

*Minutes of the 172<sup>nd</sup> Meeting of Maharashtra Coastal Zone Management  
Authority held on 05<sup>th</sup> February, 2024*

The 172<sup>nd</sup> meeting of the Maharashtra Coastal Zone Management Authority (MCZMA) was held under the Chairmanship of Principal Secretary (Environment and Climate Change), through Videoconferencing technology on Cisco WebEx platform on 05<sup>th</sup> February, 2024. List of members present in the meeting is at Annexure-I.

Confirmation of minutes of 171<sup>st</sup> meeting:

The Authority confirmed the minutes of 171<sup>st</sup> meeting of the MCZMA held on 15.12.2023 & 29.12.2023 without any change.

Item No. 1:        Proposal for amendment in CRZ Clearance for Anti Sea Erosion Measures to sea front development & beatification at Aksa beach, Madh, Mumbai Suburban by MMB

Introduction:

The Chief Engineer, MMB presented the proposal before the Authority. The matter pertains to request of MMB for amendment in CRZ Clearance for Anti Sea Erosion Measures to sea front development & beatification at Aksa beach, Madh, Mumbai Suburban.

Earlier, the MCZMA in its 127th meeting held on 02<sup>nd</sup> November, 2018 deliberated the proposal of Anti sea erosion bund of 900 m and recommended the proposal from CRZ point of view to SEIAA subject to certain conditions.

Thereafter, the SEIAA vide letter dated 5th March, 2019 granted the clearance for the project.

The MMB during the meeting presented that there are existing poles and proposed public facilities immediately along the beach and there are existing private properties nearby, hence, it is not possible to keep anti sea erosion bund on landward side of HTL. The MMB has requested to delete the following specific condition No.1 of the MCZMA recommendation and SEIAA clearance:

- I)        *MMB to ensure that no construction is allowed in intertidal or beach area i.e. CRZ area. Solid construction should be restricted to landward side of the High Tide Line.*

  
Member Secretary

  
Chairman

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In the 168<sup>th</sup> meeting, Expert Member asked MMB whether any scientific studies from erosion point of view from competent organisation have been carried out in the matter recommending the necessity of the bund at site proposed by MMB. The proposal was deferred for want of above information.

**Deliberation:**

The Chief Engineer, MMB presented that assessment of location of placement of Anti Sea Erosion Bund and shoreline studies to ascertain the coastal erosion for Aksa beach has been carried out by IIT, Mumbai and desk studies for design of coastal protection works carried out by CWPRS, Pune.

The MMB has submitted report dated 17.04.2023 on Assessment of location of placement of Anti Sea Erosion Bund by IIT, Mumbai. As per the report, it is found that Aksa beach is an eroding site and the existing structures are affected by erosion. Hence there is need to provide Anti Sea Erosion bund to protect the facilities being developed. The alignment chosen to construct the anti sea erosion measure seem appropriate as the existing electric poles were collapsing due to erosion.

The MMB has submitted report dated 12.05.2023 on desk studies for design of coastal protection works by CWPRS, Pune.

- a) The constructed seawall is aligned with the existing electric pole. The alignment of the wall is in between High & Low water line, which is a permissible activity in CRZ-1B. The seawall /Toe-berm protection was necessary to protect boundary wall & the proposed beautification. During the visit there was a flood tide (about 3.0 m water level) and the measured distance between toe-berm of the seawall to water line was about 50 m.
- b) It is recommended to provide roundhead on both sides of the seawall to reduce flanking effect on either side of seawall. However, the roundhead at the entrance (southern side of Seawall) may cause hinderance to the public visiting Aska beach. Hence, it is advised to monitor the effect of flanking on the southern side of seawall for 2-3 years and then the decision regarding the need of roundhead construction (southern side) may be taken-up. The roundhead of northern end of the seawall should be constructed immediately.



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- c) The constructed seawall is a flexible structure made up of rubble mound and it is essential to monitor and maintain them regularly. It is advisable to compile the beach profile data Infront of the constructed seawall upto the LWL or 80m (whichever is lower) at least for 3 years to compare the changes of the beach profiles.
- d) The drainage pipes on the landward side of the seawall needs regular checking for clogging, etc. and cleaning is required in case of chocking of pipes.
- e) Proper monitoring is required to check the performance of the seawall at least in 2-3 years especially during monsoon..

The MMB also submitted report dated 21.12.2023 on the shoreline studies to ascertain the coastal erosion for Aksa beach by IIT, Mumbai. The IIT report summaries that the MMB is proposing shoreline studies to ascertain coastal erosion / accretion pattern at Aksa Beach. In this regard, mathematical modelling studies were carried out using 2- Dimensional modelling to study wave transformation and morphological changes near Aksa Beach. The report summaries the wave climate characteristics at offshore and near proposed location. The wave transformation study shows that the waves predominantly come from South- West. The study shows net erosion at Aksa Beach with landward shift of shoreline. Based on the site visit and satellite image analysis, it is observed that Aksa Beach is an eroding site, and the existing structures are already affected by erosion. Hence, there is a need to provide anti-sea erosion bund to protect the facilities being developed.

IIT report concludes that, Morphology study by using coupled tide, wave and sediment transport models is performed from the Aksa coast. The Analysis shows that predominantly waves come from SW direction. The sediment analysis shows the erosion along the Aksa Beach and accretion near offshore of Aksa Beach. The flat region above high tide line is mostly likely prone to erosion during storm and monsoon weather. Erosion protection measures should be implemented to protect the beach and infrastructure adjoining the beach.

The Chief Engineer, MMB stated that there are existing electric poles on site and part of Anti Sea Erosion bund constructed along the said existing electric poles as per recommendation of CWPRS cross section.

  
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The authority noted the Order passed by Hon. National Green Tribunal, (WZ), Pune on 01.12.2023 in the matter of Mr. Banda Nagraj Kumar & Anr. Vs Maharashtra Maritime Board & Ors. (Original Application No.77/2023(WZ)).

- "11. We are of the view that whether this condition needs to be deleted from the CRZ clearance or not, a decision has to be taken by the MCZMA at their end, which is pending for a long time. Therefore, we direct the MCZMA to decide this matter within a period of one month positively. This matter cannot be kept open ended for indefinite period. The respondent No.1 shall also provide whatever kind of study it wants to place before the MCZMA within a period of 20 days from today and within a week thereafter, the MCZMA shall file reply affidavit and a copy of the same shall also be served upon all other parties, who may file rejoinder affidavit against the same, if any, within one week thereafter.
12. We further make it clear that till then, no further construction would be done."

The Authority noted that at the time of recommendation in 127<sup>th</sup> meeting, the CRZ Notification, 2011 and approved CZMP under it was in force. As per the para 4(i)(f) of CRZ Notification, 2011, "erosion control measures" are permissible activity in CRZ area.

At the relevant time, the Authority while deliberating the proposal exercised extra caution and felt to put a condition that "no construction is allowed in intertidal or beach area i.e. CRZ area. Solid construction should be restricted to landward side of the High Tide Line"

However, from the reports of IIT and CWPRS submitted by the MMB, it is observed that the seawall is aligned with the existing electric pole. The alignment chosen to construct the anti-sea erosion measure seem appropriate as the existing electric poles were collapsing due to erosion.

As per IIT report, the study shows net erosion at Aksa Beach with landward shift of shoreline. Based on the site visit and satellite image analysis, it is observed that Aksa Beach is an eroding site, and the existing structures are already affected by erosion. Hence, there is a need to provide anti-sea erosion bund to protect the facilities being developed. The flat region above high tide line is mostly likely prone to erosion during storm and monsoon weather. Erosion



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protection measures should be implemented to protect the beach and infrastructure adjoining the beach.

Taking into account the above said reports, due to site constraints and electric pole present near the site and need to protect the infrastructure adjoining the beach, the Authority is of the view that above said condition stipulated in earlier MCZMA recommendation requires modification.

It was further deliberated that before construction, MMB was required to put a request to MCZMA informing the Non Feasibility to construct the seawall on landward side of the HTL, due to constraints of the site conditions and hence, requires deletion / amendment. Now, it came to the notice of the Authority from the representation of MMB and various report of IIT & CWPRS called by the Authority; that there are constraints and seawall could not be restricted on landward side of HTL. After detailed deliberation and considering various reports, the Authority opines that above said condition requires amendment.

The Authority deliberated that construction of seawall to occupy certain area of beach for construction, however, seawall is necessary in order to protect the considerable area of beach.

Furthermore, the Authority observed that CRZ Notification, 2019, has also allows anti-sea erosion measures in intertidal area i.e. CRZ IB area. The Authority noted that presently, the CRZ Notification, 2019 and approved CZMP under it is applicable. As per approved CZMP of Mumbai, 2019 the anti-Sea Erosion Bund is partly falls in CRZ-IB & partly in CRZ-II area. As per para 5.1.2(i) (d) and 5.2 (i) of CRZ Notification, 2019, measures for control of erosion is permissible activity in CRZ-IB & partly in CRZ-II area.

The Authority after detailed deliberation felt that the project of anti sea erosion measure implemented by the MMB is vital public interest project with an objective to protect the coastline from eroding and for protection of infrastructure /properties present near the beach.

In view of above, the Authority observed that the above said condition mentioned in earlier MCZMA recommendation could not be deleted entirely as per request of the MMB. However, the Authority is of the view that the above said conditions needs modification.



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**Decision:**

In the light of above, the Authority after deliberation decided recommend the proposal to SEIAA for modification of the specific condition no. (I) as follows:

"MMB to ensure that Anti Sea Erosion bund shall occupy minimum intertidal area which is necessary"

*as*

Member Secretary

*Amak*

Chairman