

Coastal Management Zone: Implications for Fishing Communities

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The 1991 Coastal Regulation Zone Notification is to be replaced by rules based on a new concept called the Coastal Management Zone. This article, after discussing the proposed CMZ notification, points out several problem areas, particularly, for traditional fishing communities. The article also discusses ideas to address these issues.

As an exercise in yet another area-wise planning along India's seaboard by the ministry of environment and forests (MOEF), the narrow band of coastal regulation zone (CRZ) that extends landwards from the low tide line to 500 m from the high tide line, under the Coastal Regulation Zone Notification, 1991, is proposed to be replaced with a new concept called the Coastal Management Zone (CMZ). The objective of the CMZ Notification, 2008, is "protection and sustainable development of coastal stretches and the marine environment through sustainable coastal zone management practices based on sound scientific principles taking into account the vulnerability of the coast to natural hazards, sustainable livelihood security for local communities and conservation of ecologically and culturally significant coastal resources".

An English version of the CMZ Notification, 2008, S.O. 1070(E) dated May 1, 2008, has been put up on the web site of the MOEF (<http://envfor.nic.in>) and invites objections and suggestions from the public.

Unlike that of the CRZ, the boundaries of the new coastal zone will extend from the limit of the territorial sea – defined as 12 nautical miles measured from the low-water line along the coast – including the seabed and inland water bodies influenced by tidal action, up to the landward boundary of the local self-government, or local authority, adjacent to the seaboard. In the case of ecologically and culturally-sensitive areas, the entire biological or physical boundary of the area may be included under the coastal zone.

The coastal zone of the Indian mainland is proposed to be categorised into three, namely, CMZ I, CMZ II and CMZ III. The CMZ would straddle the land-sea interface except in the case of CMZ II, that

has only a terrestrial component. The offshore islands and the marine space under their jurisdiction are proposed to be categorised as CMZ IV. The islands in coastal backwaters that are not included in CMZ I or CMZ II are proposed to be included in CMZ III, unless the local authority expresses a preference to list them under CMZ IV.

Following the practice in many countries, the MOEF proposes a setback line to be demarcated on the seaboard based on the vulnerability of the coast to sea level rise, flooding and shoreline changes. It is proposed to be drawn following certain technical criteria such as elevation, geomorphological features of the coast, horizontal shoreline displacement (erosion or accretion), and sea-level trends. The setback line, more relevant for the Indian mainland, is proposed to play a vital role in locating development activities in CMZ II and III.

CMZ I

The CMZ I is proposed to include ecologically sensitive areas – defined as those areas of the coastal zone that play an important role in maintaining the functional integrity of the coast, including acting as natural barriers against coastal hazards, and/or harbouring a diverse biodiversity that provides valuable resources to local communities. These areas may be land-based or sea-based and may include mangrove and coral reef habitats; sand beaches and sand dunes; mudflats; marine wildlife protected areas; coastal fresh water bodies; salt marshes; turtle nesting grounds; and the like. These areas within the coastal zone are proposed to be identified and notified by the central government jointly with the relevant state/union territory administration with technical assistance from its scientific bodies.

The entire biological or physical boundaries of the ecologically sensitive areas are included in CMZ I. All activities in this zone are proposed to be regulated by the state/union territory coastal zone management authority on the basis of an integrated coastal zone management plan (ICZMP) – defined as the land use plan or development plan for the implementation of the integrated coastal zone management, a process by which decisions are

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made for protection of the coastal population and infrastructure, protection and conservation of the coastal and marine areas and resources, and sustainable development.

The ICZMP is proposed to be notified and endorsed by the central government. No restrictions are envisaged for fishing and fisheries related activities of local communities living in the zone. The CMZ I, thus, is proposed to be a regulated conservation area and it would attempt to balance conservation, protection against natural hazards and livelihood interests of local communities.

CMZ II

The CMZ II will encompass areas outside the CMZ I and includes "areas of particular concern" such as high population density areas, and economically, culturally or strategically important areas. These are proposed to be: (i) coastal municipalities

and corporations; (ii) coastal panchayats with population density above 400 persons per sq km; (iii) ports and harbours; (iv) tourism areas; (v) mining sites; (vi) industrial estates; (vii) foreshore facilities for special economic zones (SEZs); (viii) heritage areas; (ix) archaeological sites; (x) defence areas or installations; (xi) power plants; and (xii) greenfield airports. The CMZ II thus not only includes areas on the landward side, but also includes land areas on the seaward side of the setback line. The administrative boundaries of the areas of particular concern are proposed to be the boundaries of the CMZ II. In these areas, all activities are proposed to be regulated, as in the case of CMZ I, by an ICZMP, approved by the central government.

Unlike in the case of ICZMP for CMZ I and IV, guidelines are offered for preparing an ICZMP for CMZ II that focuses primarily on protection from natural calamities and

mitigating risks of inundation. These guidelines include: (i) indicating all present and future developments, conservation and preservation schemes; (ii) addressing vulnerability of human life and property to natural calamities; (iii) disallowing all constructions on the seaward side of approved buildings or tarred or surfaced road in the area, as of 2008; (iv) planting local vegetation and mangrove on the seaward side of the setback line; (v) strengthening of internal roads; (vi) constructing new schools, market areas and other public facilities, beyond the vulnerable area; (vii) leaving beaches free of any development (presumably, beaches that are not included under CMZ I); (viii) allowing for appropriate coastal protection structures; (ix) constructing an adequate number of cyclone shelters; (x) planning new houses and settlements on the landward side of the setback line; (xi) maintaining or regenerating sand

International Conference on Eradicating Chronic Poverty in India: Policy Issues and Challenges

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dunes (again, presumably, sand dunes that are not included under CMZ I); (xii) demarcating all areas notified by the MOEF as CMZ I in the plan for their conservation; (xiii) not imposing any regulation on fishing or fishery-related activities; and (xiv) making enforcing and monitoring of the ICZMP the responsibility of the coastal zone management authority of the concerned state or union territory. Since CMZ II does not have a marine component it appears that point (xiii) above is mainly confined to accessing the fishing ground from the landward side. The activities proposed on the seaward side of the setback line are to be regulated to ensure that no further development takes place other than foreshore requiring facilities for SEZ and basic infrastructure.

CMZ III

The CMZ III is proposed to include all open areas, including coastal waters and tide-influenced inland water bodies other than those classified as CMZ I, CMZ II and CMZ IV. Most of the marine component of the coastal zone falls within the CMZ III. There is no requirement to comply with an ICZMP either on the landward side of the setback line, or on its seaward side up to the limit of the territorial waters, although some activities on the seaward side of the setback line are expected to undergo an environmental impact assessment and to develop an environmental management plan. The housing and other infrastructure facilities existing on the seaward side of the setback line are proposed not to be disturbed or relocated in CMZ III. Similarly, activities relating to fishing by traditional communities are to be undisturbed.

The CMZ III proposes provisions for permissible activities on the seaward side of the setback line, the only zone for which such activities are proposed. All activities other than the permissible ones are proposed to be prohibited on the seaward side. There is, however, no proposed regulation or prohibition on activities that could be set up on the landward side of the setback line in CMZ III. "Permissible developmental activities" are at three levels: (a) activities that can be permitted by the local or concerned administrative authorities without the CMZ clearance (it

is not elaborated in the notification what this clearance is all about); (b) activities that can be permitted by the state/union territory coastal zone management authorities; and (c) activities that can be planned with environmental impact assessment and environmental management plan, that are approved by the MOEF.

The activities that could be allowed, inter alia, by the local authorities are proposed to comprise mainly economic activities related to transport, agriculture, fisheries, horticulture, and disaster mitigation programmes. They include: boating, shipping and navigation; fisheries including traditional fish processing, ice plants and ice crushing facilities (most likely, fisheries other than fishing by traditional communities); mariculture including hatcheries and traditional aquaculture; agriculture and horticulture; rain or cyclone shelters; and repair of existing buildings or infrastructure, including reconstruction activities.

The activities that are proposed to be permitted by the state/union territory coastal zone management authorities are mainly minor infrastructure and recreation facilities such as construction of boat jetties and fishing harbours (to be approved with environmental impact assessment); salt production in salt-pans; temporary construction of tourism facilities, etc.

The activities that could be planned with environmental impact assessment and environmental management plan at the national level are mainly major infrastructure facilities. They include: (i) integrated port, harbour, jetties and mooring facilities; (ii) dredging and disposal of dredged materials; (iii) reclamation within port limits and for coastal protection; (iv) coastal protection measures including mangrove and other forms of vegetation; (v) bridges and sea links and approaches and reclamation for this purpose; (vi) bunding for preventing coastal erosion; (vii) hydrocarbon exploration and extraction; (viii) mining of valuable minerals found in sand (placer minerals) and offshore mining; (ix) construction related to communication, power supply, lighthouses and water supply; (x) pipelines and storage of petroleum or chemicals; (xi) shipbuilding yards and ship-breaking in existing locations;

(xii) greenfield airports and expansion and modernisation of existing airports, and the like.

CMZ IV

The CMZ IV encompasses island territories of Andaman and Nicobar, Lakshadweep and other offshore islands. All activities in CMZ IV are subject to an ICZMP developed by the concerned coastal zone authority at the level of the state/union territory. Other than those essential activities required for local communities, no development activities are proposed to be permitted in the mangrove areas, coral reefs and breeding and spawning areas of endangered species. Thus, CMZ IV is also proposed to be a regulated conservation area similar to the CMZ I.

Implementation Structure

A national board for sustainable coastal zone management is proposed to be set up, which is to render policy advice to central government on matters relating to coastal zone management. It has, however, no regulatory powers. In addition to experts and representatives of central government ministries and departments, the notification proposes on the board representatives of community-based organisations of coastal populations and fishers. The existing coastal state/union territory coastal zone management authorities are proposed to monitor and implement CMZ measures under the Environment (Protection) Act, 1986.

The CRZ is proposed to cease to operate: within CMZ I and CMZ IV from the date of notification of an ICZMP; in CMZ III from the date of notification of the setback line; and in CMZ II from the date of notification of the setback line and ICZMP. Although the setback line is proposed to be demarcated within two years from the date of issue of the CMZ notification, the proposed ICZMP has no such deadline, which could delay the complete transition from the CRZ to the CMZ regime. While the "development" zone – CMZ III – might attain a quick transition since it does not require an ICZMP, the process might be inordinately delayed in other zones. It is particularly likely to be a long drawn-out process in CMZ II where many activities require an ICZMP.

Discussion

Under the proposed 2008 CMZ Notification, the coastal zone, comprising the land-sea interface extending from the territorial waters to adjacent land areas under local self-government bodies, is classified broadly into three categories: (i) a coastal zone demarcated mainly for regulated conservation of living resources and protection of the marine and coastal environment (CMZ I and CMZ IV); (ii) a coastal zone comprising a set of motley entities such as mining, infrastructure, tourism and civic bodies, earmarked for protection from natural calamities (CMZ II); and (iii) a coastal zone designated for development (CMZ III). Although recognising not only the landward component but also the marine component of the coast makes the CMZ conceptually an improvement over the CRZ, the question remains if transition from the “prohibited and regulated” CRZ regime to the “regulated, permitted and prohibited” CMZ regime indeed bodes well for the coastal fishing communities. The architecture of the CMZ regime,

in fact, has several negative implications for these communities, in spite of all the exemptions granted to fisheries.

(i) Threats to Fishing Communities: In the proposed framework, there could be a CMZ I, adjacent to, or surrounded by, a CMZ II or CMZ III. Similarly, there could be a CMZ II adjacent to, or surrounded by, a CMZ III. Most of the marine space within the coastal zone is part of the CMZ III. The problems that are likely to face fishing communities are mainly confined to CMZ II and CMZ III. Activities such as mining sites, power plants and industrial estates – proposed to be included under areas of particular concern in CMZ II – could marginalise fishers in their own living space and fishing ground and could also have negative impacts on the quality of life of coastal communities.

In the CMZ III, while there is more or less a blank cheque given to undertake development activities on the landward side of the setback line, there are many permissible development activities in the

marine space – hydrocarbon exploration and extraction, mining of minerals, mariculture, and shipping and navigation, for instance – that could detrimentally impact upon coastal habitats and fishing opportunities. There should be an effective mechanism to ensure that unregulated activities such as polluting industries in the landward component – and permissible activities in the marine component – of the CMZ III do not diminish the quality of life and constrain the right to life and livelihood of coastal and fishing communities.

Moreover, there should be clear and verifiable guidelines, and effective measures including monitoring and enforcement mechanisms, to ensure that coastal communities, and traditional fishing communities, in particular, are not squeezed out of their occupation and homestead by any legalised activity under the CMZ II and CMZ III regime. Both the land- and seaward components of the CMZ III should be brought within the purview of an ICZMP so that the CMZ III becomes a “sustainable

development zone” with sufficient protection for traditional coastal and fishing communities. Further, to improve the effectiveness of ICZMP, it is important to consider consultative and participatory mechanisms with the active involvement of coastal and fishing communities, or their representatives. Public hearing should be a tool effectively considered to ensure that the views of coastal and fishing communities are adequately taken into account while developing an ICZMP for respective CMZs. In this context, as in the case of demarcating the setback line, the MOEF should look up good practices in other countries to strengthen transparency and accountability of coastal management regimes as well as to improve public participation in such regimes.

(ii) Rights of Fishing Communities: In the proposed framework, traditional and customary rights in relation to fisheries and living space, as well as historic rights of coastal fishing communities are not recognised in the coastal zone. Ensuring that such rights are protected is of particular significance in CMZ II and III. Perhaps the best way to ensure social justice for traditional fishing communities is to designate a zone within the CMZ II and CMZ III, to protect their fisheries rights.

(iii) Housing Provisions: Regarding housing amenities of coastal communities, new houses and settlements are to be built on the landward side of the setback line in CMZ II, which is proposed to be drawn, *inter alia*, around populous coastal areas. This could imply that no reconstruction of existing houses would be permitted in CMZ II if they are on the seaward side of the setback line. In the CMZ III, existing housing facilities on the seaward side of the setback line are not to be disturbed or relocated, which could perhaps imply that old houses could be rebuilt but new houses, as in CMZ II, are to be built only on the landward side of the setback line. Even in CMZ II, permission should be granted to the fishing communities, in particular, to rebuild their homestead on the seaward side of the setback line if they so wish. In such cases, alternative measures, acceptable to the fishing communities, could be adopted to

minimise their vulnerability to natural calamities.

(iv) Potential Boundary Issues: Since there can be a CMZ I with common boundaries with CMZ II or CMZ III, there are bound to be difficulties in delineating these boundaries. In the event of any boundary dispute, how such disputes would be resolved is not dealt with in the notification. There should be public participation and consensus even in demarcating the boundaries of CMZ I since there could be situations where areas listed as CMZ III may suddenly, for example, have to accommodate a turtle nesting ground. The conditions of reversibility of classification, for example from CMZ I to CMZ III, should also be considered in the final notification since an area declared as CMZ I can cease to be so under different circumstances (a turtle nesting ground, for example, could cease to be so under changing environmental conditions).

(v) Setback Line and Local Knowledge: The setback line is proposed to be marked along the coast (excluding islands), especially in CMZ II and III within two years from the date of issue of this notification. It is to be based only on scientific principles. Since the purpose of marking the setback line is mainly to minimise exposure to natural calamities of coastal population it would be wiser to make it a consultative exercise with the participation of local communities where not only scientific principles but also local knowledge is taken into account.

(vi) Regulatory Regime and a Conservation Plan: In CMZ I and CMZ IV, the ICZMP is expected to spell out the regulatory regime. However, such a plan has been defined only as land-use or development plan towards integrated coastal zone management. Considering that conservation of ecological entities is one of the objects of the CMZ regime, it is important to expand the definition of ICZMP to also include a conservation plan, and to extend its application further to the marine space.

(vii) Marine Component: The proposed coastal zone under the CMZ regime is an improvement over the coastal zone under

the CRZ regime. However, full use has not been made of its broadened scope, considering that very little of marine space, except for ecologically sensitive areas such as coral reefs, figures in the regulatory regime of ICZM. There are no proposed measures, for example, to protect territorial waters – the marine component of the coastal zone – from marine debris and from vessel-based pollution, including dumping of wastes and discarded fishing gear, or to seek its protection from threats to marine biodiversity from introduction of alien species through bilge waters.

(viii) Monitoring, Enforcement and Dispute Settlement Mechanisms: Further, monitoring and enforcement mechanisms are perfunctorily mentioned in the notification. Designing and implementing these mechanisms in a comprehensive manner would be essential particularly to protect the interests of weaker stakeholders such as fishing communities. There is no proposed mechanism for appeal and dispute settlement, which should be an important consideration for any CMZ regime since there are so many competing and conflicting interests in the coastal zone. There is also no mention of producing periodic reports on the status of implementation of the CMZ.

(ix) Lack of Coherence: Disaggregating the coast into three separate categories, where some activities can legally encroach upon the livelihood space of traditional coastal communities, is definitely not the best way to deliver on integrated coastal zone management. There should be greater coherence between measures so that the safety envisaged by one set of measures, particularly for fishing communities, is not undermined by another set. If fishing communities are eased out of their original settlements in the coastal zone to set up an SEZ, they will not, for example, benefit from planting trees and sand dune protection intended to shield their original settlements from natural calamities. It is also important to consider greater coherence between the CMZ regime and other legal instruments for sustainable use of coastal and marine resources and biodiversity.

How local authorities could be made to permit some of the activities – for instance,

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fisheries, mariculture, shipping and navigation that are currently not in their jurisdiction – in CMZ III, is an issue that should be clarified. Also, to our knowledge, there are no regulatory regimes in India, so far, for mariculture operations in the marine environment. Considering that there are destructive and sustainable forms of mariculture there should be an attempt at the outset to make regulatory provisions that will enable development of mariculture in a sustainable

and harmonious manner before permitting such operations in the territorial waters.

(x) Need for Legislation: As Harekrishna Debnath, chairperson, the National Fishworkers' Forum points out, "the CMZ should not just be a matter of notification, it should be a matter for discussion, and full public debate in the coastal state assemblies and the Parliament, before a comprehensive legislation is enacted".

Perhaps the notification should be seen as the first step towards adopting a coherent national legislation on CMZ, which can be implemented concurrently by local self-government, state and the union governments, after satisfactorily addressing all the fears of fishing communities who are perhaps the earliest inhabitants of the seaboard, and arguably the most dependent communities on both the land and seaward components of the coastal zone.