

MUMBAI & COASTAL REGULATIONS: A BATTLE OF DECADES



Summary Report

Mumbai First in association with Eco Support hosted a virtual Panel Discussion on the approval of the new Coastal Zone Management Plan by the Union Ministry of Environment, Forest, and Climate Change. Dr. Neville Mehta, CEO, Mumbai First welcomed the audience with warm greetings and introduced our panelists. Ms. Prachi Nimkar moderated the event. The panel discussion explored perspectives around CRZ 2019 notification with reference to Mumbai and the strategies for application of this notification. Also, there was some discussion about trends which potentially affect businesses, investments and our environment.

Key Highlights

- The "Coasts and River Zones: Major Corridors of Concerns".report prepared by the Swaminathan committee in 2009 highlighted several responses to the CRZ notifications.
- The positive impacts of the guidelines are that more areas are available for real estate development and tourism. However, the guidelines do not take into account the negative impact such development can have on the coast as we live through climate change. Often, construction on the coast is allowed without safeguarding eco-sensitive areas.
- The binary in the popular news media is "Environment" vs "Development." Rather, this should be considered as "Environment & Development". We are at an inflection point where our view should not be limited to the environment but enlarged to include ecology as the center point in all the developments
- Several developer interests in the city believe that this notification has finally come at the right time, ending the uncertainty around this aspect. Anything which is uncertain creates many problems for planning and investment. The role of a developer is always challenging, however they want to be part of the solution, not the problem.
- The amendments to the CRZ notifications do not mention building of 'environmental infrastructure'.Therefore coastal pollution has continued. Environmental infrastructure (such as sewage treatment plants) is within the city and we are unable to relocate it outside the city. Furthermore, we have to ensure essential facilities & utilities should be available in these CRZ areas without causing more damage to the region.



Dr. Rakesh Kumar

Former Director CSIR NEERI, Mumbai

Dr. Rakesh Kumar initiated the talk by presenting a PowerPoint on a report prepared by M S Swaminathan committee in 2009 as a background document to the CRZ notifications to set the context for the event. The report is titled "Coasts and River Zones: Major Corridors of Concerns". The report highlighted triggers of responses including

- Coast and River zone protection for whom?
- Are we doing any good?
- Have we been effective?
- Stakeholders' response & other responses.

M S Swaminathan Committee's Report - 2009

- Check violations to CRZ through improved spatial technology
- Enhance protection to fishing communities and families for habitat and livelihood security.
- Resolve issues regarding the development and redevelopment of Mumbai based on locale-specific amendments.
- Introduce regulations to manage the proliferation of ports along the coasts by considering cumulative impacts of these developments.
- Introduce tighter standards for disposal of effluents into coastal waters so that these waters do not become cheaper alternatives to inland pollution management.

This report listed the key challenges that Indian coasts are facing:

1. Unprecedented pressures because of industrial and urban development. Mumbai comes under both these categories of development.
2. The constant Climate change-related devastation as a result of growing intensities of cyclonic storms leading to sea surges and eventual sea-level rise.

Dr Kumar further spoke about the other challenges highlighted in the M.S Swaminathan Committee report:

- Fishing communities that live in proximity to the coast are the biggest and strongest stakeholders. Their lives are in double danger; from conservation on one hand and development on the other. Do we talk about them and discuss them with respect to CRZ notifications? As we draft policies for coastal area management, policymakers must be cognizant of these trends.



- The report stresses on the enhancement and protection of fishing communities and families to maintain their habitat and livelihood security.
- The report categorically mentions Mumbai (i.e. as a developed space and similar cities) to resolve issues regarding the development and redevelopment of Mumbai based on locale-specific amendments.
- The report introduces regulations to manage the proliferation of ports along the coasts by considering the cumulative impacts of these developments.
- The report introduces tighter standards for the disposal of effluents into coastal waters so that these do not become cheaper alternatives to inland pollution management.
- The report talks about setting new management regimes in the Andaman and Nicobar as well as Lakshadweep Island. It also introduces new protection regimes- critically vulnerable coastal areas.
- The report weighs in on how to strengthen the protection of mangroves.
- The report includes the seaward side to ensure protection from current and future threats. Generally, the notifications talk about the landward side but the report talks about the seaward side as well.
- Additionally, the report has included strengthening measures for research and regulatory capacity at all levels & policies to cope with and adapt to the future dangers from sea level rise.

Dr. Rakesh Kumar concluded his opening remarks by stating - "In conversation of Mumbai, particularly when we talk about Floor Space Index (FSI) changes depending on CRZ1, or CRZ2, or CRZ3 A & B. It is very important we talk about coastal protection not the protection of the building or not the protection of FSIs. We need to take two things together then only do we only have a wholesome decision on this topic."



Dr. V.S Naidu
 Former Senior Principal Scientist at CSIR-NIO.

Dr Naidu in his opening remarks described the three water bodies surrounding Mumbai, namely; a) The Arabian Sea b) The Thane Creek c) The Ulhasnagar Creek. Thus, the entire landscape of the region is surrounded by water.

Dr. Naidu further put forth the Coastal Regulation Zone limitations. In the classification of Coastal Regulation Zone (CRZ) marking of High Tide Line (HTL) is the line beyond which water never goes. This perhaps happens once in 16years. Water goes up that level.

Classification of CRZ

- CRZ 1As per CRZ notification 2019. CRZ 1 has been further classified into CRZ 1 a & b
- CRZ 1 A is related to eco-sensitive areas (mangroves, coral reefs, etc.)
- CRZ 1 B is related to non-eco-sensitive areas.
- CRZ 2 is classified as urban areas or developed areas.

CRZ 3 in the 2019 notifications is classified differently from was in 2011 CRZ notification. According to the 2011 notifications, CRZ 3 denotes the area up to 200 metres from HTL as No Development Zone (NDZ). However, in the 2019 notifications CRZ 3 is classified into two zones; 3a & 3b.

- **CRZ 3a:** If the local population is more than 2161 per sq. km. Then it is classified as CRZ 3a i.e. NDZ is reduced to 50 metre from HTL.
- **CRZ 3b:** If the local population is less than 2161 per sq. km. Then it is classified as CRZ 3b i.e. NDZ remains 200 metre from HTL.

CRZ 4 is classified as a zone 12 nautical miles as per the CRZ notifications. According to new guidelines 2019, for CRZ clearance pertaining to CRZ 2&3 project proponents can approach state ministries and MoEFC clearances are non-mandatory.



Impacts of coastal regulations

The positive impacts of these guidelines is that more areas are available for real estate development and tourism. However, the negative impact on climate change is not considered in the CRZ notifications. Construction is allowed without safeguarding eco-sensitive areas (mangroves, coral reefs, etc.). According to McKinsey India, it was found that by 2050 sea level will rise by 0.3m and flooded depth will be rising by 0.5m. There are two types of damages that are expected to occur because of climate change and sea-level rise:

- **Permanent Damages:** For instance, if there is a negative slope (surface is coming down), the rise by 0.3m above sea level will cause the inundation of a lot of stretch of landing. It may go more than 1 km according to topographical elevations. This will cause permanent damage
- **Temporary Damages:** Because of climate change by 2050 there will be a 0.5 m increase in flood debts. When added to the present flood debt, the total would be 1m. However, floods are a temporary phenomenon. Hence this should consider while giving the NDZ permissions

Therefore, the following safeguards can be considered:

- Construction should be made in the regions where topographical elevations exceed 5 metres with respect to mean sea level.
- Since 50mt is close to mangrove cover in Mumbai & Thane creek, safeguards like STPs (sewage treatment plant) should be established in each building and a proper discharge system should be made.



Ms. Smruti Koppikar
Independent Journalist, Columnist, Writer & Teacher.

In her opening remarks, Ms Koppikar stated that in the popular news media "Environment" & "Development" are often treated as binaries. It is often considered Environment vs Development or Development vs Environment. It is a very limited and mistaken view of the issue itself. This binary comes into the media because the issue is often proposed in this manner to the larger society. Then the media tries to reflect that. They initially approach experts then speak to industrialists and then to the environmentalists. So instead of the composite view, it often results in Development vs Environment. The binary has come into the media as it exists in society itself. It should never be environment vs. development or vice versa, whereas it has to be environment and development.

She enhances her view of enlarging the scope of ecology and not limiting it to the environment. In context to the media, she said "We see slices of debate in the media in binary fashion where the media has its own agenda-setting, factors, and models."

She situated this webinar titled "Mumbai & Coastal Regulations: A Battle of Decades." in its futuristic sense as a battle for 50-60 years or probably a little more. In her view this battle in Mumbai is a battle for 5-6 decades or probably even more. She reiterated "the latest IPCC report based on NASA satellite & data listed 12 Indian cities on the threat of submergence due to sea rise and Mumbai tops the list. We are all familiar here with stories of the past 50 years in Mumbai. But are we ready for the next 50 years which may submerge the city? The question she posted was: 'Are we still planning to look at development and environment in a binary fashion?'

We are at an inflection point on the debate of coastal regulations, urban development, and the whole idea of urbanization, particularly in coastal cities. For the last 3 decades since liberalization we have always positioned development and environment separately and tried to evolve a balance between the two. Now we are at an inflection point where we no longer have the luxury of equating development and environment anymore. We are at the point where Ecology and sustainability need to be prioritized across the board.

In her coverage of Mumbai for 20 years, Ms Koppikar has seen innumerable announcements related to the need to release more land for housing, like salt pan land and de-reservation of certain zones. Making more land available in Mumbai has always been seen as a magic bullet to solve the housing crisis. Yet the housing problem remains as it is. The informal housing or what people call slums are part of informal settlements. The sector of informal housing has more or less stayed stagnant or seen marginal change. Making more land available in Mumbai has little to do with the housing itself. On the existing land, it is possible to construct low-cost housing and take the whole informal settlement out of the city which takes political will and not more land.





Mr. Mukesh Patel

Real estate developer & Treasurer of the CREDAI-MCHI Mumbai Chapter.

In his opening remarks, Mr. Patel stated that "Even if it is a battle of the past, the present or the future, I want citizens to win the battle instead of developers or activists." He welcomed the recent nod by the Union Ministry ending uncertainty around this issue. Now, it is clear what is available, what is not and its impact on development. As a developer, the role is always challenging, however, as developers, we want to be part of the solution, not the problem.

As mentioned in MoEFCC rules, developers have started giving Sewage Treatment Plants (STP), organic wet processors, rainwater harvesting, solar lighting in the building or project. As a civil engineer, he acknowledged its importance and was not willing to challenge these requirements. He stressed upon the fact that striking a balance between development and its impact on the environment is crucial for all projects.

Mr. Patel acknowledged Ms Koppikar's point that higher FSIs and larger availability of land alone won't be helpful and our focus should be on the discussion of the ecology and sustainability of Mumbai and its people.

He concluded by insisting other panelists share their message for developers who are constructing projects in the CRZ areas in Mumbai. He asked - "What are the precaution and better aspects we can put in design and construction keeping in mind the betterment of the citizens of Mumbai. I would like to invite the expertise of other panelists on how to make development more sustainable and have less impact on the ecology and people living in Mumbai."





Mr. Dattatraya Devale

Former Head of Legal Department, Maharashtra Pollution Control Board (MPCB)

Mr. Devale put forth a legal perspective on the CRZ notification. "The battle of Mumbai and Coastal Regulations started with the amalgamation of uniting seven islands. Then further development of Back Bay reclamation and Bandra reclamation and further encroachment in the coastal areas."

Dr Devale provided a brief background of CZMP. From 1991-2008 CRZ notifications were amended 25 times. However, the ecologically sensitive coastal region has become more vulnerable due to unregulated development. Illegal construction is being regulated using the old cut off year 1991 rather than using the latest year as 2008. The CRZ 2008 notifications were never implemented. The newly approved CZMP will be able to solve the problem of implementing CRZ notifications.

The original CRZ notification 1991 has undergone a number of amendments on account of not having been approved by CZMP for various areas including greater Mumbai and suburban areas at a different scale level. Before permission could be granted, seven authorized agencies were required to approve or examine CRZ boundaries and superimpose location. Hence it became necessary to designate seven authorized agencies for demarcation. It was a time-consuming process to get such demarcation as authorized agencies refuse to consider such proposals. There was a total prohibition of any construction activities in the CRZ 1 area and partial restrictions and special provisions were made in CRZ 2&3 areas. This created somewhat dissent about the implementation of CRZ notification amongst local communities being affected by prohibition and restriction of CRZ notification.

The major contention of fisherman communities and nearby slums was that they weren't able to construct in their areas. Even basic infrastructure activities such as utilities and redevelopment were prohibited. To address the grievance of the local affected communities, the 2011 notification was brought in.

In 2011, permissions were granted for redevelopment of those constructions that are dilapidated or already declared dilapidated and require rehabilitation. However, the 2011 notification did not grant any permission to buildings that could possibly deplete or become dangerous in the future.

In CRZ 2, areas for slum rehabilitation scheme in Greater Mumbai allowed FSI as per prevailing town planning on the date of project approval by the concerned authority. Likewise, reconstruction & repairs of the building belonging to fishermen societies identified by the State government shall be considered in the 2011 notification provisions.

Unfortunately, in these amendments there is no mention of the construction of Environmental infrastructure. Therefore coastal pollution has continued. Whatever environmental infrastructure (such as STP) is within the city, we are unable to relocate it outside the city. We should consider such environmental infrastructure within the CRZ area but subject to certain chapters.

At last, we can't keep the undeveloped area as undeveloped forever. We have to ensure essential facilities & utilities should be available in these CRZ areas. However, that does not mean allowing construction in such a fashion that will endanger our future in respect to the climate crisis and the increase in sea level. Thus, we need to consider the provision of the 2008 notification with respect to Sustainable development and sustainable mapping of the CRZ area on the basis of its vulnerability

He concluded on the note that public awareness of the CZMP is important. To make the public know about the CZMP it has to be available in everybody's hands. They should know the provisions in these CZMP. He commented that "Development & environmental protection go hand in hand. Coastal environments should be protected while basic utilities are developed in CRZ areas."

Q & A session

Q- As the regulatory body with minimum resources and constant amendment to these regulations, how can a regulatory body with limited resources oversee these projects?

Dr Devale explained that in every amendment, there is one provision of saving clause which protects the prior actions taken till the amendment is made. These amendments become applicable prospectively. While dealing with regulating such violations, amendments indicate that whatever previous actions have been taken up to that particular amendment, they are protected and regulated as by the earlier notification. Once the amendment is made the total scenario is changed. When a new amendment comes, the remaining pending proposal is further delayed in decision making.

Mr Devale noted that he was looking for a CRZ proposal from the year 2004-2007 and he had found that some proposals were pending for 6-7 years. Thus, they were given priority in the list and put forth for the approval of Maharashtra Coastal Zone Authority. Further proposals where the public interest is given, those proposals should be on the top of the list. The green projects causing less pollution are prioritized within his tenure of work.

Q- Environment Impact Assessment is used as a tool for the regulatory aspect of CRZ. How strong is the environmental impact assessment report for pursuing the objective of CRZ?

Mr Naidu explained that there are certain guidelines for EIA preparation in each sector where it needs to follow certain CRZ rules. To extract CRZ information there are six organizations in India, namely Survey of India, Oceanography Institute, Naval Hydrographic Office, Cept Ahmedabad, Space Applications Centre and NCSCM Trivandrum. These 6 organizations are authorized for the demarcation of Coastal tides. Once maps are ready for CRZ clearance, EIA reports should be prepared which have guidelines for each sector. Private organizations can promote eco-sensitive zones, provided you have the required software and high-resolution satellite images from NRSC Hyderabad. With that data, you can demarcate eco-sensitive zones. This has been done in the Gulf of Kutch. Eco-sensitive zones (including Mangroves & Coral Reefs) are demarcated

Q- When amendments come back and forth how are projects handled by the developers?

Mr. Mukes Patel stated that every time policy changes, projects and people living in that area are affected. If a building is maintained well then it doesn't require to be redeveloped. The 2019 notification has been helpful. A provision was given to the developer, whether to stick to the modification or to do development keeping 2013 or 2011 notification. Hence, the issue has been addressed very well.

Mr. Naidu remarked that in the construction sector, each building should have STPs facilities. During non-monsoon periods the entire water needs to be reused by buildings for plantation. The second aspect is all buildings along the coastline should use solar panels. They need to generate at least 5% of the total power requirement. While constructing buildings near the coastline, we have to consider elevation from the ground. The Topographic elevation of the building from the ground needs to exceed 5metre otherwise there is a high possibility of it getting submerged.

Q- With lesser clarity, there are more violations. Will demolishing projects that are found to be illegal further damage the environment? In such cases how can low-cost technologies help?

Mr Patel answered that in the context of coastal zone management, there's a need to retrofit the existing buildings by making them strong enough. In Mumbai, buildings/ skyscrapers are so high that they can't be demolished. So all the developers, builders, and policymakers need to sit and work on this together to make coastal protection a priority. And the buildings within 50mt of the Coastal region need to be retrofitted for strengthening.

Q- How can the media help reach the importance as well as scientific value of the notification to the common man?

Ms Koppikar remarked that any notification is going to have a multiplicity of interests. The legacy media (older newspapers, channels, etc.) would approach these issues with sensitivity, depth, and seriousness, exploring different aspects. However today media is dominated by the social media cycle, and everything is reduced to words and characters.

A coastal city like Mumbai demands that its media must engage with the issue of coastal regulations in a serious, steady, and in-depth manner. People in the newsroom need to have access to specialized knowledge and a range of opinions. And to see how the issues are flagged and communicated in as unbiased a manner as it can.

As a Media person, more clarity from the government is required. At present, there are multiple government institutions, issues lost, and no single point of accountability. In such a scenario, because of the limited longevity of the story, the news covers opinions, and sometimes some opinions are more available than others.

The way forward

The discussion ended on a positive note inviting the expertise of panelists on ecology, environment and real estate - helping us decipher how to make development more sustainable and have less impact on the ecology and people living in Mumbai.