>39</sup>	
Individual houses costing up to 10 lakhs or whose plinth area does not exceed 500 sq m	Exempted	Projects below 5 crores	Rs 50,000
Houses and projects costing between Rs 10 and 25 lakhs.	Rs 5,000	Projects below 50 crore	Rs 2 lakhs
Projects/houses costing between Rs 25 lakhs and 1 crore	Rs 50,000	Projects below 100 crore	Rs 5 lakhs
Projects costing between Rs 1 crore and Rs 2.5 crore.	Rs 1,00,000	Projects below 500 crore	Rs 10 lakhs
Projects costing between Rs 2.5 and 5 crore	Rs 2,00,000	Projects of 500 crore and above	Rs 20 lakhs
Projects costing between Rs 5 and 100 crore.	Rs 5,00,000		
Projects above Rs 100 crore	Rs 10,00,000		

The above information was collected during field trips. Data was not obtained for Andhra Pradesh since the state was not included for primary data collection in Phase I of the project. Data was not provided on whether the collections from scrutiny fees met the full expenses of the CZMAs. A response from the TN CZMA to a Right to Information application filed by a concerned citizen<sup>40</sup> on how these funds were utilised only states that the collections from this fee are utilised for conducting meetings of the CZMA, awareness programmes, funding research programmes, and travel expenses of the authority. Complete details of how these funds are utilised (such as list of research programmes undertaken or awareness programmes conducted) was not possible to obtain within the period of the field trips.

### 2.3.3 Schema for implementation: Clearance procedures

The CRZ Notification prohibits certain activities from being undertaken in CRZ areas. For other activities (Annexure 1), permission is to be sought from the concerned regulatory bodies before they are undertaken. There are three agencies that are responsible for granting clearance to projects proposed in CRZ areas. These are the NCZMA, the state CZMAs and the MoEF. The notification is silent on the process for granting clearance. It does not mention the minimum documentation furnished the project proponent should furnish, or the time frame needed for the entire clearance process. These critical aspects have been left to the agencies to decide and establish through practice. This has resulted in the absence of any standardisation whatsoever between the procedures followed by different agencies and by the CZMAs of different states. This appears to have encouraged ad hoc and whimsical decision-making. Ambiguous clauses make it difficult for public interest groups to challenge such decisions.

This review undertook a preliminary analysis of the procedures under the CRZ Notification. This contained a listing of permitted and prohibited activities, clearance granting procedures and clearance agencies as contained in the text of the notification. This is found on the website ([www.ptei-india.org](http://www.ptei-india.org)). The procedural analysis table was constructed using only the text of the notification, and the gaps in the columns on clearance procedures and questions indicate specific procedural aspects that are vague and those that are clearly outlined within the notification.

Administrative procedures for the implementation of legislation need not be outlined in the law itself. P.B. Sahasranaman opines that procedures could evolve from practice. However, they must certainly be documented formally by the concerned agency so that subsequent committees and authorities can follow them and build on them to improve these procedures.<sup>41</sup> During the interview with the Secretary of the Kerala CZMA, the researchers could not obtain any documents on the procedures

followed for clearance and had to therefore rely completely on the information shared in the interview on this subject.

Based on the information gleaned from several CZMA members in Kerala, the procedure for grant of clearance has been pieced together as comprising the following steps:

1. The proposal for projects in CRZ areas is considered by the State CZMA.
2. The proposals of projects that are to be cleared by the NCZMA or the MoEF are sent to them.
3. A presentation of the proposed project is done by private agencies. A status report is to be prepared by a consultant financed by the project proponent. A certified mapping of the CRZ area in question on a cadastral map is now a part of the clearance process.<sup>42</sup>

As of now all status reports are only available in the files maintained with the CZMAs. It was suggested to the authors that CZMAs could be put together on the website or a document so that CRZ related information collated so far is available to interested citizens.<sup>43</sup> Further enquiries on hurdles to implementing these ideas elicit responses that only point to inadequate financial and human resources, rather than any systemic problems, such as lack of political will and enthusiasm.

The Member Secretary of the Kerala CZMA stated that any activity within the CRZ needs clearance from the CZMA. The application form is to be sent to the Member Secretary, Kerala CZMA through the concerned local authorities (*Panchayat/Municipality/Corporation*). The documents that are to be submitted are the following: 1

1. Application in the prescribed format
2. Report from local authority on CRZ status
3. Building Plan
4. Site Plan
5. Building estimates and
6. Copy of the Possession Certificate.

In Tamil Nadu, the required documents and application form goes from the Member Secretary of the District Coastal Zone Management Authority who is the District Environment Engineer of the state Pollution Control Board. It is scrutinised by the district coastal zone authority headed by the District Collector. It then moves to the State Coastal Zone Management Authority, headed by the Secretary, of the Department of Environment. The Member Secretary of the CZMA is the Director of the Department of Environment. The papers move further to the MoEF if the project is one that requires clearance at the central level.

The documents that need to be submitted for the clearance of a project in Tamil Nadu are as follows (Anon, 2006):

1. Location map showing HTL, LTL, 200 m line, 500 m line and extent of coastal regulation zone, certified by the competent authority for this purpose.
2. Topographic map of the site (1:25000)
3. Confirmation from the state/UT government regarding classification of the area (as per the CZMP) and their observations/recommendations
4. Topographic map covering 10 km radius from the periphery of the site indicating mangroves and other ecologically sensitive features
5. General layout of the site (1:25000) showing already existing developments/infrastructure

6. Comments of the Chief Wildlife Warden
7. Plan of the area showing existing structure within one km.
8. Plan/Elevation of the proposed building
9. Approval of electricity connection and certification of supply
10. Layout of green belt
11. Approval of Tourism Department
12. No Objection Certificate from SPCB
13. No Objection Certificate from state Ground Water Board
14. Certificate from Water Supply Authority

Although the authorities later developed these procedures and requirements, the clearance process is hampered by the fact that reliable information on zonation is still unavailable in the absence of fully approved and accurate CZMPs.

#### *2.3.4 Monitoring and compliance*

The CRZ Notification does not lay down any procedures for the monitoring of CRZ implementation. Neither does it have any process in place for ensuring that there is regular and ongoing monitoring of projects that have been granted conditional clearance to operate in CRZ areas.

Questions to the CZMA members in Tamil Nadu and Kerala regarding monitoring of CRZ implementation led to vague references to ‘some problems’ in implementation. The researchers were not allowed access to minutes of CZMA meetings, which may have contained discussions on issues of compliance, by projects. The State CZMAs have also not undertaken any investigations or studies to arrive at a conclusion regarding the violations of CRZ and the degree of compliance by projects that are granted conditional clearance. The State CZMAs and the National CZMA are expected to submit six monthly reports on CRZ issues as per the CZMA notifications. However, these were not accessible to the researchers for analysis. A response from the Tamil Nadu CZMA to a Right to Information<sup>44</sup> application surprisingly states that the authority does not possess copies of the six-monthly reports and minutes, therefore making it difficult for researchers to assess their performance.<sup>45</sup>

Status reports are absolutely essential to understand the extent to which the CRZ has been implemented, the extent to which it has been violated and degree of compliance to conditions of clearance. Without this information, it is only logical to consider the CZMAs as ‘clearance granting agencies’ rather than management authorities.

Violations in Kerala include the Goshree project, which involved reclamation of 25 ha of land. The case was taken to the High Court and the first orders were issued in 1996. The final judgement came in 1998. Even the government has violated the CRZ Notification in Kerala. Facing the Central Marine Fisheries Research Institute in Cochin is a government multi-storied building built by reclaiming part of the Cochin Port backwater area. In Thalassery, mangroves have been felled to accommodate hotels and resorts.<sup>46</sup> . In Tamil Nadu, there were reports of illegal sand mining/quarrying taking place on the Theosophical Society area beach in Chennai and the state government had been urged to restrict it in the interest of protecting the beach and minimize the impacts of cyclones and other calamities. Violations are also reported from Cuddalore where several industries are located in the SIPCOT area and are discharging effluents and extending their constructions into CRZ area.<sup>47</sup> These violations are only indicative of the situation on the coast and were the ones discussed in some detail by the respondents in the interviews. Several civil society groups such as Coastal Action Network, Nagarika Seva Trust, Bangalore, Bombay Environmental Action Group, EQUATIONS and the National

Fishworkers' Forum have highlighted violations of the notification in the past decade and have in some instances even compiled status reports of the notification on their own. Many of these groups have approached the courts seeking judicial intervention on matters related to the violation of the notification in the tsunami-affected states in the past. The Tamil Nadu CZMA in response to a Right to Information request stated that it has taken no suo moto action on complaints of violations.<sup>48</sup>

The power of the Authority to take action against violators is not clear. Although the notifications constituting the CZMAs state that they can take action against violators under the clauses of the Environment (Protection) Act,<sup>49</sup> it is held by members of the Authority as well as others that the Authority is a toothless body and cannot enforce the CRZ Notification. There is a need to examine the Environment (Protection) Act carefully to understand the powers of the authority. The CZMA has the power to prosecute under section 10 of the EPA but no officer is authorised.<sup>50</sup> In Tamil Nadu, the Chairperson of the Authority is the Secretary of the Department of Environment, a busy government official. The EP Act provides that the head of the authority created under its clauses is empowered to take action, the Member Secretary of the CZMA stated that it was not possible to draw the attention of the secretary on all small matters that would constitute 'action'.<sup>51</sup>

#### **2.4 Implementation status**

The implementation of the notification is comprised of various aspects, and is not judged by any one criterion alone. The functioning of the CZMAs, the level of participation of various stakeholders in its design and implementation, the preparation of various plans and the instances of violations are some of the aspects that provide information on how the notification was implemented. These are discussed in specific sections in this report. Several civil society and independent observations and analyses of the notification have commented on the poor status of implementation of the law (Chainani, unpublished; Sharma, 1996; Sridhar, 2005; Sridhar et al., 2006). The most telling comments on the status of implementation of the notification however are admissions made by the government itself.

The recently released report of the Comptroller Auditor General of India (CAGI) states that the CRZ Notification was not implemented at all by the MoEF (CAGI, 2006). The report states, 'The Ministry of Environment and Forests did not enforce the Coastal Regulation Zone notification effectively resulting in extensive destruction in coastal areas due to industrial expansion' (Paragraph 5.1.1 of the CAGI report). It further states, 'The States/UTs did not prepare coastal zone management plans' (Paragraph 5.1.2) and they 'did not review/amend zoning regulations and building byelaws after the tsunami' (Paragraphs 5.1.6, 5.1.6.1 and 5.1.7). The CAGI report recommends 'the Ministry of Home Affairs may coordinate closely with Ministry of Environment and Forests (MoEF) and the State Governments and ensure the enforcement of the Coastal Regulation Zone notification so that indiscriminate commercial and industrial expansion is not permitted.'

Similarly, the Swaminathan Committee constituted to review the implementation of the CRZ Notification, whose Member Secretary was a Joint Director of the MoEF has admitted that the implementation was nearly absent in all coastal states (Anon. 2005a). At the very first meeting of the Swaminathan Committee, it was observed that the coastal states had failed to prepare the Coastal Zone Management Plans for nearly 12 years, despite being ordered to do so by the Supreme Court of India. The Committee has also noted that there are rampant violations of the CRZ notification in every coastal state (Anon. 2004).<sup>52</sup>

The main concern with the newly proposed coastal regime is that there was absolutely no implementation of the earlier notification. Critics are sceptical whether the same MoEF will show any

keenness and political will to draft and later ensure the implementation of a stronger protection regime given the hostile response from the influential industrial and development lobbies operating today.

### 3. Governance issues with the CRZ Notification

An assessment of the CRZ Notification and its implementation was also done to understand its compliance with parameters of good governance such as **transparency, accountability, access to information and public participation**. These are discussed together in this section, to show the manner in which these factors interface with each other as manifested in the CRZ implementation experience.

The original notification was introduced in 1991 only after a period of 90 days was granted for citizens to comment on the draft notification and send their comments and suggestions to the MoEF (Chainani, *unpublished*). It was only after all the objections were considered that the final notification was made.<sup>53</sup> Following this, the CRZ Notification has been amended 19 times (upto July 2003) and out of these only three amendments allowed for public comment. All the others were introduced using clause 5(d) of the EP Rules. This clause states that in certain cases where the Central Government thinks it necessary, it can dispense with the requirement to call for public comments on draft amendments.

Table 2 below shows the various amendments to the CRZ Notification that utilised clause 5(d) of the EP Rules. The provisions or clauses that 16 amendments introduced or changed without any public participation were likely to have significant social and ecological impacts. Some of these are the permission for land reclamation for certain activities provided the purpose was not commercial purposes, permission for demolition or reconstruction of buildings of archaeological or historical importance, heritage buildings and buildings under public use and reduction of the NDZ area in CRZ –III to 50 m in the Andaman and Nicobar Islands and in the Lakshadweep Islands for tourism purposes. The draft amendments should have rightly been circulated widely and discussions held to obtain different viewpoints before finalising them.

Table 2 Showing the amendments to the notification that did not appear for public comment.

Date of amendment	Legal clauses
31 <sup>st</sup> January 1997	S.O.73 (E) EPA 3(1), 3(2)(v), EP Rules5 (3)(a), 5(4)
9 <sup>th</sup> July 1997	S. O. No. 494(E) EPA 3(1), 3(2)(v), EP Rules5 (3)(a), 5(4)
20 <sup>th</sup> April 1998	S.O 334 (E) EPA 3(1), 3(2)(v), EP Rules 5(3)(a), 5(4)
30 <sup>th</sup> September 1998	S.O 873(E) EPA 3(1), 3(2)(v), EP Rules 5(3)(a), 5(4)
29 <sup>th</sup> December 1998	S.O 1122(E) EPA 3(1), 3(2)(v), EP Rules 5(3)(a), 5(4)
29 <sup>th</sup> September 1999	S.O. 998 (E) EPA 3(1), 3(2)(v) EP Rules 5(4)
29 <sup>th</sup> September 2000	S.O 900(E) EPA 3(1), 3(2)(v) EP Rules 5(3), 5(4)
12 <sup>th</sup> April 2001	S.O 329(E) EPA 3(1), 3(2)(v), EP Rules 5(3)(a), 5(4)
3 <sup>rd</sup> October 2001	S.O 998(E) EPA 3(1), 3(2)(v), EP Rules 5(3)& (4)
19 <sup>th</sup> October 2002	S.O 1100 (E) EPA 3(1), 3(2)(v), EP Rules 5(3)& (4)
16 <sup>th</sup> January 2003	S.O 52 (E) EPA 3(1), 3(2)(v) EP Rules 5(3), 5(4)
22 <sup>nd</sup> April 2003	S.O 460(E) EPA 3(2)(1), 3(2)(v) EP Rules 5(3), 5(4)
30 <sup>th</sup> May 2003	S.O.635 (E) EPA 3(1), 3(2)(v) EP Rules 5(3), 5(4)
30 <sup>th</sup> May 2003	S.O.636 (E) EPA 3(1), 3(2)(v) EP Rules 5(3), 5(4)
24 <sup>th</sup> June 2003	S.O.725 (E) EPA 3(1), 3(2)(v) EP Rules 5(3), 5(4)
24 <sup>th</sup> July 2003	S.O.838 (E) EPA 3(2)(1), 3(2)(v) EP Rules 5(3), 5(4)

The Supreme Court had earlier, in its order of April 1996, severely criticised the use of the Central Government's arbitrary, "unguided and uncanalised" powers when it granted the relaxation of CRZ areas for all rivers and creeks through the amendment dated 16th August 1994. Despite this, it continues to be the preferred style of operation for the MoEF, which issued amendments to allow specific development activities along the coast without basing these decisions on scientific studies and detailed discussions with local fisher communities and several other constituencies who depend on a healthy coast for their survival. The amendment of July 1997 took place when the function of CRZ clearance for ports was handed over to the Ministry of Surface Transport and the July 2003 amendment that introduced the reduction of NDZ for tourism purposes was based on an ICZM study, even before the study was completed. This provides evidence of the callous attitude towards the law even with the principal regulatory agency and perhaps even a motivation that sought to undermine the CRZ Notification.

In July 1997, an amendment introduced the term 'local inhabitants' instead of 'traditional users'. With this change, the little emphasis in the notification on protecting the livelihoods of coastal communities along with environmental protection was lost. Also, whatever support had been built for the CRZ Notification among the fisher communities, stood threatened. The change in terminology saw stiff opposition from various quarters and this amendment was challenged in the High Court of Delhi by the Wildlife Protection Society of India in CWP 4198/97 (ironically the petitioners state that the matter has not come for hearing even once). This means that all categories of 'coastal' people are at the same level and there is no identification of the primary users of the coast.<sup>54</sup>

Several amendments were brought in with the justification that 'local people' had asked for these changes to be made on the grounds that it was hampering their development. For eg:

15. That local people of the Union Territory of the Andaman and Nicobar Islands are stated to face 'difficulties' – a justification that finds no other substantiation but which results in extensions to sand mining permissions.
16. The Central Government is stated to have had consultations with the State Governments to permit construction of dwelling units, infrastructure for the local inhabitants, housing schemes of Urban Development Authorities (approved prior to 1991), setting up of non-polluting industries in Special Economic Zones and salt harvesting in the January 2002 draft amendment.
17. The July 1997 amendment states that some State Governments had drawn the attention of the Central Government to the 'difficulties' being faced by 'local people' and subsequently construction of essential facilities in the coastal zone was introduced. Most of the 'essential facilities' in this amendment relate to large industries on the coast.
18. In response to the petition filed by Wildlife Protection Society of India challenging the July 1997 amendment to the CRZ Notification, the response of the MoEF stated, "*exploration and detailed and extensive discussions were held with the concerned departments and organisations. The views of an expert committee were also obtained regarding some of the provisions of the amending notification and the expert committee was also represented by non-officials members and had extensive discussion with various Governments, NGOs and public.*" Table 2 shows that this amendment was introduced without soliciting public comment under 5(d) of the EP Act.

In all of the above cases, although the MoEF states that the changes have been brought about because of demands from specific areas, there was no way for citizens to find out who were actually involved in discussions with the MoEF, what were their concerns or grievances and was dilution of the notification's

provisions the only way to address these grievances. No evidence of any of these consultations is available from the MoEF or with NGOs.

The regular implementation of the CRZ Notification also suffers from lack of transparency. The minutes of meetings of the Coastal Zone Management Authorities, their process of decision-making, their monitoring reports and other critical documents are not accessible to the public. The implementation of the CRZ Notification will remain a problem unless voluntary disclosure of public interest information regarding the functioning of the Authorities as well as process and content of plans and other relevant documents is made mandatory.

Neither the notification itself, nor the MoEF as an implementing agency, provided for trainings or building capacity of the Authorities and other line departments in comprehending or implementing the notification. Unless this is explicitly stated in the notification itself or at least in the form of guidelines, it will be left to the state governments to undertake these activities at their discretion.

The CRZ Notification initially contained certain provisions that protected the interests of fisher communities whose livelihood depended on a healthy coast. If they are involved in the implementation of the notification and its monitoring, it could ensure the protection of coastal habitats as well as relieve the state government to a great extent, of the responsibility of having to be involved in the day-to-day implementation of the notification. Therefore, it was important for the notification to emphasise capacity-building and active participation of local governments and citizens in rural and urban coastal areas. In its present form, this is absent in the notification. Several traditional fisherfolk and coastal community institutions find themselves in varying degrees of disuse/redundancy. The notification does not recognise their presence or their potential role in coastal conservation. It would be useful to study how these community institutions can play a role in the implementation and monitoring of coastal zone management laws.

The level of participation of district and village level institutions in the implementation of the notification is ad hoc. While the Tamil Nadu Government has notified committees for the implementation of the notification at the district level<sup>55</sup>, other states do not appear to have followed suit. Tamil Nadu also has a specific committee for the Chennai Metropolitan area comprising the Director, Department of Environment, the Member Secretary of Chennai Metropolitan Development Authority, a representative of the local body and a District Environmental Engineer of the State Pollution Control Board.<sup>56</sup> In Kerala, it was felt that if coastal conservation was to be truly achieved, then areas in the sea adjoining the coast would also need to be brought under some form of regulation. A suggestion was made was to demarcate a littoral zone upto 2 km into the land from the sea.<sup>57</sup> The *panchayats* could then exercise some control over pollution on land, which was affecting the sea.

The constitution of CZMAs needs more attention in the CRZ Notification. Presently, none of the Authorities include a professionally trained or experienced person from the field of environmental law. This study examined the composition of the committee members (see [www.ptei-india.org](http://www.ptei-india.org) for a table on the composition of the CZMAs.) The process for selecting members to the committee is presently done without any prior public information or notice. Thus it is not possible for citizens to provide any inputs for the constitution of the CZMA or even know if a new Authority has been set up after the expiry of the existing one. If done in an open and participatory manner it could ensure that experts from the most relevant fields are included in the Authorities. This may also ensure that there is no time gap between the expiry of the Authority and the constitution of a new one or reconstitution of the old Authority.

The process of formulating the Tamil Nadu CZMP is an example of the role of public participation in the planning process. Information about the process of finalisation of the CZMP reached local groups working on coastal issues through informal sources and not through a public notice. A copy of the CZMP worked on by the State Government was obtained and analysed by many civil society groups working on coastal issues in the state. Following this several letters were written by citizens to the MoEF, to the Coastal Task force that was set up to assist the Ministry in finalising CZMPs and to the State Government (Jairaj, undated; Sundararajan-Mathew, 1996a, b; Anon. 1996a, b; Rajah, 1998; CAG, 1998). They provided detailed comments regarding the zonation of ecologically sensitive areas, lack of information and in some cases faulty information in the CZMP about fishing villages and their population. However, due to the lack of transparency, it was not known whether these comments were considered before the finalisation of the CZMP and what the reasons were for excluding certain suggestions. In the case of Kerala, the CZMPs were made publicly accessible in all districts, but this was done only after the process of finalisation of the CZMP. Even then, the CZMP was not made available in Cochin, a rapidly developing area.<sup>58</sup>

#### 4. CRZ in the post-tsunami context

As stated earlier, the understanding and the implementation of the CRZ Notification has been fraught with problems and its implementation in the coastal states has been at best, partial. There is even official opinion on how the lack of implementation has made coastal areas vulnerable to disasters (CAGI, 2006). Ecologically sensitive areas such as mangroves and coastal wetlands have been destroyed, sand dunes and beaches, which function as protective barriers, have been affected by intensive development activities. Industrial development along the coast has polluted ground and surface water sources. Traditional coastal dwellers have also been directly displaced by development projects or have had to move out due to pollution impacts. These conditions have led to the impoverishment of coastal communities. Due to the degradation of coastal areas and the poverty of coastal communities, impacts of natural disasters have been especially significant and long lasting.

The devastation caused by the December 2004 tsunami drew focus on the significance of setbacks. How far should residences and other infrastructure be located from the sea? The CRZ Notification mandated a minimum setback of 500m from the HTL, but not for all activities. As the notification was originally envisaged, only those activities that required foreshore facilities were to be allowed within the CRZ area. This was in addition to all the structures that existed in the CRZ prior to the notification. But subsequent amendments and absence of demarcation of the HTL or CRZ zones have resulted in more and more activities being permitted on the coast.

The rehabilitation measures post-tsunami were to be undertaken mainly in CRZ areas. The activities that were proposed in the rehabilitation phase, post-tsunami led to a great deal of confusion as the notification was unclear about the legalities of several of these activities. There was no help forthcoming from the Ministry of Environment and Forests on these issues either. The foremost problems were about where to locate the new dwelling units of the families whose homes had been damaged partially and fully. 'Move fishers beyond 500m' was the only simplistic and knee-jerk State response. In Tamil Nadu, the UN Team for Recovery Support co-organised a consultation on post-tsunami reconstruction on the 12th April 2005.<sup>59</sup> Prior to this, the UNDP commissioned a study on the CRZ and issues related to rehabilitation which identified several issues that needed to be clarified by the MoEF, prior to the tsunami-affected coastal states undertaking any construction (Sridhar, 2005). Despite issues such as these being raised at the April 2005 consultation, it is not known if the MoEF has been proactively monitoring or assisting in lawful reconstruction activities.

#### 4.1 Housing within the post-tsunami CRZ

The Government of Tamil Nadu introduced G.O (Government Order) 172 on 30th March 2005 declaring that all government sponsored new houses would be constructed only 200 m from the HTL. With the stated objective of providing built houses in safe locations to the tsunami-affected families, the Government pledged assistance only to those who agreed to be relocated beyond 200 metres of the HTL. Those who intended to construct within 200 m would not be eligible for government assistance. The government also extended assistance to those whose homes were not damaged but who wanted to relocate nonetheless. The ambiguity of the Coastal Regulation Zone Notification led to the above interpretation, and it was deemed that no new constructions would be permitted within 200 m for all categories of the CRZ (Sridhar, 2006).

There was strong resentment towards G.O 172 from various quarters. Several fishworker groups and NGOs termed this a discriminatory order. They put forth various arguments against the G.O stating that fisher communities have a right to stay close to the shoreline and visibility of the coastal waters is important for their fishing activities. The lack of consultation with and participation of fishing communities in these shelter guidelines has also been severely criticised. Other arguments stated that this G.O would effectively remove fishing communities from the coast, and thus make it easy for the tourism industry and other real estate interests to occupy the coast (Sridhar, *ibid*).

In response to this, a meeting of federations of fishermen took place in Chennai on January 16, 2005 and passed strong resolutions where they claimed the coast as theirs. Under pressure from the fisher groups, on 25th March 2005, the Chief Minister announced in the legislative assembly, that the fishers should not be made to move away from the coast. Now within 200 m, new constructions would be allowed albeit informally.<sup>60</sup> Following this, the Government Order 172 dated 30th March 2005 was issued. It states, *“The areas so vacated because of new construction will be entered in the Prohibitory Order book and maintained for public purposes. Fisher people will be permitted to keep boats, nets etc. in these areas. Separate sheds, locker rooms etc. may be put up in these locations by Government/NGOs on a temporary basis as per CRZ guidelines”* (Government of Tamil Nadu, 2003). It needs to be confirmed if the Tamil Nadu State Government is indeed following this rule in the rehabilitation efforts. Despite this clause, there are fears that the lands freed up will be used for development projects, such as tourist facilities, which will result in environmental and social impacts on fisher communities and the coastal ecology (TISS, 2005).

The problem of identification of legal areas for rehabilitation without accurate CZMPs, remains. Also, the reconstruction of damaged structures in CRZ-I and in the NDZ of CRZ-III areas is impossible unless a way to ascertain if the damaged structures were legal and existed in the CRZ area prior to 1991 is found. Some indication of possible methods that can be followed is provided in the UNDP sponsored study on post-tsunami rehabilitation issues in Tamil Nadu (Sridhar, 2005).

It is seen that those agencies governing use and those stakeholders that have access to financial resources and political prowess exercise a more successful articulation over their rights and control on coasts than those solely dependent on it for their survival. The past few decades have witnessed fisher support groups such as the National Fishworkers' Forum, several NGOs and community groups working for the uplift of fisher communities demanding coastal area rights on behalf of communities. They have demanded that fishworkers and their families be given the first right over the coast. Some of them have coined the term 'sea tribes' to draw a parallel between their condition and that of forest dwelling tribal communities. Although this articulation is used to build a sense of unified identity among fishworker communities, a concerted effort at going beyond sloganeering is yet to be made.<sup>61</sup>

Fishing communities do not have pattas or land rights and title deeds in the majority of cases. However, the CRZ Notification only allows authorised constructions on the coast. The dichotomy has not been addressed yet till date (Sridhar, 2005).

Post-tsunami, in Kerala the government stated that construction would not be taken up in the same place if it is a CRZ area, but this is not being followed. A case was filed in the Kerala High Court because the government proposed to rehabilitate the tsunami-affected families in the same place. The petitioner argued that people will thus continue to face natural disasters and violation of CRZ will be condoned.<sup>62</sup>

The CAGI report states that though funds were made available to the A.P. State Housing Corporation in April 2005, no progress was made (March 2006) for completion and handing over the houses to the beneficiaries due to delays in acquisition of land and resistance on the part of beneficiaries to move out of the Coastal Regulation Zone. As of September 2006, 59 houses were completed (CAGI, 2006).

#### **4.2 Coastal protection post tsunami - sea walls and bioshields**

The immediate reactions of the state governments to the tsunami were to 'fortify' the coast by constructing sea walls across the coast. The state government rushed into declaring that protection works such as construction of sea walls, groynes, beach protection measures, shelter beds, mangrove plantations along the coastline would be undertaken. Specific projects such as sea wall construction around Kalpakkam township are reported to be under consideration in the Tamil Nadu.

The reviewers of the Swaminathan Committee Report point out that prior to the tsunami, the Tamil Nadu Forest Department was involved with the plantation of Casuarina along the coast, although largely on revenue lands. The data from various coastal forest divisions along Tamil Nadu shows that only Casuarina was being planted all along the coast and the entire exercise appeared to be devoid of any science (refer to the Chapter on initiatives of the Forest Department in Tamil Nadu). They have drawn attention to the fact that "the range of restoration activities currently being undertaken such as that of creating bioshields and coral reef restoration should be injected with a good amount of scientific rigour. They state that there is a range of socio-economic and ecological parameters that are to be considered in the plan for creating bioshields but these have not thus far been employed (Sridhar, *et al.*, 2005).

There have been several other concerns regarding CRZ implementation in light of tsunami rehabilitation efforts. In the initial period of relief, sand mining from CRZ areas was reported as NGOs and others involved in relief efforts did not know that it was a prohibited activity. The issue of maintenance of buildings and sanitation standards in the construction of temporary shelters and their dismantling has been a cause of concern too.

#### **4.3 New legislation post-tsunami: Better or bitter fare?**

##### *The Coastal Management Zone*

Even prior to the tsunami, a process had been undertaken by the Ministry of Environment and Forests to reform environmental regulations. These included the promulgation of a National Environment Policy, the reengineering of the environment clearance process<sup>63</sup> and the establishment of the M.S Swaminathan Committee to review the CRZ Notification and suggest changes for a new legislation. The Swaminathan Committee, headed by Prof. M.S. Swaminathan was constituted in July 2004 with the mandate to suggest an appropriate framework of coastal management. The report of the committee was submitted to the MoEF in February 2005.

The minutes of the meetings of the Swaminathan Committee refer to several activities that have been responsible for destroying coastal areas and also affecting the livelihoods of fisher communities, such as sand mining and sea walls. This study makes a comparison of the contents of these minutes and the recommendations in the final Swaminathan Report (available on [www.ptei-india.org](http://www.ptei-india.org)). Ironically, several suggestions made in the committee meetings (as seen from the minutes) don't match with the final recommendations of the final chapter of the Swaminathan Report.

The entire process of review of the CRZ Notification by this committee was criticised because it did not involve participation from public interest groups or coastal communities. The meeting minutes and reports of the Committee remained out of public access until an application under the Right to Information Act was filed seeking this information. The most astonishing aspect of this process was that even State Governments or State CZMAs were not consulted while drafting the report.<sup>64</sup>

The minutes of the meeting do not indicate any reference to an assessment of the degree of implementation of the CRZ Notification and the number of violations that exist in different states, although it merely states that the law was severely violated. The committee has not considered the various steps that may have been undertaken by state governments to implement the notification and the problems they may have faced in this process.

The meeting discussions imply that the committee considered the notification per se as being the problem and not the mechanisms for implementation such as the management authorities which are understaffed, short of funds and dealing with State Governments which may have no political will to regulate activities on the coast. The recommendations of the committee were used to develop a new notification called the Coastal Management Zone Notification in place of the CRZ Notification. But the new notification suffers from the lack of an institutional framework for implementation precisely because of the oversight of the committee regarding appropriate mechanisms for the realisation of coastal management.

Although the initiative taken to review the efficiency of the CRZ Notification, a fifteen year old legislation, in achieving coastal protection is appreciated and long overdue, the process of the review and the final product - the Swaminathan Committee Report, has not been accepted by several people concerned with coastal issues (Anon, 2006b<sup>65</sup>; Anon, 2006c<sup>66</sup>; NFF, 2006) The United Nations Development Programme (UNDP) commissioned a review of the Swaminathan Committee Report after the latter was released (Sridhar et al. 2005). The reviewers provide an exhaustive analysis of the Committee Report and have highlighted areas that need more working if a new framework for coastal management and protection of coastal livelihoods is to be achieved.

The draft CMZ Notification has been circulating since early 2006 (Anon. 2006d). While the MoEF has not formally called this its draft CMZ Notification, it needs no endorsement, as it is identical to the recommended notification in the Swaminathan Report. The reviewers of the Swaminathan Report have stated that the proposed notification was not based on any scientific principles and was in fact completely contrary to the positive elements contained in the first few chapters of the Swaminathan Report (Sridhar et al., 2005).

#### **4.4. Efficiency of the CMZ Notification**

##### *4.4.1 Incomplete idea of the integrated planning process*

The new notification and the Swaminathan Report hinge on the approach of integrated planning. While the Swaminathan Committee Report recommended several constructive measures to take forward the concept of Integrated Coastal Zone Management, the proposed notification does not seem to contain a

framework to implement this. Integrated planning and management is an extremely detailed and involved exercise that can only happen through political will, a sense of cooperation among departments and decentralisation of rights and responsibilities to citizens and officials at local levels. Plans once worked out have to be binding for a certain time period. Too much flexibility (or complete mutability as seen in the CMZ Notification) will surely be counter-productive.

The draft CMZ Notification relies heavily on Integrated Plans for appropriate development along the coast. The Integrated Plans for ports and harbours and for tourism in CMZ II are to be done by 'Port authorities or concerned agencies' and 'Ministry of Tourism and the State/UT Tourism Department' and these plans 'shall be approved by the Ministry'. This is far from even being a starting point for 'integrated' plans in the real sense. Integrated plans will need to be drawn up by special interdisciplinary groups, representatives of different line departments, citizen-experts, scientists and others who may be able to contribute with their knowledge and understanding of the nature of the coast. Without such a process, the Integrated Plans will have no acceptance among all constituencies and therefore project proponents or those who undertake activities on the coast will find no incentive to abide by legal requirements. Besides it does not suffice that the MoEF approves these plans, if State Government departments do not accept them, as coastal lands are primarily under their jurisdiction.

#### *4.4.2 Poor regulatory structure*

While there is growing opinion from all quarters that an open system with the required checks and balances is more appropriate than a license system characterised by tedious clearance procedures, it is also to be borne in mind that some degree of regulation might have to accompany any management system in the country. Today, environmental protection still depends on whether a project proponent finds it a desirable outcome or not. A strong objective and set of regulations that are designed to prioritise the well being of communities and ecosystems and sustainable economic growth is absent in most laws and their implementation plans. The absence of any regulatory emphasis or structure for implementation in this new CMZ Notification is disturbing.

The CMZ Notification has passed by the positive elements in the Swaminathan Committee Report. For example, the Swaminathan Committee recommended an end to building more sea walls and sand mining as these were recognised as causing substantial damage through beach and dune loss, loss of protection to agricultural lands further inland, impacts on turtle nesting grounds and erosion of coastal lands. Sand mining, for instance, has been prohibited only in CMZ II areas and not in other regions. The notification states 'activities that may be permitted or prohibited on the seaward side of the setback line and agencies responsible is given at Annexure II'. Annexure II lists activities that can be permitted in CMZ II areas provided permission is obtained from the concerned authorities. It does not clarify whether these are activities that can even be allowed in CMZ III areas or whether all activities that are missing from Annexure II must be considered prohibited everywhere.

#### *4.4.3 No procedural improvement over the earlier law*

The CMZ Notification does not explicate clearance procedures for permitting infrastructure/development projects. Part VII of the CMZ Notification, which appears to be a section on process for grant of clearance only mentions the time period within which clearance decisions will be made, its validity period and the possibility of transferring clearance. By this account, the CMZ is repeating the very same problems that hampered the implementation of the CRZ Notification. The initial years after the promulgation of the CRZ Notification saw no implementation whatsoever because no attention was paid to the process by which State Governments could carry out its ambitious aims. It was only after the CZMAs were established by order of the Supreme Court that the Authorities found mechanisms by

which to perform the function of grant of clearance at the state level. In the proposed CMZ Notification, responsibilities of clearance of projects have been divided between 'local/concerned authorities', the State/UT Authority and the MoEF. However the procedures to be followed for clearance are not mentioned anywhere. Logically, the Swaminathan Committee should have studied the clearance process practiced by different states and the MoEF and recommended changes armed with practical information from these agencies. It should have also described the process to be followed by the various agencies in the new notification. This exercise alone can go a long way in ensuring that laws such as this find flight.

The new notification contains no definitions in its current form, a feature it shares with the CRZ Notification. Areas which have the highest ecological significance are to be identified as CMZ I in the new law. The notification states that '*Integrated Management Plans for these sensitive areas shall be prepared by the Ministry of Environment & Forests through scientific institutions which will be implemented by the concerned State/Union Territory and monitored by the Coastal Zone Management Authority of (that) State/Union Territory. Necessary funding will be earmarked and provided by MoEF. Activities which are essential shall be permitted in these areas based on Integrated Coastal Zone Management Plans and after public hearing*'. Considering that the management areas in question includes extremely sensitive ecosystems such as mangroves, sea grass beds, turtle nesting grounds etc, the terms such as 'essential' warrant clear and stringent qualifiers so that ambiguity in definitions are not used to justify projects, schemes or activities that can damage these ecosystems.

The proposed notification lays down activities that are to be considered in CMZ II areas. This category is a strange mix of areas, falling under administrative categories such as, corporations, municipalities and *panchayats* as well as areas identified by certain kinds of economic activities, such as mining, industry and tourism. What is not clear is whether the areas to be identified under this category are *already* under certain kinds of use such as mining or tourism projects or whether they are *proposed* as mining or tourism areas. If it is the latter, then the identification process must take into accounts that in areas such as Kerala where coastal lands form a large percentage of the total area available for varied uses, housing and infrastructure required for fishing activities should be given priority. These uses should not be considered on par with economic activities like tourism and mining. Similarly, the idea that '*new houses and settlements shall be planned only on (the) landward of the setback line*' will be acceptable only if the priority rights for fisheries infrastructure and housing are established. The clause, '*activities requiring foreshore facilities and which are non-polluting in nature shall be permitted on the seaward side of the setback line subject to Environment Impact Assessment*', is especially problematic since its restriction is to pollution-related impacts and also because the understanding of what constitutes 'non-polluting' activities is variable as seen in the present CRZ Notification.

The CMZ Notification has allowed for the identification of areas of particular interest from an economic point of view, and also heritage and archaeological sites. But it fails to accommodate the identification and special considerations that are needed for areas that have already been polluted beyond repair. This identification of critically polluted coastal areas is absolutely essential to ensure that such areas do not face any more pollution pressure. Areas such as the SIPCOT area in Cuddalore unless declared as 'no go' areas for any further industrial activity will cause severe and irreversible health impacts on the local population and natural resources. The CMZ Notification, by this oversight, will be responsible for violating the right to life of people in such areas. The Pollution Control Boards in some states had initiated a zoning exercise to assist in appropriate siting of industries. Such initiatives can be effectively linked with the CMZ Notification.

The management of CMZ II and III areas will be governed by the identification of setback lines based on the vulnerability of the coast to natural and man-made hazards. This is much needed as it will be based on the geomorphology of the coast and will go a long way in ensuring appropriate development on the coast. However, the identification of setback lines and decisions on siting of dwelling units for fisher communities will also have to be based on the livelihood needs of fisher communities. A sensitive balance will need to be struck between their need for proximity to the sea considering their livelihood needs, and protecting them from natural disasters. Emphasising the need for a setback that is responsive to new knowledge and events, the reviewers of the Swaminathan Committee report state '*guidelines and procedures for changes in the vulnerability line should be worked out. The provision for change of the vulnerability line should not be misused for dilution to pave for development activities in this sensitive area. The conservation spirit of the notification must consistently manifest in the text of the notification*' (Sridhar et al., 2006).

#### 4.5 CMZ and environment protection

The entire approach and design of the new notification is identical to that of the old law. It also adopts a dos and don'ts approach and is guided by similar concerns as the existing law. The present design of the new notification does not contain any procedural clauses or any other operational clause, which permits only a superficial examination of its content in this study.

Within the new notification, Integrated Management Plans will provide the framework and details of how CMZ I, II, III and IV areas are to be managed. The preparation of these management plans must be undertaken with adequate scientific input. Annexure 3 contains a description of the various provisions of the new notification. Having drawn from the experience of several natural disasters including the tsunami of 2004, the proposed CMZ Notification seeks to actively promote coastal protection through methods such as regeneration, restoration, stabilisation and protection. It states that:

*In CMZ II areas, sufficient bioshields with local vegetation, trees including mangroves shall be planted on the seaward side; beaches shall be left free of any development, appropriate coastal protection structures be constructed wherever required on a scientific basis; Sand dunes being natural speed breakers in the event of hazards shall be maintained or regenerated by planting shrubs or through appropriate measures.* Restoration and pro-active conservation activities rather than mere regulation finds a mention in these clauses of the new notification although it remains largely a land-use and zoning law. It is possible that coastal protection and conservation efforts will gain impetus through formal recognition under the Environment (Protection) Act, 1986. The introduction of these activities into the notification could potentially ensure central and state support in financial, logistical and technical terms.

However, regeneration and restoration activities must be preceded by adequate ecological and socio economic studies. The factors that must be known are: the characteristics of the area prior to degradation, the socio-economic factors that were the root causes of degradation, the best options for restoration, mechanisms to reduce or eliminate factors that may cause degradation again and mechanisms to create support among local communities and government agencies for the restoration initiative. The practice of defining restoration initiatives by targets only in quantitative terms - number of saplings planted and extent of area brought under plantation, should become a thing of the past. Since the notification does mention these conservation related activities, it may have been useful to elaborate these clauses with appropriate guidelines as annexes.

All Ecologically Sensitive Areas will be demarcated as CMZ I in the new notification. These areas are to be managed as per the Integrated Management Plans (IMPs) prepared by the Ministry of

Environment & Forests through scientific institutions which will be implemented by the concerned State/Union Territory and monitored by the Coastal Zone Management Authority of State/Union Territory. The CMZ Notification pays little attention to CMZ I areas considering the sensitivity of these habitats. Prohibition of all activities that have the potential to alter these ecosystems should have been laid down as the guiding principle to protect these areas. Establishment of buffer areas around the identified CMZ I areas should have also been made mandatory. While it can be argued that these aspects can be built into the Management Plans, mentioning these protective measures in the text of the notification has immense significance for the implementation of these measures.

The set of activities that can be permitted on the seaward side of the setback line are mentioned below. The notification does not indicate how decision-making will take place to permit these activities. It is important to remember here that even dwelling units will not be allowed in this region. The absence of IMPs as the basis of management of CMZ III does not seem deliberate and could just be due to an assumption that these activities are welfare measures for coastal communities or to support their livelihoods. However, shipping, tourism and recreational facilities and waste disposal are also listed here quite inexplicably.

*Activities permitted by the local/concerned authorities on the seaward side*

- Boating, shipping and navigation.
- Fisheries including traditional fish processing units and ice crushing facilities.
- Mariculture including hatcheries and traditional aquaculture.
- Agriculture and horticulture.
- Public toilets and rain/cyclone shelters.
- Repair of existing buildings including reconstructions.

*Activities to be permitted with the approval of State/UT Authority on the seaward side*

- Temporary construction for tourism facilities.
- Coastal protection: The approach shall be to avoid 'hard engineering', while 'soft engineering' options shall be preferred.
- Bunding for the purpose of preventing coastal erosion salinity ingress, maintenance of waterways.
- Saltpans – for making salt by solar evaporation of seawater.
- Water sports and recreation facilities.
- Discharge of treated effluents shall be permitted as per the State/UT Pollution Control Boards norms.
- Forest related activities.
- Boat building and repair.
- Boat re-fuelling facilities.

#### **4.6 CMZ and governance**

The CMZ Notification is a central notification like the CRZ Notification and may depend heavily on the State Government for its implementation. Although the implementing agencies are not categorically mentioned for each of the categories, the CZMAs at the state and national level have been identified as the monitoring and enforcing agencies in the CMZ Notification. This has been envisaged without any attempt at understanding the main causes of non-implementation of existing law. The notification must be lucid and will need to be acceptable to all State Governments and will require a prior commitment

from them in terms of allocation of funds and other logistical support for any implementation to take effect.

*Quality of IMPs:* The management of coasts under the CMZ Notification relies heavily on the quality and process of preparation of IMPs. The process of developing IMPs will require adequate training to all relevant agencies as most agencies so far have worked with little or no capacities or coordination. Superior quality IMPs can be ensured by insulating the drafting process from political pressure, vested interests of donors and carefully selecting the agencies/individuals entrusted with developing these plans. These should have been ensured through guidelines or specific clauses in the CMZ Notification.

*Validity of IMPs:* The CMZ Notification ought to have granted IMPs a formal administrative and legal status. Since the plans are to be the integral documents, governing activities and projects on the coast, implementation and compliance with the CMZ Notification will have to measure against these plans.

*Public hearings:* The notification does not lay down a transparent and participatory process for the preparation of IMPs. The notification mentions the use of EIAs and public hearings in the decision-making for certain projects. However, without a procedural framework indicating how these will be done and at what stages in the process they are to take place, these provisions can go easily unimplemented or be counter-productive. The CMZ states, *'Defence related projects shall be approved by the Ministry of Environment and Forests based on an Environmental Impact Assessment and public hearing'*. EIAs are to be done for non-polluting activities to establish them on the seaward side of the set back line, but the clauses of transparency and guidelines for public participation are missing here. Unfortunately, there is no link to the procedures followed in the EIA Notification, under the EP Act, which lays down procedures for granting clearance to development projects that have the potential to cause environmental and social impacts.

*Procedures:* No procedures have been laid down for monitoring and enforcement of this law. CZMAs are vested with this responsibility but again without any direction or attention paid to procedures. CMZAs are to be strengthened, the notification states while failing to mention how. There are no process guidelines for selecting members, CZMA composition and appropriate staffing and funding for logistical and technical support. There is also no mention of any process of reporting the compliance from different states in such a way that implementation levels can be assessed and used to improve coastal management.

*Decentralisation:* The responsibility of district and village level institutions in ensuring implementation, monitoring and enforcement should have been made mandatory, as they are already being practiced in the states of Tamil Nadu and Kerala. The role of community groups in monitoring and regulation should have also been encouraged and facilitated.

*Transparency:* There are no clauses of transparency and public access to information, anywhere in the notification. It also doesn't provide information, suo moto, about any aspect of coastal management, be it the IMPs, specific project related documents or meeting minutes of Authorities/ Committees.

## 5. Suggestions for the future

The suggestions on moving forward draw from the earlier work and suggestions provided by the authors and other civil society groups on the subject of coastal zone management.

That the Swaminathan Committee Report was timely is not disputed considering the implementation track record of India's principal coastal protection law. The resultant effects of non-

performance is demonstrated after every disaster on the coast and through increasing local action against environmental destruction. The terms of reference of the Swaminathan Committee were also more holistic than those of earlier review committees. Earlier reviews of the notification were specially intended to dilute the restrictions imposed by the legislation on development activities such as urban construction, sand mining and tourism facilities. These review processes resulted in amendments that only weakened the protective clauses of this environmental law, without suggesting additional conservation measures or governance procedures, although these changes were much needed.

As the only complete review of the legislation, the Swaminathan Committee report has significance and will help to put in place an appropriate regulatory framework for coastal management and regulation. However, a sound coastal management review process ought to pay equal attention to the process and content of the Swaminathan recommendations. The Swaminathan Committee's review process fell short on both these counts. Therefore, it is strongly recommended that the Swaminathan Committee's report be seen as the first step towards the review of CRZ Notification rather than the last.

### 5.1 Process related recommendations

- It is of tremendous value to involve a representative cross-section of the public at the planning stage before actual changes are made to legislation. There should be major public consultations/workshops inviting various NGOs and resource persons to present the findings of the Swaminathan Committee Report and to build on it. The Swaminathan Committee's findings need to be discussed widely with several sections of people especially fishworker communities, fisher trade unions, local governments, traditional governance institutions in coastal areas. These groups have either been involved with the implementation of the CRZ Notification or have faced the impacts of its faulty implementation. Their inputs will be critical in determining a sound regulatory process for coastal conservation and to facilitate their involvement in its execution.
- The Swaminathan Committee Report should be discussed with regulatory agencies that have been involved with the implementation of the notification at the state and central levels. The Swaminathan Committee failed to consult SCZMAs and district committees that were responsible for implementation of the CRZ Notification at the state level on a day-to-day basis. A sound regulatory framework cannot be developed unless the problems faced by these agencies are fully understood. Their problems are of a varied nature and range from the logistical to the political. If these are not addressed, any new legislation brought in place of the CRZ Notification may run into the same problems.
- A participatory process for developing changes to legislation can be established by holding consultative group meetings, establishing task forces and thematic groups and conducting trainings and workshops for stakeholders.

### 5.2 Content related recommendations

- The UNDP commissioned independent review of the Swaminathan Committee Report criticised the recommendations of the Swaminathan Committee as falling short on scientific grounds. The review recommends that "it is however possible to overcome this inconsistency and other discrepancies outlined in the Swaminathan Report, by launching a complementary set of studies, and planning exercises, which are truly national in scope and participatory in approach" (Sridhar, et al., 2006)
- The UNDP review has specifically recommended research and documentation of primary and secondary ecological, legal and sociological information relevant to coastal conservation, required to guide policy changes. All the un-addressed deficiencies with the CRZ Notification should be

collated. There are several studies and reports done by institutions and NGOs that can be referred to as well as various letters, memoranda and petitions highlighting these deficiencies.

- It is also essential to commission a study to understand coastal management policies and tools followed by other countries and identify suitable best practices. This would also include their policy/ legislative responses to coastal hazards and development challenges.
- A mechanism to grant usufruct rights of fishers over coastal areas with appropriate conservation conditions must be devised. These must be formally incorporated into the coastal management framework. The framework for coastal management must be firmly based on the priority given to fishworker communities as having the first right to coastal areas.

Some aspects listed below need to be incorporated in any new legislation proposed for coastal conservation and management.

- Incorporation of hazard and risk management and flood plain management and wetland drainage design in the overall coastal management mechanism and in the designing of the vulnerability line.
- Flexibility in the concept of the vulnerability line with proper guidelines and procedures for changes. The provisions for change of the vulnerability line should not be misused for dilution to pave for development activities in this sensitive area.
- A detailed set of guidelines for the identification of the Ecologically Sensitive Areas and the degree of protection they require.
- A review of the utility and effectiveness of bio-shields must precede plantation work on the coast. These reviews should be supplemented with complete impact assessment studies, identification of alternatives and assessments of particular species as actual bio-shields.
- The legislation should contain a specific list of projects for each zone on the coast for which Environment Impact Assessment procedures are mandatory (notwithstanding any list prepared under other legislations). These must employ rigorous BACI (Before-After-Control-Impact) designed studies that are ongoing processes, lasting as long as the development activity is being conducted.

The MoEF proposes to replace the present CRZ Notification with the draft CMZ Notification. The draft is an outcome of the Swaminathan Committee report but has unfortunately passed by all the positive aspects of the report. It is only termed a 'management' notification, but in actuality has little more than the old zonation approach of the CRZ Notification. Even in this, it fails to prohibit activities with established negative impacts. There are no procedures outlined for enforcement and monitoring in this law. It will be useful to start the process of drafting legislation for coastal management after a thorough process of consultation is undertaken as mentioned above. It must also be ensured that groundwork on the CMZ Notification is not begun until a new legislation is debated. A time frame of two years may be given to all State Governments to undertake the necessary groundwork for the implementation of the new notification.

Until the new legislation is ready, and all the groundwork for this is done, the existing CRZ Notification must be implemented. In order to make this possible, the MoEF must immediately redress several long pending areas of confusion, vagueness and arbitrariness of the CRZ notification. The most significant of these issues are:

- The multiple interpretations of CRZ clauses by various MoEF orders and legal judgements.
- The lack of definitions of terminology used in the CRZ Notification.

- Specific mention of the agencies responsible and elaboration of the process for the grant of clearance for various activities listed in the notification.
- Guidelines for development / rehabilitation activities in the tsunami affected states in the context of the provisions of coastal laws.
- Preparation of detailed geo-referenced maps to be publicly available and accessible, for the entire coast to facilitate a GIS-based approach to coastal zone management.
- Specific mention of the punitive measures and guidelines for taking action against violators of the CRZ Notification in the text of the notification.
- Introducing into the notification appropriate clauses of transparency and public access to all documents, minutes and decisions of all the regulatory agencies and authorities involved in the implementation of the CRZ Notification.

It is essential for the MoEF to state categorically that violations of the present notification will not be overlooked once the new notification becomes applicable. If this is not done, the message to violators will be that the present and future violations will be regularised in time. This is bound to set a very poor precedent and will make future implementation of any coastal conservation law impossible.

The two-year transition period could be used by the regulatory agencies to commission status reports on the implementation of the CRZ Notification and the violations that exist until a cut off date. This is essential to initiate the implementation of the new notification with base line information of the present violators and to ensure that the list of defaulters does not get longer. Appropriate action against violators must be initiated during the transition phase.

Changes to current coastal management approaches and legislation are indeed the need of the hour. An understanding of the root causes of non-compliance and non-implementation of the CRZ Notification will be essential to identify the shape that new legislation should take. This report attempted to piece together the experiences with one such legislation. Similar studies on other relevant coastal management legislations should also be undertaken.

## **Annexure I**

### **Activities prohibited within the Coastal Regulation Zone**

1. Manufacture or handling or storage or disposal of hazardous substances as specified in the Notifications of the Government of India in the Ministry of Environment & Forests. No. S.O. 594(E) dated 28th July, 1989 (Hazardous Wastes), S.O. 966(E) dated 27th November, 1989 (Hazardous Chemicals) and GSR 1037(E) dated 5th December, 1989 (Hazardous Micro Organisms Genetically Engineered Organisms Or Cells)
2. Setting up of new fish processing units including warehousing
3. Setting up and expansion of units / mechanisms for disposal of wastes and effluents
4. Discharge of untreated wastes and effluents from industries, cities or towns and other human settlements - existing practices to be phased out in 3 years
5. Dumping of city or town waste for the purposes of land filling or otherwise - existing practices to be phased out in 3 years
6. Dumping of ash or any wastes from thermal power stations
7. Land reclamation for commercial purposes such as shopping and housing complexes, hotels and entertainment activities
8. Mining of sands, rocks and other substrata materials
9. Harvesting or drawal of ground water and construction of mechanisms therefore within 200 m of HTL
10. Construction activities in the CRZ -I
11. Dressing or altering of sand dunes, hills, natural features including landscape changes for beautification, recreational and other such purposes
12. Construction of buildings on the landward side on any new roads except roads approved in the Coastal Zone Management Plan, which are constructed on the seaward side of an existing road
13. In ecologically sensitive areas (such as marine parks, mangroves, coral reefs, breeding and spawning grounds of fish, wildlife habitats and such other areas as may be notified by the Central/State Government/Union Territories) construction of beach resorts/hotels
14. In CRZ-IV ANI, corals from the beaches and coastal waters shall not be used for construction and other purposes
15. In CRZ-IV ANI dredging and underwater blasting in and around coral formations shall not be permitted
16. In CRZ-IV LK, corals from the beaches and coastal waters shall not be used for construction and other purposes
17. In CRZ-IV LK dredging and underwater blasting in and around coral formations shall not be permitted

## Annexure 2

### **Activities permitted (under conditions) within the Coastal Regulation Zone**

1. Industries directly related to waterfront or directly needing foreshore facilities.
2. Projects of Department of Atomic Energy.
3. Non-polluting industries in the field of information technology in SEZs.
4. Other service industries in the Coastal Regulation Zone of Special Economic Zones (SEZ); Specified activities / facilities in SEZs.
5. Facilities for generating power by non-conventional energy sources.
6. Desalination plants.
7. Construction of airstrips and associated facilities in the islands of Lakshadweep and ANI.
8. Transfer of hazardous substances from ships to ports, terminals and refineries and vice versa, in the port areas.
9. Facilities for receipt and storage of petroleum products and Liquefied Natural Gas as specified in Annexure III appended to this notification and facilities for re-gasification of Liquefied Natural Gas, may be permitted within the said Zone.
10. Expansion of fish processing units.
11. Hatchery and natural fish drying in permitted areas.
12. Setting up and expansion of units / mechanisms for disposal of wastes and treated effluents into watercourse.
13. Storm water drains.
14. Setting up and expansion of units / mechanisms for treatment and disposal of wastes and effluents arising from hotels and beach resorts located in Coastal Regulation Zone areas.
15. Setting up and expansion of units / mechanisms for treatment and disposal of wastes and effluents of domestic or municipal sewage in the Union territories of the Andaman and Nicobar Islands and Lakshadweep.
16. Land reclamation, bunding or disturbing the natural course of sea water required for conservation or modernisation or expansion of ports, harbours, jetties, wharves, quays, slipways, bridges and sea-links and for other facilities that are essential for activities permissible under the notification or for control of coastal erosion and maintenance or clearing of waterways, channels and ports or for prevention of sandbars or for tidal regulators, storm water drains or for structures for prevention of salinity ingress and sweet water recharge.
17. Mining of rare minerals not available outside the CRZ areas.
18. Exploration and extraction of Oil and Natural Gas and associated activities and facilities.
19. Sand mining in ANI.
20. Harvesting or drawal of ground water in the 200-500m area.
21. Harvesting or drawal of ground water in the 50-200m area.
22. Harvesting or drawal of ground water in areas within 200m or the CRZ whichever is less.

23. Construction activity for facilities for carrying treated effluents and waste-water discharges into the sea, facilities for carrying sea water for cooling purposes, oil, gas and similar pipelines and facilities essential for activities permitted under this Notification.
24. Defence requirements for which foreshore facilities are essential such as slipways, jetties, wharves and quays.
25. Operational constructions for ports, harbours and lighthouses and construction activities of jetties, wharves, quays, slip ways.
26. Constructions or modernisation or expansion of jetties and wharves in the Union territory of Lakshadweep for providing embarkation and disembarkation facilities.
27. Foreshore facilities for transport of raw materials facilities for in-take of cooling water and outfall for discharge of treated waste water / cooling water of thermal power plants
28. Housing schemes in CRZ
29. Weather radars for cyclone movement and prediction by IMD
30. Demolition or reconstruction of buildings of archaeological or historical importance
31. Demolition or reconstruction of heritage buildings
32. Demolition or reconstruction of buildings under public use including those used for purposes of worship, education, medical care and cultural activities.
33. All other activities with investment of five crore rupees or more
34. Other activities with investment less than five crore rupees
35. All development and activities within the CRZ other than those covered in para 2 and para 3 (2)
36. Pipelines and conveying system including transmission lines
37. Facilities that are essential for activities permitted under CRZ -I
38. Construction of trans-harbour sea links
39. Construction of dispensaries, schools, public rain shelters, community toilets, bridges, roads, jetties, water supply, drainage, sewerage which are required for traditional inhabitants of the Sunderbans Bio-sphere reserve area of West Bengal, on a case to case basis
40. Salt harvesting by solar evaporation of sea water
41. Storage of non hazardous cargo such as edible oil, fertilizers and food grain within notified ports
42. Housing schemes of the State Urban Development Authorities
43. Reconstruction of the authorised buildings to be permitted
44. Repairs of existing authorised structures for permissible activities under the notification including facilities essential for such activities
45. Agriculture, horticulture, gardens, pastures, parks, playfields, forestry
46. Construction of dispensaries, schools, public rain shelters, community toilets, bridges, roads and provision of facilities for water supply, drainage, sewerage which
47. Construction of units or ancillary thereto for domestic sewage treatment and disposal
48. Tourism in the ANI

49. Construction of hotels/beach resorts for temporary occupation of tourists/visitors subject to the conditions as stipulated in the guidelines at Annexure-II
50. Construction/reconstruction of dwelling units
51. Reconstruction/alterations of existing authorised buildings
52. Construction of non-polluting industries in the field of information technology and other service industries, desalination plants, beach resorts and related recreational facilities essential for promotion of SEZ
53. Buildings in CRZ-IV -ANI
54. Construction of buildings in CRZ-VI in Lakshadweep and small islands
55. Tourism in the Lakshadweep

## Annexure 3

### The schema of the CMZ Notification

CMZ I	CMZ II	CMZ III	CMZ IV
<b>Description of Zone</b>			
All ESAs as mentioned in CMZ Notification 2006	Coastal Municipality/Corporations and Coastal <i>Panchayats</i> with population density more than 400/sq km; ports and harbours, tourism areas, Declared Tourism Areas, Mining sites, Approved Industrial Estates, Special Economic Zone, Heritage areas, Archaeological sites, Defence areas /installations, Atomic/thermal/other power plants	All open areas including coastal seas but excluding those areas classified as CMZ-I, II and IV	Andaman and Nicobar and Lakshadweep.
<b>Agency responsible for site identification</b>			
Sites to be identified by MoEF	Site to be identified by relevant departments; Heritage areas & archaeological sites to be identified by MoEF, concerned Ministry & ASI.	NA	NA
<b>Basis of management</b>			
IMPs to be prepared by MoEF through scientific institutions	IMPs to be prepared by prepared by local bodies/concerned agencies/scientific institutions and approved by MoEF for <i>panchayats/municipalities /corporations</i> . To be prepared by Ministry of Tourism and the State/UT Tourism Department for tourism sites. No IMPs for other activity areas under this category		Integrated Coastal Zone Management plan prepared by the MoEF.
<b>Implementation agency</b>			
Implemented by the concerned State/UT	-	-	-
<b>Monitoring agency*</b>			
Monitored by the CZMA of State/Union Territory.	-	-	-
<b>Funds</b>			
Necessary funding will be earmarked and provided by MoEF	-	-	-
<b>Agency to grant clearance for activities</b>			
-	MoEf to grant permission (based on EIA) for: mining of placer minerals, oil & gas, other minerals found in coastal & offshore areas; activities requiring foreshore facilities & which are non-polluting; Defence related projects (based on PH).	Activities that may be permitted on the seaward side of the setback line to be permitted by local body/ state or UT (with EIA only for jetties and fishing harbours) /MoEF (with EIA)	-

\* A general statement about monitoring and enforcement agencies in the CMZ Notification is *“For the purpose of monitoring and enforcing the Coastal Management Zone Notification the Central Government will strengthen the existing National and State/UT Coastal Zone Management Authorities constituted under Environment (Protection) Act 1986.”*

## Notes

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- <sup>1</sup> The PTEI is executed by UNDP and implemented by the Ashoka Trust for Research in Ecology and the Environment, Citizen, consumer and civic Action Group and the Nature Conservation Foundation ([www.ptei-india.org](http://www.ptei-india.org)). The project aims to understand coastal vulnerability and resilience in the face of such natural disasters within the Indian context, establish participatory ecological and community monitoring systems, critically analyse developmental policy with respect to coast, and develop management models for key sites along the coast.
- <sup>2</sup> Anonymous. 2005. States request more stringent Coastal Regulation Zone guidelines. *The Hindu*, 10<sup>th</sup> January.
- <sup>3</sup> Interview with P.B.Sahasranaman, environment lawyer, who had filed a petition in the High Court of Kerala on the post-tsunami constructions within the CRZ in Kerala (W.P. (C). No. 883 of 2005). August 2006.
- <sup>4</sup> Interviews conducted in the course of this study seemed to indicate that the need for implementing the CRZ, post-tsunami was appreciated by government bureaucrats, fishworker leaders and NGOs.
- <sup>5</sup> Interview with TSS Mani, a human rights activist and advisor to FIMCOTN, a fishworkers association in Tamil Nadu, October 2006.
- <sup>6</sup> Ibid 5
- <sup>7</sup> See Rangarajan, 2006 for an account of Mrs. Gandhi's involvement in environmental struggles and her motivations.
- <sup>8</sup> The complete quotation is worth mention here as it signifies the idea of coastal protection she was approached with – "I have received a number of reports about the degradation and mis-utilisation of beaches in our coastal states by building and other activity. This is worrying as the beaches have aesthetic and environmental value as well as other uses. They have to be kept clear of all activities at least upto 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 beach sands without marring their beauty. Beaches must be kept free from all kinds of artificial development. Pollution from industrial and town wastes must be also avoided totally. Please give thought to this matter and ensure that our lovely coastline and its beaches remain unsullied."
- <sup>9</sup> Anon. 1993. Seas become rubbish dumps. Pollution in coastal areas increasing. *Indian Express*, June 12.
- <sup>10</sup> Interview with Bharat Jairaj, Environment Lawyer, CAG, Chennai. October 2006.
- <sup>11</sup> Supreme Court Order dated 18th April 1996 in W.P.(C) No.664 of 1993 issued in the petition filed by the Indian Council for Enviro-Legal Action.
- <sup>12</sup> Chainani's chapter on the CRZ mentions that a meeting with held with the Govt of Maharashtra on Nov 20th, 1990, wherein environmentalists from the state also participated.
- <sup>13</sup> A detailed step-by-step account leading upto the gazetting of the CRZ Notification is available in Chainani's chapter on CRZ, perhaps the only such document of its kind.
- <sup>14</sup> For the purposes of the notification, "developed area" is referred to as that area within municipal limits or in other legally designated urban areas which are already substantially built up and which have been provided with drainage and approach roads and other infrastructural facilities, such as water supply and sewerage mains.
- <sup>15</sup> Interview with T. Peter, Kerala Swatantra Matsya Tozhilali Union, August 2006.
- <sup>16</sup> PASI was led by community leaders and environmentalists such as S. Jagannathan of the Land For Tillers movement, Tamil Nadu, Jacob D. Raj of the NGO 'Prepare' in Andhra Pradesh, Shri. Banka Behari Das representing the Orissa Krushak Mahasangha, Vandana Shiva of the Research Foundation for Science and Ecology, New Delhi and Claude Alvares from The Goa Foundation, Mapusa, among others.
- <sup>17</sup> Vide Order dated 11th December 1996 in W.P (C) No. 561 of 1994 in the matter of S. Jagannath v. Union of India
- <sup>18</sup> The Supreme Court in its order stated that all aquaculture industry/shrimp culture industry/shrimp culture ponds that were illegal should be demolished before March 1997.
- <sup>19</sup> Ibid 11
- <sup>20</sup> These objectives were identified by Dr B Baba and Dr John Kurien who are members of the present Kerala Coastal Zone Management Authority and also by environmental lawyer P.B Sahasranaman in interviews conducted in August 2006
- <sup>21</sup> Also available in <http://www.india-seminar.com/2000/492/492%20d.%20goenka.htm>
- <sup>22</sup> Interview with Bharat Jairaj, October 2006.
- <sup>23</sup> Ibid 22
- <sup>24</sup> Ibid 22
- <sup>25</sup> T. Mohan is a Chennai-based environmental lawyer, who has argued many cases on the CRZ Notification and environmental matters in Tamil Nadu.

- <sup>26</sup> For the purposes of this study, amendments upto 24th July 2003 alone have been considered since there is some ambiguity with the subsequent two notifications' clauses.
- <sup>27</sup> Parliament enacts laws from time to time by way of Central "Acts" and these Acts are implemented by the various Ministries/Departments of Government of India, that is, the Executive. It is a well-recognised principle that the law enacted by Parliament cannot be comprehensive enough so as to visualise each and every eventuality that may arise during the course of its implementation and make a provision for it in the Act in anticipation. In order to cover for such contingencies, the Central Acts generally contain a provision authorising the Central Government to frame rules/regulations, etc. in certain specified areas to enable Government to carry out the objective of the Act. These rules/regulations framed in exercise of the powers conferred by an Act of Parliament is termed as "Subordinate Legislation". In a similar manner, framing of Subordinate Legislation is also contemplated in the Constitution of India.  
([http://rajyasabha.nic.in/com\\_sub\\_legis/coslbrieff.htm](http://rajyasabha.nic.in/com_sub_legis/coslbrieff.htm))
- <sup>28</sup> Ibid 22
- <sup>29</sup> Ibid 11
- <sup>30</sup> The Coastal Watch Programme of Equations, an NGO based in Bangalore for example, organised a strategic meeting of organisations and individuals on "Coastal Zone Management Authorities" on June 20, 1999. The issues highlighted at the meeting were the ambiguous roles of the authorities, the presence of multiple agencies with overlapping roles, the profile and composition of the SCZMAs and the NCZMA, and the unclear role of the local bodies in this decision-making mechanism. The problems with the SCZMA composition were mentioned in interviews with P. B. Sahasranaman and Dr. John Kurien, member CZMA and Professor, Centre for Development Studies. August 2006.
- <sup>31</sup> Interview with P. B. Sahasranaman, Kerala based environmental lawyer, Cochin, August 2006.
- <sup>32</sup> Interview with Dr. K. Kokkal, member CZMA and Principal Scientific Officer, Kerala State Council for Science, Technology and Environment, Thiruvananthapuram, August 2006
- <sup>33</sup> Ibid 31
- <sup>34</sup> Ibid 31
- <sup>35</sup> Interviews with Dr. John Kurien, Bharat Jairaj. August and October 2006
- <sup>36</sup> Interviews with Dr. B Baba, Director, Centre for Earth Science Studies and Dr. K.V Thomas, Scientist, Centre for Earth Science Studies, August 2006, Thiruvananthapuram.
- <sup>37</sup> Interview with Dr. B. Baba, Centre for Earth Science Studies, Thiruvananthapuram, August 2006.
- <sup>38</sup> Ibid 32
- <sup>39</sup> Letter No 18123/EC.3/2000-1, dated 14.8.2000
- <sup>40</sup> Letter from the TN CZMA to Mr. Dharmesh Shah's application dated December 2006.
- <sup>41</sup> Ibid 31
- <sup>42</sup> Interviews with Dr. B Baba, Dr John Kurien, Dr. K. Kokkal, August 2006
- <sup>43</sup> Interview with Dr. K. Kokkal, August 2006
- <sup>44</sup> Ibid 44
- <sup>45</sup> The RTI response letter states that the six-monthly reports and minutes are submitted to the MoEF and hence copies are not available with the authority.
- <sup>46</sup> Ibid 31
- <sup>47</sup> Interview with Mr. Nityanand Jayaraman, Corporate Accountability Desk. October 2006.
- <sup>48</sup> Ibid 40
- <sup>49</sup> Clauses ii (a) and iv of the notifications for the setting up of CZMAs.
- <sup>50</sup> Ibid 31
- <sup>51</sup> Interview with Mr. Neelakanthan, Member Secretary of the TN CZMA, October 2006.
- <sup>52</sup> The minutes of the Swaminathan Committee were obtained through a Right to Information application in December 2006.
- <sup>53</sup> Ibid 13
- <sup>54</sup> Ibid 10
- <sup>55</sup> Via G.O. MS. No 165, Environment & Forests (EC -III) Department dated 9.6.98.
- <sup>56</sup> Via Government Letter MS No 35 (EC -III) dated 15.3.2005.
- <sup>57</sup> Interview with Dr. John Kurien. Professor, Centre for Development Studies, Thiruvananthapuram, August 2006.
- <sup>58</sup> Interview with P. B. Sahasranaman, 2006 and Dr. K. Kokkal. August 2006.
- <sup>59</sup> Consultation on "Reconstruction of Shelters and Community Infrastructure" in collaboration with UN Team for Recovery Support in Chennai on 12-04-2005 at the Indian Institute of Technology, Chennai.

<sup>60</sup> Ibid 5

<sup>61</sup> Ibid 5

<sup>62</sup> Writ Petition (C) No. 883 of 2005. Association for Environmental Protection vs State of Kerala and others

<sup>63</sup> The reengineering process resulted in a new Environment Impact Assessment notification 2006 despite severe criticism from NGOs and project-affected communities.

<sup>64</sup> Interviews with members of the Kerala and Tamil Nadu CZMAs.

<sup>65</sup> Also see <http://www.thehindubusinessline.com/2006/06/28/stories/2006062802451200.htm>

<sup>66</sup> Also see <http://www.hindu.com/2006/06/27/stories/2006062718720300.htm>

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