

# Report of the Committee to Review the Issues Relating to the Coastal Regulation Zone Notification, 2011

Information under RTI Act, 2005  
Date 15/6/16  
(CPGO-CRZ)  
MSEPC

## Content

List of key abbreviations .....	4
Executive Summary .....	5
Composition of the Committee .....	11
Terms of Reference of the Committee .....	12
Sittings of the Committee .....	12
Chapter 1 .....	13
Introduction, Approach and Methodology adopted by the Committee .....	13
<b>1.1 Introduction</b> .....	13
Key Issues along the Coast .....	15
<b>1.2 Approach and Methodology adopted by the Committee to address the ToRs</b> .....	29
Chapter 2 .....	30
Issues and Representations made by the Coastal State/UT Governments as per ToRs .....	30
A. Specific issues indicated by the State/UT Governments .....	31
<b>2.1 Maharashtra [ToR-1(a)]</b> .....	31
<b>2.2 Karnataka [ToR-1(b)]</b> .....	36
<b>2.3 Kerala [ToR-1(c)]</b> .....	38
<b>2.4 Suggestions and comments made by other States/UTs including general issues [ToR-1(e)]</b> .....	42
<b>2.5 Analysis of the CRZ Notification, 2011</b> .....	56
Chapter 3 .....	66
Discussions on the Issues raised by the States and UTs .....	66
<b>3.1 Development Issues in CRZ-II</b> .....	66
<b>3.2 Development Issues in CRZ-III Including Dwelling Units of Fishermen</b> .....	70
<b>3.3 Fishery-Related Matters</b> .....	72
<b>3.4 Tourism-Related Issues</b> .....	72
<b>3.5 Hazard Management</b> .....	74
<b>3.6 Demarcation of HTL/LTL</b> .....	74
<b>3.7 Preparation of CZMPs</b> .....	74
<b>3.8 Tidal-Influenced Water Bodies</b> .....	75
<b>3.9 Enforcement of CRZ Notification</b> .....	75

3.10 Monitoring, Institutional Mechanism and Capacity Building .....	77
3.11 Issues Related to Conservation of ESAs .....	78
3.12 Other Issues .....	82
Chapter 4 .....	84
Recommendations and Proposed Draft CRZ Notification .....	84
4.1 Recommendations .....	84
4.2 Proposed Draft CRZ Notification .....	89
Annexure-A .....	106
CONSERVATION, PROTECTION AND MANAGEMENT FRAMEWORK FOR CRZ-I ..	106
Annexure-B .....	112
Preparation of Coastal Zone Management Plans (CZMPs) .....	112

## List of key abbreviations

CESS	Centre for Earth Science Studies (now designated as National Centre for Earth Science Studies)
CIDCO	City Industrial Development Corporation
CPDAC	Coastal Protection and Development Advisory Committee
CRZ	Coastal Regulation Zone
CVCAs	Critical Vulnerable Coastal Areas
CZMA	Coastal Zone Management Authority
CZMP	Coastal Zone Management Plan
DCR	Development Control Rules
DP	Development Plan
E(P)A 1986	Environment (Protection) Act, 1986
ESA	Ecologically Sensitive Area
FSI	Floor Space Index
HTL	High Tide Line
ICZMP	Integrated Coastal Zone Management Plan
IMBL	International Maritime Boundary Line
IMP	Integrated Management Plan
IPZ	Island Protection Zone
LTL	Low Tide Line
MoEF&CC	Ministry of Environment, Forests & Climate Change
MoES	Ministry of Earth Sciences
NCSCM	National Centre for Sustainable Coastal Management
NCZMA	National Coastal Zone Management Authority
NMMC	Navi Mumbai Municipal Corporation
NDZ	No Development Zone
SCZMA	State Coastal Zone Management Authority
SEIAA	State Environmental Impact Assessment Authority
SICOM	Society of Integrated Coastal Management
SLR	Sea Level Rise
Sol	Survey of India
UT	Union Territory

## Executive Summary

The MoEF (now designated as MoEF&CC) constituted a six-member Committee on 17 June 2014 under the Chairmanship of Dr. Shailesh Nayak, Secretary, MoES to examine the issues of coastal States/UT Governments relating to CRZ Notification, 2011 and to examine the errors or inconsistencies and procedural simplification in the said Notification. The other members of the Committee were Shri Shashi Shekhar, Additional Secretary, MoEF&CC, Prof. R. Ramesh, Director, NCSCM, Dr. M. Baba, Former Director, CESS, Shri Hardik Shah, Member Secretary, Gujarat CZMA and Dr. A. Senthil Vel, Additional Project Director, SICOM, the Member Secretary of the Committee.

The Committee examined the issues posed by coastal States/UTs with regard to CRZ Notification, 2011. The correspondences, communications and presentations made by the States/UTs are annexed. The Committee had sittings with the Governments of Maharashtra, Karnataka and Kerala in Mumbai, Bangalore and Thiruvananthapuram, respectively. Later, all the States and UTs were invited to Delhi and the Committee heard the representations. A summary of the presentations on the issues and suggestions of the States/UTs and the Committee's analysis of the same are given in detail in this report. The Committee also critically examined the CRZ Notification, 2011 with respect to the errors/inconsistencies and discussed the ways and means for procedural simplification.

After examining all the issues detailed by the State Governments and taking into consideration the implications of CRZ Notification, 2011 the Committee is of the opinion that the coastal zone management policy in the country should focus upon the following six principles:-

- (i) Keeping in view the importance and incomparable values of ESAs, the geomorphological features, archaeological and heritage sites, the CRZ Notification should primarily focus on protection and conservation of such areas/features in the coastal areas. The protection and conservation including

- The present CRZ Notification, 2011 has many ambiguities with regard to High Tide Line (HTL)/Low Tide Line (LTL) mapping, CRZ boundary demarcation and so on, which are prerequisites for CZMP, the preparation of which is considerably delayed. It is also observed that the Environment Departments of the States/UTs are extremely under-staffed to meet the challenges of coastal zone management (CZM). The existing staff in the States/UTs is mostly involved in addressing approvals and issues relating to CRZ-II and III. There have been very few instances where States/UTs have taken proactive steps in CRZ-I and CRZ-IV areas, the conservation of the ecosystems in it, combating pollution understanding the changes in the coastal areas and their impact and taken corrective steps in improving the general environmental quality of the coast. Hence, the Committee is of the opinion that the Environment Departments of the States/UTs and MoEF&CC should be sensitized to address CRZ-I and CRZ-IV issues and in turn as a part of decentralization and empowering the local bodies and provide such regulations that facilitate the States/UTs to undertake developmental activities that are ecologically sustainable.

### **Protection and conservation of Ecologically Sensitive Areas**

- It has clearly emerged that the ecologically sensitive areas along the coastal and in the marine areas are extremely important to maintain the biodiversity of the marine life and also to maintain the functional integrity of the coast. Over a period of time the conservation and protection of ESA have been neglected and are under tremendous pressure due to increase in population and the developmental activities undertaken to meet the economic aspiration of the growing population. The destruction of ecosystems is a matter of concern and in several cases it is irreversible. The coastal ecosystems are important as they play a crucial role in the proliferation of marine fauna on which the local communities depend for livelihood. They reduce the vulnerability of coastal communities to natural disasters and play a crucial role in maintaining the functions of the coast including acting as a carbon sink. Hence, the Committee suggests that the Government should strengthen existing mechanisms, infrastructure, expertise and institutions at various levels to conserve and protect

52

the coastal ecosystems. The Government in this context may, in the larger interest of the country take appropriate steps in conservation, protection of ecosystems, while taking into consideration the basic requirements of the growing population.

### **Economic development along the coastal area**

- The Committee is also of the opinion that new opportunities and initiatives need to be taken to address the economic and social development of coastal communities. Most of the traditional coastal communities that live on the resources from the coastal areas, especially fishing, need to be provided with adequate opportunities for economic development. In this regard, the Committee is of the opinion that while the ecosystems are being conserved and protected by the Governments, the local communities should also play an important role in the conservation and protection of the ecosystems. The local communities should be provided with an opportunity to take up tourism, artisanal fisheries such as traditional aquaculture and ornamental fish culture, in such ecosystem areas for their economic improvement. The Governments should work in this area, which will address both conservation and economic development of the communities thereby, reducing pressure on the already depleting fishery resources.
- The Committee has serious concern on the growing coastal pollution from industrial waste and sewage, dumping of solid waste, non-point source pollution from the agricultural areas, and so on. With the growing infrastructure in the coastal areas, especially in the cities and municipalities pollution levels are bound to increase. This is a serious issue which needs to be addressed by the respective State/UT Governments on a mission mode by preparing effective CZMP and ICZMP.
- Another matter of concern which the Committee has noted is the changes in the shoreline. The shoreline change is mostly due to anthropogenic activities. In this context, certain initiatives have been taken by the MoEF&CC through the NCSCM wherein the shoreline changes are being mapped and studied. These studies need to be taken into consideration while undertaking foreshore developmental activities (CZMP and ICZMP). The studies need to be carried on

further to ascertain the exact reasons of shoreline change so as to implement remedial measures.

### **Impacts of climate change and initiatives to address the coastal vulnerability**

- The Committee appreciates the initiatives taken by MoEF&CC in setting up exclusive Centres for coastal management such as National Centre for Sustainable Coastal Management (NCSCM), Society of Integrated Coastal Management (SICOM) and State-level Project Management Units (SPMUs) including strengthening of the consortium institutions in each of the coastal States/UTs. These agencies could be further developed for undertaking research and development in the area of coastal management and also to address the social needs of the coastal communities in the States/UTs.
- The Committee after detailed examination of all issues raised by the State/UT Governments and taking into account the current international scenario in the area, including the emerging scientific technologies in the field of coastal and marine management, is of the clear view that the MoEF&CC should embark upon new initiatives for protecting and conserving the coastal and marine areas, which are endowed with rich but fragile ecosystems. While taking up conservation and management of ecosystems, the MoEF&CC shall also identify/assess development of technologies/infrastructure that would have minimum impact on the coastal and marine environment and also address to the economic aspirations of the growing population of the country.

The Committee after examination of the issues raised by the coastal States/UTs and its own analysis, which are detailed out in the subsequent chapters of this report has proposed a revised CRZ Notification in supersession of the existing CRZ Notification, 2011, the draft of which also forms a part of this report. The Committee suggests that the Government should examine the above-mentioned draft notification carefully and may also take into account any another emerging area/issues before considering it for implementation.



## Composition of the Committee

As per the Office Order No. 19-112/2013-IA-III dated 17 June 2014, the composition of the Committee constituted to review the issues relating to CRZ Notification, 2011 is as follows:

- |     |  |                     |
|-----|--|---------------------|
| 1)  | Dr. Shailesh Nayak<br>Secretary<br>Ministry of Earth Science                                 | Chairman            |
| 2)  | Shri Shashi Shekhar,<br>Additional Secretary<br>MoEF, New Delhi                              | Member              |
| 3)  | Prof. R. Ramesh,<br>Director, National Centre for Sustainable<br>Coastal Management, Chennai | Member              |
| 4)  | Dr. M. Baba,<br>Former Director, CESS<br>Former Member, NCZMA                                | Member              |
| (5) | Shri Hardik Shah,<br>Member Secretary,<br>Gujarat Coastal Zone Management Authority          | Member              |
| (6) | Dr. A. Senthil Vel,<br>Additional Project Director,<br>SICOM, New Delhi                      | Member<br>Secretary |

## Terms of Reference of the Committee

1. The broad Terms of Reference (ToR) of the Committee are:
  - a) to examine issues relating to Maharashtra raised by the State Government vide letters dated 27.08.2013 and 23.12.2013;
  - b) to examine issues relating to Karnataka raised by the State Government vide letters dated 16.08.2013, 28.02.2014 and 18.02.2014;
  - c) to examine issues relating to Kerala raised by the State Government vide letters dated 10.02.2014;
  - d) to examine errors/inconsistencies in the CRZ Notification, 2011 and procedural simplification and
  - e) to examine any other issues raised by the State Government(s) during their interaction with the Committee.
2. The Committee may interact with the State/ UT Governments, if necessary.

## Sittings of the Committee

The Committee in accordance with the ToR had the following meetings:

- 8 July 2014 at Mumbai – to examine the issues relating to Maharashtra,
- 21 August 2014 at Bengaluru – to examine the issues relating to Karnataka,
- 22 August 2014 at Thiruvananthapuram – to examine the issues relating to Kerala,
- 27 October 2014 at New Delhi – to examine the issues of West Bengal, Odisha, Tamil Nadu, Puducherry, Goa, Daman & Diu, Gujarat, Andhra Pradesh and
- 18 December 2014 at New Delhi – meeting of the Committee to draft the Report.
- 9 January 2015 at New Delhi – meeting of the Committee to finalize the draft Report.
- The report will be submitted in the third week of January, 2015

# Chapter 1

## Introduction, Approach and Methodology adopted by the Committee

### 1.1 Introduction

India's mainland coast extends to 5500 km and a total of more than 7500 km including the Andaman & Nicobar (A&N) and Lakshadweep Islands with nearly one-fourth of the country's population living within 50 km of the coast. A wide range of coastal ecologically sensitive areas such as mangroves, sea grass, coral reefs, tidal flats, estuaries, lagoons, sand dunes and salt marshes occur along the coast. A number of rivers flow into the Bay of Bengal on the east coast and into the Arabian Sea on the west coast, carrying large quantities of sediment. The east coast is dominated by large river deltas and sandy beaches, while the west coast consists of an intricate network of estuaries, backwaters and predominantly rocky coastline.

#### 1.1.1 Importance of Coastal ESAs

Coastal habitats alone account for approximately one-third of all marine biological productivity and estuarine ecosystems (i.e., salt marshes, sea grasses, mangrove forests) are among the most productive regions. Coastal ESAs are home to unique flora and



fauna. Coral reefs constitute less than 1% of the ocean floor but support over 25% of the marine biodiversity. Mangroves, beaches and coral reefs aid in controlling coastal erosion, shoreline change and also serve as a natural defense against coastal hazards such as storm surges, cyclones and tsunamis. The submerged

vegetation of these shallow habitats serve important functions as traps of suspended sediment, important winter forage for migratory birds and nursery areas for juvenile finfish and shellfish. While reefs, mangroves and sea grasses are important breeding and feeding grounds for shellfish and finfish, sand dunes and beaches play a major role as interface between sea and land by preventing erosion due to storm waves. In view of the immense value of the ESAs indicated here, including its contribution in maintaining the biological integrity of the coastal habitats for vast coastal biodiversity representing different levels in the food chain, it is imperative that necessary protection and conservation measures are put in place at the earliest. These sensitive ecosystems provide various ecosystem services, which provide livelihood avenues to millions of coastal population, directly and indirectly.

Coastal ecosystems are also very efficient **carbon sinks** and have a major role in sequestering atmospheric carbon dioxide. India has about 3,703,970 hectares of coastal wetlands, which accounts for ~25% of the total wetland areas of the country. Among these wetland ecosystems, mangroves occupy 4628 km<sup>2</sup>, salt marshes ~1611 km<sup>2</sup>, inter-tidal mud flats ~24,136 km<sup>2</sup>, coral reefs ~1420 km<sup>2</sup> and sea grass ~360 km<sup>2</sup>. These coastal/ marine ecosystems are the most productive ecosystems of the world with a large potential for carbon sequestration. Overall, Indian mangroves are able to sequester about 1.5 metric tons of carbon per hectare per year. Recent data estimate that sea grasses together with salt marshes and mangroves are responsible for capturing up to 70% of the organic carbon in the marine realm making them one of the most intense carbon sinks on the planet.

In recent times, coasts have become a zone with multiple activities and stakeholders competing for coastal resources. However, coasts are also intensely prone to cyclones, storm surges, erosion and flooding. A combination of a contested space and a highly vulnerable environment means that coastal populations live in a high-risk landscape. The extent of erosion largely due to developmental activities along the coast is rapidly increasing. According to a recent study (2011) by the National Centre for Sustainable Coastal Management (NCSCM), almost 40% of the Indian coast is subject to coastal erosion. This figure is higher than earlier estimates by the Coastal Protection and Development Advisory Committee (CPDAC), which had

reported in 2004 that about 22% of the coast was undergoing erosion and it had increased to almost 30% by 2010. Studies have indicated that loss of beach space has a serious impact on fishing communities in India, because much of the small-scale fishery is beach based and the houses of fishermen are located close to the shoreline.

### 1.1.2 Coastal Pollution

The coastal/ marine ecosystems are often considered the last receptacle of wastes. With increasing demographic pressure and activities along the coast, without a simultaneous increase in the treatment facilities available for the wastewater generated, pollution of coastal waters is rapidly increasing and is a matter of great concern. Major land-based pollution to the coast primarily includes domestic sewage – discharged directly into the sea or through the rivers, solid wastes dumped into waterways along the coastline, industrial effluents – untreated/partially treated and oil and grease – from land-based sources, marine sources such as ships, submarine seepage and refinery wastes. Municipal sewage is the main single source of pollution to the coastal waters due to land-based activities<sup>1</sup>.

#### Key Issues along the Coast

- Destruction of coastal ecosystems for economic use or settlements
- Vulnerability to cyclones and storm surges
- Coastal erosion
- Pollution caused by industries, sewage discharge and agriculture in the drainage basin
- Overpopulation and settlements built at unsafe place or in wetlands
- Threatened food (e.g. fisheries) security
- Shortage in freshwater supply due to salt water intrusion.

It is estimated that 120 Class-I cities and Class-II towns of coastal areas generate about 6835 million liters per day (MLD) of wastewater per day, out of which, only 1492 MLD of wastewater undergoes various levels of treatment. The remaining is discharged directly to the coastal waters without any kind of treatment. This means that on an average 5343 MLD of untreated wastewater from municipal sources reach coastal waters; which is equivalent to 5.343 million m<sup>3</sup> per day or 1.9 billion m<sup>3</sup> per year. This figure is

<sup>1</sup> <http://www.cpcb.nic.in/comaps.php> accessed 8 December 2014

almost five times the earlier estimate of  $0.41 \times 10^9 \text{ m}^3$  (De Sa<sup>2</sup>). The disposal of solid waste generated by 120 coastal cities and towns are disposed in landfill sites, partly dumped openly and partly composted. About 16,734 tons per day of Municipal Solid Waste (MSW) was generated by 11 major coastal cities in 2011 (Status report on Municipal Solid Waste Management, CPCB, 2013). Some of the industries have adequate treatment facilities up to secondary/tertiary level.

In the case of small-scale industrial units and industrial clusters, treatment of wastewater is carried out by establishing Common Effluent Treatment Plants (CETPs). In Gujarat and Maharashtra, 24 CETPs discharge treated effluent to the coastal waters. Most of the CETPs comply with effluent standards. A first compilation of quantum of pollutants into the coastal ecosystem of India was given by De Sa (undated)<sup>2</sup> as follows:

S. No.	Input/pollutant	Quantum (annual)
1.	Sediments	1600 million tons
2.	Industrial effluents	$50 \times 10^6 \text{ m}^3$
3.	Sewage – largely untreated	$0.41 \times 10^9 \text{ m}^3$
4.	Garbage and other solids	$34 \times 10^6 \text{ tons}$
5.	Fertilizer – residue	$5 \times 10^6 \text{ tons}$
6.	Synthetic detergents – residue	1,30,000 tons
7.	Pesticides – residue	65,000 tons
8.	Petroleum hydrocarbons (tar balls residue)	3500 tons
9.	Mining rejects, dredged spoils and sand extractions	$0.2 \times 10^6 \text{ tons}$

A conservative figure for the quantum of sewage currently reaching the coast is  $1.95 \times 10^9 \text{ m}^3$  per year.

### 1.1.3 Coastal/Marine Fisheries:

The nature of fisheries in India is constantly changing with the emergence of new technologies and techniques in fishing, fuelled by local and global demand as access

<sup>2</sup>Present state of the coastal environment in India. <http://www.teriin.org/teri-wr/coastin/papers/paper2.htm> accessed 9 December 2014

to markets improves. The estimated marine resource potential of the Indian EEZ is about 4.24 million metric tons at current exploitation levels. As the following graph shows, there has been an increasing trend in marine fish catch in the last 60 years.

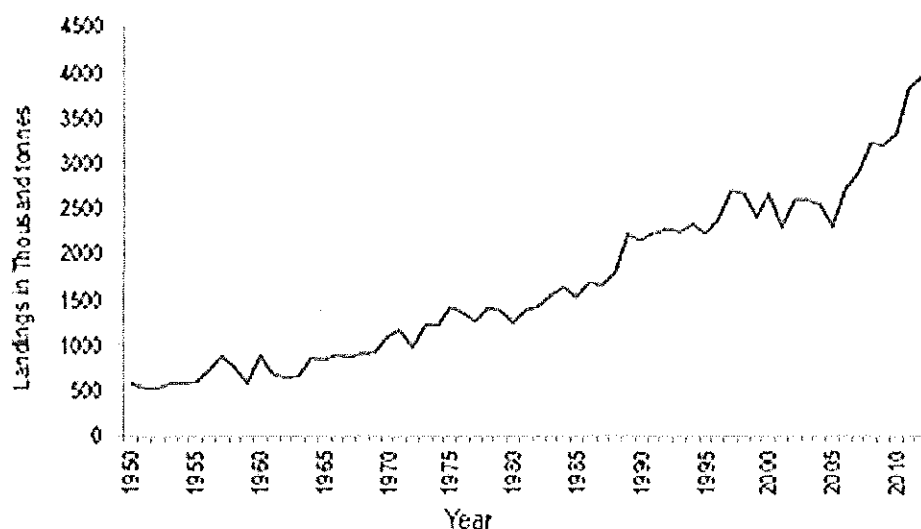


Fig. 1: Estimated marine fish landings in India from 1950 to 2012 (Source:CMFRI Annual Report 2012–2013)

However, CMFRI attributes the increase largely to a few species such as oil sardines, perches and penaeid prawns. However, catch of fishes such as Hilsa and Mackerel have declined. According to CMFRI (2011), inshore waters have been almost exploited to unsustainable levels. Many reasons have been attributed to the reduction in the fish catch in the near-shore area apart from overfishing. These include habitat destruction especially of coastal habitats such as mangroves and other wetlands including estuaries, resulting in the loss of safe nursery areas for spawning and juveniles, pollution from municipal and industrial sources due to large-scale coastal development, construction of aquaculture farms in coastal areas and so on.

In India, according to CMFRI Census (2010), there are 3288 marine fishing villages and 1511 marine fish landing Centres in the maritime States and UTs. The total marine fisher population was about 4 million comprising 864,550 families. About 38% of the marine fishers were engaged in active fishing with 85% of them having full

time engagement. About 63.6% of the fishers were engaged in fishing and allied activities.

#### 1.1.4 Assessment of Coastal and Marine Ecosystem Goods and Services

Coastal regions provide most of the identified ecosystem services and account for highest value on per hectare basis for any ecosystem. The goods from the coastal ecosystems generate provisioning services which include food, salts, minerals and oil resources, construction materials and biodiversity including genetic stock that has potential for various biotechnological and pharmaceutical applications. There are 13 major ports and 176 non-major ports along the India's 7500 km (including island territories). India is the sixth largest producer of fish with an annual potential yield of 3.92 million tons.

An estimated 200,000 traditional crafts carryout traditional fishing and about 35,000 mechanized fishing boats are enhancing their fishing capacity annually. Employment generation due to coastal ecosystem services may be categorized under heads such as marine fisheries, backwater fisheries, seaweed collection, salt production, coastal aquaculture/shrimp production and coastal tourism. Ecosystem based coastal and marine tourism provides huge employment opportunities, especially to the local communities. If the ESAs are managed properly and adequate tourism facilities provided, the tourism sector in this area can have tremendous employment opportunities.

#### Economic Evaluation of the Coast

- The total value of marine fisheries is estimated to be Rs. 32,844 crore for the year 2012–2013.
- The value of minerals found along the coastal/sandy beaches of the country is estimated to be around Rs. 1390 crore per year, based on annual extraction.
- The value of regulating function of mangroves and seagrass as sequesters of carbon has been estimated to be more than Rs. 600 crore per annum based on carbon values used in a previous MoEF&CC funded study on valuation of ecosystem services for forests in India.
- Dense and very dense mangroves account for 2368 km<sup>2</sup> (56% of the total mangroves cover), sparse mangroves account for 1514 km<sup>2</sup> (33%) and degraded mangroves account for 483 km<sup>2</sup> (10%).



#### 1.1.5 Best Practices of Conservation management

Globally, diverse management practices are being followed for the conservation of coastal/ marine ecosystems. The management regime recommended by the International Union for Conservation of Nature (IUCN) is taken as one of the best practices followed internationally. The IUCN model of conservation is based on public policy and increasing attempts are made to include local communities in the conservation agenda. IUCN's prime objective is to foster a balanced, holistic and integrated approach for managing coastal ecosystems in order to meet long-term ecological, economic and social interests<sup>3</sup>.

IUCN Asia's Coastal and Marine Programme supports sound policy and integrated coastal management interventions as a balanced response to coastal ecosystem issues and to help meet the long-term needs of the users of the coast. Knowledge management and capacity development are key focus areas, aimed at strengthening both marine and coastal management. The following are the main objectives:

- Achieve sustainable development of coastal and marine area
- Reduce vulnerability to natural hazards
- Maintain essential ecological processes, life support systems and biological diversity
- Strengthen institutional and governance capacity for Integrated Coastal Management
- Build sustainable financing opportunities for coastal management
- Capture and disseminate lessons in best practice, both locally and globally

IUCN's core principle asserts that thriving coastal ecosystems are fundamental for sustaining healthy livelihoods and act as a regional link in strengthening coastal management practices at the local, national and trans-boundary scales.

<sup>3</sup>Extracted from: <http://www.iucn.org/about/union/secretariat/offices/asia/elq/mcp/> on 16<sup>th</sup> January 2015

#### 1.1.6 The Coastal Regulation Zone 2011 Notification – Legislations and policy guidelines to protect the coastal environment

To regulate the developmental activities and to protect the fragile coastal environment, India has implemented coastal regulatory frameworks: Coastal Regulation Zone (CRZ) Notification, 2011 and Island Protection Zone (IPZ) Notification, 2011. The background to the issue of CRZ 2011 and IPZ 2011 is as follows:

- a) To protect the Indian coastline, a directive was issued in 1981 from the Central Government advising all coastal States/UTs to take necessary precautions to keep the beaches clean and regulate developmental activities.
- b) The CRZ Notification, 1991 was issued under Environment (Protection) Act [E(P)A], 1986 to regulate all development activities in coastal areas.
- c) This Notification prohibited and regulated certain activities within 500 m from the HTL on the landward side and within 100–150 m from the HTL on the landward side along water bodies influenced by tidal activities such as creeks and estuaries. The CRZ area was classified as CRZ-I, CRZ-II, CRZ-III and CRZ-IV. This Notification of 1991 was amended nearly 25 times.
- d) Keeping in view the issues raised by coastal State/ UT Governments and stakeholders, several expert committees were constituted by the Central Government to examine these issues.
- e) The Ministry constituted a Committee in July 2004 under the Chairmanship of Prof. M. S. Swaminathan to review various reports on CRZ, international practices and suggest the scientific principles for an Integrated Coastal Zone Management (ICZM) policy best suited for the country – to define and enlist various coastal and marine resources and recommend methodology for their identification and the extent of safeguards required for the conservation and protection and to review the CRZ Notification, 1991. The Committee submitted its report in February 2005.
- f) A draft Coastal Management Zone [CMZ] Notification, 2008 was issued, which was later withdrawn based on the suggestions and objections raised by the stakeholders.

- g) The Ministry constituted a Committee in June 2009 under the Chairmanship of Prof. M. S. Swaminathan to consider all the coastal issues and suggest the policy and legal framework for ICZM. The Committee submitted its report titled "Final Frontier" in July 2009. Based on the recommendations made in the report the Ministry issued two Notifications superseding the CRZ Notification, 1991: (i) CRZ Notification, 2011 and (ii) IPZ Notification, 2011.
- h) These two Notifications are being implemented and are monitored by the National Coastal Zone Management Authority (NCZMA) and State/UT level Coastal Zone Management Authorities (SCZMAs). The NCZMA and 13 SCZMAs have been notified under the E(P)A 1986.

#### 1.1.7 ICZM Project implemented by MoEF&CC

To implement the National Environment Policy 2006, recommendations of "Final Frontier 2009", Public Accounts Committee (2009–2010) [PAC], and CRZ Notification, 2011 and IPZ Notification, 2011 regulatory framework with public participation, the Government of India (GoI) embarked upon the implementation of the Integrated Coastal Zone Management (ICZM) project. This project was approved by the Expenditure Finance Committee (EFC) and Cabinet Committee on Economic Affairs (CCEA) during 2010. The project is being taken up on a pilot scale with the assistance of the World Bank in the identified stretches in the States of Gujarat, Odisha and West Bengal. To implement this project, the MoEF&CC has set up the Society of Integrated Coastal Management (SICOM) located in New Delhi.

The objectives of the ICZM Project are as follows:

- a) To develop the capacity and institutions to implement the CRZ Notification, 2011 and achieve the objectives of integrated and sustainable coastal management as per the National Environmental Policy, 2006.
- b) To address the issues relating to climate change, which have a major implication on the coastal areas and coastal communities especially with respect to sea level rise (SLR) and increased frequency of cyclones and storm surges. Under the programme, an exercise of hazard mapping will be carried out to protect the coastal people and infrastructure located in the coastal regions.

- c) To conserve and protect the fragile coastal ecosystems such as the mangroves, brackish water wetlands and coral reefs, including addressing the pollution of coastal waters and livelihood improvement of local communities.

#### 1.1.8 Society for Integrated Coastal Management(SICOM)

SICOM was established under the Society Registration Act, 1986 by the MoEF&CC for implementing the World Bank Assisted ICZM Project in the country. SICOM is working as a National Project Management Unit for the project. In implementing the ICZM project, SICOM is coordinating with various Ministries, coastal State and UT Governments and SPMUs/Project Executing Agencies (PEAs) of the ICZM project. SICOM is also taking lead in designing the Phase II of the ICZM project which will include other coastal States and UTs. The major role and responsibilities of SICOM are as follows:

- (a) Act as a fulcrum between MoEF&CC, State Governments, NCSCM, other Ministries, research and academic bodies, NGOs and people.
- (b) To play a leading role in assisting MoEF&CC in implementing the CRZ and IPZ Notifications and preparing the CZMPs while coordinating with Sol, NCSCM and CZMAs.
- (c) To guide in the preparation of ICZMP factoring in the hazard line for identified areas in coordination with the State Governments.
- (d) To formulate Phase-II of the ICZM project wherein the other States/UTs would be included as approved in the EFC. Meanwhile, all the State/UT Governments which were not included in the Phase-I may be requested to form the SPMUs so that their capacity development process begins to help them in formulation of plan and their implementation.
- (e) To explore various possibilities of exchange programme in terms of visits, information exchange etc., with other countries especially in South East Asia, where similar environmental and demographic pressures exist.
- (f) To put in place monitoring systems for the three SPMUs independently to assess the implementation of the project.
- (g) To leverage NCSCM in ensuring preparation of appropriate ICZM Plan for identified areas, with NCSCM providing all the necessary technical inputs so

that the concerned Government can undertake an ecologically compatible and sustainable development of the area.

- (h) To prepare a comprehensive capacity development plan for all the stakeholders like Ministry of Shipping, Tourism, Petroleum, Agriculture, Fisheries etc., and execute them.
- (i) SICOM will also play a leading role with NCSCM in identifying the areas which have been destroyed/undergone serious damages due to various human interventions and take up steps through NCSCM and State Government to take up restoration and management of such sites.
- (j) To immediately create a web platform and link with similar facilities with coastal States/UTs, SPMUs for exchange of ideas, best practices, knowledge etc.

To accomplish the above scope of work and to take up the work assigned under the proposed notification, SICOM may build adequate capacity with skilled manpower. The role of SICOM is crucial as it would play a leading role in coordinating with as indicated at 1.1.8(a) to (j) above. Further, SICOM will be instrumental in facilitating capacity building and institutional strengthening in the area of coastal zone management in the country.

#### 1.1.9 National Centre for Sustainable Coastal Management

NCSCM was established by SICOM under the MoEF&CC in 2010 with the vision of promoting sustainable coasts through increased partnerships, conservation practices, scientific research and knowledge management for the benefit of current and future generations and assist MoEF&CC and States in implementing the provisions of CRZ Notification. NCSCM has established six multi-disciplinary Divisions in the Centre to undertake research and development in the area of CZM practice through the development and provision of cutting-edge science, knowledge and networking with relevant national and international institutes of repute. These are being realized through inter- and trans-disciplinary scientific research, advisory capacities and by imparting knowledge into a seamless, holistic decision support system for effective implementation of CRZ Notification.

Fourteen institutions have formed a consortium with NCSCM, with Anna University Chennai as the Hub. It would guide and coordinate the implementation of CZM approaches leading to enhanced conservation of coastal resources and sustainable development along the coast of India through applied and futuristic research. The Centre would develop a central repository of information and knowledge on CZM practices in India and elsewhere. The outputs from research at NCSCM would aid in the better protection, conservation and management of the coast. The following are the specific roles and responsibilities of NCSCM:

1. Preparation of HTL / LTL for the entire coast using ortho-imageries
2. Preparation of CRZ I boundary maps (including ESAs, geomorphologically important zones and areas or structures of archaeological importance and value sites) in 1: 10,000 scale by acquiring the ecosystem maps and boundaries of marine protected areas from national agencies identified by the Ministry.
3. Validation of cadastral maps prepared by State/ UT Governments
4. Preparation of State of Coast Report, which would include assessment of the extent of change in coastal ecosystems
5. Development of a comprehensive digital coastal database to help in policy decisions
6. Monitoring mechanism: Pre- and post-monitoring of major coastal projects as directed by MoEF&CC
7. Develop guidelines to aid in effective implementation of the provisions of the CRZ and IPZ notifications
8. Develop guidelines for ICZM projects for the purpose of conservation of coastal areas and to involve local communities in decision making
9. Assessment of carbon sequestration potentials of major coastal ecosystems
10. Building capacity at all levels in coastal management along with SICOM

#### 1.1.10 Recent Initiatives in Coastal Management by MoEF&CC

##### a. Use of space application and IT technology for coastal mangement

Since the implementation of the CRZ Notification, 1991, MoEF&CC has been relying upon satellite imagery for mapping vital coastal resources. The satellite imagery and data obtained by aerial photography undertaken by Sol shall be used for preparing CZMP, which would include HTL, LTL, land use (Fig. 2), demarcation of ESA etc. Further, these technologies can be used extensively for estimation of primary productivity, ocean resources and fishery resources, pollution monitoring, detecting algal blooms and for oil spill mitigation.



Fig. 2: Decadal Changes in land use pattern

##### b. National Shoreline Change Assessment

Based on directions by MoEF&CC, NCSCM undertook the study of shoreline change for the entire coast of India in order to identify coastal areas where significant erosion and accretion have occurred and continue to occur, quantify the rates of erosion/accretion, analyze the impacts of coastal structures on the shoreline, create a national database for coastal erosion and accretion with 1972 as the base year and contribute to an understanding and prediction of future shoreline positions. Earlier, shoreline mapping and analysis were carried out by a manual cartographic techniques, which since early 1980s has been changed to a highly sophisticated geographic information system (GIS). A GIS database has been created with layers such as base shoreline, historical shorelines, erosion rates and critical erosion maps by State for the entire coastline of mainland India (Fig.3).

Report of the Committee to  
Review the Issues Relating to  
the Coastal Regulation Zone  
Notification 2011



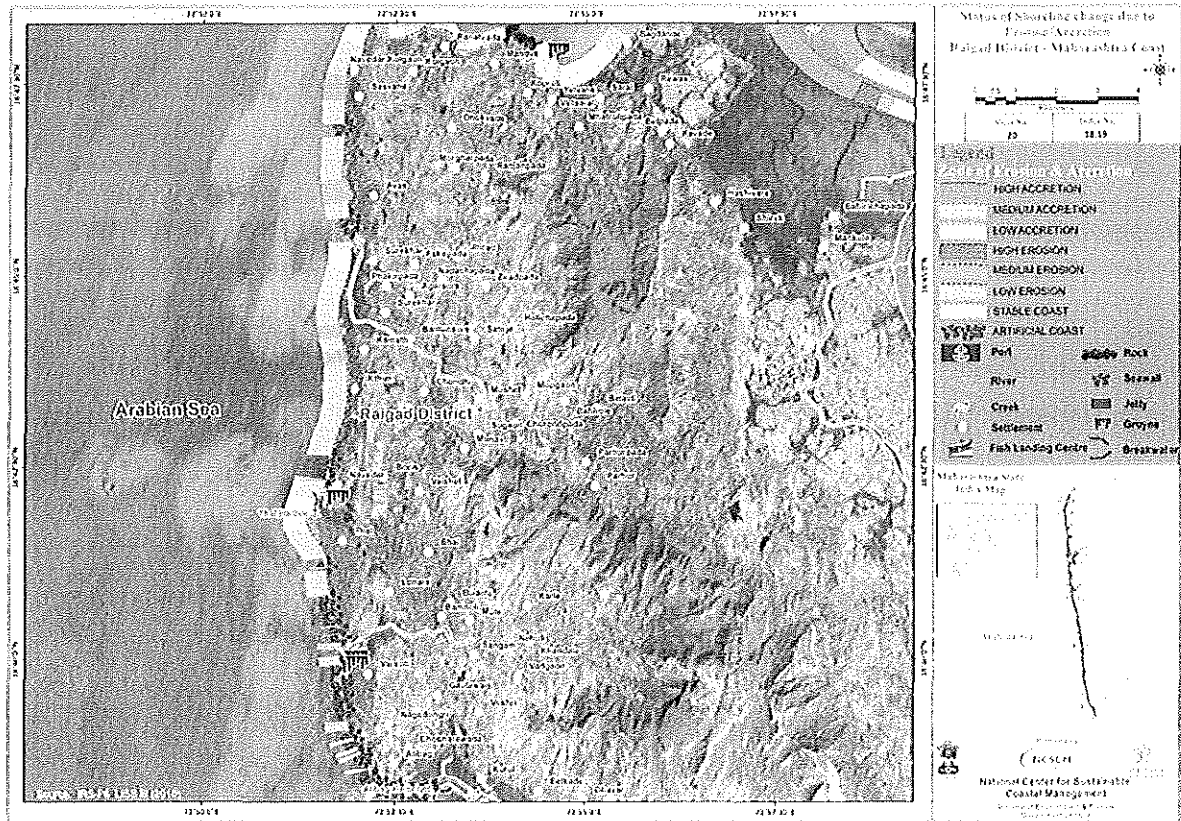


Fig. 3: Shoreline change along the coast of Maharashtra

#### c. Hazard Line mapping

As per the CRZ Notification, 2011 "the 'hazard line' denotes the line demarcated by MoEFF&CC through NCSCM, taking into account water level fluctuations, sea level rise (SLR) and shoreline changes". SICOM is implementing the hazard line (Hazard Line) mapping project through Sol. In this regard, MoU has been entered between MoS&T and MoEF&CC on 10 May 2010. The Hazard Line mapping involves:

- (i) Survey and preparation of digital terrain model of 0.5 m contour interval for the entire mainland coast based on aerial photography and photogrammetry;
- (ii) collection of historical tide gauge data and analyses to determine flood levels;
- (iii) analyses of maps and satellite imagery to determine historic erosion line;
- (iv) preparation of Hazard Line based on erosion and flood line;

(v) transfer of the Hazard Line to topographic maps and to the ground for implementation of CRZ Notification, 2011.

d. HTL demarcation using ortho photos

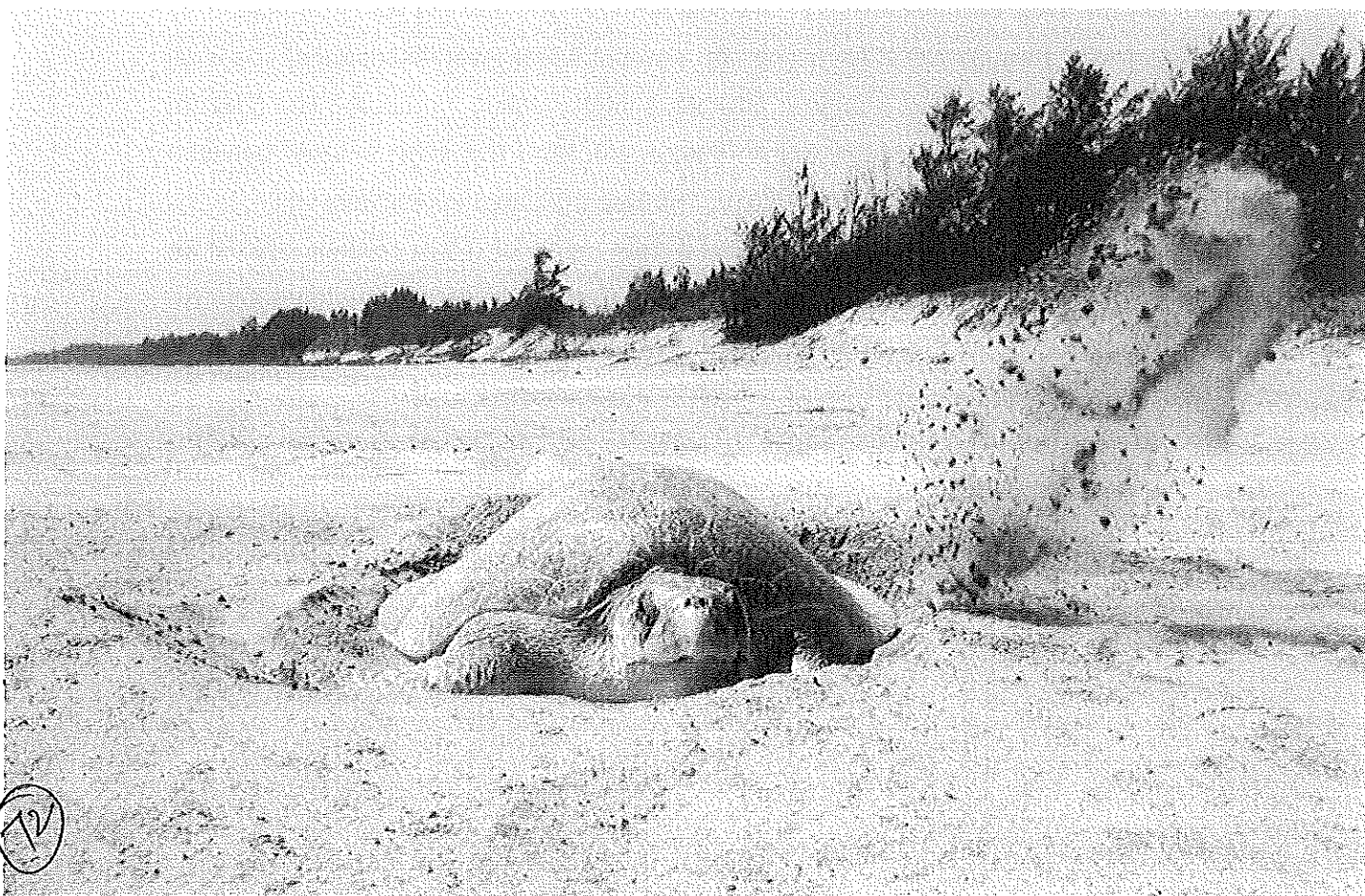
Based on directions from MoEF&CC and SICOM, NCSCM is in the process of delineating the HTL as per the requirement of the CRZ Notification using ortho photos available at Sol.

e. Mapping of ESAs

ESAs, which are part of CRZ Notification such as mangroves, coral reefs, sand dunes, turtle nesting ground/horseshoe crab habitats/nesting grounds of birds and sea grass beds, are being identified, delineated and mapped by NCSCM.

f. Information technology and awareness in all sectors

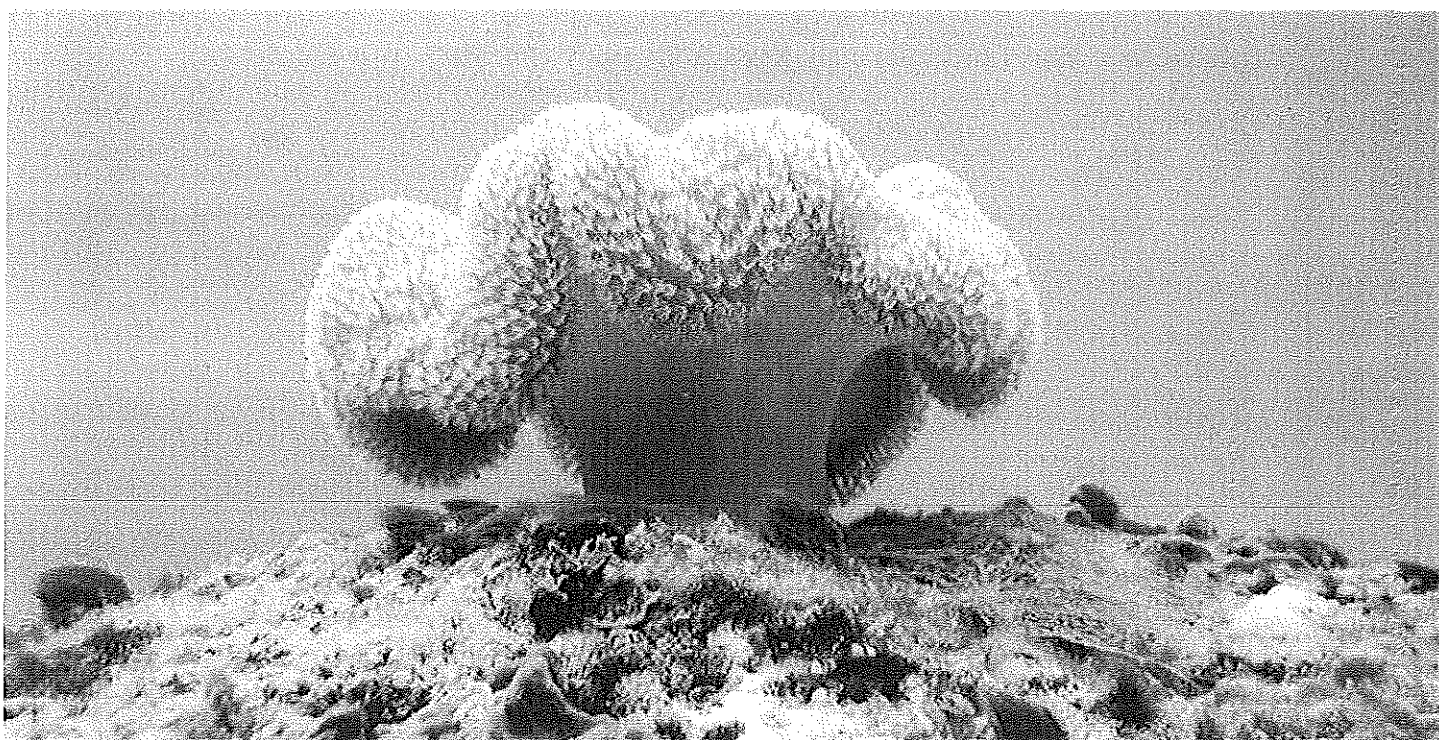
NCSCM is developing information and technological web map application tools that aid as decision support systems for policy makers. Such tools would also help communities address coastal issues and would eventually become one of the most-used resources in the coastal management community.



## 1.2 Approach and Methodology adopted by the Committee to address the ToRs

In view of the several representations received from the Governments of various coastal States/UTs, especially from the Governments of Karnataka, Kerala and Maharashtra requesting for amending the CRZ 2011, the Ministry constituted Committee to review the CRZ Notification, 2011 (Ref: No.19-112/2013-IA-III, dated 17 June 2014).

After constitution of the Committee, three meetings were held with the officials of the Governments of Maharashtra, Karnataka and Kerala on 8 July 2014, 21 August 2014 and 22 August 2014, respectively. Subsequently other States and UTs requested the Committee to present their issues with respect to the implementation of CRZ, 2011. Accordingly, a meeting was held with all coastal States and UTs on 27 October 2014 in MoES, Delhi. Copies of the presentation made and representations received are given in Volumes II and III of this report. Based on the issues raised by the respective coastal State/UT Governments and taking into account the provisions of the CRZ Notification, 2011 including the recent initiatives taken by the MoEF&CC towards coastal management, the Committee has addressed the ToRs listed in the Office Order and made its recommendations.



## Chapter 2

### Issues and Representations made by the Coastal State/UT Governments as per ToRs

- ToR-1(a) : "to examine issues relating to Maharashtra raised by the State Government vide letters dated 27.08.2013 and 23.12.2013".
- TOR-1(b) : "to examine issues relating to Karnataka raised by the State Government vide letters dated 16.08.2013, 28.02.2014 and 18.02.2014".
- TOR-1(c) : "to examine issues relating to Kerala raised by the State Government vide letters dated 10.02.2014".
- (TOR-1(d) : to examine errors/inconsistencies in CRZ Notifications, 2011 and procedural simplification)
- ToR-2 : The Committee may interact with the State Government, if necessary, and address any other issues raised by the State Government during their interaction with the Committee.



## A. Specific issues indicated by the State/UT Governments

### 2.1 Maharashtra [ToR-1(a)]

Based on the above-mentioned ToR 1(a), the Committee visited Mumbai on 8 July 2014 and had discussions with the officials of various departments of Government of Maharashtra (GoM). The details of the issues raised and the suggestions/requests made by the various departments/agencies of GoM such as CIDCO, BMC, Slum Rehabilitation Authority (SRA) and State Tourism Department, are detailed in the following sections. The copies of the presentations along with the communications made to MoEF&CC vide the above-mentioned letters indicated in the ToR are in Volume II of this report:

#### 2.1.1 Loss of buildable land due to demarcation of the HTL based on CRZ Notification, 2011

(a) Most of the lands in Navi Mumbai were below low tide level when it was acquired in 1971. Prior to acquisition, these coastal lands were under agriculture and salt pans. For undertaking agriculture, bunds were constructed to prevent the ingress of tidal waters. The bunds were constructed based on Dutch method. The development of Navi Mumbai was taken up in a phased manner by acquisition of land by CIDCO. The HTL being demarcated based on CRZ Notification, 2011, indicates that the total land loss could be around 1240 hectares of developable area. Further, additional land is to be provided to project affected people and R&R-related activities including providing 260 hectare of land for the development of Navi Mumbai Airport.

(b) The reasons for ingress of creek water into the land area were examined by the Committee in detail along with graphic presentations made by CIDCO. Over a period of time due to non-maintenance of the bunds and breaking of the bunds by locals for shallow water fishing, the seawater has ingressed into the land. Due to the salinity ingress, the HTL has further shifted landwards. In several of such areas



where salinity ingress has taken place, mangroves have grown. On account of the shifting of the HTL on the landward side, it was indicated that approximately 744 hectares of net saleable land which is 60% of the total 1240 hectares that CIDCO would lose is estimated around Rs.37,200 crore (with an average price of Rs. 50,000/m<sup>2</sup>). Further, the land being allotted to the affected people due to the project, under the 'land for land' scheme would be coming under CRZ-I and CRZ-II. The people who have been affected by airport construction need to be located close to the creek as they are fishermen communities. On account of all these activities, CIDCO would lose further developable land area. In this regard, it was requested that the HTL as of 1991 should be retained.

(c) The Hon'ble High Court (HC) of Bombay in its Order dated 6 October 2005 has directed to observe total freeze on destruction of mangroves and to maintain an NDZ of 50 m width around any mangrove. Further, as per the above-mentioned Orders, no steps can be taken that would stop the ingress of saline water into areas with mangroves. Hence, CIDCO has stopped repairing the bunds and desilting of the ponds. The GoM has requested that the HTL demarcation as per CRZ Notification, 1991 should be allowed to continue.

(d) For the purpose of maintenance and desilting of Dronagiri holding ponds, CIDCO has again approached Hon'ble HC of Bombay. The Hon'ble HC directed MCZMA and MoEF&CC to decide whether holding ponds and channels fall in CRZ. It was indicated that MCZMA has submitted a report to MoEF&CC and MoEF&CC vide their letter dated 31 October 2013 have requested CIDCO to provide for five times compensatory mangrove afforestation in lieu of the mangroves along the holding ponds. The contention of the CIDCO is that none of the holding ponds and channels in Navi Mumbai falls in CRZ-I as they are not part of the creek. Some of the mangroves fall partly in CRZ-II as they are along the artificially created water bodies excavated out of the firm land. It was indicated that because the ponds were not desilted the water holding capacity in the ponds have decreased, thereby causing floods in the vicinity during monsoons.

#### 2.1.2 Issues relating to slum redevelopment by SRA and redevelopment of dilapidated, cessed and unsafe building

(a) The SRA Scheme is being implemented by GoM. It was indicated that large pockets of slums have settled along the seashore. About 291 slum pockets are present in CRZ-II, which houses 3.5 lakh huts with 15 lakh people living in such slums. It was indicated that in the CRZ-II areas the eligible Floor Space Index (FSI) within city is 1.67 while in suburbs it is 1.25 as against 3 or 4 FSI in the non-CRZ areas. The provisions of CRZ Notification, 2011 pertaining to slum rehabilitation scheme were explained in detail and the hardships faced by the slum dwellers and the environmental and social issues of slums explained.

(b) It was informed that as per the Notification, 2011, GoM had sought proposals on joint venture basis through wide publication in newspapers. It was also informed that not a single valid proposal was received even after repeated advertisements. On account of the provision in the CRZ Notification, 2011, the slum redevelopment in CRZ-II areas are languishing as the scheme indicated under the CRZ Notification, 2011 is not economically viable.

(c) The schemes with regard to the slum redevelopment in CRZ-II areas should be allowed to develop with current permissible FSI as prevailing outside CRZ. Further, no joint venture with Government organization should be made mandatory. The ratio of 51:49, Government:private party, as indicated in the CRZ Notification, 2011 be waived off and permitted to be developed by the proponent.

### 2.1.3 Municipal Corporation of Greater Mumbai on CRZ issues relating to redevelopment of dilapidated, cessed and unsafe building

(a) It was highlighted that the datum line of redevelopment of dilapidated, cessed and unsafe buildings is frozen as on 6 January 2011 by MoEF&CC vide corrigendum dated 29 March 2011 to the CRZ Notification, 2011. In this regard, it was indicated that declaration of dilapidated buildings is a continuous process based on ageing of structures. GoM declares buildings based on criteria as dilapidated. It was highlighted that the buildings which are now declared safe could become dilapidated in future. Hence, the Notification should provide for such dynamic situations. For undertaking redevelopment of dilapidated structures, the FSI/Floor Area Ratio (FAR) should not be frozen but enabling provision should be inserted in the notification for

providing FSI and FAR on that particular date on which the redevelopment is accorded permission. It was suggested that it would be desirable to specifically incorporate permissibility of reconstruction/redevelopment in accordance with Town and Country Planning Regulations applicable as on the date on which such reconstruction is approved by competent authority.

(b) It was requested that the corrigendum may be modified as "*The Floor Space Index or Floor Area Ratio for such redevelopment schemes shall be in accordance with the Town and Country Planning Regulations prevailing as on the date on which the project is granted approval by the competent authority.*"

#### 2.1.4 Issues relating to Koliwadas and Goathans of Maharashtra

(a) It was also highlighted that in the CRZ Notification, 2011, Koliwadas and Goathans are classified as CRZ-III. It was indicated that presently there are 23 Goathans and 16 Koliwadas in Mumbai affected by CRZ. Declaring these Koliwadas and Goathans as CRZ-III would severely limit the development thereby defeating the objective of ensuring livelihood security to the fisher and other local communities in a sustainable manner. Further, it was indicated that there is no clarity in respect of availability of Town and Country Planning Regulations for redevelopment/reconsideration of dwelling units in Koliwadas/Goathans. In this regard, BMC requested that instead of CRZ-III these Koliwadas and Goathans be classified as CRZ-II and current DCR to be made applicable to facilitate development. Accordingly, Clause (g) of Sr. No.(8)(V)(iii) for the CRZ Notification, 2011 be modified.

#### 2.1.5 Issues relating to the development of coastal road project by MCGM

(a) It was indicated in the presentation that in the present scenario where the majority of the public use north-south local train, there has been several incidents of accidents. It was indicated that due to increase in population and large number of commuters taking the local train the accident rate has increased to around 2000



deaths in a year. In this regard, the GoM proposes to construct 36 km long coastal road from Colaba up to Malad-Kandivali Link Road. The proposed road would be 4+4 access controlled freeway. For the proposed road, there shall be no land acquisition and no R&R. The proposed road would protect the beaches and fishermen's villages without obstructing the natural course of seawater. It was also clarified that for the construction of the road project, no significant damage would be caused to the mangroves or beaches. The road will be on stilts and in places through the tunnels. For the road project, approximately 9.8 km reclamation is proposed in the sea with a total area of 160 hectares and about 8 km reclamation in the mangrove areas. It was also indicated that in the mangrove stretch of 3.45 km of the road would be constructed on stilts and wherever mangrove destruction would take place re-plantation of mangroves will be taken up with the Forests Department. It was indicated that by construction of the road there would be significant reduction of traffic congestion on the existing roads and reduction in travel time.

(b) To develop the above-mentioned road project, MCGM requested for amendment of para 3(iv) of the required in CRZ Notification, 2011 providing for "land reclamation for construction of coastal roads". In the reclaimed area, MCGM proposes to develop promenades, gardens and green spaces. It was indicated that no real estate development for commercial use shall be permitted and no relaxation of CRZ regulation on the landward side of the proposed road shall be sought.

2.1.6 With regard to new airport CIDCO vide their letter No. CIDCO/MD/2013/247, dated 23 December 2013 have sought for an in-principle approval for a proposal for development of islands airport in Thane creek, Navi Mumbai. As per the letter, the Navi Mumbai International Airport (NMIA) has obtained all necessary clearances including permission from the Hon'ble HC for removal of mangroves. The project involves 671 ha of private land and rehabilitation of 3500 families. The 3500 people affected by this project need to be rehabilitated. This is a serious issue that CIDCO is facing including escalating cost of airport development. In this regard, CIDCO intends to search for an alternative site for airport. CIDCO has proposed a development of an airport in an island in Thane creek which is west of existing NMIA site. As per the letter this islands airport in Thane creek would not require acquisition of private land and rehabilitation of any population. In the letter, CIDCO has

requested MoEF&CC, "I request MoEF&CC to look into the proposal of development of airport on a reclaimed island in Thane creek, Navi Mumbai and grant us "In-principle approval" for the same. Upon approval, CIDCO would initiate further necessary studies such as preparation of Detailed Project Report (DPR) and EIA report for obtaining Environment and CRZ clearance for the island airport proposal".

## 2.2 Karnataka [ToR-1(b)]

The Committee visited Bengaluru on 21 August 2014 and had discussion with the officials of Government of Karnataka (GoKA) which was represented by Chief Secretary, GoKA. The issues raised by GoKA are detailed later and the copy of the presentations and letters are provided in Volume III of this Report.

### 2.2.1 Fishermen issues in Karnataka

(a) Most of the fishermen villages are located on the sea coast, on account of the stipulations of 200 m NDZ the fisher folk are unable to undertake developmental activities especially the dwelling units and other infrastructure required for the protection of their life and livelihood. Therefore, the width of NDZ is to be reduced to 50 m as provided for the islands of Kerala instead of 200 m all along the sea coast and width of the river/creek with maximum of 50 m along the river/creek. Fisher folk need to build their dwelling units close to sea only for the convenience of earning their livelihood. Therefore, dwelling units should be permitted in the NDZ to enable accommodation for expansion of families of fisher folk and local inhabitants. Due to the restrictions the fisher folk and the local inhabitants are unable to avail the benefit of "MatsyaAshraya" and other housing schemes of Government. In view of the above, the state Government has requested amendment to the CRZ to provide for construction of new dwelling units be permitted within 100 meters from HTL.

### 2.2.2 Issues relating to tourism sector

(a) A proposal has been forwarded to the MoEF&CC through the Ministry of Tourism (MoT), GoI by Department of Tourism (DoT), GoKA with reference to the report on CRZ submitted earlier by the Expert Committee headed by Prof. M. S. Swaminathan. The proposal sought amendments to the CRZ Notification, 2011 in line with the special provisions provided for the states of Kerala, Maharashtra and Goa and addressing various issues faced by local agencies in tourism development. Under the 12th Five-year plan MoT, GoI planned development of Tourist Circuits across India. DoT, GoKA for the year 2013–2014 had proposed development of Mega Coastal Tourism Circuit as a measure to boost coastal tourism in the State. The development comprises basic tourist amenities to be provided to the tourists in 23 beaches along the coast of Karnataka. To promote and enhance the tourism experience of tourists, DoT GoKA had submitted a proposal to the MoEF&CC seeking relaxation of CRZ norms by way of "Special Tourism Zones".

(b) The State has identified 41 beaches and 11 islands with good tourism potential. In Karnataka the coastal stretches very narrow because of the Western Ghats. In certain stretches the coastal areas are less than 100mts. On the average the coastal stretch is around 300mts. The national highway, and in some cases state highway, pass through this narrow stretch of CRZ, even within NDZ. The State Government of Karnataka requested for special relaxation to permit certain constructions of temporary nature on the seaward side of such road when the roads fall in NDZ for temporary tourism related activities. On the landward side of the road the tourism development as indicated in the CRZ Notification could be taken up subject to environmental conditions.



## 2.3 Kerala [ToR-1(c)]

The Committee visited Thiruvananthapuram on 22 August 2014 and had discussions with the officials of GoK represented by Chief Secretary, GoK. The Chief Minister, GoK also met the Committee and he explained the hardships faced by the Government with regard to CRZ. The issues raised by GoK are detailed in the following sections and the copy of the presentations is provided in Volume III of this Report.

### 2.3.1 Issues relating to fishermen

(a) Fishermen/traditional communities living by the sea and by the tidally influenced water bodies where CRZ-III is applicable currently are unable to construct houses/toilet/stores (for safe keeping of their implements). Being highly essential to live by the ecosystem for earning their livelihood, the above-mentioned activities need to be permitted in the NDZ of CRZ-III.

(b) The space for constructing dwelling units in the CRZ area is limited. Hence, family members are not in a position to construct dwelling units in the land rightfully received as family right/share in the NDZs of CRZ-III. Moreover, in case of a local/fishermen community who buy a piece of land within the CRZ area are unable to build a house as per the present provisions. These are highly essential requirements for the traditional/fishermen community, the right for the same need to be reinstated in CRZ-II and CRZ-III area.

(c) Kerala being criss-crossed with numerous inland water bodies under the purview of CRZ Notification, 2011 the CRZ area landward of HTL up to 100 m creates the same hurdle as above for traditional communities. The construction of dwelling units needs to be permitted on the banks of paddy fields/pokkali fields/aqua farms for their sustenance.

(d) Considering the stress due to population on the banks of the tidally affected water bodies (majority of the area having density of population  $>2000/\text{km}^2$ ), the NDZ of CRZ-III along the banks of inland water bodies may be reduced to 50 m from HTL (landward) from the present stipulation of 100 m.

(e) The provision to permit reconstruction in the NDZ of CRZ-III area without

increase in existing plinth area, existing FSI and existing density may be modified as *permit reconstruction in the NDZ of CRZ-III without increase in existing plinth area or up to 100 m<sup>2</sup> in case of dwelling units of traditional community*. This would help the fishermen/local community to reconstruct small huts and dwelling units into a better place to live.

(f) Presently, construction in backwater islands is possible only beyond 50 m from the HTL. For the traditional/fishermen community, this may be amended to the extent that "residential construction can be permitted landward of existing authorized structures and approved roads".

(g) Construction of dwelling units of coastal community including fisher folk may be permitted leaving 50 m from HTL of sea except along the highly eroding sea coast and 10m from HTL of backwater or landward existing authorized structures or approved road whichever is less in CRZ-III.

(h) Considering the specific coastal settings of the State having numerous barrier beaches, spits and barrier islands with width less than 1 km separating the sea from the backwater the NDZ may be reduced to 20 m in those areas for traditional coastal communities including fisher folk for the construction of dwelling units and other livelihood essential facilities.

(i) Permission for the construction of 3-4 floor housing buildings under Government projects such as Rajiv Slum Development Project in CRZ-III area after leaving 100 m from HTL of sea. This is required for providing better dwelling facility for the fisherman community.

### 2.3.2 Tourism issues

(a) Tourism in Kerala has become a significant contributor to the sustainable development of the State. Tourism contributes about 10% to the GDP of the State. Tourism creates employment opportunity to more than 25 lakh individuals in the State. Tourism sector can further grow only with the active support of the Governments, both Central and the State, with favorable policies and creating enabling environment for attracting investment in tourism infrastructure. Even though CRZ Notification helps in conserving the beaches and tidal-influenced water bodies

in a big way, it imposes limitations to tourism growth in the State, which heavily depends on the beaches and backwaters as its major tourism destinations.

(b) The Notification restricts the development of tourism infrastructure at the most potential tourism areas of the state such as beaches, backwaters and tidal-influenced water bodies. Hence, there is an urgent need for the reconsideration of the CRZ norms in the tourism potential areas in Kerala to facilitate controlled developments in tourism in a sustainable and responsible manner in the identified beach stretches in the State of Kerala. It is also essential to reconsider and modify the CRZ norms related to backwaters and tidal-influenced water bodies to enable environmental friendly tourism investments, as backwaters are the back bone of Kerala, creating large opportunity for employment and livelihood of the local population.

(c) Considerable number of tourism destinations that emerged in the State is in rural coastal areas and falls under CRZ-III, and hence no development is possible within 200 m of NDZ. This makes the destinations unattractive to the investors as well as the tourists. The NDZ for the tidal-influenced area for 100 m makes backwater-related tourism too restrictive and is unaffordable to the State as backwater tourism is the back bone of Kerala tourism industry.

(f) GoK suggested the following modifications to the CRZ rules in the case of Kerala state:-

(i) As per Section 8 (i) II of CRZ Notification, 2011, in CRZ-II, buildings shall be permitted on the landward side of the existing road, or on the landward side of the existing authorized structures. But as per Annexure III of the notification which describes the guidelines for the development of beach resorts for hotels, it is mentioned that the guidelines are for "designated areas of CRZ-III and CRZ-II". This imposes huge restrictions for tourism developments in CRZ-II area and is contradicting the statements in Section 8(i) II and III. In fact, Annexure III is referred only in Section 8(i) III which is meant for CRZ-III.

(ii) The NDZ for the beach stretches identified in rural areas falling in CRZ-III may be brought down to 100m instead of 200m. The same guidelines applicable as per Annexure III of the CRZ Notification, 2011 may be made

applicable at the 100–500 m area from HTL. It may be noted that as per 8 (i) III (ii) of the CRZ Notification, 2011, construction of residential buildings for fisher folk is permitted from 100 m to 200 m of the NDZ and the proposal is only to extend this provision to tourism development with restrictive guidelines.

- (iii) For beaches falling in the urban area, the prevailing CRZ-II norms has been proposed to continue by removing CRZ-II from the applicability of the provisions in Annexure III regulations of CRZ Notification, 2011. It may be noted that the above provision is not available in CRZ Notification, 1991 and is included as a new provision in CRZ Notification, 2011. There is anomaly in this provision as the restriction is imposed only to tourism development and not to any kind of other uses such as residential or commercial developments.
- (iv) The backwaters of Kerala and houseboats are considered to be very important for the tourism industry of Kerala and contribute significantly to the local employment opportunity and foreign exchange earnings. The banks of these backwaters and river mouths are enchanting picnic spots. Stretched over a total expanse of 1500 km, the backwaters have a network of 44 rivers, lagoons and lakes from north to south. Alapuzha, Kumarakom and Ashtamudi are internationally known backwater destinations with world-class tourist facilities. Malabar backwaters in Kannur and Kasargod districts are developing fast and are emerging areas utilizing backwater potential for tourism investments. The 100 m NDZ for backwaters and tidal-influenced water bodies are imposing huge limitation in tourism investments. The 100 m wide NDZ is not viable to any investor. It may be noted that after the introduction of CRZ Notification, 2011 in 1991, 50 m NDZ was applicable for most of the period which is now made 100 m in CRZ Notification, 2011. Also the regulation applicable to backwater islands as per CRZ Notification, 2011 is only 50 m NDZ.

### 2.3.3 Conservation of backwaters

The inclusion of Vembanad as a CVCA and the preparation of IMP for Vembanad

are major issues still remaining unresolved due to lack of clear directions and guidelines from MoEF&CC. This is a major impediment in the protection of the Vembanad ecosystem and sustainable development of the region. Application of two environmental laws to the same area is another matter of concern. The Ashtamudi and Vembanad backwaters are Ramasar sites and hence the wetland (Conservation and Management) Rules 2010 are applicable, while the same areas are also under the purview of CRZ.

## 2.4 Suggestions and comments made by other States/UTS including general issues [ToR-1(e)]

The Committee interacted with officials of the other coastal States/UTs, namely Odisha, Andhra Pradesh, Tamil Nadu, Puducherry, Goa, Daman and Diu, Gujarat, West Bengal. Most of the issues indicated by the above States/UTs were general in nature. All these issues are listed below:-

### 2.4.1 HTL demarcation and CZMP preparation

- (a) It was indicated by the States/UTs that for effective implementation, physical demarcation of HTL on ground should be expedited.
- (b) Several States/UTs indicated that they have expertise and institutional mechanism for HTL demarcation and CZMP preparation. In this regard the States/UTs sought for authorizing the institutions in each of the States/UTs for undertaking HTL and CZMP preparation.
- (c) It was indicated that the CRZ boundary along tidal influenced water bodies based on salinity ingress is highly confusing and in several cases not practical due to various hydro dynamic and geomorphological features. The States/UTS requested for doing away with this kind of parameter for determining CRZ boundary.

### 2.4.2 Monitoring and enforcement

- (a) It was indicated that the provisions under E(P) Act, 1986 is not effective for dealing with violations.



- (b) Several States/UTs sought for quicker redressal mechanisms for complaint and guidelines issued for taking action against violations.

#### 2.4.3 Requirement of guidelines for implementation of various provisions of CRZ Notification.

- (a) Many States indicated that both CRZ Notification, 1991 and 2011 does not provide for guidelines especially for FSI/FAR restrictions, ESA management, etc., including a simplified procedure for implementation of the notification. Hence the local communities are put into hardship due to the ambiguities prevailing in the notification.
- (b) Simplified procedures for clearance for projects such as fishing jetties erosion control measures break waters, water pipelines and navigational facilities should be made available.
- (c) All States/UTs sought for a clear cut list of activities that are either permitted or prohibited so that there is no ambiguity. It was also indicated that a large list with exempting clause is highly confusing.

#### 2.4.4 Disaster management and hazard line mapping

- (a) It was indicated by the States/UTs that the Hazard Line to be mapped by the MoEF&CC will lead to large areas getting covered in the States/UTs especially in the east coast as there is a gentle slope in the coastal areas. A large extent of flood-prone areas is likely to be covered under CRZ, and imposing restrictions on such areas may be difficult due to high population density.
- (b) It was indicated that there should be no height restriction for cyclone shelters in the NDZ of CRZ-III.
- (c) Development of projects in coastal areas is delayed due to lack of clarity in determining the high erosion, low erosion and medium erosion. Hence, this should be mapped at the earliest. Due to the deficit of the above-mentioned information, development of the port projects has been delayed considerably.

#### 2.4.5 Fishery related issues including fish processing

- (a) Many States/UTs raised the issue with regard to providing for safe handling of fish, landing centres require ice and storage plants in the CRZ areas. It was indicate that the fishery-related facilities should be made permissible in the NDZ including certain temporary constructions in the sand dunes.
- (b) The small UTs especially Daman and Diu sought for allocating abandoned salt pans for fishery related activities as there is acute shortage of land.
- (c) Setting up an expansion of fish-processing units including warehousing (excluding hatchery and natural fish drying) were prohibited, whereas existing fish-processing units for modernization purposes were permitted to utilize 25% additional plinth area required for additional equipment and pollution control measures only subject to existing FSI/FAR norms and subject to the condition that the additional plinth area shall not be towards seaward side of existing unit and also subject to the approval of State PCB/PCC. However, the exemption clause with regard to utilization of additional plinth area is deleted in Para 3(iii) of CRZ Notification dated 6 January 2011. This is inhibiting the modernization of existing fish-processing units by adopting pollution control measures. The representatives of industry and public representatives of coastal districts have also demanded inclusion of the provision in the CRZ Notification, 2011.
- (d) The construction of building for livelihood activities such as peeling of prawns, fish-based small-scale non-polluting cottage industries/small shops and flour mills may be permitted in CRZ area other than CRZ-I and CRZ-IV. This will ensure jobs for the traditional community and will help to improve the livelihood of the local community.
- (e) In the fish landing centres approved by GoK wherein all foreshore facilities required for fishing and fishery allied activities such as traditional fish-processing yards, boat building or repair yards, net mending yards, ice plants, ice storage, auction hall and jetties may be permitted by Grama Panchayat in the CRZ area.

#### 2.4.6 Protection of ESAs categorized as CRZ-I

- (a) Several States/UTs indicated their difficulties in management of mangrove area and in the absence of proper guidelines certain essential development required for larger public could not be taken up in the mangrove area. It was indicated that mangrove patches should be classified based on the area, and minimum area for classification as CRZ-I should be specified to avoid wrong classification of areas and unnecessary litigations.
- (b) It was indicated that Maharashtra has 30,000 hectares of mangroves of which there are 17,000 hectares in Government land and 13,000 hectares in private land. Of the total mangrove area of 30,000 hectare, 4000 hectares falls within protected forest. The Judgment of Hon'ble High Court (HC) of Bombay dated 6 October 2005 has imposed total ban on destruction and cutting of mangroves in the entire State including prohibition on dumping of solid waste in the mangrove area. This Judgment applies to all mangrove land irrespective of its ownership. Further, as per the same Judgment, no construction can be taken up within 50 m on all sides of mangroves. GoM has been directed not to issue any development permission in the mangrove area. Further, as per the directions of Hon'ble HC, mangroves in Government-owned land is to be notified as "protected forest" while mangrove areas in private land shall be notified as "forest". For the purpose of protecting mangroves, the GoM has set up a Mangrove Cell headed by CCF. The Mangrove Cell was established in January 2012 with a main focus for conservation of mangroves and to promote coastal biodiversity. Mangrove conservation projects with UNDP-GEF and GIZ are being taken up by the Forest Department. The most of the destruction of mangroves is taking place in private land. To prevent further destruction of mangroves and to empower the Forest Department to take action against violations, delegation of Section 23 of E(P)A 1986, to the Forest Department has sought.
- (c) It was also requested to the Committee to provide for suitable provisions in the CRZ Notification, 2011, to permit certain constructions which can be accorded clearance at the State level especially for the development of marine interpretation Centres, low-intensity traditional aquaculture and hatchery activities in the CRZ-III areas. Request was also made to permit construction of

promenades at the edge of the mangroves so as to prevent felling and also to prevent solid waste dumping in the mangrove area. Clearing of mangroves and destruction of wildlife habitat in the CRZ-I areas should be explicitly declared as prohibited activity under CRZ-I. Based on the above-mentioned facts, GoM requested for the following:

- (i) to empower Section 23 of E(P)A 1986 to the State Forest Department to take punitive action against violations in CRZ-I areas;
  - (ii) to explicitly insert a provision under item CRZ-I of the CRZ Notification, 2011 that "Clearing of mangroves and destruction of wildlife habitat in CRZ-I areas as a prohibited activity";
  - (iii) to provide for construction of Marine Interpretation Centre in CRZ-III areas and construction of a walkway and research facilities in the mangrove area classified as CRZ-I. For undertaking the above-mentioned activities, the State Government shall be empowered to accord clearance under the Notification after due recommendations of the MCZMA.
- (d) Further, CIDCO for conserving 1471 hectares of coastal wetland, mudflats and mangroves, along with Forest Department proposes to construct a genetic resource conservation park and provide for raised broad walkway along with an information dissemination centre to be built in the adjoining land in the mangrove area. It was indicated that the CRZ Notification, 2011 does not provide for any incentive in undertaking certain development in CRZ-I for the purpose of promoting awareness and conservation of mangroves. CIDCO requested the Committee to consider development of such facilities for public use in the CRZ-I areas without destruction of the mangroves similar to the Forests Department's request indicated above.
- (e) In this regard, CIDCO explained in detail the legal provision pertaining to the inland mangroves and coastal mangroves as contained in the Forest (Conservation) Act [F(C)A], 1980, Maharashtra Felling of Trees (Regulation) Act, 1964, Maharashtra (Urban Areas) Preservation of Trees Act, 1975. It was requested that the Committee may distinguish between natural coastal mangroves and inland mangroves. Since, Navi Mumbai has inland mangroves mainly due to artificially created ingress of seawater the provisions applicable to

coastal mangroves shall not apply on such inland mangroves. Request for permitting construction of walkway, interpretation centre, genetic research park and so on within CRZ-I/CRZ-III areas was sought.

- (f) In the CRZ-I area, there is a need for preservation of land between LTL and HTL and the mangroves which have a strong ecological rationale should be integrated within the new development plan. With regard to CRZ-II areas, the zone defined as already developed and with infrastructure should become integral part of development/redevelopment as envisaged in the Town and Country Planning Regulations as brought out from time to time. In this regard, the land use zoning and the FSI should be decided as per the current needs and not tied down to 1967 Rules. Since the new DP is under preparation, BMC requested for inserting the following clause in 8(V)(iii), *"In case the Development Plan and DCR revised by following due process of public consultation, the provisions of the same will become applicable even in CRZ, after the same is approved by MoEF&CC."* Hence, GoM has requested for applicability of the uniform DCR for entire Mumbai.
- (g) It was indicated that as per the Notification, Achra-Ratnagiri and Malvan-Sindhudurg has been declared as Critical Vulnerable Coastal Areas (CVCA), where Integrated Management Plans (IMPs) are to be prepared. In the absence of such IMPs, no developmental activities are being permitted. Hence, it is requested that MoEF&CC may provide guidelines for preparing the IMPs.
- (h) It was indicated that in CRZ-I there has been systematic landfill, reclamation, unauthorized encroachment, cutting of mangroves, and so on. In this regard, the local authorities should be empowered to take up eco-developmental programme by creating garden, open spaces and promenades for sustainable conservation of CRZ-I. This step would reduce encroachments and degradation of the costal environment.
- (i) It was mentioned that the mangroves in case of more than 10,000 m<sup>2</sup> are required to provide 50 m buffer. However, unfortunately, the buffer zone of 50 m has led to encroachment, illegal dumping, construction activity and slum redevelopment. Hence, it was requested that the 50 m buffer shall be maintained

with green belt under social forestry or gardens. This would serve as a barrier to encroachment and also provide protection to mangroves.

#### 2.4.7 Tourism

- (a) Apart from the specific issues raised by the States of Kerala and Karnataka with regard to tourism several other States also sought relaxation of the CRZ provision or promoting tourism in the CRZ areas. It was indicated that temporary structures for beach resort should be made permissible in the NDZ.
- (b) Specially the UT of Puducherry indicated that there are several heritage buildings which are more than 70 years old are located along the white town which falls under CRZ-II and has greater building coverage than the present permissible levels. As per the Town Planning norms of 1991, building height varies with existing road width and the coverage varies with plot size and usage of building. Hence, construction and reconstruction in CRZ-II should be allowed as per the prevailing Town Planning norms as on date.



#### 2.4.8 Clearance of projects

- (a) Several States/UTs indicated that there is considerable ambiguity in the clearance of projects. The procedures are complicated and time taking. It was also indicated that the form for seeking clearance of projects in CRZ Notification, 2011 is complicated and very elaborate. Several States/UTs sought for delegation of powers for according clearance to projects in the coastal areas.
- (b) The projects attracting EIA Notification should be permitted as per the said Notification and those not attracting the EIA Notification shall be dealt as per the norms of the State Government by the concerned authorities.
- (c) As per the CRZ Notification, 2011 prior NOC from SPCB is mandatory for projects which are discharging effluents, solid wastes and sewage. It was indicated that only prior approval under Water (Prevention and Control of Pollution) Act, 1974 for disposal of treated effluent in the coastal water body may be made mandatory for the projects.
- (d) The CRZ insists a rapid EIA report including marine and terrestrial component expect for construction project listed under 4(c) and 4(d). It is not clear whether rapid EIA is required for all projects expecting listed under 4(c) and 4(d).
- (e) CRZ suggest Comprehensive EIA with cumulative studies for projects in the stretches classified as low and medium eroding by MoEF&CC based on scientific studies and in consultation with the State Governments and UT Administration. Clarification was sought whether this is applicable for all kinds of projects and the availability of the data in this regard.
- (f) Whether Disaster Management Report, Risk Assessment Report and Management Plans are required for small projects such as hotels and guesthouse.
- (g) It was suggested that CRZ map indicating HTL and LTL demarcated by one of the authorized agency in 1:4000 scale is insisted in this regard standardization of cost for map preparation is required based on project cost.
- (h) No objection certificates from the concerned State Pollution Control Boards or UT Pollution Control Committees for the projects involving discharge of effluents, solid wastes, sewage and so on are required prior to CRZ clearance, this



procedure is difficult as no objection certificate from the Pollution Control Boards will not be issued by it prior to clearance by SCZMA.

- (i) In 4(ii), Activities [(a)–(i)] of the CRZ Notification, 2011 shall require clearance from MoEF&CC. Clarification is needed on the following: whether the recommendation of the project after appraisal by SCZMA is to be sent to MoEF&CC for clearance and whether the entire process is to be done by MoEF&CC.

#### 2.4.9 Capacity building and institutional mechanism

- (a) Several States/UTs indicated that the CZMAs have no adequate capacity including funding. They requested for financing and providing technical assistance to the State Governments in the area of coastal management. The States/UTs sought for the ICZM Project which is presently being implemented by MoEF&CC through SICOM and NCSCM. The States/UTs sought for extending the expertise of SICOM and NCSCM to their States/UTs as well for the purpose of preparing ICZMPs including capacity building.

#### 2.4.10 Regularization of the dwelling units constructed in violation of the CRZ Notification

- (a) Some of the States/UTs especially Goa indicated that several dwelling units of local communities have been constructed in violation of the CRZ Notification. Keeping in view the larger public interest the State sought regularization of dwelling units of traditional coastal communities including fisher-folk.
- (b) The GoM sought for regularization some of the large constructions in Navi Mumbai undertaken in violation of the CRZ Notification. However, it was indicated that these constructions had all other requisite approvals.

#### 2.4.11 Mining of minerals

- (a) Some of the Stats/UTs sought for permitting mining of sand based on scientific analysis including their removal. The Government of Gujarat indicated that

certain stretches of the coastline have large reserve of high quality of limestone. It was indicated that the Gulf of Kachchh and Saurashtra have vast limestone reserves amounting to 10,000 million metric tons. This limestone has high calcium content (more than 92%) and is extremely valuable. Several industries especially cement industries in these areas use the limestone. Many of the industries have been set up prior to 1991 based on the limestone reserve. These industries have been affected due to the provision of the CRZ Notification. The State Government has sought relaxation of mining of limestone and has requested to make it a permissible activity outside eco-sensitive area with subject to the condition of proper mitigation measures, preservation of erosion, saline water incursion, pollution of coastal waters and so on.

- (b) There is a need for clear regulations on estuaries. Estuary is a point of meeting of a river and sea; this area is special because of unique salt-tolerant flora they harbor and distinct fauna dependent on such floral components. Estuary is cradle for various life forms including mangroves. Regulation on estuaries should clearly define the carrying capacity of various bio-resources being removed from estuaries, for example, the sand mining by the mechanized method to be stopped.

#### 2.4.12 Disparity in DCR in CRZ and non-CRZ areas

- (a) It was also presented that there are several disparities in the DCR with respect to CRZ and non-CRZ areas. Some of which include, the DCR within the CRZ area is applicable as on 1967 while in the non-CRZ area the DCR applicability would be as per the present regulations. The applicability of DP & CR of 1967 is retrograde and against the principle of planning. Therefore, it was requested that there is a need to adopt a uniform DCR for entire Mumbai which has been already conveyed to Secretary, Environment and Principal Secretary, Urban Development on 9 March 2012 by BMC and the same has been forwarded to MoEF&CC. It was also mentioned that the Municipal Corporation of Greater Mumbai (MCGM) has undertaken the preparation work of revision of the development plan of 2014–2034 and it was pointed out that, out of 458.28 km<sup>2</sup>,

109.24 km<sup>2</sup> is under CRZ which amounts to 25%. This 109.24 km<sup>2</sup> of CRZ area includes 52.61 km<sup>2</sup> as CRZ-I, 43.48 km<sup>2</sup> as CRZ-II and the rest 13.15 km<sup>2</sup> as CRZ-III. It was also mentioned that by 2034 the population of this city would increase from 12.44 million to 14.37 million as on 2011. The GoM indicated that this disparity among various norms has led to confusion and has restricted development. In order to resolve such conflicts between the construction norms and to get uniformity, the GoM requested the Committee to resolve this issue at the earliest. Reiterating this, it was indicated that the DCR of 1967 regulations inhibits development in the city and it would be unrealistic and anachronistic keeping in view the growing population.

#### 2.4.13 CRZ-II and III related issues pertaining to Town and Country Planning norms

- (a) Further, as per the CRZ Notification open spaces/parks has been classified as CRZ-III where no development can take place. In such areas, slums have come up. The Hon'ble Court has held that no redevelopment can be taken up in such CRZ-III areas. Due to the stalemate, neither slums can be redeveloped nor the open space developed. Keeping in view such complex problems, BMC suggested that there needs to be a fresh approach of integrated planning of CRZ-I and CRZ-III with rest of the city. GoM has requested for to provide uniform FSI/FAR for the city of Mumbai as per the prevailing Town and Country Planning Regulations for undertaking development of slum redevelopment schemes, redevelopment of dilapidated buildings, cessed and unsafe buildings.
- (b) The CRZ Notification, 2011 provides for prior clearance for demolition and reconstruction of public use structures, such as education, workshops, medical care and cultural activities by MoEF&CC. It was requested that since most of the structures are Government projects involving public interest timely clearance is required. Hence, they may be permitted to be cleared at the state level. It was also requested that projects of public interest such as water sewerage pipeline, bridges and roads could be approved the state level instead of being referred to MoEF&CC which is presently followed.

- (c) The Notification provides only for the traditional fishing activity. It is silent with regard to mechanized fishing activity that is being carried out even now. In view of the reduction in the fish catches and owing to the advanced technology available to take up coastal aqua culture and mariculture, there is a need to make provision for undertaking such activities in CRZ-IV and for the establishment of facilities required for such activities on the adjacent land. No norms are prescribed for regulated activities. In view of this, the GoKA has requested for "The activities impugning on the sea and tidal-influenced water bodies will be regulated except for traditional fishing and related activities undertaken by local communities" be modified as "The activities impugning on the sea and tidal-influenced water bodies will be regulated except for traditional fishing, coastal aquaculture and mariculture including facilities required for such activities on the adjacent land as well as related activities undertaken by local communities".
- (d) There are many riverine Islands and long stretches of rivers with tidal influence. Traditional fishermen as well as other inhabitants are there all along the river and islands. These traditional families are finding it difficult to expand the dwelling units due to family expansion. CRZ for the islands in the State of Karnataka is presently 100 m or width of the river/creek. Therefore, the CRZ limit in the islands of the state as well as all along the rivers also to be limited to 50 m or width of the river/creek whichever is less as provided for Kerala. The GoKA has requested for 50 m width from the HTL on the landward side as the CRZ area for the islands within the backwaters.
- (e) The fishermen villages are generally thickly populated in the coastal area with all the civic amenities provided by the Government. These fishermen are confined to the same area. Hence, the fishermen may be permitted for construction/re-construction of their dwelling units and to enable other infrastructure facilities. According to the existing Provision, CRZ-II comprises areas that have been developed up to or close to the shoreline. (Explanation – For the purposes of the expression "developed area" is referred to as that area within the existing municipal limits or in other existing legally designated urban areas which are substantially built-up and has been provided with drainage and approach roads

and other infrastructural facilities, such as water supply and sewerage mains.) The GoKA has requested for the fishermen villages that have been substantially built up and be included under the definition of "developed area" in the explanation, as is allowed in the case of CRZ-II in urban local bodies.

- (f) Buildings shall be permitted only on the landward side of the existing road or on the landward side of the existing authorized structures. Clarification was sought regarding the term "existing road": the type of road (metalled/non-metal/murum, etc.) and date/year of construction of road.

#### 2.4.14 Foreshore requiring facilities

- (a) The CRZ restrictions are hindering the development of port-related activities. At present all the minor ports of the state have been classified under CRZ-III. But all the minor ports are situated on the shore line of developed areas within the municipal limits and already have created substantive built up area with other infrastructure facilities. As per the notification these ports should have been classified under CRZ-II. But unfortunately the minor ports of the state have been classified as CRZ-III. Thus, the resulting restrictions on the development of water front industries would seriously undermine the developments of the ports of the Karnataka state.
- (b) Development of ports is mainly dependent on the construction of infrastructure facilities on water front area of the coastline. Port-based industries are vital to the economic development of the State; therefore, it was requested by GoKA that the Karnataka ports either be classified under CRZ-II or be totally exempted from the preview of CRZ in the interest of the trade and economy of the State.
- (c) At present, the CRZ clearance authority is given to the MoEF&CC in respect of port-related projects. The Karnataka Port Department is of the opinion that, as the development of the ports of the country comes under the purview of the Ministry of Shipping and Road Transport, it is advisable to empower the Ministry of Shipping, Road Transport and Highways, GoI, New Delhi to grant CRZ clearances for port projects in the best interest of the comprehensive and speedy development of the port sector.

- (d) As per the CRZ Notification, 2011 expansion of the existing ports is required to obtain the permission from SCZMA or MoEF&CC but expansion/infrastructure addition, up gradation of the existing port facilities is very essential and equally inevitable for efficient management of the ports. Hence, expansion of the existing minor ports may be exempted from the purview of the CRZ notification.

#### 2.4.15 Inland islands in coastal waters and estuaries

- (a) The NDZ along backwaters, estuaries, creeks, and so on, of the state may be limited to 50 m instead of 100 m. It may be noted that in most of the period after the introduction of CRZ Notification, 1991, the NDZ applicable to backwaters was only 50 m. Also, as per CRZ Notification, 2011, the NDZ for backwater islands is only 50 m and the proposal is only to extend this provision to the entire backwaters and tidal-influenced water bodies.

### 2.5 Analysis of the CRZ Notification, 2011

(TOR-1(d) – to examine errors/inconsistencies in CRZ Notifications, 2011 and procedural simplification)

2.5.1 The Committee has examined the various issues raised by the coastal State Government and UTs vis-à-vis CRZ Notification, 2011. The Committee has also examined some of the relevant Court Orders in the matter. After taking into account the hardship faced by the people in the coastal areas especially due to the restrictions imposed on housing, road development and tourism development, the Committee is of the opinion that the present CRZ Notification, 2011 should be recast and a fresh notification shall be considered by the Government, which will supersede the CRZ Notification, 2011. This decision of the Committee is mainly founded on the premises that each of the coastal State/UT has well-laid Town and Country Planning Regulations including other developmental regulations which address most of the issues in the CRZ Notification, 2011. The imposition of the Notification by the Central Government on the State and UT Governments has restricted the housing development of the coastal communities. Although there is a need to protect the coastal environment, the housing need of the communities is equally important.

2.5.2 The Committee examined the CRZ Notification, 2011 and its implementation by the MoEF&CC and the coastal State/UT Governments. With regard to the Notification, the Committee observed that the objectives of the Notification are well laid out which takes into account the future issues of the coastal environment. With regard to the jurisdictions listed in the Notification at item (i) and (ii) (iv) and (v) of para 1, there are no issues.

2.5.3 In the para (iii) with regard to the Hazard Line, the Committee is of the opinion that at this stage, it is an excellent time worthy exercise embarked upon by MoEF&CC. However, the Committee observed that it would take a long time for actual demarcation on the ground. Further, the hazard line, which takes into account water-level fluctuations, elevation, SLR and shoreline changes shall also be considered along with the geological factors at a later stage (e.g. plate movement of the Indian subcontinent, as there is subduction in some areas and emergence of land in other parts of the country). Till such time, the zone between the HTL and the Hazard Line should be treated only as "hazard management zone" and not for any other regulatory purposes. However, if the Hazard Line falls below 500 m, then a minimum of 500 m will be under regulation.

2.5.4 The respective State Governments need to take into account the issues relating to hazard management within their Town and Country planning norms for developmental activities. Several State Governments have also raised the issue of Hazard Line and its implications and its demarcation on the ground. The Committee is of the opinion that the MoEF&CC through NCSCM should move forward with the demarcation of Hazard Line as these are crucial input generated with valuable scientific data generated through Sol through aerial photography, photogrammetry and ground verification and erosion mapping by NCSCM using time-series high-resolution satellite imagery. The delineation of Hazard Line would be useful for the country to prepare proper hazard mitigation measures in the coastal areas. Further, the data generated by the Sol which is one of kind in the world; need to be factored into other developmental activities of the coast. It will be the responsibility of the State/UT Governments to include the coastal hazard mitigation activities/facilities

provided in the respective CZMPs. The State/UT Disaster Management Authorities shall be overall responsible to meet the challenges of disasters arising from coastal and marine areas.

2.5.5 With regard to **para 2** of the CRZ Notification 2011, the Committee observed that the HTL demarcation which was to be completed within one year has not been completed so far. The Committee was apprised of the efforts taken recently by the MoEF&CC, where the methodology was finalized for demarcation of HTL. It has been decided that the ortho maps generated by the Sol during the year 2011 under the hazard mapping component would be used to delineate and provide authentic HTL at best possible accuracy. NCSCM has been authorized to coordinate with the State/UT Governments and the Sol to complete the HTL and LTL demarcation within the stipulated time of 2015. NCSCM has taken necessary steps for expediting the task on time. Most State Governments and UTs have provided necessary inputs in completing the HTL and LTL demarcation. This exercise, when completed, would resolve several outstanding issues, which has also been noted in the report of the high level Committee which reviewed various Acts administered by the MoEF&CC under the Chairmanship of T. S. R. Subramanian Committee at para 9.18. Once the HTL and LTL are demarcated, the CRZ boundaries and their classifications would become easy for demarcation.

2.5.6 With regard to **Para 3**, titled 'prohibited activities', the Committee examined it in detail and observed that several of the activities listed under prohibited activities have exemptions, which have led to ambiguity among the stakeholders. Several State Governments have raised the issue with regard to lack of clarity on clearance procedures for according environmental clearance for the proposed activities. Further, the Committee also is of the opinion that several of the activities listed under the prohibited activities are not exhaustive. It is also felt by the Committee that some of the activities relating to industrial activities are governed by the respective Acts and legislations. In order to avoid duplication and overlap, it is the opinion of the Committee that those respective Acts and legislations, norms should be strengthened further, to address issues relating to coastal areas rather than a separate legislation/provision under the CRZ Notification.



2.5.7 The Committee is of the opinion that the very purpose of the issuance of a direction for coastal management by the Prime Ministers' Office in 1981, was to maintain beaches and its surrounding coastal areas clean. In spite of more than three decades of implementation of coastal management provisions by the Ministry and the State Governments, the conditions of the beaches in India, the coastal waters, the estuaries and other tidal-influenced water bodies remain highly polluted. Such a deterioration of water quality and the solid waste on the beaches has affected the coastal ecosystems and their regeneration capacity – deterioration of ground water with direct impacts on the livelihood of the coastal communities and coastal tourism. The Committee is of the opinion that it is high time that the Government takes a serious measure in controlling the discharge of effluents, untreated sewage, dumping of solid wastes in coastal areas and its waters. The "SWACHH BHARAT ABHIYAN" initiated by the Government should reach the coastal areas with high priority. MoEF&CC through its bodies such as SICOM, NCSCM and State Government should implement this programme vigorously.

2.5.8 Another major issue with regard to the security of the coastal areas, given the present security concerns, has arisen from 26/11/2008 terror incident in Mumbai. The Committee is of the opinion that necessary facilities for coastal patrolling and vigilance activities, coastal police station and other defense-related activities need faster clearances. Hence, such matters relating to national security should be accorded fast clearances by the respective State /UT Governments within a stipulated time.

2.5.9 Ground water drawal at **Para 3 (xi)** of the Notification is a matter of serious concern. The Committee was made aware of the ground water depletion and resultant salinity intrusion that is taking place along the coastal areas of the country due to large-scale and unregulated extraction. Several anthropogenic activities such as seawall, embankment and road construction, dredging and sand mining in the coastal areas disturb the coastal aquifers thereby altering the fresh ground water resources. Destruction of sand dunes and beaches has reduced the percolation of rainwater, thereby affecting the coastal groundwater recharge. The respective State

Ground Water Authorities including the Ground Water Authority at the Centre should take a serious concern of the issue and prepare guidelines for coastal area groundwater recharge mechanisms including protection of groundwater aquifer in the coastal areas. All construction activities such as roads and dwelling units should have built-in ground water recharge system. The Central Groundwater Board shall be entrusted to prepare an atlas of the coastal aquifers. This data shall be incorporated in the CZMP by the respective States / UTs.

2.5.10 With regard to **Para 4** of the CRZ Notification pertaining to regulation of permissible activities, the Committee was given to understand by the State Governments that there are several activities that are not listed in the Notification; hence, the stakeholders, especially communities, face problems due to ambiguities. Further, even for the small dwelling unit in rural areas, the community has to obtain clearance from the CZMAs which are located in the State capital. Such hardships faced by the communities are a matter of concern. The Committee is of the opinion that the local-level body should be empowered to provide clearance to such matters in accordance with the 73rd and 74th Constitutional Amendment. The Committee is of the opinion that the construction projects which attract EIA should be dealt with as per EIA Notification only.

2.5.11 Further, several States have brought to the notice regarding **para 4 (ii)** which empowers MoEF&CC to accord clearance for small projects such as laying of pipelines, transmission lines, conveyance systems and public buildings. The Committee is of the opinion that the MoEF&CC should restrict itself to policy making in the area of coastal management and monitoring of activities. Such clearances for small projects could be undertaken by the State/UT Governments or other agencies. The MoEF&CC should address coastal management through creating adequate institutions and strengthen existing institutions. A strong scientific skilled manpower should be developed by the MoEF&CC to address the emerging future challenges of coastal management.

2.5.12 With regard to **Para 5** relating to the preparation of CZMPs, the Committee is of the opinion that the demarcation of HTL is the most important aspect of CZMP.

With regard to preparing CZMPs, several State/UT Governments have indicated their concerns as there is lack of data, expertise, institutions and shortage of manpower, which is affecting the preparation of CZMP on time. These issues have remained unresolved since 1991. CZMP preparation even under 1991 Notification was not completed in spite intervention by the Hon'ble Supreme Court. Hence, the Committee is of the opinion that CZMPs shall be prepared by the States/UTs indicating the HTL, LTL, CRZ-I, CRZ-II, CRZ-III and CRZ-IV areas, the disaster management facilities and any other prohibited area declared by the States/UTs.

The States/UTs may also address some of crucial issues of coastal and marine areas including activities required for society such as coastal hazard mitigation, infrastructure for non-conventional energy, transportation, harvesting/extraction of resources, conveying systems, solid waste management, effluent and sewage treatment facilities and any other innovative schemes or those schemes suitable or unique to their location. The same could be included in the CZMP. It shall be ensured by the agencies and authorities that satellite based inputs/data shall be relied upon for preparing the CZMP. The above draft CZMP shall be recommended by the States/UT CZMAs and approval from the NCZMA shall be obtained. Thereafter, all the development activities including conservation and management of the ESA in the CRZ will be governed by the concerned bodies including those indicated in this Notification. All other projects of national importance declared by the Central Government shall be undertaken in CRZ area on a case to case basis based on EIA as provided in the E(P)A 1986.

Ministry shall put in place a monitoring mechanism, which will consist of State/UT CZMAs, NCZMA, SICOM and NCSCM. SICOM shall prepare a periodic status report of coast and marine areas which shall include the status of implementation of the CRZ Notification. This status report shall be prepared on a yearly basis and it shall provide recommendations and suggestions to the Ministry.

2.5.13 With regard to Para 6, relating to the enforcement of CRZ Notification, the Committee has been informed of a serious staff shortage in every State/UT. Further, the funds allotted by the State/UT Governments for coastal management is

insufficient to address complex issues such as pollution, destruction of ESAs and land erosion, which are all matters of serious concern. These issues require continuous monitoring and rigorous enforcement of law. The Ministry, through its technical body SICOM, should set up appropriate mechanism for monitoring the coast and enforcement of coastal regulations.

2.5.14 With regard to **Para 7** pertaining to classification of the CRZ areas, the Committee observed that this section of the Notification is most critical, as it divides the coastal areas into conservation and development zones. The very heart of the Notification is contained in **Para 7 (i)** which deals with CRZ-I. The ESAs, geomorphologic features and the valuable archaeological and heritage sites are some of the most important and critical aspects of coastal areas. In addition, the beaches, which are crucial in maintaining the integrity of the coast, are subject to extreme degradation and need to be considered as part of the ESA. These features and assets have to be preserved as they are incomparable and extremely invaluable. The ESAs such as mangroves, corals, mudflats, forest areas, salt marshes, turtle nesting ground, horse shoe crab areas, sea grass beds, migratory bird areas and their nesting grounds require utmost attention from the MoEF&CC and States/UTs. These areas, if lost, cannot be regained and the damages in most cases are irreversible. The Committee, from the data available, has observed that serious damages have occurred to these ecosystems and habitats, resulting in irreversible damage. Some of the main causes are encroachment, pollution and unplanned development.

2.5.15 Based on the above-mentioned facts, the Committee observed that the MoEF&CC should mainly focus on developing mechanisms for the conservation and protection of the coastal ecosystems, which is its prime mandate. There is an urgent need to conduct resource mapping of such coastal ecosystems and habitats, including ground-level surveys. It is a fact that these ecosystems and features listed under CRZ-I of the Notification are essential for the growth of fish and fisheries on which the local communities depend upon for their livelihoods.

2.5.16 Further, the Committee was also informed by the States/UTs that several eco-sensitive areas are inhabited by people, and the inhabitants harvest the natural resources from the ecosystems for their livelihood. These communities, especially the large population living in and around ESAs such as Sundarbans, Bhitarkanika, Chilika, Coringa, Pichavaram, Gulf of Mannar, Pulicat, Vembanad and Gulf of Kachchh, need certain basic infrastructure for their life and livelihood. The Ministry through SICOM shall prepare the appropriate management plans in consultation with the State/UT Governments to address the conservation and protection of these ecosystems along with the livelihood of local communities.

2.5.17 Para 7.2, which is CRZ-II, is another important para of the Notification which affects some of the densely populated cities such as Mumbai, Chennai, Visakhapatnam, Kochi, Mangalore and Puri. The most crucial issue of the provision is restriction of building norms. The Committee has dealt with this issue in detail and had discussions with all State Governments. It is a fact that all coastal States/UTs have a well-defined Town and Country Planning Regulation and have adequate staff and mechanism to implement the regulations. The provisions in CRZ Notification are often overriding the Town and Country Planning Regulation of the State/UT Governments and could be considered as not appropriate from the legal point of view.

2.5.18 Hence, it was felt that the provisions of Town and Country Planning Regulations should be adhered to the coastal areas, subject to strict implementation of certain conditions which include protection of ESAs, prohibition of discharge of untreated effluents, prevention of activities that alter the shoreline, providing adequate open space and connectivity to provide for quick and timely relief during natural calamities, regulated ground water extraction, recycle and reuse of water including prohibition on dumping of municipal solid waste in coastal areas and waters.

2.5.19 The Committee was also made aware of the slums, dilapidated, old and unsafe structures that are present in large numbers especially in the city of Mumbai. The GoM has brought to the notice of the Committee and at several occasions to

Gol that the CRZ Notification has prevented the redevelopment of such slums, dilapidated structures and old buildings. The Committee was of the opinion that it is the responsibility of the respective State/UT Governments to undertake urgent and immediate steps to rehabilitate the people and provide for decent housing to the people living in slums, dilapidated structures and unsafe houses. This action needs to be taken within the ambit of the existing State/UT legislations.

2.5.20 With regard to para 7 (iii), CRZ-III relates to the rural areas, which are the largest geographical area of the coastal regions. These areas are inhabited by fishermen, farmers, salt pan workers and other coastal communities who depend on the coastal areas for their livelihoods. This stretch is important mainly from the local community point of view and has large tourism potential. The Committee is of the opinion that the local communities may be encouraged to take up tourism as a home stay option, which will provide alternative livelihood and also reduce pressure on coastal fishery. Further, some of the State/UT Governments, especially Kerala, Daman and Diu, have brought to the notice of the Ministry, the high population density of local communities living in such CRZ-III areas. The present regulations of NDZ of 200 m have been highly restrictive in the densely populated parts of the country, which has hindered the housing development of the local communities. The Committee is of the opinion that the housing issues of local communities must be addressed immediately.

2.5.21 Further, one important issue which was brought to the notice of the Committee include the small islands along the mainland coast of the country. While the Ministry has addressed the conservation and management of the oceanic islands of Andaman and Nicobar and Lakshadweep under the IPZ 2011 Notification, the issues relating to these small islands along the mainland have not been addressed. Most of these islands are inhabited and some of them are rather densely inhabited especially in West Bengal, Kerala and Karnataka. In view of the restriction of the present Notification, which mandates an NDZ of 50 and 100 m, development is hampered in these islands. Keeping in view the hardships of the local communities and the potential for tourism, the Committee recommends relaxing the restrictions in such islands.

2.5.22 Certain omissions and corrections required in the Notification were also brought to the notice of the Committee. These include:

- (a) the usage of the term "*creek*" while referring to the width in the place of "tidal-influenced water body";
- (b) the term "*permitted areas*" in para 3(iii) without defining the same, omission of word "studies" in para 3(iv)(d) "...based on carried...";
- (c) the omission of method of drawal of ground water within 200 m of HTL in para 3(xi)(a);
- (d) the requirement of phrase "Any other construction except those permitted under paras 4 to 8 *except facilities required for patrolling and vigilance activities of marine/coastal police stations*" in para 3(xiv);
- (e) omission of word "*agencies* authorized by MoEF&CC" in para 5(ii);
- (f) the requirement of term "regulations" in the place of "*regularization*" in para 8(i);
- (g) note the missing of phrase "shall be permissible in CRZ" at the end of para 8.V.3.(iii) and such others.

2.5.23 The Committee also noticed that the essential guidelines for several of the procedures to be followed under the Notification including for the demarcation of HTL and LTL were not made available to the agencies/public resulting in delays and lack of clarity. This has attracted litigations on several occasions. Similarly, there are ambiguities in the guidelines for CZMP preparation appended to the Notification resulting again in differences in approaches by the authorized agencies.

## Chapter 3

### Discussions on the Issues raised by the States and UTs

The Committee after examining the presentations and details provided by the Governments of Maharashtra, Karnataka, Kerala and other States/UTs with regard to difficulties and impediments in the implementation of the CRZ Notification, 2011 found that many of the issues raised by the States/UTs have several commonalities except for a few area specific matters. In this context, the Committee analyzed these issues topic wise and came to the following conclusions.

#### 3.1 Development Issues in CRZ-II

3.1.1 The Committee examined the issue with regard to the applicability of **Development Plan (DP) and Development Control Rules (DCR)** of various years as presented by Maharashtra. The DCR of 1967 which was applicable under the CRZ Notification, 1991 inhibits certain developments in the CRZ areas of the city. With the growing population and to address the housing issues of Mumbai and other coastal cities in the country it is important that the local Town and Country Planning Regulations are made applicable uniformly in the coastal areas. The disparity in the regulations, governing constructions in the CRZ area is hindering development and causing hardship to the local communities. In fact, it is found that the





restrictions imposed have actually led to land encroachment and development of illegal slums particularly along the beaches of Mumbai.

3.1.2 The Committee examined the issues of slums in Mumbai in great detail. It was brought to the notice that these slums exist in extremely unhygienic conditions with no proper basic infrastructure. The slums are thickly populated and the population is prone to risks of flooding, cyclone, and so on. There are no proper roads or passage to evacuate the people during calamities. Since the slums are proliferating in unhygienic and inhuman conditions, it is the responsibility of the State Government to provide basic descent housing facility to the people. This is one of the fundamental requirements of the people. In view of the urgency and in the public interest, the Committee is of the opinion that the CRZ Notification, since its implementation from 1991, has not addressed the issues appropriately. The Committee also examined the Office Order of September, 1998 issued by MoEF&CC which freezes the FSI as on 19.2.1991 including the Orders of Hon'ble High Court of Bombay which has upheld the above Orders of MoEF&CC. The Orders of Hon'ble High Court of Bombay in freezing the FSI as on 1991 have also been examined. The Orders of the Hon'ble High Court in this matter does not prevent the Government to amend the law. Hence, the Committee is of the opinion that in view of the serious environmental and social issues arising due to proliferation of slums the matter should be left to the State Governments to implement the slum rehabilitation schemes as per the concerned State Government norms issued from time to time. The Committee is of the opinion that rehabilitation of the slum areas is an urgent matter to be addressed in most of the cities of the country particularly in the coastal areas as they are vulnerable to hazard from the sea. However, the Committee recommends that while undertaking such housing for slum rehabilitation in the CRZ-II areas, the following shall be strictly adhered to:

- a. All construction activities shall be undertaken in these coastal municipalities on the landward side of the road included in the approved developmental plan or authorized structure(s).
- b. All developmental activities shall be undertaken (in these municipal areas) as per the prevailing local Town and Country Planning Regulations subject to the following conditions:

- (i) no discharge of untreated sewage/effluents;
- (ii) no activities shall be undertaken that would cause shoreline change including disturbing the sediment balance in the coastal waters;
- (iii) adequate provisions/facilities shall be built to provide for quick and timely rescue, relief and rehabilitation measures in case of natural calamities;
- (iv) adequate open space shall be provided to meet the emergencies during natural disasters, to maintain aesthetics including adequate ground cover for fresh water recharge;
- (v) all residential constructions shall be provided with groundwater recharge facilities;
- (vi) all residential or commercial buildings shall be provided with water recycling systems and shall use the recycled water for non-contact purposes such as gardening, washing and flushing (through dual pipeline system);
- (vii) no dumping of solid waste. The solid waste shall be managed as per the MSW Rules;
- (viii) no conversion of land earmarked for parks, gardens, schools, hospitals and dispensaries, defense establishments, disaster management and other public utility purposes;
- (ix) necessary provisions shall be put in place to ensure that the ambient air quality within the municipality is as per norms. All construction activities, transport, industrial activities and so on, shall follow strict air quality norms so as to provide congenial quality of air for people.

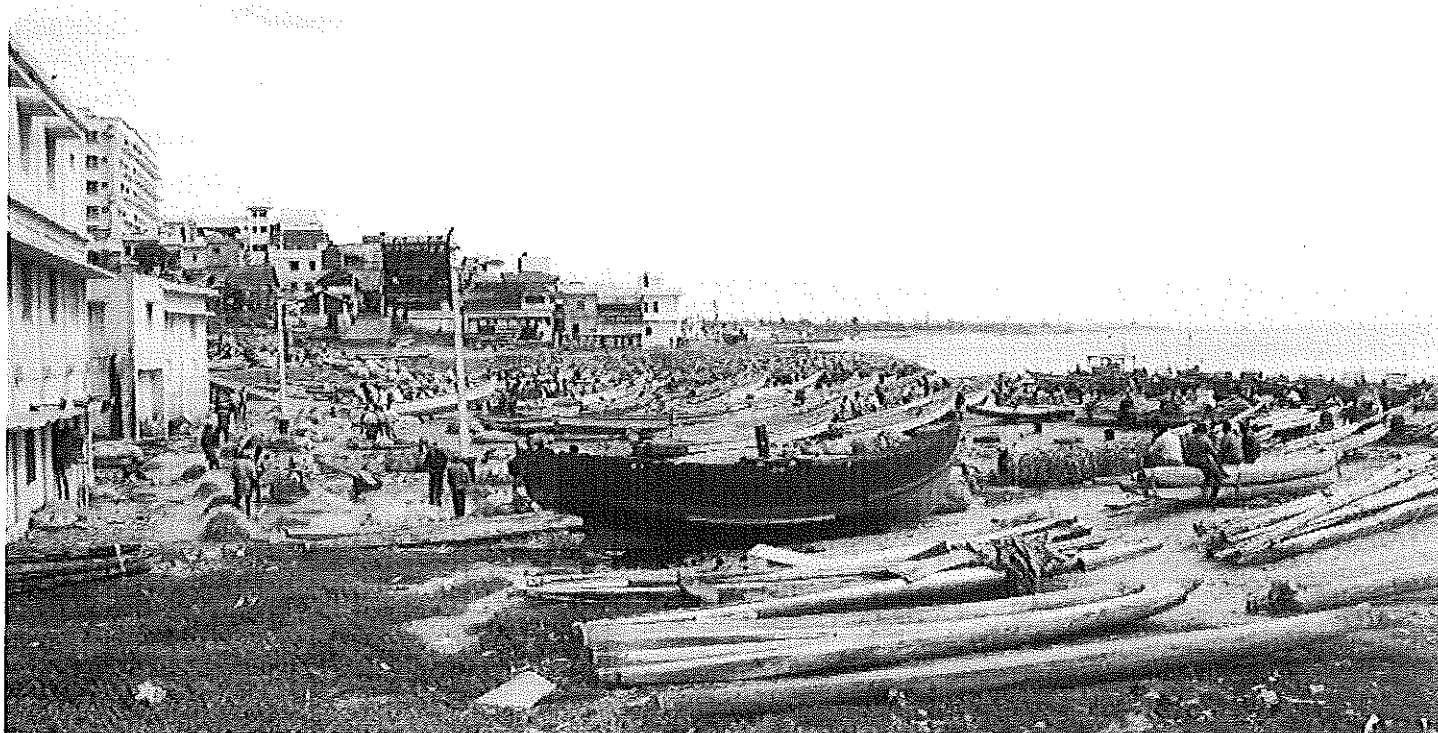
3.1.3 The Committee had detailed discussions with regard to the **dilapidated, cessed and unsafe buildings**. The Committee examined the existing provision at para 8V(c) titled "Redevelopment of dilapidated, cessed and unsafe buildings" under CRZ Notification, 2011 including the amendment to the Notification. The Committee observed that in para 8V(c)(2)(ii) of the Notification dated 6 January 2011 provided for FSI and FAR as per prevailing Town and Country Planning Regulations. However, in the amendment dated 29 March 2011 to the CRZ Notification, 2011, the Ministry has frozen the FSI/FAR as on 6 January 2011. Now, State Government seeks the implementation of the original provisions of CRZ Notification, 2011

which provides for FSI/FAR in accordance with Town and Country Planning Regulations prevailing as on date on which the project is granted approval by the State/UT Government.

The State Government has provided the reasons for such provisions mainly to provide safe housing to the tenements. The Committee after detailed discussions is of the opinion that the requests made by State Governments need to be accepted as this will facilitate people to have a safe and decent housing. The Committee also discussed the issue relating to collapsing of the old buildings in Mumbai especially during monsoon which causes huge loss of life and property. In view of the above difficulties faced by the people, the Committee accepted the requests of State Governments with regard to undertaking redevelopment of such buildings as per the provisions of Town and Country Planning Regulations subject to certain specific conditions which are listed under slum redevelopment at item 4.1.2 (i) to (ix) above.

3.1.4 The Committee examined the relevant para of CRZ Notification, 2011 pertaining to **Koliwad** (these are fishing villages). As per the provisions, the Koliwad are classified as CRZ-III within CRZ-II. The above provision restricts the development of Koliwad. The State Government is of the view that such Koliwad and **Goathans** (are villages) be classified as CRZ-II in order to bring them on par with other developments in Mumbai. This position is acceptable by the Committee as the fishermen communities living within city municipal limits classified as Koliwad/Goathans/fishermen colony and so on, of Mumbai or elsewhere in such localities in the coastal areas of the country should be developed to meet the economic aspirations of the fishermen communities. The development of these areas shall be subject to the conditions listed in slum redevelopment at item 4.1.2(i) to (ix) above.

3.1.5 The **open space and parks** shall not be converted into developable areas. It shall be ensured that the open space, parks and so on in the approved Development Plan shall be maintained and no constructions shall be permitted except for toilets, wall, walkway and so on, required for non-commercial public use.



### 3.2 Development Issues in CRZ-III Including Dwelling Units of Fishermen

3.2.1 Several coastal States including Kerala brought to the notice of the Committee the need to ~~reduce the~~ No Development Zone in CRZ-III areas. The Committee after detailed discussion on the issues relating to local communities living in coastal areas was of the opinion that as per the information provided by State Government these local communities are put into great hardship due to the restrictions imposed by the CRZ Notification especially the NDZ specified in the CRZ-III areas. The local communities who possess land in such NDZ are deprived to construct or expand their houses. Further, the NDZ in the small islands in these water bodies is also restrictive and imposes restrictions on the housing/tourism facilities. It was brought to the notice of the Committee by State Government that some of these rural areas in Kerala, Karnataka and other places are thickly populated with more than 2000 people/km<sup>2</sup>. Kerala being the State which has very less area for habitation is facing serious issues with regard to housing and other development activities. The Committee after detailed discussion is of the view that the rural areas may be divided based on the population density. The categorization of such populated rural areas shall be as thickly populated and other rural areas. The thickly populated rural areas shall be those which have a population density of more than 2161 people/km<sup>2</sup> which is as per class-III towns of 2001 census of India. Other rural areas would be those which are less than 2161 people/km<sup>2</sup>. The

Committee taking into consideration the hardships faced by the local communities and keeping in view the need for housing recommends that the NDZ may be reduced to (i) 50 m in the densely populated rural areas and (ii) 200 m NDZ along the other rural areas. The housing of the communities in densely populated areas could be taken up landward of the above NDZ subject to the following conditions:

- (i) In densely populated CRZ-III areas, development can be taken up in accordance with the local prevailing norms including the height regulations. The local authorities shall ensure that:
  - a. no activities shall be undertaken that would cause shoreline change including disturbing the sediment balance in the coastal waters;
  - b. adequate provisions/facilities shall be built to provide for quick and timely rescue, relief and rehabilitation measures in case of natural calamities.;
  - c. adequate open space shall be provided (to maintain aesthetics including adequate ground cover for fresh water recharge) and also to meet the emergencies during natural disasters;
  - d. all structures shall be provided with groundwater recharge facilities. Further, drawal of groundwater shall be regulated as per the norms laid down by the local ground water authority;
  - e. no discharge of untreated sewage/effluents. All buildings shall be provided with water recycling systems and shall use the recycled water for non-contact purposes such as gardening, farming, washing and flushing;
  - f. no dumping of solid waste;
  - g. no conversion of land earmarked for parks, gardens, schools, hospitals and dispensaries, defense establishments, disaster management and other public utility areas including areas meant for fisheries.
- (ii) Rural areas are those areas which are less populated. In such areas, development of new houses of local communities can be taken up beyond NDZ which is 200 m from the HTL. Expansion of existing houses in accordance with the prevailing local Town and Country Planning Regulations can be taken up subject to overall height of the construction not exceeding 9 m with ground plus one floor. For development of these rural areas, all provisions listed in a. to h. above shall be adhered to.

3.2.2 In the NDZ of CRZ-III areas, all traditional activities including fisheries, public amenities, recreational facilities and foreshore requiring facilities can be taken up in larger public interest as per the relevant provisions contained in the State and Central legislations and those contained in this notification. Repairs and reconstruction of existing authorized structure in the NDZ shall be taken up as per the local Town and Country Planning Regulations.

3.2.3 The Committee after detailed discussion on the issue is of the opinion that the dwelling units of the coastal communities in CRZ-III areas which have been constructed in violation of the CRZ Notification shall be regularized by the concerned States/UTs Government following the local town and country construction norms. If any of these violations are pending before the Court, the State Government may take up the matter, and with the approval of the Court such violations could be regularized.

### 3.3 Fishery-Related Matters

The Committee is of the opinion that the modernization of the fish-processing units is necessary in order to improve the quality of processing and to maintain the norms stipulated for standards. Further, facilities for effluent treatment should be in place for the existing fish-processing units to ensure zero liquid discharge. Since the setting up of fish-processing units fall under the purview of the State/UT Governments, issues relating to modernization may also be dealt by the respective coastal State/UT Governments.

### 3.4 Tourism-Related Issues

3.4.1 The Committee after examining each of the issues raised by Karnataka, Kerala and other States regarding difficulties in the implementation of the tourism-related projects and taking into consideration the potential for tourism, which could help regional economic development including the local communities, suggests the following:

Tourism projects in the CRZ-II areas may be taken up as per the local Town and Country Planning Regulations. Tourism project(s) in the CRZ-III areas can be taken up as follows:

- (i) In the NDZ and in the intertidal area, temporary tourism facilities such as, cyclone shelter, toilets, wash rooms, change rooms, drinking water facility and temporary shack(s) can be taken up with the permission of the concerned local authorities. It shall be ensured by the local authorities that such facilities indicated above shall occupy only 33% of the area. Further, it shall be the responsibility of the authorities that the solid wastes are handled as per MSW Rules and no untreated effluents are discharged in the coast or in the waters. All disaster management mechanisms shall be put in place by the authorities for rescue and relief.
- (ii) Wherever there is a national or a state highway passing through the NDZ, the tourism facilities indicated at (i) above shall be taken up on the seaward side of the road. On the landward side of such road or NDZ, the following tourism activities can be permitted:
  - a. Eco-friendly resorts, hotels and other such facilities for tourism not exceeding 9 m in height with ground plus one floor with slope and tiled roof.
  - b. The total covered area of construction shall not exceed more than 33% of the total area. The open space in the site shall be utilized for greenery, non-paved parking, play fields, and so on. Green areas and open space shall be promoted so as to minimize the impact of storms and facilitate operation and rescue during natural hazards.
  - c. Drawal of freshwater from the aquifers shall be with the approval of the state ground water authority. Adequate facilities for groundwater recharging shall be provided.
  - d. No discharge of untreated sewage, no disposal of solid waste. The water shall be treated and reused within the project area for gardening, flushing and washing.
  - e. No operation of any hazardous or harmful activities which are detrimental to the coast and marine environment.



- f. To provide for adequate space for operation of livelihood activities of local communities who depend upon the resources of coastal and marine environment.

3.4.2 The Committee recommends that local communities including fishermen who possess houses in CRZ-III areas can be permitted to undertake tourism through home stay without changing the plinth area/design or facade of the existing structure.

### 3.5 Hazard Management

The Committee recommends that in addition to the CRZ categories and its jurisdiction, there shall be an HMZ, which is, the zone falling between the CRZ boundary and the Hazard Line on the landward side. The Hazard Line is being demarcated by the MoEF&CC through Sol and NCSCM. In this HMZ, the concerned State/UT Governments shall provide for necessary hazard management measures as per the HM Rules. The States/UTs shall prepare the hazard management plans for this zone and integrate it with the CZMP of their respective areas.

### 3.6 Demarcation of HTL/LTL

The Committee noted that the Ministry has assigned NCSCM to demarcate HTL and LTL based on the data/inputs provided by the Sol, NRSC and the coastal State/UT Governments. The above HTL/LTL is being demarcated by the NCSCM based on the advice of a Committee appointed by the Ministry. The HTL/LTL thus demarcated would be final and all the CZMP would be prepared based on the above HTL/LTL by the respective coastal States/UTs.

### 3.7 Preparation of CZMPs

3.7.1 This issue of **CZMP preparation** has been considered by the Committee, and the initiatives taken by the MoEF&CC in this regard have been appreciated. The HTL demarcation by NCSCM is a key step towards the preparation of the CZMPs. The uniform HTL all along the country shall resolve most of the issues related to it.

3.7.2 CZMPs shall be prepared by the States/UTs indicating the HTL, LTL, CRZ-I, CRZ-II and CRZ-IV areas, any other prohibited area declared by the States/UTs and



the disaster management facilities superimposed on the approved Development Plan in case of CRZ-II areas (municipalities). In the case of CRZ-III areas, the CZMPs demarcating the HTL, LTL, CRZ-I, CRZ-III and CRZ-IV areas, any other prohibited area declared by the States/UTs and keeping in view the provisions contained in this Notification shall be prepared at the local body level.

3.7.3 The States/UTs may also address some of the important coastal issues, including climate change, renewable energy and any other innovative schemes suitable or unique for their location and include in the CZMP. Then this CZMP has to be recommended by the State/UT CZMAs and approved by the NCZMA. Thereafter, all the development activities in the CRZ will be governed by the local body as per the approved CZMPs.

### 3.8 Tidal-Influenced Water Bodies

3.8.1 The Committee discussed the issues relating to the water bodies connected to the sea such as estuaries, rivers, creeks, backwaters, lagoons, ponds and the like which are termed as "**tidal-influenced water bodies**".

### 3.9 Enforcement of CRZ Notification

3.9.1 All activities proposed to be undertaken in the CRZ-II and CRZ-III areas other than those which attract EIA Notification, 2006 shall be governed by the concerned State/UT Government regulations subject to the conditions stipulated in the CRZ Notification and CZMPs approved by the NCZMA.

3.9.2 The Committee agrees to the request for speedy clearance of the projects. The Committee examined the process of clearance under CRZ Notification, 2011 including the various requirements/information sought at Annexure-IV of the Notification dealing with the application for clearances. It was felt that the information sought is required for all category of projects listed in the Notification which includes small houses of local communities, ice plants, fishing-related activities, agriculture, roads, rain shelters, community toilets and so on. Such information sought under Annexure-IV of the Notification may not be available with the agencies proposing to undertake the activities. Further, such detailed information may also not be required

for small projects. With a view of simplifying the procedures for obtaining clearance under the CRZ Notification and to make it transparent and people friendly, each of the State Governments shall formulate the criteria for seeking clearance under the CRZ Notification along with an application form. The application form, details of the procedures, the agencies/local bodies that would clear the project, time limit for the clearance and so on shall be appended to the CZMP of the respective coastal States/UTs.

3.9.3 The Committee is of the opinion that all Acts, Notifications, governing the environmental issues shall operate independently and shall not be interdependent until unless specified. However, the project authority shall ensure that the projects are taken up for implementation only after receiving all statutory clearances.

3.9.4 The Committee examined the role of the CZMAs and the notification constituting the CZMAs. The Committee was of the opinion that the CZMAs should focus mainly on conservation and protection of the coastal areas especially the coastal ecosystem and geomorphological features which are so unique and fragile. The CZMAs rather than carrying out such scientific activity at the ground level are mainly involved in accordingly clearance and examining developmental projects particularly in the CRZ-II and III areas. This activity is a duplication of the Authorities and Agencies created under EIA Notification, 2006.

Hence, the Committee is of the opinion that all such activities and clearances with regard to developmental projects in CRZ should be considered and examined by the respective Authorities created under EIA Notification, 2006. The CZMAs including NCZMA should be responsible mainly for monitoring, enforcement and examining the implementation of the CRZ Notification, particularly, the status of ESAs and approval of CZMPs. The CZMAs should coordinate with NCSCM and SICOM with regard to protection and conservation of ecosystem including monitoring of pollution, erosion, accretion, and so on. The CZMAs should also play an important role in developing a State level capacity in various research and development including awareness in the area of coastal management. The MoEF&CC may provide necessary technical assistance and financial assistance under the ICZM Project to the coastal States/UTs for developing such expertise.

3.9.5 The Committee examined several issues in the present CRZ Notification where the terminologies are not explained or defined. This has led to ambiguities, litigations, violations and difficulty to the people. Hence, the Committee is of the view that the Ministry shall clearly indicate the definition, jurisdiction, the process of clearance, timelines and so on, so that the people are not put to difficulty. Further, the transparency mechanism shall be built in the new regulations to ensure speedy clearance process.

3.9.6 It will be the responsibility of the concerned State Government to address issues relating to complaint and redressal mechanism. The Environment Division of the State and the PCBs are delegated with necessary provisions of EPA 1986 to take action against the violations. Further, the Committee under Shri T. S. R. Subramaniam has also addressed this issue which may be taken into consideration.

### 3.10 Monitoring, Institutional Mechanism and Capacity Building

3.10.1 The Committee is of the opinion that the State/UT Environment Departments which have a dedicated website for CRZ matters shall be updated regularly. The CZMPs shall be uploaded in the website after obtaining necessary approvals from Competent Authority. The notified areas under this Notification and decisions taken at the local level shall also be hosted on the dedicated website of the States/UTs.

3.10.2 Ministry will put in place a monitoring mechanism which will consist of State/UT CZMAs. The Ministry through specialized agencies shall strengthen the monitoring agencies and encourage monitoring through space and IT based technology. The Ministry will also put in place a third party monitoring system who will undertake periodic monitoring and evaluation of the coastal environment.

3.10.3 MoEF&CC through SICOM shall undertake strengthening of the existing institutions and periodic training and capacity building of the CZMAs and other stakeholders working in the area of coastal management. Further, the concerned State/UT Governments shall provide adequate infrastructure facilities keeping in

view the international scenario and emerging technologies in the area of coastal management.

### 3.11 Issues Related to Conservation of ESAs

3.11.1 The Committee after examination of the provisions of the CRZ Notification, 2011 it is observed that there is no adequate provision for management of ESAs which are categorized as CRZ-I including the geomorphological and archaeological features. It was brought to the notice of the Committee that the mangroves are present in the Government as well as in the private lands. While the protection is provided in the Government land by the concerned State Government agencies, the owners of private land, who have planted the mangroves and face difficulties as the mangrove land is declared as 'no development area. This provision of imposing no development on a private mangrove land is a disincentive to such land owners. While the Committee appreciates the efforts and initiatives taken by the private owners in developing mangroves, it is found that there are no incentives to such initiatives. Further, the Committee feels that the private land owners should also be enabled to undertake development as per the local Town and Country Planning Regulations.

3.11.2 It was mentioned that the mangroves in case of more than 1000 m<sup>2</sup> are required to provide 50 m buffer. However, unfortunately, the buffer zone of 50 m has led to encroachment, illegal dumping, construction activity and slum redevelopment. Hence, to prevent such unauthorized and illegal activities which are harmful to mangroves, a walkway on stilts along the boundary may be permitted. The 50 m buffer could also be developed as a green belt under social forestry or gardens. Further, the Committee is of the view that marine interpretation centres and research facilities are a requirement to spread awareness about the mangroves and its flora and fauna associated with it. Such awareness about the mangroves and the associated flora and fauna by the public would bring out better conservation and protection of the mangroves. This would be a positive approach which may be encouraged. The walkways, promenades and social forestry could be promoted all along the mangrove buffer zone that would prevent illegal felling of mangroves and

also prevent dumping of waste in the mangrove area. In order to promote the conservation of mangroves, the Committee is of the opinion that the approval mechanism should be made simpler and faster and the State Government should be delegated the power to recommend and clear such proposals.

3.11.4 The Committee examined the issue of mapping the ESAs and preparation of the management plan in detail. It was brought to the notice of the Committee by NCSCM that the mapping activity of ESAs including the preparation of management plans for the conservation and protection of these ESAs are undertaken by the NCSCM.

3.11.5 The Committee taking into consideration the various aspects of mangrove conservation and the request made by the State Government to undertake certain development in larger public interest recommends as follows:

Mangroves in the coastal areas act as breeding, spawning and rearing grounds of several aquatic fauna that are important for biodiversity. Several species of finfish and shellfish live in mangrove areas on which the local communities depend for their livelihood. Further, the mangroves help in minimizing the impact of storms, floods, erosion and so on and are also carbon sinks. Keeping in view the importance of mangroves, the concerned State/UT Governments shall earmark adequate funds and identify suitable land for promoting, conserving and afforestation of mangroves in the respective areas. This activity shall be undertaken by the concerned State Governments/UTs.



The mangrove vegetation in the coastal areas are categorized as follows:

- (i) Mangroves declared as forest under Forest Conservation Act, 1980 – Notwithstanding anything contained in this notification, such mangroves declared by the concerned State Governments/UT Administrations/Central Government as forest land under the F(C)A, 1980 shall attract the provisions of the F(C)A, 1980 only.
- (ii) Mangroves in (a) Government land not declared under Forest Conservation Act, 1980; (b) private land.

1(a) Mangroves in Government land shall be protected based on a detailed plan prepared by the concerned State/UT Governments. In case the mangrove area is more than 1000 m<sup>2</sup>, a buffer of 50 m along the periphery of mangrove area shall be provided. This buffer zone of 50 m shall be utilized for constructing walkways, interpretation centers, promenades public facilities for developing parks, research facilities related to mangrove biodiversity, facilities for conservation and the like. Further, in the mangrove area and in the buffer, all activities are prohibited except for laying of pipelines, transmission lines, conveyor belts, construction of road on stilts and other conveying mechanisms that are required for public use. Defense establishments such as watch tower could be taken up in the mangrove area. In such cases where removal of mangroves is inevitable in public interest after examining all the alternatives, a minimum of ten times the area of mangroves shall be re-planted and protected within the coastal zone of respective States or UTs. Mangrove removal for the above purposes shall be undertaken only on the recommendation by CZMAs and on the approval of the concerned States/UTs.

2(a) Government land designated for agriculture, fishing, infrastructure meant for local communities, fresh water storage, aquatic bodies, public bodies and associated infrastructure facilities for public use in the development plan which was approved prior to approval of CZMP of 26 September 1996 under the CRZ Notification 1991 may be taken up.

In case of such designated areas where mangroves have grown due to abandonment of agriculture, fishery related activities or lack of infrastructure

to prevent ingress of salinity into land/fresh water bodies, in such areas development can be taken up as per the development plan approved prior to 27 September 1996 subject to the condition that such development in the mangrove land are considered by a committee headed by the Chief Secretary of the States/UTs. For any mangrove area destroyed while undertaking developments as indicated above, compensatory mangrove afforestation should be taken up 20 times in lieu of the mangrove destroyed, in an area identified by NCSCM.

- (b) For mangroves in private land, incentives shall be provided by the concerned State/UT Forest Departments for promoting mangrove conservation/afforestation in private land, for which there will be no requirement of a buffer zone. The developmental activities in the private mangrove land can be taken up.

3.11.6 The Committee taking into account the provisions of the CRZ Notification in this regard agreed that the proposed notification should provide for the following:

- i. To clearly indicate that destruction of mangroves other than for the permissible activities under the notification is a prohibited activity.
- ii. The mangroves shall be mapped by the NCSCM who have already been assigned the work of mapping ESAs. Detailed management plan for protection and conservation of mangroves shall be taken up by the concerned Department in the State Government. 50m buffer shall be provided along the mangrove area wherever the mangrove area is more than 1000 m<sup>2</sup>.
- iii. For the purpose of conservation, protection and to create awareness, certain basic public infrastructure such as walk ways, rain shelters, interpretation centres, research facilities, parks, forestry and promenades, field research facilities related to coastal ecosystems and marine interpretation centres, can be created. The walkway on stilts could be constructed along the buffer area of such mangrove patch. All such developments shall be for public purposes only. For any mangroves destroyed for such construction, compensatory mangrove plantation of ten times shall be taken up within the States/UTs. It shall be ensured that no benefit for construction shall accrue on the landward side of such constructions.

### 3.12 Other Issues

3.12.1 The Committee discussed in detail the issue relating to coastal road in the CRZ-IV which is the water area. GoM has proposed such roads not only to ease the traffic congestion but also due to lack of land available in the mainland for this purpose. The justification provided is that such road would provide for faster means of transportation and can be taken up with no rehabilitation/relocation. Although the project is being taken up in larger public interest, the environmental issues especially from the coastal environment need to be addressed in detail for taking up such projects. Large-scale reclamation may transform the coastline. The project may cause erosion and other associated impacts such as destruction of mangroves, loss of beaches and loss to fisheries affecting the fishing community. In this regard, the State Government may have to carry out a detailed study along with a feasibility report. If found feasible from both economic and environmental angles; the coastal road project could be incorporated in the CZMP for which a separate approval may be sought from the MoEF&CC after following due procedures. The MoEF&CC shall examine the project under CRZ as the project falls within CRZ-IV category.

3.12.2 The Committee discussed in detail with regard to the new airport proposed by Maharashtra in an island in Thane creek. It was the view of the Committee that the GoM may reconsider the proposal since climate change and subsequent SLR is a serious issue. Further, in view of the increasing frequency of cyclones, storm surges, currents and so on, the feasibility from technical angle needs to be examined critically by the GoM. Though in several countries offshore airports are operating, this issue needs to be examined from both economic and environmental angles.

3.12.3 The request regarding the usage of old industrial buildings in CRZ area for developmental activities which are non-polluting in nature including tourism and other service sector activities was considered by the Committee. The Committee agrees with the proposal, however, the plinth area of such structures shall not be altered.

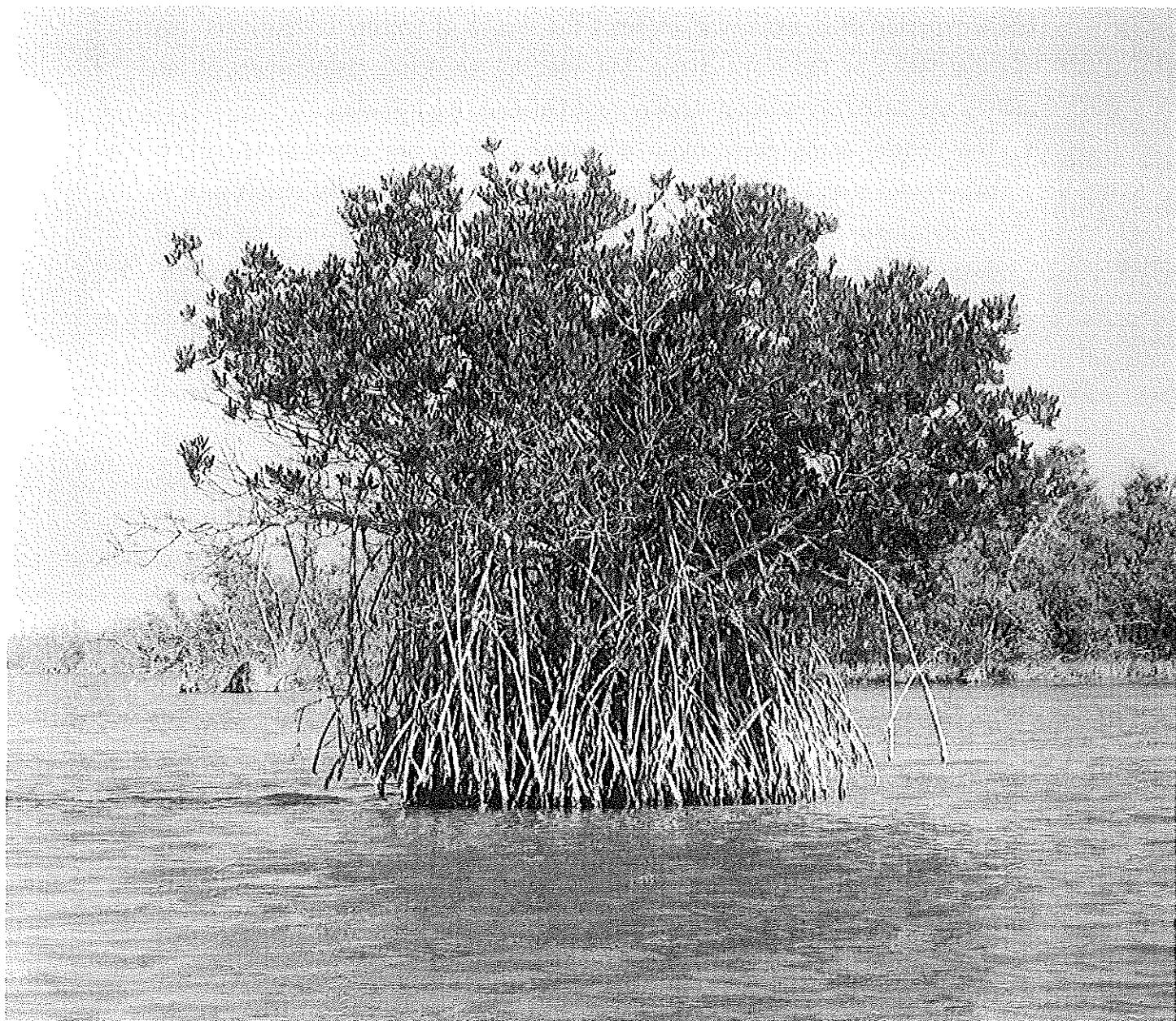
3.12.4 The Committee after taking into account the request of GoG seeking relaxation in mining of limestone in CRZ area was of the opinion that the limestone reserves are valuable and should be utilized for developmental purposes. The





limestone reserves of Gulf of Kachchh and Saurashtra need to be examined and studied in detail by reputed scientific national institutes such as CSIR – Central Mining Research Institute, Dhanbad, National Cement and Building Material Institute, Faridabad and NCSCM. Based on the recommendations of these Institutes, selective mining with appropriate safeguards related to ground water, coastal erosion and others could be carried out. The mining of such minerals could be indicated in the CZMP of the State/UT which shall be prepared based on the above studies.

3.12.5 The Committee recommends that all other projects of national importance declared by the Central Government shall be undertaken in CRZ on a case-to-case basis based on EIA as provided in the EPA 1986.



## Chapter 4

### Recommendations and Proposed Draft CRZ Notification

#### 4.1 Recommendations

The Committee after examining in detail the issues of coastal environment, the hardship faced by the communities, the need for economic development of the country and based on the six principles, recommended the following:-

- A. The coastal areas have fragile ecosystems which are sensitive to various parameters such as salinity, temperature, turbidity, pollution and disturbance to the substrata. Even small changes in these parameters lead to partial or total destruction of these ecosystems, which in most cases are irreversible; hence, they should be preserved and conserved. From the data made available, it is observed that these ecosystems have undergone destruction over a period of time. Such irreversible damages cause serious impact to the livelihood to the local communities as these ecosystems sustain the productivity of the coastal areas. Further, these ecosystems such as mangroves, coral reefs, sea grass beds and coastal forests act as barriers to cyclones, flooding and erosion and also act as major carbon sinks. In view of the immense importance of the ESAs, the MoEF&CC may formulate concrete proposals and initiate activities for the conservation and protection of these ecosystems.
- B. The ecosystems while rendering immensely useful goods and services to the environment and coastal communities, can also attract tourism if properly managed. Hence, it is important that the Government takes major initiatives in identifying, conserving and drawing up concrete framework based on certain successful models worldwide including that of IUCN for the conservation, protection and promotion of eco-tourism in such areas. These would provide alternative livelihood to local communities, thereby, reducing pressure on the fish and fisheries.

- C. The Committee strongly opined that ESAs mapped under CRZ-I should be identified based on scientific assessment, each of which shall be notified. The States/ UTs through reputed scientific authorized agencies shall undertake conservation, protection measures as per the management plan based on the guidelines prepared by MoEF&CC.
- D. The coastal areas also are places where several historical, archaeological and heritage value structures and areas are present. These features need to be protected and conserved from the historical point of view. The MoEF&CC in cooperation with the Ministry of Culture should undertake identification, mapping and conservation programmes of such areas.
- E. The sea bed and the bed of the tidally influenced water bodies are the breeding, spawning and rearing grounds of several coastal/marine species on which the local communities depend upon. Several activities such as indiscriminate mining and dredging have destroyed the benthic flora and fauna. Such activities have affected the coastal processes leading to accretion, deposition and change in hydrodynamics and morphodynamics. Hence, there is a need to protect and regulate the activities that are detrimental to the integrity of the water bodies and their bed.
- F. The marine waters and the coastal areas have been sites for disposal of sewage, effluents and solid waste. This indiscriminate dumping and disposal over a period of time has made the coastal waters and several of the coastal stretches toxic. It is a fact that the coastal cities are growing but there is inadequate solid waste management or sewage treatment facilities to address the pollution-related problems. If left unattended, the implications would be serious and could be irreversible. Hence, the Government, at local, State and Central level, should take serious note of this issue and address the problem at the earliest. The State Pollution Control Boards should be entrusted to take up the Government's initiative of "Swachchh Bharat Abhiyaan" in the coastal and marine waters as well.
- G. It is observed that the CRZ Notification has tried to address some of the issues related to Town and Country planning in it. The Committee was informed by all the coastal States and UTs that they have well-laid Town and Country Planning

Regulations. The regulations of the CRZ Notification in category II and III areas, especially with regard to construction, have affected the housing, slum redevelopment, redevelopment of dilapidated structures and other dangerous buildings. It is strongly felt that the concerned State Governments should be left to address the housing needs of the communities as per the State/UT Government norms. Providing decent housing to all communities is of prime importance and is a fundamental requirement of the people.

- H. The States and UTs also brought to the notice of the Committee the need for safe, hygienic and decent housing with basic infrastructure facilities for large sections of the coastal fisher and other population who since several decades have been living in unhygienic, disaster-prone slums and unsafe buildings. The Committee is convinced that the CRZ Notifications have not addressed this human issue comprehensively. Although the Committee agrees that the construction of housing infrastructure would lead to congestion in the coastal areas, there is no alternative with the Governments as there are no mechanisms in place to prevent migration of population to coastal areas or to decongest the existing populated areas. In the absence of such mechanisms, it is imperative that housing with basic infrastructure facilities is provided to these communities in the national interest.
- I. It has been brought out to the Committee by all the States/UTs that the CRZ Notifications have been made very complex and its interpretation and implementation is difficult. It was also observed that certain terminologies used in the CRZ Notification such as the word "existing" "HTL" etc were not defined in right time. Some of the issues being scientific, appropriate guidelines were not issued by the Government to the public. Hence, lot of ambiguity exists even today and several court cases and disputes have arisen due to such complexities. The HTL/LTL demarcation, boundaries of CRZ-I, CRZ-II and CRZ-III and so on, are complicated. It is recommended that the Ministry addresses each of the issues in detail and brings out guidelines, criteria and so on.
- J. The other major issue that has come before the Committee is the conflicting and overlapping jurisdictions and provisions in the CRZ and other laws. The CRZ Notification, 2011 provisions especially in the CRZ-II and CRZ-III areas override

the Town and Country Planning Regulations of the coastal States/UTs in the CRZ area. This disparity between the CRZ and non-CRZ had led to several issues. Most State Governments have sought for uniform regulations in the State for smooth implementation. This suggestion of the State Governments is found justified since currently there are a lot of ambiguities with regard to HTL/LTL mapping, CRZ boundary demarcation and so on, which are prerequisites for CZMP, the preparation of which is considerably delayed. It is also observed that the Environment Departments of States/UTs are extremely under-staffed to meet the challenges of CZM. The existing staff in the States/UTs is mostly involved in addressing approvals and issues relating to CRZ-II and CRZ-III. There have been very few instances where States/UTs have taken proactive steps in CRZ-I and CRZ-IV areas, the conservation of the ecosystems in it, combating pollution and improving the general environmental quality of the coast. Hence, the Committee is of the opinion that the Environment Departments of the States/UTs and the MoEF&CC should be sensitized to mainly address CRZ-I and CRZ-IV issues and in turn allow the concerned Departments in the States/UTs to address the issues relating to CRZ-II and CRZ-III themselves as they relate mostly to town and country planning arena.

- J. The Committee is also of the opinion that new opportunities and initiatives need to be taken to address the economic and social development of coastal communities. Most of the traditional coastal communities, who live on the resources from the coastal areas, especially fishing, need to be provided with adequate opportunity for economic development. In this regard, the Committee is of the opinion that while the ecosystems are being conserved and protected by the Governments, the local communities should also play an important role in conservations and protection of the ecosystems. The local communities should be provided with an opportunity to take up tourism, artisanal fisheries such as traditional aquaculture and ornamental fish culture, in such ecosystem areas for their economic improvement. The Governments should work in this area which will address both conservation and economic development of the communities thereby, reducing pressure on the already depleting fisheries.

- K. Another matter of concern which the Committee has noted is the change in the shoreline. The shoreline change is accelerated by anthropogenic activities. In this context, certain initiatives have been taken by the MoEF&CC through the NCSCM wherein the shoreline changes are being mapped and studied. The above-mentioned studies need to be taken into consideration while undertaking foreshore developmental activities. Also, the studies need to be carried further to ascertain exact reasons of shoreline change.
- L. The Committee appreciates the initiatives taken by the Ministry in setting up exclusive Centres for coastal management such as NCSCM, SICOM and State level Project Management Units including strengthening of the consortium institutions in each of the coastal States/UTs. These agencies could be further developed for undertaking research and development in the area of coastal management and also to address the social needs of the communities in the States/UTs.
- M. The Committee after detailed examination of all issues raised by the States/UTs Government and taking into consideration the international scenario in the area of CZM including the emerging scientific technologies in the area of coastal and marine management is of the clear view that the MoEF&CC should embark upon new initiatives for protecting and conserving the coastal and marine areas which have such precious and fragile ecosystems.

Based on the discussions with the States/UTs with respect to each of the issues raised by them, the decisions therein and the recommendations given above the Committee proposes a draft CRZ Notification, which, if approved by the MoEF&CC, shall supersede the CRZ Notification, 2011.

## 4.2 Proposed Draft CRZ Notification

Whereas, the Ministry of Environment, Forests and Climate Change (hereinafter referred to as MoEF&CC) issued Coastal Regulation Zone (hereinafter referred to as CRZ) Notification, 2011 vide S.O.19(E) dated 6th January, 2011 under Section 3 of Environment (Protection) Act, 1986;

And whereas, the coastal and marine ecosystems also contain Ecologically Sensitive Areas (hereinafter referred to as ESAs) which sustain high biodiversity and offer immense value of ecosystem services to people for their livelihood;

And whereas, the ESAs such as mangroves, coral reefs, turtle nesting ground etc., provide protection to local communities from natural hazards such as cyclone, flood, tidal surges, sea level rise, etc.;

And whereas, certain ESAs provide for breeding, spawning and rearing grounds of economically important finfish and shellfish in the coastal and the marine areas on which the local communities depend for their sustenance;

And whereas, certain ESAs such as mangroves, coral reefs, forests under Forest Act (1980), sea grass beds and the like and the geomorphological features such as beaches, sand dunes, mudflats etc., are important as they play a critical role in maintaining the integrity of the coastal and marine dynamics including helping in recharging the fresh water aquifers;

And whereas, coastal areas including the ESAs offer great opportunity for promotion and development of eco-tourism including beach tourism;

And whereas, the large amount of flora including that of ESAs along the coastal and marine areas act as a carbon sinks that help in reducing global warming;

And whereas, the coastal and marine environment of the country is highly diverse in terms of flora, fauna, geomorphological features, climatic conditions, hydrodynamics and demographic patterns;



And whereas, certain areas along the coastal and marine regions have natural features that provide for increased scenic beauty, structures/monuments which are archeologically and heritage-wise valuable and such areas provide for high and incomparable aesthetic/historic value;

And whereas, the sea bed and the bed of the tidally influenced water bodies are being indiscriminately mined for sand and other resources, thereby, destroying the benthic flora and fauna that also affect the sediment dynamics;

And whereas, the coastal and marine areas are experiencing increase in pollution load mainly from industries and sewage generated not only from coastal infrastructure/townships and cities but also from the discharge of effluents, pesticides and sewage generated in the hinterland far away from the coast brought through the rivers;

And whereas, the livelihood of the local communities are affected due to depletion of economically important fish stock on account of destruction of marine ecosystems also due to indiscriminate effluent discharge and solid waste dumping;

And whereas, the coastal and marine areas are experiencing impacts of climate change including sea level rise;

And whereas, the State Governments and Union Territories (UTs) have expressed that the CRZ Notification, 2011 did not provide adequate measures and incentives for conservation and management of ESAs and areas along the coastal and marine areas;

And whereas, the Ministry is made aware of the conflict between certain State/UT level legislations and the provisions contained in the CRZ Notification, 2011 and these conflicts are adversely affecting the housing and livelihood of the local communities;



And whereas, all the State Governments/UTs have requested the MoEF&CC to simplify the procedures laid down in the CRZ Notification, 2011, thereby making it people friendly and transparent;

And whereas, in the CRZ Notification, 2011 where the objective was to ensure livelihood security to the fishing communities and other local communities living in the coastal areas, to conserve and protect coastal stretches, its unique environment and its marine area and to promote development in a sustainable manner based on scientific principles by taking into account the dangers of natural hazards in the coastal areas, sea level rise; declared the coastal stretches of the country and the water area up to its territorial water limit, excluding the islands of Andaman and Nicobar (hereinafter referred to as A&N) and Lakshadweep and the marine areas surrounding these islands up to its territorial limit, as CRZ and restricted the setting up and expansion of any industry, operations or processes and manufacture or handling or storage or disposal of hazardous substances as specified in the Hazardous Substances (Handling, Management and Transboundary Movement) Rules, 2009 in the aforesaid CRZ;

And whereas, the MoEF&CC has received several representations from various coastal States and Union Territories (UTs) regarding the difficulties in implementing the CRZ Notification, 2011;

Having understood the above and the value of the coastal and marine ecosystems, the benefits that they offer and their potential to offer to mankind and the need for their conservation and preservation, in exercise of powers also conferred by clause (d) and sub rule (3) of rule 5 of Environment (Protection) Act, 1986 and in supersession of the Notification of the Government of India in the MoEF&CC, number S.O. 114(E), dated the 6th January, 2011 except as respects things done or omitted to be done before such supersession, the Central Government hereby declares the areas as CRZ and imposes the following restrictions on setting up and expansion of industries, operations, processes and the like in the CRZ.

2. In this draft notification, unless the context otherwise requires

- (i) 'High Tide Line (hereinafter referred to as the HTL)' means the High Tide Line as demarcated by the National Centre for Sustainable Coastal Management (hereinafter referred to as NCSCM) based on 2011-12 satellite data generated specifically for this purpose by Sol under the Integrated Coastal Zone Management Project of MoEF&CC. The HTL demarcated by NCSCM based on the above data would be the final HTL for all purposes under this draft notification.
- (ii) 'Low Tide Line (hereinafter referred to as the LTL)' means the Low Tide Line as demarcated by NCSCM based on 2011-12 satellite data and the data generated by SOI. The LTL demarcated by NCSCM based on the above data would be the final LTL for all purposes under this draft notification.
- (iii) 'Hazard Line' means the line demarcated by the Survey of India (hereinafter referred to as Sol) taking into account the extent of flooding on the land area due to water level fluctuations, sea level rise and erosion/accretion (shoreline change) occurring over a period of time;
- (iv) 'Coastal Zone Management Plan (hereinafter referred to as the CZMP)' means the plans mandated under the CRZ Notification to be prepared by the concerned State/UT Governments based on the criteria/guidelines laid down in this draft notification at Annexure-B. The CZMP prepared by the State/UT Governments and approved by NCZMA will be notified under E(P)A, 1986 after holding public hearing as provided for in the said Act.;
- (v) 'Densely populated rural areas' means those coastal areas which have a population density more than 2161 people per sq km (as per Class-III towns of 2001 Census of India) within the smallest census unit along the coast prescribed in the census of 2001;
- (vi) 'Rural coastal areas' means those coastal areas which have a coastal density of less than 2161 people per sq km (as per Class-III towns of 2001 Census of India) within the smallest census unit along the coast prescribed in the census of 2001;

- (vii) 'Tidally influenced water bodies' are those water bodies influenced by tidal effects of the sea such as estuaries, creeks, backwaters, lagoons, and the like connected to the sea;

### 3. Jurisdiction of this draft notification

- (i) Land area from HTL to 500m on the land ward side along sea front;
- (ii) Land area between HTL to 100m or width of the water body, whichever is less, on the landward side along the tidally influenced water bodies;
- (iii) Land area between HTL and LTL which is termed as inter-tidal zone;
  - (a) Water area and the bed area of the sea from LTL to the limit of the territorial waters or International Maritime Boundary Line (IMBL);
  - (b) In case of tidally influenced water bodies, the bed area between LTL on one side of the bank to the LTL of the opposite side of the bank;
- (iv) The CRZ is applicable to all mainland islands, which are located in the tidally influenced water bodies and those islands which are located in the offshore of the mainland. Oceanic islands of the Andaman & Nicobar and Lakshadweep are dealt with in the Island Protection Zone (IPZ) Notification 2011.

### 4. Hazard Management Zone:

In addition to the above, there shall be a hazard management zone (hereinafter referred to as HMZ), which is the zone falling between the CRZ boundary and the hazard line on the landward side. The hazard line is being demarcated by MoEF&CC through NCSCM. In this HMZ the concerned State(s)/UT shall provide for necessary hazard management measures as per the HM Rules.

### 5. Roles and responsibilities of authorities and agencies under this draft notification,

- (i) MoEF&CC shall be responsible for overseeing the implementation and enforcement of this n.
- (ii) National Coastal Zone Management Authority (hereinafter referred to as NCZMA constituted under E(P)Act, 1986) shall be responsible for according approval to the CZMPs prepared by the concerned States/UTs Government along with other responsibilities/duties entrusted by MoEF&CC.
- (iii) SICOM established by MoEF&CC under the Society Registration Act, 1860 shall be responsible for coordinating with various Central Ministries/ State/UT Governments and other agencies with regard to implementation of the notification including the CZMAs. SICOM shall coordinate and facilitate transfer of requisite data from different authorised agencies such as, MoEF&CC, ISRO, SAC, NCSCM, Sol, NIOT etc., to the States/UTs for the purpose of preparing CZMPs and other management plans. SICOM shall undertake capacity building and also facilitate in institutional strengthening of various agencies including the CZMAs and other stakeholders.
- (iv) State/UTs shall be responsible for preparing the CZMPs of their respective areas including any other management plans listed under this draft notification. Further, the CZMAs shall be responsible for recommending the CZMPs prepared by the States/UTs, overseeing the implementation of the CZMPs and enforcing the provisions of this draft notification.
- (v) NCSCM established by SICOM as a Society under Tamil Nadu Societies Act 27 of 1975 shall be the research and development Centre in the area of coastal and marine zone management. NCSCM will be responsible for providing HTL/LTL, the necessary inputs for demarcation, delineation and guidelines for management of ESAs, CZMPs, ICZMPs and the like.
- (vi) Authorised agencies are reputed scientific bodies identified by MoEF&CC for the purpose of preparing the CZMPs for the States/UTs based on the guidelines. These authorised agencies can also take up implementation of the management plans if so assigned by the concerned State/UT Governments.

6. List of prohibited activities in the CRZ area:

- (i) Setting up of new industries and expansion of existing industries except,-
  - (a) those directly related to waterfront or directly needing foreshore facilities;  
*Explanation:* The expression "foreshore facilities" means those activities permissible under this draft notification and they require waterfront for their operations such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, pipelines, lighthouses, navigational safety facilities, coastal police stations, projects of national strategic importance and the like.;
  - (b) projects of Department of Atomic Energy;
  - (c) facilities for generating power by non-conventional energy sources and setting up of desalination plants in the areas not classified as CRZ-I(i) based on an impact assessment study including social impacts;
  - (d) reconstruction, repair works of dwelling units of local communities including fishers in accordance with local town and country planning regulations;
- (ii) manufacture or handling of oil storage or disposal of hazardous substances as specified in the notification of Ministry of Environment and Forests, No.S.O.594 (E), dated the 28<sup>th</sup> July 1989, S.O.No.966(E), dated the 27<sup>th</sup> November, 1989 and GSR 1037 (E), dated the 5<sup>th</sup> December, 1989 except,-
  - (a) transfer of hazardous substances from ships to ports, terminals and refineries and vice versa;
  - (b) facilities for receipt and storage of petroleum products and liquefied natural gas and facilities for regasification of Liquefied Natural Gas (hereinafter referred to as the LNG) in the areas not classified as CRZ- I subject to implementation of safety regulations including guidelines issued by the Oil Industry Safety Directorate in the Ministry of Petroleum and Natural Gas and guidelines issued by MoEF&CC and subject to further terms and conditions for implementation of ameliorative and restorative measures in relation to environment as may be stipulated by in MoEF&CC.
- (ii) Provided that facilities for receipt and storage of fertilizers and raw materials required for manufacture of fertilizers like ammonia, phosphoric acid, sulphur, sulphuric acid, nitric acid and the like, shall be permitted within the said zone in the areas not classified as CRZ-I.

- (iii) setting up and expansion of fish processing units including warehousing (excluding hatchery and natural fish during in permitted areas):  
(Provided that existing fish processing units for modernization purposes may utilize twenty five per cent additional plinth area required for additional equipment and pollution control measures only subject to existing Floor Space Index/ Floor Area Ratio norms and subject to the condition that the additional plinth area shall not be towards seaward side of existing unit and also subject to the approval of State Pollution Control Board or Pollution Control Committee.)
- (iv) Reclamation, bunding or disturbing the natural course of seawater except for those measures,-
  - (a) essential for setting up, construction or modernisation or expansion of foreshore facilities like ports, harbours, jetties, wharves, quays, slipways, bridges, sealinks, roads on stilts, and facilities meant for defense and security purposes and other facilities that are essential for activities permissible under the notification;
  - (b) required for control of erosion, based on scientific studies including Environmental Impact Assessment (hereinafter referred to as the EIA);
  - (c) essential for maintenance or clearing of waterways and channels for ports / harbours / jetties based on EIA studies;
  - (d) required to prevent sand bars, installation of tidal regulators, laying of storm water drains or for structures for prevention of salinity ingress and freshwater recharge based on studies carried out by any agency to be specified by MoEF&CC.
- (v) Setting up and expansion of units or mechanism for disposal of wastes and effluents except facilities required for,-
  - (a) discharging treated effluents into the water course with approval under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);
  - (b) storm water drains and ancillary structures for pumping;
  - (c) treatment of waste and effluents arising from hotels, beach resorts and human settlements located in CRZ areas other than CRZ-I and disposal of treated wastes and effluents;

(vi) Discharge of untreated waste and effluents from industries, cities or towns and other human settlements. The concerned authorities shall implement schemes for phasing out existing discharge of this nature, if any, within a period not exceeding two years from the date of issue of this draft notification.

(vii) Dumping of city or town wastes including construction debris, industrial solid wastes, fly ash for the purpose of land filling and the like and the concerned authority shall implement schemes for phasing out any existing practice within a period of one year from date of commencement of this draft notification.

Note:-The MoEF&CC will issue a separate instruction to the States and Union Territories in respect of preparation of action plans and their implementation as also monitoring including the time schedule thereof, in respect of paras (v), (vi) and (vii).

(viii) Port and harbour projects in high eroding stretches of the coast, except those projects classified as strategic and defense related in terms of EIA notification, 2006 identified by MoEF&CC based on scientific studies and in consultation with the State Government or the Union territory Administration.

(ix) Drawl of groundwater and construction related thereto within 200m of HTL along the sea coast and in the CRZ of tidal influenced water bodies, except the following:-

(a) In the areas which are inhabited by the local communities for drinking and domestic use it shall be done only using manual methods.

(b) In the 200m-500m zone the drawl shall be permitted only when done manually through ordinary wells for drinking, horticulture, agriculture and fisheries and where no other source of water is available.

Note: Appropriate restrictions for such drawl may be imposed by the Authority designated by the State Government and Union territory Administration in the areas affected by sea water intrusion.

(x) Construction activities in CRZ-I except those specified in this draft notification. Any other activities that need to be prohibited/ permitted by the concerned States/UTs other than those mentioned above or any discrepancies noticed by the State/UT Government with regard to the CRZ area between 1991 and 2011 shall be rectified and be specified in the CZMP. Only those essential activities required at

larger public and national strategic interest and duly justified with approval at the highest level of the State/UTs shall be brought out clearly in the approved CZMP and can be implemented after the CZMP is approved by NCZMA and notified by MoEF&CC.

## 7. Classification of the CRZ:

For the purpose of conserving and protecting the coastal areas and marine waters, the CRZ area shall be classified as follows:

A. CRZ-I are those coastal zones which are ESAs, geo-morphologically important zones and archaeological and heritage areas.

### a. Ecologically Sensitive Areas (ESA)

- (a) Mangroves
- (b) Corals and coral reefs and associated biodiversity
- (c) Salt marshes
- (d) Sea grasses
- (e) Horse shoe crab habitats
- (f) Turtle nesting grounds
- (g) Bird nesting grounds
- (h) The national parks, marine parks, sanctuaries, reserve forests, wildlife habitats and other protected areas declared under the provisions of Wild Life (Protection) Act, 1972 (53 of 1972), the F(C)A, 1980 (69 of 1980) or E(P)A 1986 (29 of 1986); including Biosphere Reserves would be conserved and protected as per the provisions of the respective Acts/notifications/guidelines.

### b. Geo-morphologically Important Zones

- (a) Intertidal areas
- (b) Sand dunes
- (c) Mudflats
- (d) Sandy beaches

### c. Areas or structures of archaeological importance and heritage value sites.

The conservation, protection and management framework for the CRZ-I shall be as given in Annexure-A of this draft notification.



B. CRZ-II: The areas that have been developed up to or close to the shoreline along the mainland.

Explanation- The expression "developed area" referred to as that area within the municipal limits declared by the States/UTs from time to time or in other existing legally designated urban areas which are substantially built-up and has been provided with drainage and approach roads and other infrastructural facilities such as water supply and sewerage mains;

(1) Regulation of activities in CRZ-II shall be as follows:

(a) buildings, including slum rehabilitation, reconstruction of dilapidated structures and unsafe buildings, shall be permitted only on the landward side of the existing road or road proposed in the Development Plan or on the landward side of existing authorized structures;

(b) buildings permitted on the landward side of the existing road or road proposed in the Development Plan or existing authorized structures shall be subject to the local town and country planning regulations issued from time to time; Provided that no permission for construction of buildings shall be given on landward side of any new roads which are constructed on the seaward side of an existing road

(c) Construction of buildings shall be taken up subject to the following conditions:-

- (i) it shall be ensured that there is no discharge of untreated sewage and efforts shall be made for zero discharge;
- (ii) no untreated or treated effluents shall be discharged. Any industrial unit operating in CRZ-II shall ensure that there is zero discharge maintained. The treated effluent shall be recycle and reused;
- (iii) all residential or commercial buildings shall be provided with water recycling systems and shall use the recycled water for non-contact purposes such as gardening, washing and flushing;
- (iv) adequate open space shall be provided to meet the emergencies during natural disasters and also to maintain aesthetics.

- (v) adequate open space shall be provided for groundwater recharge. All residential constructions shall be provided with groundwater recharge facilities;
  - (vi) no dumping of solid waste in the CRZ area. The solid waste shall be managed as per the MSW Rules issued from time to time;
  - (vii) no conversion of land reserved for parks, gardens, schools, hospitals and dispensaries, defense establishments, disaster management and other public utility purposes;
- (2) In the case of mainland islands, a No Development Zone (NDZ) of 10 m from the HTL shall be provided. Developmental activities shall be taken up on the landward side of the NDZ subject to clause (1) (c) above. In the NDZ of such islands, temporary structures relating to fisheries, agriculture and the like can be developed.
- (3) The clearances and approvals for the permissible activities in CRZ-II shall be accorded by the States / UTs themselves through the respective Municipalities without referring to CZMA but shall be as per the approved CZMP and the provisions contained in the CRZ Notification. All constructions proposed to be undertaken in the CRZ-II areas other than those which attract EIA Notification, 2006 amended from time to time shall be governed by the concerned State/ UT regulations para 7B(1). Any discrepancy in the CRZ-II area, prior to 1991 and post 1991 identified by the State/UT Government shall be brought before NCZMA with the recommendations of the CZMA. The NCZMA after taking into account the larger public interest shall examine the above discrepancies and convey its decision to the State/UT Governments. Such decisions of the NCZMA shall be included in the CZMPs.
- C. CRZ-III**– These are areas which are relatively undeveloped including mainland islands and can be divided for the purpose of this regulation into (a) Densely Populated Rural areas and (b) Rural areas. Development in CRZ-III shall be undertaken as follows:-
- (a) Densely Populated Rural areas are those coastal panchayat areas which have a high population density as defined in clause 2(v) of this draft notification. In such

areas, construction and other permissible activities shall be taken up beyond 50 m of HTL (NDZ) on the landward side in accordance with only the local prevailing norms of the State/UT. The local authorities are mandated under this draft notification to ensure that:

- (i) adequate provisions/facilities shall be built to provide for quick and timely rescue, relief and rehabilitation measures in case of natural calamities;
  - (ii) adequate open space shall be provided (to maintain aesthetics including adequate ground cover for fresh water recharge) and also to meet the emergencies during natural disasters;
  - (iii) height regulations shall be as per the prevailing State/UT norms;
  - (iv) all structures shall be provided with groundwater recharge facilities;
  - (v) drawal of groundwater shall be strictly regulated and norms laid down by the local ground water authority followed
  - (vi) it shall be ensured that there no discharge of untreated sewage. Efforts shall be made for zero discharge;
  - (vii) no untreated or treated effluents shall be discharged. Any industrial unit operating in CRZ-II shall ensure that there is zero discharge maintained. The treated effluent shall be recycle and reused.;
  - (viii) All buildings shall be provided with water recycling systems and shall use the recycled water for non-contact purposes such as gardening, farming, washing and flushing.
  - (ix) no dumping of solid waste in CRZ area. The solid waste generated shall be managed as per MSW Rules as amended from time to time.
  - (x) no conversion of land earmarked for parks, gardens, schools, hospitals and dispensaries, defense establishments, disaster management and other public utility areas including areas meant for fisheries.
  - (xi) in case of the mainland islands a distance of 10m shall be maintained as NDZ. All developmental activities indicated above shall be taken up on the landward side of the NDZ.
- (b) Rural areas are those areas as defined in 2(vi) and which are not covered under para 7(C)(a) above. In such areas, development of new houses of local communities can be taken up beyond the NDZ which is 200 m from the HTL.

Construction of new houses and expansion of existing houses in accordance with the prevailing local Town and Country regulation can be taken up, such that the overall height of the construction does not exceed 9m with ground plus one floor and a sloping roof. Total covered area of construction shall not exceed 33% of the total area.

- (c) In the NDZ of CRZ-III areas, all traditional activities including fisheries, public amenities, tourism facilities as indicated at 7(C)(e) and foreshore requiring facilities, can be taken up in larger public interest as per the relevant provisions contained in the state and central legislations and those contained in this draft notification. Repairs, reconstruction of existing authorized structures shall be taken up as per the local Town and Country Planning Regulations.
- (d) In case of the mainland islands falling in densely populated rural areas of CRZ-III a distance of 10m shall be maintained as NDZ. Beyond the NDZ on the landward side, development as indicated as per 7(C)(a)(b) above shall be taken up.
- (e) Tourism project(s) in the CRZ-III areas can be taken up as follows:
  - (i) in the NDZ temporary tourism facilities such as toilets, wash rooms, change rooms, drinking water facility, and temporary shack(s) can be taken up with the permission of the concerned local authorities. It shall be ensured by the local authorities that such facilities indicated above shall occupy only 10% of the area. Further, it will be the responsibility of the authorities to ensure that the solid wastes are handled as per MSW rules and no untreated sewage is discharged in the coast or in the waters. All disaster management mechanisms shall be put in place by the authorities for rescue and relief.
  - (ii) wherever there is a national or a state highway passing through the NDZ, the tourism facilities can be taken up on the seaward side of the road as per para 7(C)(e)(i) above. On the landward side of such road or NDZ, the following tourism activities are permitted with the following:
    - a. Resorts, hotels and other such facilities for tourism not exceeding 9 m in height with ground plus one floor with slope and tiled roof.
    - b. Total covered area of construction shall not exceed 33% of the total area. The open space in the site shall be utilized for greenery, non-paved parking, play fields, and so on. Green areas and open space shall be

promoted so as to minimize the impact of storms and facilitate operation and rescue during natural hazards.

- c. Drawl of groundwater is not permitted. Adequate facilities for groundwater recharging shall be provided.
  - d. Zero discharge of sewage shall be maintained. The tourism units shall undertake 100% recycling and reuse of treated water. The treated water shall be used within the project area for gardening, flushing, washing and the like.
  - e. No disposal of solid waste. The solid waste generated from the tourism unit shall be managed as per MSW rules as amended from time to time. Any violation of the MSW rules shall attract stringent punitive action as prescribed under the relevant Acts/Rules.
  - f. No operation of any hazardous or harmful activities which are detrimental to the coast and marine environment.
  - g. Provide adequate space for the conduct of livelihood activities by local communities.
- (e) The local communities including fishermen who possess houses in CRZ-III areas can be permitted to take up tourism activities through home stay without changing the plinth area/ design or facade of the existing houses.
- (f) The clearances and approvals for the permissible activities in CRZ-III shall be accorded by the States/UTs themselves through the respective Local Bodies without referring to CZMA but shall be as per the approved CZMP and the provisions contained in the CRZ Notification. Further, the CRZ-I areas indicated in para 7(A) above falling within CRZ-III areas shall be governed as per the provisions listed under the same para.
- (g) All activities proposed to be undertaken in the above CRZ-III areas other than those which attract EIA Notification, 2006 shall be governed by the concerned State/UT Government regulations subject to the conditions stipulated under category of CRZ-III above.

D.CRZ-IV – These are the water areas falling below the LTL including the bed and the substrata up to territorial water limits. In CRZ-IV developmental activities shall ensure that-

- (i) Minimum or no impact to the sediment and littoral movement, except for mechanisms and facilities required for foreshore developmental activities including ports, harbors, erosion control measures and the like, subject to the provisions contained in the para 6(i), (iv) and (viii) of this draft notification and also based on sediment model studies.
  - (ii) Untreated effluents are not discharged into the waters. The industrial units shall maintain zero discharge. The effluent generated shall be recycled and reused within the unit.
  - (iii) Municipal sewage generated shall be treated and reused for various non-contact purposes such as gardening, washing and the like.
  - (iv) No solid waste shall be dumped in the CRZ-IV area. The solid waste shall be managed in accordance with the provision of MSW rules as amended from time to time.
  - (v) No reclamation of the sea bed except for port and harbour, fisheries-related activities and other infrastructure required in the larger public interest such as bridges, sealinks on stilts, roads, important national installations related to coastal security, tourism shall be accorded clearance by the respective authorities at the State/UT level. With regard to monuments/memorials proposed by the State/UT Government recommended by the local CZMA to be approved by MoEF&CC on a case-to-case basis taking into account the erosion control and other disaster mitigation measures. Wherever reclamation, if any, for the above projects are permitted, the original HTL as demarcated in the approved CZMP shall prevail.
  - (vi) The clearances and approvals for the activities in CRZ-IV that do not attract EIA Notification 2006 as amended from time to time and that do not require special permission as given in (vi) above shall be accorded by the States/UTs themselves without referring to CZMA but shall be as per the approved CZMP and the provisions contained in the CRZ Notification
8. Enforcement, monitoring and transparency mechanism:
- (i) For the purpose of implementation and enforcement of the provisions of this draft notification and compliance with conditions stipulated thereunder, the

powers either original or delegated are available under Environment (Protection) Act, 1986 with the MoEF&CC, State Government or the UT Administration, NCZMA and SCZMAs;

- (ii) The composition, tenure and mandate of NCZMA and State or UT CZMAs have already been notified by MoEF&CC in terms of Orders of Hon'ble Supreme Court in Writ Petition 664 of 1993;
- (iii) The State or UT CZMAs shall primarily be responsible for enforcing and monitoring the implementation of this draft notification and to assist in this task, the States and UTs;
- (iv) The monitoring of the implementation of the provisions of this draft notification shall be based on satellite data generated from time to time along with field verification to be carried out by CZMAs. SICOM and NCSCM shall be the repositories of such satellite data which shall be provided to various authorities and agencies mandated for monitoring and enforcement of the notification;
- (v) The approved CZMPs along with any other notified areas under this draft notification and decisions taken by various authorities and agencies mandated to enforce this draft notification shall be hosted on the dedicated website of the States/UTs;
- (vi) Ministry through SICOM shall bring out definitions, FAQ, guidelines for each of the activities indicated in the Notification and provide wide publicity in local languages.

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## Annexure-A

### CONSERVATION, PROTECTION AND MANAGEMENT FRAMEWORK FOR CRZ-I

The coastal and marine Ecologically Sensitive Areas (ESAs) and the geomorphological features play a vital role in maintaining the functions of the coast. Mangroves, beaches, coral reefs etc., aid in controlling coastal erosion, shoreline change, saltwater intrusion and also serve as natural defense against coastal hazards such as storm surges, cyclones and tsunamis. The ESAs maintain the biological integrity of the coast by providing direct and indirect ecosystem services to the coastal livelihood. In addition, several invaluable archeological and heritage sites are also located along the coast. Hence conservation and protection of the above areas/ features/ sites become necessary.

The conservation, protection and management framework for the CRZ-I is as follows:-

#### a. Ecologically Sensitive Areas (ESA)

##### 1. General measures

- (i) All ESAs shall be identified and boundary delineated by NCSCM using satellite data.
- (ii) The State/UT Governments through the authorized agencies shall prepare CZMP as per the guidelines contained in the Notification at Annexure-B highlighting the conservation and protection of the CRZ-I areas.
- (iii) All ESAs to be notified under E(P)A, 1986 by the concerned States/UTs following the above process.
- (iv) Those activities permissible under this notification shall be included in the CZMPs
- (v) The following specific conditions shall be adopted for the conservation, protection and management of each of the ESAs given below:-



I. Mangroves:

Mangroves for the purpose of this draft notification are categorized as follows:

- (i) Mangroves declared as forest under Forest Conservation Act, 1980:- Notwithstanding anything contained in this draft notification, such mangroves declared by the concerned State Governments/UT Administrations/Central Government as forest land under the F(C)A, 1980 shall attract the provisions of the F(C)A, 1980 only.
- (ii) Mangroves in (A) Government land not declared under Forest Conservation Act, 1980 and (B) private land.

A: Government Land :

- (a) Mangroves in Government land shall be protected based on a detailed plan to be prepared by the concerned State/UT Governments. In case the mangrove area is more than 1000 sqm, a buffer of 50m along the periphery of mangrove area shall be provided. This buffer zone of 50m shall be utilized for constructing walkways, interpretation centers, promenades, public facilities for developing parks, research facilities related to mangrove biodiversity, facilities for conservation and the like.
- (b) In the mangrove area and in the buffer, all activities are prohibited except for laying of pipelines, transmission lines, conveyor belts, construction of road on stilts and other conveying mechanisms that are required for public use. Defense related establishments such as watch towers could be taken up in the mangrove area.
- (c) In such cases where removal of mangroves is inevitable in public interest after examining all the alternatives, a minimum of 10 (ten) times the lost area of mangroves shall be re-planted and protected within the coastal zone of respective States or UTs. Mangrove removal for the above purposes shall be undertaken only on the recommendation by CZMAs and on the approval of the concerned States/UTs.
- (d) Any discrepancy in the mangrove area between prior to 1991 and post 1991 and falling within municipal limits be identified by the State/UT Government and brought before NCZMA duly recommended by the CZMA. The NCZMA after taking into account the larger public interest and national importance shall

examine the above discrepancies and convey its decision to the State/UT Governments. Such decisions of the NCZMA shall be included in the CZMPs. In the process if mangrove areas are to be reclaimed to undertake projects for larger public interest, the State/UT Government shall undertake 10 (ten) times mangrove afforestation in lieu of the mangrove land area reclaimed for the purpose.

(B) Private Land:

Mangroves in private land, (incentives shall be provided by the concerned State/ UT Forest Departments for promoting mangrove conservation/ afforestation in private land) will not require buffer zone. If any developmental activities are desired in the private mangrove land, such development can be taken up as per the provisions contained for CRZ-II or III, as the case may be.

II. Corals and coral reefs and associated biodiversity:

- (i) Destruction of coral and coral reefs and the surroundings is a prohibited activity.
- (ii) All coral and coral reefs shall be protected except for those small quantities required for research purposes.
- (iii) Coral and coral reefs transplantation activities shall be through recognized research institutions wherever required for regeneration after obtaining necessary approvals under Wildlife (Protection) Act 1972.
- (iv) The dead and/or destroyed coral areas shall be taken up for rejuvenation and rehabilitation. The conservation and protection of corals and coral reefs shall be taken up as follows:
  - a) active and live coral and coral reefs identified and delineated shall be declared and notified as ESA under E(P)A 1986.
  - b) it shall be ensured that no activities that are detrimental to the health of corals, coral reefs and its associated biodiversity such as mining, effluent and sewage discharge, dredging, ballast water discharge, ship washings, fishing other than traditional non-destructive fisheries, construction activities and the like are taken up in and around the coral areas.

III. The National Parks, marine parks, Sanctuaries, reserve forests, wildlife habitats and other protected areas declared under the provisions of Wild Life (Protection)

Act, 1972 (53 of 1972), the F(C)A 1980 (69 of 1980) or E(P)A 1986 (29 of 1986); including Biosphere Reserves would be conserved and protected as follows:

- (i) conservation and protection of the above listed areas shall be as per the provisions of the respective Acts/notifications/guidelines.
- (ii) efforts shall be made to increase the forest area in the coastal region in order to prevent loss of life and property from increased storms, tides and floods.
- (iii) the concerned State Governments/UTs shall provide for adequate funds for such measures to undertake shelter belt plantation or bio-shields with planting material suitable to the location.

IV. Salt marshes: The conservation and protection of salt marshes shall be as follows:

- (i) the salt marsh areas shall be conserved and protected and efforts shall be made to promote the endemic biodiversity in the salt marshes.
- (ii) only those activities required for overhead conveying/transmission of cables and underground laying of transmission line cables and so on, shall be permissible.
- (iii) traditional fishing is permissible in salt marshes.
- (iv) Temporary tourism facilities around the salt marsh areas could be considered subject to adhering to strict norms laid down in the guidelines.
- (v) certain salt marshes which have less biodiversity, identified by NCSCM and demarcated in CZMP can be considered for salt pan activities.

V. Turtle nesting grounds shall be protected and conserved as follows:

- (i) turtle nesting grounds identified by the concerned States/UTs shall be protected as per Wildlife (Protection) Act of 1972.
- (ii) no activities shall be permitted in and around the turtle nesting ground including those causing light and sound pollution except for those required for conservation and protection of these sites.
- (iii) strict management plans for protecting the turtle nesting grounds shall be undertaken and implemented by the concerned State/UT Authorities.

VI. Horse shoe crabs habitats shall be protected and conserved as follows:

- (i) the habitat identified shall be taken up for conservation and protection.

- (ii) no activities shall be taken up in and around these habitats which affect the horse shoe crab ecosystem.

VII. Sea grass beds shall be protected and conserved as follows:

- (i) identified sea grass beds shall be conserved and protected.
- (ii) no developmental activities that have adverse effect on the sea grass bed shall be undertaken.
- (iii) efforts shall be made to propagate sea grass beds along the coastal waters where ever possible by States/UTs as it acts as a carbon sink.

VIII. Nesting grounds of birds shall be protected and conserved as follows:

- (i) the nesting ground of birds including their local migratory route shall be protected. No developmental activities which have adverse impact on the nesting grounds and the migratory routes shall be undertaken including construction of wind mills, transmission lines and the like in the locality.
- (ii) efforts shall be made to increase the forest cover and mangrove cover including enriching the biodiversity of salt marsh and other coastal water bodies so as to provide for suitable habitat for the avifauna.

b. Geomorphologically Important Zones shall be protected and managed as follows:-

I. Sand dunes identified shall be conserved and protected as follows:

- (i) sand dunes identified shall be notified under E(P)A 1986;
- (ii) no developmental activities be permissible except for providing ecofriendly temporary tourism facilities on stilts such as walkways, tents and the like;
- (iii) mining of sand from sand dunes is a prohibited activity except for the removal of rare earth minerals with proper replenishment using the tailings or other suitable sand.
- (iv) no activities on the sand dunes shall be taken up that would lead to erosion/destruction of sand dunes;
- (v) afforestation, if any, on the sand dunes shall be done only with native flora
- (vi) the States/UTs shall prepare management plans for the demarcated sand dunes which shall be approved by the Ministry.

II. Sandy beaches:

- (i) no developmental activities except for those foreshore facilities permitted, shall be undertaken on the beaches

- (ii) mining of beach sand is prohibited except for the removal of rare earth minerals with proper replenishment using the tailings or other suitable sand
- (iii) when the permissible developmental activities are taken up on the beaches if loss of beach in the neighborhood is predicted, necessary beach nourishment to compensate for the losses shall be undertaken by the project authorities and its long term maintenance shall be ensured by them
- (iv) the States/UTs shall prepare management plans for the demarcated beaches which shall be approved by the Ministry.

III. Mudflats:

- (i) developmental activities such as construction of foreshore facilities, laying overhead transmission lines and underground pipelines/ conveying systems/ transmission lines, saltpans and the like are permitted.
- (ii) the States/UTs shall prepare management plans for the demarcated mudflats which shall be approved by the Ministry.

IV. Other areas falling between LTL and HTL:

- (i) no developmental activities except for those foreshore facilities permitted in this draft notification shall be undertaken in these intertidal areas.
- (ii) mining is prohibited except for the extraction of rare earth minerals with proper backfilling. The States/UTs shall prepare management plans for rare earth mining activity which shall be approved by the Ministry.

c. Areas or structures of archaeological importance and heritage value sites.

- (i) all archaeological and heritage sites identified by Archaeological Survey of India, State Archaeological agencies shall be responsible for conservation and protection of these structures of sites as per the provisions of the respective Acts/notifications/guidelines.
- (ii) no activities that are detrimental to the identified areas or structures of archaeological and heritage value shall be permitted.
- (iii) it shall be ensured that these structures or areas are preserved and activities undertaken without changing the façade/plinth of such structures. Such structures could be considered for use in accordance with the relevant norms after undertaking careful designing of the interiors without changing the exterior architectural design of the structure.

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## Annexure-B

### Preparation of Coastal Zone Management Plans (CZMPs)

- (i) Coastal Zone Management Plans (CZMPs) shall be prepared by the States/UTs indicating the HTL, LTL, CRZ-I, CRZ-II, CRZ-III and CRZ-IV areas including the disaster management facilities and any other prohibited area declared by the States/UTs.
- (ii) For the purpose of conserving and protecting the CRZ-I area the steps indicated in Annexure A shall be followed
- (iii) Other facilities/ development/ infrastructure specifically mentioned in this draft notification, shall also be included in the CZMP.
- (iv) The States/UTs may also address some of the crucial issues of coastal and marine areas including activities required for society such as infrastructure for non-conventional energy, transportation, harvesting /extraction of resources, conveying systems, solid waste management, effluent and sewage treatment facilities and any other innovative schemes/schemes suitable or unique to their location. The same could be included in the CZMP.
- (v) It shall be ensured by the agencies and authorities that satellite based inputs/ data shall be relied upon for preparing the CZMP.
- (vi) The draft CZMP shall be recommended by the States/ UTs CZMAs and approval from the NCZMA shall be obtained.
- (vii) Thereafter, all development activities including conservation and management of the ESA in CRZ-I will be governed by the concerned bodies including those indicated in this draft notification.
- (viii) Coastal projects requiring foreshore facilities that are declared as nationally important by the Central Government, shall be undertaken in CRZ area on a case to case basis, based on EIA as provided in the E(P)A 1986.

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