

MINUTES OF THE 170TH MEETING OF EXPERT APPRAISAL COMMITTEE FOR PROJECTS RELATED TO COASTAL REGULATION ZONE HELD ON 11TH MAY, 2017 AT INDIRA PARYAVARAN BHAWAN, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW DELHI

The 170th Meeting of the Expert Appraisal Committee for projects related to coastal regulation zone was held on 11.05.2017 at Brahamputra Hall, Indira Paryavaran Bhawan, New Delhi. The members present were:

1. Dr. Deepak Arun Apte - Chairman
2. Shri. Sharad Chandra - Member
3. Shri. Arvind Kumar Nautiyal - Member Secretary

Dr. E. Vivekanandan, Dr. S.W.A Naqvi, Dr. Anuradha Shukla and Shri N.K Gupta were absent. Dr. S.G Bhave communicated inability to attend on medical ground.

Also in attendance: Shri W. Bharat Singh, Joint Director, MoEFCC and Dr. Bhawana Kapkoti Negi, Technical Officer, MoEFCC. The deliberations held and the decisions taken are as under:

1.0 CONFIRMATION OF THE MINUTES OF THE LAST MEETING.

The Committee having taken note that there are no comments from members, in disagreement or otherwise, on the minutes of the 168th Meeting, confirmed the same.

2.0 CONSIDERATION OF PROPOSALS:

2.1 Pipeline and Diffuser System for Disposal of Treated waste water at Marine outfall point at District Devbhumi, Dwarka, Gujarat by M/s Tata Chemicals Ltd. - Reconsideration for CRZ Clearance [F.No.11-34/2016-IA-III] reg.

The proposal was earlier considered in the 165th Meeting of the Committee held during 16-17 January, 2017. In the said meeting, the project proponent made a presentation and provided the following information:

- (i) The project involves laying of treated effluent disposal pipeline from their plant to final disposal point in the Gulf of Kutch at Mithapur in Gujarat promoted by M/s Tata Chemicals Ltd.
- (ii) The proposal involves up-gradation of existing treated waste water discharge system by installation of trestle mounted pipelines and diffuser system to discharge point at marine outfall point suggested by NIO beyond Marine Sanctuary and its Eco-sensitive zone.

- (iii) The total length of proposed treated waste water disposal pipeline corridor is 3756 m. The length of pipeline in Non CRZ area is 318.75 m and the length of pipeline in CRZ area is 3437.25 m.
- (iv) Total water requirement and its source: No additional water is required.
- (v) Waste water generation, treatment and disposal: The proposal involves upgradation of existing treated waste water discharge system by installation of trestle mounted pipelines and diffuser system to discharge point at marine outfall point suggested by NIO. Treated waste water 240,000 KLD with existing treatment facilities.
- (vi) Municipal solid waste generated disposal facility: There will not be municipal solid waste generation due to this improvement proposal.
- (vii) Power requirement and source: Power Requirement: 2x 1250 KW (1 Working+01 Stand By Pump), 3.3 KV, which will be sourced TCL Captive supply.
- (viii) Investment/Cost of the project: Rs. 229 Crores.
- (ix) Wildlife issues: Yes, The proposed pipeline corridor in parts would pass through Marine sanctuary.
- (x) Eco-Sensitive Zone in 10 km radius area: Yes, project is within Eco Sensitive Zone Area.
- (xi) Details of Forest land: Yes, 11.268 ha area of Marine Sanctuary. This area is also declared Mangrove forest as per Draft notification No. GVN/1999(8)/JJM/1692/1652/K. Settlement order No. K/FSO/T-3/1548/2013-14 of FSO, Junagadh, dated 11/05/2013 is yet to be finalized by Government of Gujarat.
- (xii) Tata Chemicals' proposal for Diversion of 11.268 Ha Marine Sanctuary area is approved by NBWL in the 39th Meeting dated 23rd August, 2016.
- (xiii) CRZ study has been conducted by Institute of Remote Sensing (IRS), Anna University Chennai.
- (xiv) SCZMA Recommendations: Gujarat Coastal Zone Management Authority has recommended the proposal from CRZ perspective.
- (xv) Employment potential: The proposed project will be part of existing operations.
- (xvi) Benefits of the project: Disposal of treated waste water through pipeline and diffuser system will provide better dispersion.

The EAC, in the said 165th meeting, noted that the industrial operations/activities in the plant premises at Mithapur involved manufacturing of Soda Ash. The plant also has a captive power generation facility. The proposed pipeline would carry the treated effluent from both the operations/activities at the plant to the disposal point in the Gulf of Kutch in western coast of Gujarat. As such, the proposal remains an integral part of all the industrial operations/activities, including manufacturing of Soda ash, listed separately as the industrial projects/activities in the schedule to the EIA Notification, 2006 and thus requiring prior environmental clearance.

The EAC was informed about the provision contained in para 4(i) (b) of the CRZ Notification, 2011, for the projects listed under this Notification and also attracting the EIA Notification, 2006, provides for clearance under the EIA Notification, 2006 only subject to being recommended by the State/UT CZMA. The project proponent further informed the Committee that their proposal for expansion of Soda ash plant has been

submitted to the Ministry for grant of EC in terms of the EIA Notification, 2006. *Considering the provisions of the CRZ Notification, 2011, the EAC had suggested the project proponent to revise the said proposal accordingly for consideration under the EIA Notification only by the sectoral EAC.*

In view of the above, the proposal was, therefore, not taken forward by the EAC and decided to recommend for transferring the proposal to the concerned sector. The Committee had also observed that the EIA has glaring gaps especially in the marine biodiversity part. Full EIA report was not presented to the Committee. Executive summary also does not show plume dispersion model. However from the executive summary it is evident that the effluent plume may have serious deleterious effects on the coral reefs of Poshitra, Beyt Dwarka, Paga and Boria islands. That the statements made in Wildlife Conservation Plan such as 'The intertidal area of the Gulf of Kutch is muddy and devoid of live corals' are not only misleading but also factually inaccurate. That the adjoining areas of the discharge point i.e. Poshitra Bay is the last remaining feeding ground of Critically Endangered Dugong whose western Indian population is confined to this part of Gulf of Kutch. Poshitra is also a site of endemism being Point Endemic area for *Sakuraeolis gujaratica* as well as Type Locality of recently described *Anteaeolidiella poshitra* both critically endangered molluscs. The Committee therefore suggests in-depth assessment of marine biodiversity of the proposed region including Poshitra, Paga, Beyt Dwarka and Boria Islands and impacts of the proposed project on the same before placing for the considering for the concerned sector.

The project proponent later submitted justification for consideration of the proposal by the EAC (CRZ) stating the following:

- Tata Chemicals Ltd. (TCL) established its chemical manufacturing plants located at Mithapur, Gujarat, India in 1939. The plant generates treated waste water from its Gulf of Kutch after solids separation and dilution with spent seawater released from plant cooling water system.
- The proposal for effluent pipeline is in keeping with the regulatory requirement contained in the Environment (Protection) (Fourth Amendment) Rules, 2011 published in Govt. of India Gazette Notification G.S.R. 424(E) dated 1st June 2011. Under these rules the revised Effluent standards for Soda Ash industry (S.No. 75, A Solvay Process) have been provided. This entails discharge through the covered pipelines and diffuser into deep sea. The Tata Chemicals Limited is committed to adopt best practices to safeguard environment. The proposal is in keeping with this philosophy of the company.
- TCL has submitted three proposals:
 - (i) *Pipeline and Diffuser System for Disposal of Treated waste water at Marine outfall point suggested by NIO*
 - (ii) *Expansion of Soda Ash and Captive Cogeneration Power Plant*
 - (iii) *Expansion of Cement production capacity.*

On the subject of multiple proposals by TCL, clarifications below was submitted:

- a) The proposal number (ii) & (iii) do not require increase or change in quantity and characteristics of the effluent as permitted by GPCB.

- b) The proposal for effluent pipeline is independent of other proposals and bears no dependence to approval and implementation of other proposals, which may follow course as per approvals and the processes thereafter. Neither is the need for effluent pipeline arise from the proposal numbers (ii) & (iii) and they do not cause any change in quantity and characteristics of effluent. Thus the proposals (ii) and (iii) do not have any bearing on need and capacity of the effluent pipeline proposal.
- c) TCL would carry out the works of effluent pipeline to improve environment in the region for the benefit of wildlife conservation in the region at the earliest irrespective of the progress of other projects listed as proposals number (ii) and (iii).
- d) The proposal (ii) & (iii) are for the expansion of the soda ash, cement and captive cogeneration power plant. There is significant additional brine capacity available with the TCL that the company proposes to utilize for increasing production. The details of the project expansion are so designed as to put the solid waste to cement production and not to increase quantity of effluent or adverse impact on the characteristics of the effluent.

The project proponent also submitted its clarification to the observations of the Committee made in the 165th meeting as follows:

S.N	Observations of EAC	Clarification by M/s TCL
(i)	The EAC, in the first instance, noted that the industrial operations/activities in the plant premises at Mithapur involved manufacturing of Soda Ash. The plant also has the captive power generation facility. The proposed pipeline would carry the treated effluent from both the operations/activities at the plant to the disposal point in the Gulf of Kutch in western coast of Gujarat. As such, the proposal remains an integral part of all the industrial operations/activities, including manufacturing of Soda ash, listed separately as the industrial projects/activities in the schedule to the EIA Notification, 2006 and thus requiring prior environmental clearance.	TCL Mithapur was established in 1939. The treated waste water from TCL plant at Mithapur is presently discharged through open channel at Gulf of Kutch after separation of solids and dilution with spent sea water released from plant cooling water system. Ministry of Environment, Forest & Climate Change has notified the revised Effluent standards for soda ash industry (S.No. 75, A. Solvay Process) under Environment (Protection) (Fourth Amendment) Rules, 2011 vide Govt. of India Gazette Notification G.S.R. 424(E) dated 1 st June 2011. To meet the requirements of revised norms, TCL proposes to upgrade existing effluent management system by disposal of treated waste water through pipelines and diffuser system to Marine outfall location suggested by National Institute of Oceanography. Accordingly the proposal. Thus while the effluent system is part of the soda ash manufacturing process, permission/clearance is an established manufacturing facility. It is, therefore, submitted that the proposal be seen as limited to effluent pipeline which falls in the CRZ and be considered by the EAC.
(ii)	The EAC was informed about the provision contained in provision	TCL Mithapur plant currently discharges its treated waste water into Sea (Gulf of Kutch through open

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	<p>contained in para 4(i) (b) of the CRZ Notification, 2011, for the projects listed under this Notification and also attracting the EIA Notification, 2006 only subject to being recommended by the State /UT CZMA</p>	<p>channel as per consent order under Water Act, 1974 granted by Gujarat Pollution Control Board (GPCB). The soda ash factory is already functional for long. This proposal is to meet revised standards contained in Notification G.S.R. 424(E) dated 1st June 2011 and the commitment of TCL to adopt modern practices of minimising impact on environment. The GPCB has also granted Consent to Establish (CTE) for discharge of treated waste water into Gulf of Kutch through pipeline and diffuser system (CTE amendment order No. 70701 dated 01.10.2015). the proposal for upgradation (pipeline and disposal activity) does not fall under activities list (1a to 8b) in the Schedule of the EIA Notification, 2006. TCL has submitted detailed clarification on non-applicability of EIA Notification, 2006 to MoEFCC on May 04, 2016. Copy of TCL submissions is enclosed as Annexure-1. Hence, TCL has applied for CRZ Clearance under the provisions of para 4(i) (a) of the CRZ Notification, 2011, for the activities require waterfront and foreshore facilities. The proposal has been recommended by Gujarat Coastal Zone Management Authority vide Government of Gujarat letter No. ENV-10-2016-74-E (T cell) dated June 28, 2016.</p>
(iii)	<p>The project proponent further informed the Committee that their proposal for expansion of Soda ash plant has been submitted to the Ministry for grant of EC in terms of the EIA Notification, 2006. Considering the provisions of the CRZ Notification, 2011, the EAC suggested the project proponent to revise the said proposal accordingly for consideration under the EIA Notification only by the sectoral EAC</p>	<p>TCL has submitted following proposals to MoEF&CC:</p> <p>Proposal No.1: IA/GJ/MIS/59359/2016-Pipeline and Diffuser System for Disposal of Treated waste water at Marine outfall point suggested by NIO</p> <p>Proposal no.2: IA/GJ/IND2/53444/2016-Proposed Expansion of Soda Ash and Captive Co-generation Power Plant</p> <p>Proposal No.3: IA/GJ/IND/58896/2016-Proposed Expansion of Cement production Capacity.</p> <p><i>The proposal (S.No.1) is aimed to improve effluent management system by replacement of existing open channel with closed pipeline and diffuser system. It is necessary as per the Notification G.SR. 424(E) dated 1st June, 2011. The activities of proposal (S.No.1) are proposed to be implemented for existing operations to meet the requirements of revised effluent standards. It is submitted that the proposal for pipeline and diffuser system is not linked to the expansion proposal as there is no</i></p>

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		<p><i>increase in quantity of treated waste water and pollution load due to proposed expansion proposals (S.No. 2 & 3). The quantity of treated waste water will remain within the existing consent capacities. The project site of proposals (S.No. 2 & 3) falls within existing chemical complex which is outside the limit of CRZ.</i></p> <p>Considering the above facts, provisions of the EIA Notification, 2006 are not attracted by the proposed activity (S.No.1) of pipeline for discharge of treated waste water.</p>
(iv)	<p>EIA has glaring gaps especially in the marine biodiversity part. Full EIA report was not presented to the Committee</p>	<p>TCL proposal for upgradation of existing effluent management system has been recommended by Gujarat Coastal Zone Management Committee (Ref-1) to the Ministry. Company has submitted online application in portal of the Ministry on 30 September 2016. The application was accepted by the Member Secretary on 7th November, 2016. The proposal was considered by the EAC on 16 January 2017 (Ref-2). Representatives of Tata Chemicals, Tata Consulting Engineers and National Institute of Oceanography were present during EAC meeting for presentation on project details and EIA studies of TCL proposal as per agenda item (Ref-2). However, the presentation of EIA report could not be made with the conclusion that the proposal will be transferred to the EAC of respective industry sector.</p> <p>It is submitted that the EIA report addresses the concerns related to Marine biodiversity including present status and likely impacts in chapters 3 and 5 respectively.</p>
(v)	<p>Executive summary also does not show plume dispersion model. However, from the executive summary it is evident that the effluent plume may have serious deleterious effects on the coral reefs of Poshitra, Beyt Dwarka, page and Bora islands.</p>	<p>National Institute of Oceanography (NIO) has conducted Marine Environment Impact Assessment (EIA) considering requirements of the revised standards for soda ash industry as per Notification G.S.R 424(E) dated 1st June, 2011. Please refer to Section 4.4 of EIA Study Report: Hydrodynamic modelling has been conducted by using Dedicated software Hydrodyn-FLOSOFT/POLSOFT/SEDOFT for prediction of tides and currents; dilution and dispersion processes in marine areas; and sediment transport in tidally driven zones. On the basis of this study NIO has identified a suitable location (Marine outfall point-Latitude 22° 24'36" N, Longitude 69°04'50" E) in the Sea (Gulf of Kutch) to release treated waste water through pipeline</p>

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		<p>and diffuser system as required in revised effluent discharge standards.</p> <p>Please see chapter 4 (Proposed Effluent Disposal Scheme) of EIA report submitted. Conclusions of EIA report on impact on flora and fauna are reproduced and Potential marine environmental impacts are at Section 8.0 of EIA:</p> <p>As against the ambient temperature of 28^oC, the predicted temperature in the vicinity of the DP1 would be in the range 29.2 to 30.3^oC. the near ambient temperature in the direction of the spreading plume would be attained at a distance of 200 to 600 m from the release site. Considering that the ambient water temperature can occasionally increase upto a maximum of 30^oC, the temperature expected in the vicinity of DP1 would be a maximum of 32^oC.</p> <p><i>Flora and fauna:</i> The general water quality of the coastal area subsequent to the release of the treated effluent through a diffuser is unlikely to change significantly. Hence, by and large, the biological characteristics of the region would not be affected adversely except for some negative impact on macro benthos in the vicinity of the diffuser, due to the settlement of SS. The SS though not harmful, it may change the sediment character locally and the macro benthos community would have to adjust to this modified habitat.</p> <p><i>Coral Reefs:</i> The conclusion /observation of the Gujarat Coastal Zone Management Authority as contained in recommendation letter are reproduced below:</p> <p>"The nearest coral reef to the release site is Chandri Reef is at least 10 km away to the NW of the Bet Shankhodhar. Page Reef is roughly 12 km to the NE of the release location. Model studies indicate that the SS would be close to the baseline within 1 km from the release site. Hence these reefs would not be affected by the suspended solids associated with the effluent."</p>
(vi)	Statements made in Wildlife Conservation Plan such as 'The intertidal area of the Gulf of Kutch	Chapter 4 (Ecological Assessment) of Wildlife Conservation Plan has described the general status of Coral Reef (Section 4.8) in Gulf of Kutch which

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	is muddy and devoid of line corals' are not just misleading but also factually inaccurate.	<p>includes the statement... 'The intertidal area of the Gulf of Kutch is muddy and devoid of live corals'. It refers to the coastal regions of GoK contained in the study zone and may not be construed to imply to entire GoK. The statement is accordingly true presentation of project study region of GoK. This has been clarified in EIA Study report and concluded by Gujarat Coastal Zone Management Authority as below:</p> <p>"The nearest coral reef to the release site is Chandri reef is at least 10 km away to the NW of the Bet Shankhodhar. Paga reef is roughly 12 km to the NE of the release location. Model studies indicate that the SS would be close to the baseline within 1 km from the release site. Hence these reefs would not affected by the SS associated with the effluent".</p>
(vii)	The adjoining area of the discharge point i.e. Poshitra Bay is last remaining feeding ground of Critically Endangered Dugong whose western Indian population is confined to this part of Gulf of Kutch. Poshitra is also a site of endemism being Point Endemic area for <i>Sakuraeolis gujaratica</i> as well as Type Locality of recently described <i>Anteaeolidiella poshitra</i> both critically endangered molluscs.	<p>The subject proposal is aimed to improve existing effluent management system by replacement of existing open channel with closed pipeline and diffuser system. This proposal is to meet the requirements of MoEFF revised Effluent standards for Soda ash industry (S.No. 75, A. Solvay Process) under Environment (Protection) (Fourth Amendment) Rules, 2011 vide Govt. of India Gazette Notification G.S.R. 424(E) dated 1st June 2011.</p> <p>The proposal thus will have net positive impact in the region to the benefit of marine flora and fauna. The Poshitra bay is far east of the project site. It is restated that the route of the proposed pipeline is devoid of vegetation and microbenthos being unsuited for Dugong and the <i>Anteaeolidiella</i> molluscs. The impact on effluent release point too is minimal and shall dissipate within a distance of 200m to 600m. the area of open channel discharge shall benefit with no open release of effluent and would be rejuvenated to support marine flora and fauna. The pipeline would be laid on trestle having no impact on water movement in the area. Thus whatever little impact in the limited region of discharged point shall be more than compensated by the gains made in the region of present open channel as the region of open discharge will get rejuvenated over a period of time.</p>
(viii)	The Committee therefore suggests in depth assessment of marine	A detailed EIA study conducted by National Institute of Oceanography has considered

S.N	Observations of EAC	Clarification by M/s TCL
	biodiversity of the proposed region including Poshitra, Paga, Beyt Dwarka and Boria Islands and impacts of the proposed project on the same before placing for the considering for the concerned sector.	following aspects and suggested a suitable marine outfall location for release of treated waste water which is being discharged currently through open Channel: Chapter 3: Prevailing Marine Environment; Chapter 4: Proposed Effluent Disposal Scheme; Chapter 5: Potential Marine Environmental Impacts; Chapter 6: Mitigation Measures; and Chapter 7: Management of Marine Environment.

The Committee noted the clarifications provided by the project proponent. It was also noted that the proposal involves upgradation of existing treated waste water discharge system by installation of trestle mounted pipelines and diffuser system to discharge point at marine outfall point suggested by NIO. The Committee also noted that NIO had undertaken a comprehensive study on the following:

- a) prevailing environmental status of the Mithapur Bay w.r.t physical process, water quality, sediment quality and biological characteristics;
- b) suitable site and mode of release for treated effluent of 2,40,000 cum/day;
- c) conceptual design for the diffuser;
- d) assessment of adverse potential impacts of the proposed activity on the marine environment during construction and operational phases;
- e) suggest adequate mitigation measures in the form of marine environment management plan (MEMP) for minimising adverse impacts identified, if any.

On the question of impact of marine sanctuary located in the project area, arising due to discharge of treated effluent, the Committee deliberated the route of the pipeline and agreed that the suggestion of route proposed by NIO in respect of the instant proposal, at point where depth of 5 m is available, entails an increase of resultant ambient temperature at the range of 29.20°C to 30.3°C, which is less than permissible increase of 5°C from the ambient temperature (28°C). The Committee further noted that based on the model results carried out by NIO, the increase in salinity by about 1 ppt in a small area around the diffuser only and hence would not entail any adversity in marine flora and fauna in the region.

Based on the clarifications provided by the project proponent and deliberations made, the Committee recommended the proposal for CRZ clearance subject to the following specific condition:

- i) Prior approval of the Standing Committee of the National Board of Wildlife, as may be applicable, shall be obtained;
- ii) Prior approval for diversion of forest land (mangrove) as applicable shall be obtained;
- iii) A 2% of the cost of the project shall be apportioned for marine and coastal biodiversity protection and conservation measures, to be spent by the project proponent towards fulfilling its Corporate Environmental Responsibility (CER)

during the currency of the project. Proper record and account of measures taken should be maintained and should also be submitted to the CZMA every six months.

- iv) As part of CSR activity, the project proponent shall formulate schemes identified based on need based assessment and implemented in select villages in the project area in consultation with the village Panchayat and the District Administration. Separate budget for community development activities and income generating programmes shall be earmarked;
- v) The pipeline shall be laid on trestles to minimise impact on sea bed and aquatic life;
- vi) The site shall be restored to its original condition after work completion;
- vii) Storage of raw material and camp with sanitation facilities for the construction labour shall be set up beyond sanctuary limits;
- viii) Treated waste water conforming to GPCB norms shall only be discharged, it shall be ensure that regular monitoring results of the treated waste water discharge conducted by an independent agency, shall be submitted to the GPCB and the regional office of Ministry;
- ix) As committed, a comprehensive survey of the wildlife and vegetation shall be carried out at every 5 year in buffer areas and shall be submitted to MNP.
- x) Mudflat restoration plan with specific focus on waders and other waterbirds of the affected region be developed and implemented through MNP
- xi) Baseline for Marine and coastal biodiversity of Poshitra Bay should be developed and monitored bi-annually with specific focus on sea grass beds, and endemic species *Sakuraeolis gujaratica* and *Anteaeolidiella poshitra*.

2.2 Inland Waterway Terminal at Haldia, District Purbi (East), Medinipur, West Bengal by M/s Inland Waterways Authority of India - Fresh case for CRZ Clearance [F.No.11-14/2017-IA-III] reg.

The proposal is for construction of Inland Waterway Terminal at Haldia, in District Purbi (East), Medinipur, in West Bengal by Inland Waterways Authority of India. The project proponent made a presentation and provided the following information to the Committee:

- (i) The Public Investment Board on 06.03.2017 has recommended approval for the phase-I of the 'Jal Marg Vikas Project' (JMVP). The proposed project i.e construction of Inland Waterways Terminal (IWT) at Haldia is part of the JMVP and is one of the project monitored by the Prime Ministers' Office under Pragati.
- (ii) The terminal will be developed within the Industrial Zone of Haldia Dock complex and will include jetty, berth, storage sheds, roads green area, administrative building, silos and other allied facilities. The proposed Halida terminal on NW-1 will facilitate the bulk transportation of material and products through barges at lower coast and provide an opportunity for business and employment. Considering the potential of NW-1 transport mode IWAI has designed this terminal catering to the need of Halida Industrial belt. Inland water way transport is the most efficient and environment friendly mode of transportation, involving least CO2 emissions when compared to rail and road transport.

- (iii) The project to be taken up by the Inland waterways Authority of India is for increasing transportation of goods through National Waterways (NW)-1 from Haldia to Allahabad and also augment the navigational capacity of NW-2, presently up to Bangladesh, thereby reducing the cost of transport on land. The present project consists of 5 berths for handling of different cargos viz. coal, stone aggregates, fertilizers, fly ash, edible oil & POL amounting to a total capacity of 4.07 MTPA. This will be one of its first kind opening a gateway of inland water transport to the North East region of the country.
- (iv) The area where the jetties would be constructed belongs to Kolkata Port Trust having proper draught. The activity is permissible in terms of para no. 4 (i) of CRZ Notification, 2011.
- (v) Project site partially falls under CRZ-IB, CRZ II and CRZ-IVB zone.
- (vi) No mangroves or any other ecological entities are located in the project site.
- (vii) The proposed investment cost will be about Rs 517.10 crores.
- (viii) Direct employment of about 400-600 and indirect employment of about 4000-6000 are likely to be generated.
- (ix) CRZ map in scale of 1:4000 and 1:25000 covering 7 km radius of project site have been prepared by Institute of Remote Sensing, Anna University, Chennai.
- (x) The West Bengal State Coastal Zone Management Authority has recommended the project for CRZ Clearance vide their letter No. 135/EN/T-II-4/018/2015 dated 24.01.2017.
- (xi) Haldia was declared by CPCB a "Critically Polluted area (CPA's) by Advt. No. B-29012/ESS/CPA/2010. However, the moratorium has now been lifted vide MoEF office Memorandum N.J-11013/5/2010-IA dated 17.9.2013.
- (xii) The proposed terminal site from 500m-10km area around falls in Zone -IV high damage risk zone as per seismic zonal map of India and high cyclone risk zone.
- (xiii) Hoogly river passes along the southern boundary of the terminal and the Haldi river is located about 9.5 km west of the proposed terminal.
- (xiv) Environmental impacts are of low to moderate significance. Environmental impacts are anticipated both during construction and operation phase. Major impacts anticipated are dust generation, occupational health & safety hazards, water quality degradation and impact on aquatic flora. However detailed management plan is prepared for the project which comprises of mitigation measures, preventive and environmental codes of practices measures. EMP if implemented will potentially reduce the anticipated impacts due to project.

2. The Committee deliberated the issue regarding admissibility/ non admissibility of the EIA notification 2006. The Committee was also informed of a communication dated 06.03.2017 by the Infra-2 Section of IA-III Division of the Ministry, copy of which was received after the proposal has been listed and posted as an item for the instant 170th Meeting of the EAC (CRZ). The contents of the said communication was noted and it was decided that deliberation from CRZ perspective may be carried out so that further deliberations from CRZ angle can be done away at a later date unless otherwise new issue emerges. The Committee was informed that vide letter no. 14-9/2016-IA-III, the Infra-2 Section of IA-III Division of the Ministry after having obtained due approval of the Competent Authority at the level of Secretary (EFCC), had communicated to Inland Waterways Authority of India that the instant project

proposal requires prior environmental clearance under EIA Notification, 2006, as it involves capital dredging.

3. It was also informed that the issue of admissibility/ non admissibility of the EIA notification 2006 was extensively deliberated in the meeting of the Public Investment Board (PIB) held on 06.03.2017, during the discussions on the instant proposal of the Ministry of Shipping i.e. implementation of the Phase-I of the Jal Marg Vikas Project for augmentation of navigation in the Haldia-Varanasi stretch of National Waterways-1.

4. The project proponent stated that applicability of environmental clearance for IWT terminal has already been extensively discussed in the meetings of the SFC, which appraised the proposal for execution of the subproject of JMVP and also in the PIB which appraised Phase-I of JMVP. That in their view, there is no requirement of taking prior environmental clearance for cargo facilities at the proposed Haldia multimodal terminal, as is evident from the grounds given below:

- (a) There has already been a navigational channel in existence in the Ganga and Hooghly rivers since time immemorial and various types and quantities of cargo are being transported through these rivers. Government declared the Haldia-Allahabad stretch of the Ganga-Bhagirathi-Hooghly River System as National Waterway-1 in 1986; and IWAI was established in 1986 through the IWAI Act, 1985 "for the regulation and development of inland waterways for the purposes of shipping and navigation and for matters connected therewith and incidental thereto". Ever since 1986, IWAI has been regulating the shipping and navigation on NW-1 and undertaking various developmental activities such as construction of IWT terminals at strategic locations along NW- 1 (including one at Haldia) for storage, trans-shipment and handling of cargo; maintenance of the navigational channel; providing aids to navigation to facilitate smooth and safe navigation etc. As the role of IWAI was that of a regulator and facilitator, it was not required to obtain any environmental clearance for creating the infrastructure facilities.
- (b) The Hon'ble High Court of Allahabad, vide an order dated 27th July 2012 in PIL No. 31229 of 2005 (Kautilya Society and Another versus State of UP and Others), had had passed a generic direction that "the Varanasi Development Authority shall ensure that no further construction within 200 meters from highest flood level at banks of river Ganga at Varanasi is made....." In this context, IWAI and the Ministry of Shipping had filed Miscellaneous Applications in 2015 seeking exemption from the said generic order of the Hon'ble High Court before starting construction of the terminal at Ramnagar, Varanasi on the ban of river Ganga. The Division Bench of Hon'ble High Court before headed by the then Chief Justice, after hearing the written and oral submissions made, particularly the contentions that IWT terminals are neither ports nor harbours and passed on Order on 28th April 2016 permitting IWAI to construct the IWT Terminal at Varanasi without the requirement of obtaining prior environmental clearance, with the stipulation that EIA-EMP should be carried out during and after completion of construction work for the terminal. This principle should apply to construction of the multimodal terminal at Haldia also.

- (c) *The matter relating to environmental clearance for the Jal Marg Vikas Project has already been settled on the advise rendered by the Ministry of Law & Justice on a reference made by MoEF&CC. Accepting this position, MoEF&CC has already filed its Reply Affidavit dated 27th October 2016 in O.A No. 487 of 2015 in the Hon'ble National Green Tribunal (Bharat Jhujhunwala and Others v/s IWAI and Others), inter alia, stating that jetty multimodal terminal and inland waterways are not covered under the EIA Notification, 2006.*
- (d) The requirement of prior environmental clearance for the cargo handling facilities with various capacities referred to in item 7(e) of Schedule to the EIA Notification of 2006 is relevant for such facilities in ports and harbours and not with reference to IWT terminals, as IWT terminals are not ports or harbours. Hence, this is not sustainable.

5. The proponent further stated that the proposed IWT terminal at Haldia falls within the CRZ area. Therefore, application for CRZ clearance for MMT at Haldia under CRZ Notification, 2011 was duly submitted to West Bengal Coastal Zone Management Authority (WBSCZMA). The Authority has considered the application and recommended for the CRZ clearance for Haldia terminal vide letter No. 135/EN/T-II-4/018/2015 dated 24th January 2017.

6. The Committee observed that in the said meeting of the PIB held on 06.03.2017, the Ministry of Shipping (MoS) had placed before the Board, detailed justification and settled position according to them, that prior environmental clearance under the provisions of the EIA Notification, 2006, as amended from time to time, is not required for maintenance dredging of inland waterways for the purpose of navigation. That, in the said meeting, as recorded in the O.M. No. IWT-11011/89/2016-Vol.II, dated 15.03.2017 of the MoS, the representative of Ministry of Environment, Forest & Climate Change (MoEF&CC) could not respond to the points placed by the MoS before the PIB, Chairman, PIB desired that the matter may be resolved between the MoS and MoEF&CC before the JMVP proposal is submitted for consideration and approval of the Cabinet.

7. The Committee also perused the records of the notes in the above mentioned O.M of the MoS and noted that the MoS reiterates its contention that prior environmental clearance under the provisions of the EIA Notification, 2006, as amended from time to time, is not required for maintenance dredging in inland waterways for the purpose of navigation, in view of the following points to support this contention:

- (a) A navigational channel is already existing on NW-1. It is, therefore, not a case of creation and development of a new navigational channel, but it is a case of capacity augmentation and maintenance of the existing navigational channel for the purpose of smooth and safe navigation. Maintenance dredging on NW-1 is, thus, not a new activity, but it is an ongoing regular activity undertaken by IWAI, under the mandate of Clauses (c) and (e) of Section 14(1) of the Inland waterways Authority of India Act, 1985, ever since declaration of the Halida-Allahabad stretch of the Ganga-Bhagirathi-Hoogly river system as NW-1 in the year, 1986. *The stand that this activity requires prior environmental clearance at*

this stage of implementation of JMVP, therefore, amounts to giving a new dimension to the matter and is hardly sustainable. Apparently, it is for this reason that in the first meeting of the PIB held on 03.01.2017, the representative of MoEF&CC did not raise any objection from environment angle on the JMVP proposal.

- (b) The amendment to the EIA Notification, 2006 through SO No. 141(E) dated 15.01.2016 deals with the procedure relating to dredging for the purpose of mining, which is not applicable in the case of maintenance dredging in the fairway for navigation on inland waterways, in fact, the EIA Notification dated 15.01.2016, while describing the procedure for clearance required for mining, very categorically states in Appendix IX that "Dredging and de-silting of dams, reservoirs, weirs, barrages, river and canals for the purpose of their maintenance, upkeep and disaster management" shall not require prior environmental clearance. Further, in the section on "Desilting of Reservoirs/Barrages/Annecuts/Lakes/Canals" in the Sustainable Sand Mining Management Guidelines, 2016 issued by the MoEF&CC, the following two categorical provisions exist:
- i) "The de-silting of reservoir, dredging for upkeep and maintenance of structures, channels and averting natural disasters will not be treated as mining for the purpose of environmental clearance"
 - ii) "For navigation purposes, the river reaches in the water ways path may be dredged to have a minimum depth of water.
- (c) That the matter regarding requirement of environmental clearance for JMVP has already been settled on the advice tendered by the Ministry of Law & Justice on a reference made by MoEF&CC. Accepting this position, MoEF&CC had also filed its Reply Affidavit dated 27.10.2016 in OA No. 487 of 2015 in the Hon'ble National Green Tribunal (Bharat Jhunjhunwala and Others v/s IWAI and Others), inter-alia, stating that jetty, multimodal terminal inland waterways are not covered under the EIA Notification, 2016.
- (d) There appears to be some element of confusion with regard to the scope of the term 'dredging', which might have led the MoEF&CC to take a view different from the letter and spirit of the EIA Notification of 2006. There are two types of dredging viz. capital dredging and maintenance dredging. *Capital dredging is a listed activity in the Schedule to the EIA Notification, 2006 as amended in 2009 for taking prior environmental clearance, while maintenance dredging is not a listed activity for this requirement. While the term 'capital dredging' is not defined in the EIA Notification, 2006 and its subsequent amendments, the amended Notification SO No. 141 (E) dated 15.01.2016 clearly defines the meaning of 'maintenance dredging' as "Dredging and de-silting of dams, reservoirs, weirs, barrages, river, and canals for the purpose of their maintenance, upkeep and disaster management."*
- (e) As per the Detailed Feasibility Report prepared for Jal Marg Vikas Project (JMVP), the mean sediment load in the Ganga is 524 mt/year, of which 20% moves as bedload and the balance 80% moves in suspension. The targeted depth of the dredging work associated with Phase-I of JMVP is only up to 3.0 meters and this can be achieved through maintenance dredging of the bed load without

impacting the natural bed of the river, wherever required to achieve this depth. The EIA reports submitted by the ESIA Consultants have also not recommended prior environmental clearance for this activity, as it has no discernible adverse environmental impacts.

- (f) Extensive maintenance dredging is going on in the Jhelum River in J&K, obviously because requirement of environmental clearance is not applicable in the case of maintenance dredging in inland waterways and convey the same urgently to Ministry of Shipping for incorporation in the Note for the Cabinet on implementation of Phase-I of JMVP, as recommended by the PIB.

8. *Perusal of the provisions of EIA notification, 2006, the Committee noted that 'maintenance dredging' is exempted from the provisions of EIA Notification, 2006 provided it form part of the original proposal for which environmental clearance was accorded and Environmental Management Plan has been prepared. That in the instant case that may not be the case so. The Committee deliberated the details of the contention placed before it on the applicability or otherwise of the EIA notification, 2006 and observed that from records produced and noted above, it appears that decision to assess whether the project attract the provision of EIA notification, 2006 may be incomplete. The Committee however decided that these are matter of administrative issues and therefore the Ministry may like to take a decision on the same. That in so far as the CRZ angle is concerned the project entails CRZ implications, manageable through adequate and appropriate mitigation measures. In addition, the Committee observed that as development is to take place through augmentation of an existing system, the impact due to the present proposal when seen in isolation may be only marginal and with appropriate mitigation measures can be annulled.*

9. In view of the above, the Committee decide that the project has been examined purely from CRZ angle and agreed that in so far CRZ issues are concerns the project may be recommended for CRZ clearance subject to the following conditions:

- (i) The project shall be implemented such that the Government of India's mission on Clean Ganga is implemented in letter and spirit and such that the project is a show case as role model for Inland Water Transport.
- (ii) The project proponent shall take necessary directives from National Ganga River Basin Authority before execution of the project.
- (iii) The project proponent shall commission a study on Gangetic Dolphin habitats and formulate road map for its conservation with a time bound manner not exceeding two years.
- (iv) Mudflat (adjoining and in the near vicinity of the project areas) restoration plan shall be developed with specific focus on waders and other migratory species. Non-vegetated mudflats must be maintained as it is and no mangrove afforestation should be undertaken on the same.
- (v) A robust scientific study on data of fish fauna available in the Ganges shall be carried out from an institute of national repute and report submitted within one year to the Regional Office of the Ministry and the Ganga Basin Authority.
- (vi) The project proponent shall ensure that implementation of the Oil Spill Contingency Plan is regularly monitored and observations documented and submitted to the concerned authority.

- (vii) Surface water contamination shall be monitored periodically in order to prevent contamination of run-off water getting mixed of contaminated run-off with river. The monitoring results shall be submitted periodically to the State Pollution Control Board and the regional office of the Ministry.
- (viii) In order to ensure that the fishing community are not disturbed during their course of fishing activity, the project proponent shall ensure that barge movement shall be restricted to channel area only and the speed of barges regulated.
- (ix) The project proponent shall provide arrangement for Fish Drying beds with prior consultation with the fishing community. In addition, the project proponent shall ensure rehabilitation and resettlement of the fishermen communities in the event the project impacts existing livelihood pattern of these communities.
- (x) There shall be no disposal of solid or liquid wastes on the coastal area. Solid waste management shall be as per Solid Wastes Management Rules, 2016. A team comprising of members of the WBCZMA and others with expertise in the subject may visit the project site periodically during the construction phase to supervise and suggest additional measures if desired.
- (xi) Status of implementation of the specific and general conditions prescribed in the recommendations made by the West Bengal Coastal Zone Management Authority shall be submitted to all concerned agencies including regional office of the Ministry of Environment, Forest and Climate Change.
- (xii) A 2% of the cost of the project shall be apportioned for marine and coastal biodiversity protection and conservation measures, to be spent by the project proponent towards fulfilling its Corporate Environmental Responsibility (CER) during the currency of the project. Proper record and account of measures taken should be maintained and should also be submitted to the CZMA every six months.

2.3 Establishment of Sea Front Facilities with sea water Collection System, Ramanji & Vagarau near District Nellore, Andhra Pradesh by National Institute of Ocean Technology - CRZ Clearance [F.No.11-17/2017-IA-III] reg.

The proposal is for establishment of Sea Front Facilities with sea water Collection System, in Ramanji & Vagarau near District Nellore, Andhra Pradesh by National Institute of Ocean Technology. The project proponent made a presentation and provided the following information to the Committee:

- (i) The project proposal is aimed at creating a world class seafront research facility to carry out ocean related research activities and will be located at Ramanji & Vagarau near District Nellore, Andhra Pradesh. The GPS location of the project is N 14003'30" and E 80008'90".
- (ii) The cost of the project will be Rs 772 crores.
- (iii) The components of establishment of New Sea Front Facilities included: (i) numerical tank facility; (ii) Ballast water treatment technologies; (iii) multispecies marine fish hatchery; (iv) pilot scale mass cultivation of marine microalgae in HDPE lined raceway ponds for lutein and CGF production; (v) administrative block, estate section, guest house, canteen, security block, utility building, compound wall, road & external/internal services, pipeline trestle for seawater intake (vi) R.O plant of capacity 100 cm/day.

- (iv) It will be connect with Gudur railway station (44 km); Tirupati Airport (103 km); and Vakadu town (21 km).
- (v) The project falls under CRZ-IB and CRZ-III of the CRZ Notification, 2011.
- (vi) Mangroves are observed at the confluence of Suvarnmukhi river with the sea and all along the course of Buckingham canal in the project area.
- (vii) The total plot area is 394042.8 sqm, FSI area is 0.24 and total construction area of 96500 sqm. The project will comprise of laboratory buildings. Maximum height of the building will be 15m.
- (viii) Parking facility for 2000Sqm four wheelers and 100Sqm two wheelers is proposed to be provided against the requirement of 100 numbers and 300 numbers respectively (according to local norms).
- (ix) During operational phase, total water demand of the project is expected to be 100m³/day and the same will be met by the Reverse Osmosis Plant Recycled Water. Wastewater generated (60m³/day KLD) uses will be treated in Remineralisation facilities and settlement tank STPs of total 60m³/day KLD capacity. Entire KLD of treated wastewater will be recycled (partly for flushing, partly for gardening). About Zero KLD will be disposed in to municipal drain.
- (x) The brine water flow rate will be approximately 14 cum per hour with a recovery of 30 %. The TDS of feed water is 28000-30000 ppm and the TDS of brine is about 40000 ppm.
- (xi) Tidal hydrodynamic and brine dispersion study, which includes advection-dispersion studies using numerical modelling and computational fluid dynamics (CFD) approaches has been carried out based on seawater average salinity range considered as 33 ppt and outfall to be located at 4.0-4.5 m water depth, with the proposed outfall configuration providing a dilution of 2200 with few meters of outfall point.
- (xii) About 0.11 TPD solid water will be generated during development of the project, out of which the biodegradable waste (0.077 TPD) will be processed in OWC and the non-biodegradable waste generated (0.033 TPD) will be handed over to authorized local vendor.
- (xiii) The total power requirement during construction phase is 60 KVA and will be met from Andhra Pradesh southern power Distribution Company Ltd and total power requirement during cooperation phase is 900 KVA and will be met from Andhra Pradesh southern power Distribution Company Ltd.
- (xiv) Rooftop rainwater of buildings will be collected in centralized RWH tanks of total 8 KLD capacities for harvesting after filtration.
- (xv) The proposal has been appraised by State Coastal Zone Management Authority and recommended for CRZ clearance on 17.10.2016 subject to few conditions.

2. The project proponent also informed that there are no rare, endangered, threatened species recorded during survey. Biodiversity part of EIA few errors such as *Gekko gecko* a species of gecko also known as Tokay gecko is only found in Northeast India. *Hyla arborea* (European Tree Frog) is not found in India. However, for maintenance of quality of aquatic ecology of the project area, critical locations and designated monitoring sites will be carefully selected for periodic monitoring with respect to water, sediment, flora and fauna during construction and operation phase.

3. The Committee deliberated the impact of R.O Plant on the marine biodiversity and observed that for a discharge of 14 cum/hr the implications on the marine biodiversity may be insignificant considering the result of the study carried out and presented before the Committee. *The Committee was however of the view that submarine pipeline system shall be adopted and not over ground pipeline system as proposed by the project proponent. The Committee also suggested that the project proponent shall carry out a long time scale study on shoreline erosion in the region and submit the report to the regional office of the Ministry on an annual basis.*

4. Based on the clarifications provided by the project proponent and deliberations made, the Committee recommended the proposal for CRZ clearance subject to the following specific condition:

- (i) The conditions stipulated by APCZMA specifying that: (a) the proponent shall submit the comprehensive report specially for marine part with special emphasis on beach morphology and impact on sand dunes due to laying of pipelines; and (b) the project proponent shall submit a first hand baselines data on marine biodiversity with special focus on sea turtles and it's nesting within one year from the receipt of CRZ clearance especially in light that Nellore Olive Ridley Turtle Nesting Site is not very far from the proposed project site.
- (ii) Regular monitoring of the health of the aquatic ecosystem of the project area during construction activity will be followed.
- (iii) The project proponent shall ensure that submarine pipeline system is adopted and not over ground pipeline system as proposed.
- (iv) A long time scale study on shoreline erosion is carried for the region and report submitted annually to the regional office of the Ministry.
- (v) Periodic monitoring with respect to water, sediment, flora and fauna shall be carried out during the construction and operational phase.

2.4 Establishment of new Lighthouse at Tadachakond (Anjarle) near Kelashi, District Ratnagiri, Maharashtra by Directorate of Lighthouses and Lightships, Mumbai – Consideration for CRZ Clearance [F.No.11-13/2017-IA-III] reg.

The proposal is for setting up of a new Lighthouse at Tadachakond (Anjarle) near Kelshi, District Ratnagiri, Maharashtra by the Directorate of Lighthouses and Lightships, Mumbai. The project proponent made a presentation and provided the following information:

- a) The project proposal is aimed at ensuring safe and secured navigation in Indian waters, with this aim setting up of new Lighthouse at Tadachokond (Anjarle), near Keshi, Tal, Dapoli, Dist. Ratnagiri by Directorate of Lighthouse & Lightships, Mumbai.
- b) Proposed lighthouse will provide safety to local fisherman community during day & night time in mid sea, and will also facilitate seamless visual coverage for aids to navigation for maritime safety. The lighthouse has become an urgent necessity

due to increase in shipping traffic. It will fulfil required International standards for navigational safety.

- c) It is proposed to establish a 30 m high new lighthouse tower having luminous range of 20 NM on 1 ha land bearing Survey No. 30/1 at Tadachakond (Anjarle) near Kelshi to cover the existing 85 km gap between Nanwell Point Light House in Raigad District and Tolleshwar Lighthouse in Ratnagiri District.
- d) Total area for the project is 10,000 Sq.m (approachable by motorable road) and the area has been selected after detailed site survey.
- e) The GPS location of the project is N 17° 05' 40" and E 73° 04' 00".
- f) CRZ map in scale of 1:4000 of project site has been prepared by Institute of Remote Sensing, Anna University, Chennai.
- g) The land falls within the radius of 500 meter from sea shore and hence falls in CRZ-III.
- h) Segregation of wastes at source will be adopted while also ensuring that any hazardous wastes (e.g. used oils, lead-acid batteries) are securely stored transferred to appropriate facilities. It will also be ensured that all wastes are properly contained, labelled and disposed of in accordance with National/local regulations; and an inventory shall identify the consumption of products/material, ensuring wastes traceability, and identifying potential wastage and overconsumption.
- i) The proposal has been recommended for CRZ Clearance by the MCZMA on 14.02.2017.
- j) No ground water extraction will be carried out. Water required will be sourced from local authority and rain water harvesting system.
- k) Costs of the project will be Rs 3.62 crores.
- l) The ecologically sensitive area like mangroves, sand dune and turtle breeding sites are not in the vicinity of the proposed site.
- m) The major portion of the proposed light house site is within 200m buffer of the HTL and it is falling on CRZ III.
- n) Landuse map of 7.0 km radius around the project site has been prepared at 1:25,000 scale, with the proposed lighthouse site boundary superimposed on the landuse map.

2. The Committee noted that the project neither entails any significant disturbance in terms of CRZ angle, nor does it involve activities that could alter the CRZ status of the area. The Committee also observed that the proposal is in the interest of life safety of fishing and shipping sector. *Based on the presentation made by the project proponent and deliberations made, the Committee therefore recommended the proposal for CRZ clearance.*

2.5 Laying of onshore Treated Waste Water Disposal Pipeline of 60 MLD Capacity from existing lagoons at Sarod upto disposal point in Gulf of Khambhat at District Bharuch, Gujarat by M/s Vadodara Enviro Channel Ltd.(VECL) – Consideration for CRZ Clearance [F.No.11-9/2017-IA-III] reg.

The proposal is for laying of onshore Treated Waste Water Disposal Pipeline of 60 MLD Capacity from existing lagoons at Sarod upto disposal point in Gulf of Khambhat, in District Bharuch, Gujarat by M/s Vadodara Enviro Channel Ltd. (VECL).

The project proponent made a presentation and provided the following information to the Committee:

- a) Treated Wastewater Disposal pipeline project upto deep sea will result in scientifically designed diffuser system through which the waste waters will be diffused in order to attain sufficient dilution and dispersion effect, thereby improving the environment at large in the estuary portion of river Mahi.
- ii) Based on the reconnaissance survey and detailed alternatives evaluation, an alignment route was selected for pipeline laying upto the disposal point. Pumping Station will be constructed from the downstream of existing lagoons near Sarod, comprising of: Segment 1 - Onshore line: Along Shoreline (Intertidal Zone) starting from pumping station at Sarod to Landfall point (Length ~ 8.5 Kms); Segment 2 - Offshore line: Further Sub-tidal from land fall point to final disposal (Outfall) point (Length ~ 6.2 Kms).
- iii) The GPS location of the site for disposal of treated effluent is at Latitude 22°14'30"N and Longitude 72°35'36"E.
- iv) CRZ map in scale of 1:4000 and covering 7.0 km radius of project site have been prepared by Institute of Remote Sensing, Anna University, Chennai.
- v) The effluent discharge pipelines will pass through CRZ-I(B), CRZ-III, and CRZ-IV (B) areas.
- vi) The proposed pipeline alignment along the sea coast falls in seismic zone III (Moderate Damage Risk Zone), submerged during high tide and tidal surge.
- vii) There are no mangroves in the entire stretch of the pipeline laying activity. There are also no eco sensitive areas in entire pipeline route.
- viii) Treated wastewaters will be diffused through a scientifically designed diffuser system into deep marine waters as per NIO recommendations and will not be disposed in the estuary / creek portion.
- ix) The entire stretch of the estuary and marine environment will have a positive impact on the marine aquatic life, flora, fauna all along the shoreline of Mahi estuary and also in Gulf of Cambay.
- x) The total cost of the proposed project will be about Rs 115.0 Crores.

2. The Committee was informed of a representation received on the project from an NGO. The issues submitted being as follows:

- a). As per the Google Earth imagery dated 09.12.2015 the proposed outfall point falls on the mudflats. As you are aware, mudflats are categorized under CRZ IA as per the CRZ Notification, 2011, and cannot be used for discharge or dumping of effluents.
- b). The project proponent has proposed to set up pumping station next to the existing lagoons. The EIA states that "In the Pumping Station area other ancillary buildings proposed are as follows: 11 KV Switchyard, Transformer Yard, Administrative Office, PCC cum Breaker Room, MCC Room covering PCC, MCC, Control Panel and Battery Room etc. and DG Set Area Store Room". The project proponent has not stated in any of the documents what is the additional area required for the proposed construction of pumping station. In addition, the pumping station is proposed to be located on agricultural land.

- c). As mentioned in the EIA report there are many fishing villages located around the project site. Before laying the pipeline, the fishing communities should be consulted to avoid blocking of the fishermen's navigation channel.
- d). The pipeline should not be located in the area used for traditional fishing activities, or in areas that are rich in biodiversity.
- e). The project proponent should install a flow meter system to monitor/ measure the volume of effluents released from the lagoon into the Gulf of Khambhat.
- f). The dilution factor required for the release of effluents should be achieved at low tide time. The project proponent should regularly monitor all the parameters before releasing the effluent in to the Gulf of Khambhat. These parameters should be shared on line at electronic display boards that should be installed at the offices of the fisher folk Societies.
- g). A mechanism should be set up to monitor if the pipeline has been ruptured, or damaged and the same should be regularly monitored.
- h). The EIA report states that the trees will be cut during the construction phase. The project proponent has not stated which tree species will be cut. No details for compensatory afforestation for the same have been provided.
- i). The EIA report states eight locations where mangrove patches were observed in the study area of the proposed pipeline. It is stated that the mangroves are in the regeneration phase. The project proponent should ensure that the tidal flow to the mangroves is not blocked even partially by the proposed pipeline. The blocking of the flow would lead to the death of the mangroves.
- j). The project proponent should also upload the compliance reports of the existing pipelines, effluents for which are released at J Point – Mahi estuary.
- k). The results of the groundwater analysis conducted as part of the EIA report [October-December 2013] states that, 'TDS, Electrical Conductivity and Chlorides are found high at Kavi and Kovali. Total Hardness observed high at Sarod, Kavi, Kangam, Dehgam and Kovali. Magnesium is found above the permissible limit at Sarod, Nahar, Kovali and Gulal village'. And for the surface water analysis the report states, 'Turbidity is high at Kavi pond. Total hardness exceeds desirable limits at Sarod pond. Iron concentration is found to be high in Kavi and Dehgam pond. Total Coliform and faecal coliform observed higher than the desirable and permissible limits at all locations may be due to anthropogenic sources like animal washing, bathing and washing of clothes'. The project proponent should undertake periodic monitoring so that the proposed pipeline does not further impact the quality of water in the areas.
- l). The EIA Report states, 'Benefits due to disposal of wastewater in deep sea will reduce the pollution in river Mahi'. The project proponent has failed to take into consideration that the release of effluents will impact the biodiversity of Mahi estuary.
- m). The Mahi estuary has already been impacted by the effluents released from the industries in Vadodara. The proposed outfall point is located in the Gulf of Khambhat, which is well known for its marine biodiversity. Regular monitoring should be undertaken to know the impacts of the effluents on the biodiversity of Gulf of Khambhat and Mahi estuary.

3. The Committee noted that GPCB vide their letter no.35538 dated 16th December, 2009, CCA order have directed VECL to make arrangement for deep sea

disposal of treated waste water by tamper proof pipeline system (Point no. 9 in specific conditions). The point has also referred to in present consent conditions (point no 11, consent no. 66975). That M/s VECL shall have make arrangement to go at deeper sea by tamper proof pipeline system as it is observed & advised by NIO & NEERI. And that progress report shall be submitted to the board quarterly. The Committee also noted the observations of NIO as follows:

- The treated waste water, 60 MLD discharged from member units of VECL should be released in the estuarine waters of Mahi River, using a 6 port diffuser.
- The diffuser should be aligned perpendicular to the coastline.
- Angle of the port should be 15 degree aligned downstream; each port should be separated by 4 m.

4. The Committee after intensive discussions noted that the proposed effluent discharge system consists of collection of effluents from two Common Effluent Treatment Plants and individual waste water treatment plants in and around Vadodara. The Committee also noted that the proposal should necessary require setting up a Final Effluent treatment Plant (FETP) for which there is no proposal at hand. The project proponent also stated that they are not agreeable to the specific condition of setting up of FETP as stipulated by GCZMA. The Committee observed that under such circumstance the project would require Environment Clearance under the provisions of EIA Notification, 2006. *The Committee felt that the project proposal is in its present form incomplete and pre-mature for consideration, both under CRZ Notification, 2011, and EIA Notification, 2006,. The proposal was therefore dropped.*

2.6 Proposed Project for laying of treated effluent disposal pipeline at District Junagarh, Gujarat by M/s Gadre Marine Export Private Limited - Consideration for CRZ Clearance [F.No.11-26/2016-IA-III] reg.

The proposal of M/s Gadre Marine Export Private Limited was earlier placed in the 162nd meeting held during 29-30 August, 2016, but was deferred as the project proponent was unable to attend the meeting and had requested for deferment. The proposal was placed for consideration in the instant meeting. The proposal is for laying of treated effluent disposal pipeline in village Chorwad, in district Junagarh, in Gujarat.

2. The project proponent made a presentation and provided the following information:

- (i) The proposed project entails laying of conveyance of treated effluent through a pipeline laid on the sea floor and discharged into the open sea at the appropriate location. The source of effluent is from the processing units of frozen crab stick as well as frozen fish paste (Surimi) and of fish protein powder from fish waste.
- (ii) The project would lead to employment of additional 250 local people (fisherman).
- (iii) The total cost of the proposed project will be about Rs 10.75 Crores (including cost of pipeline & expansion of unit).

- (iv) The fish processing plant is located at 588 m on landward from CRZ boundary of 500m. The project area falls in CRZ IB, III, IV A and IVB area.
- (v) The outfall point of discharge will be at Latitude 20°59'11.98" and Longitude 70°13'48.24". The length of the outfall pipe will be 1325 m and would terminate at 13 m water depth. The outfall will have multiple port diffuser arrangement system with 4 number of ports of each 100 mm outer diameter.
- (vi) CRZ map (1:4,000 scale) with demarcation of HTL, LTL has been prepared.
- (vii) There are no mangroves or corals or sea grass or any other ecological sensitive areas around.
- (viii) The total quantity of effluent will be 2 MLD (8.33 m³/hour) [0.78 MLD + 1.22 MLD].
- (ix) The length of the outfall pipeline along its route is 1325 m.
- (x) The water depth at location of outfall will be 13.0 m with respect to CD. The outfall diffuser is designed with 4 nos. X 100 mm dia. Ports.
- (xi) The proposed water requirement will be 1020 KL/day, and total waste water quantity is 1800 KL/Day and treatment capacity will be 2400 KL/Day.
- (xii) The quality of effluent shall be maintained as per the norms of GPCB. If any significant impact on the ecology of sea is observed, the treatment of effluent would be enhanced.
- (xiii) The ecology of sea would be maintained by conducting periodic monitoring.

2. The Committee noted that the project entails expansion of the fish processing unit, and the issue of requirement of Environmental Clearance for expansion of the unit under the provisions of EIA Notification, 2006 has not been flagged by the project proponent. The Committee also noted that the resultant effluent volume after the expansion of fish processing unit will be 2.0 MLD, whereas, before expansion the effluent discharge volume is 0.78 MLD. It was also noted that the discharge is presently being treated and discharged through open channel. Whereas, after the expansion, it will be discharged through the proposed pipeline after treatment.

The Committee observed that laying and construction of effluent outfall with diffuser port will have marginal impact on seawater, marine ecology land use and community. The magnitude of the adverse impact appears to be low and the proposed project may be beneficial to the economy of the region. The impact due to construction of marine outfall and the effluent discharge in sea water were also deliberated in detail and it was agreed that even though there may be marginal impact initially to the sea bottom and benthic community, the long term effect may be highly insignificant. It was also observed that in general, the impact of the effluent discharge on the marine fishes may be disturbing the breeding habitat, but, in the present scenario, the quality of the effluent is confined to the norms of GPCB, also it attains ample dilution in shorter distance and hence the impact will be minimum.

The Committee also observed that the baseline data collected from the project region and the review of the available information indicates that the water quality parameters are within the acceptable limits for the coastal waters. The water quality of the effluent discharge into the sea is within the standards stipulated by the Gujarat Pollution Control Board. That the water at open sea, and mouth region are well mixed, remain clean and free from any pollution.

The Committee further noted that the entire effluent will be treated in the same existing Effluent Treatment Plan (ETP) with little modification to meet the norms stipulated by the Gujarat Pollution Control Board. It was also observed that as per Marine EIA Report a total length of 2825m of pipeline (HDPE pipeline) having 250 mm diameter has been suggested, out of which 1500 m pipeline would be laid on land and remaining 1325 m pipeline would be laid into sea upto the point suggested by the consultant viz. Indomer Coastal Hydraulics (P) Ltd. It was further stated that the fishing activities take place at 2km-10km offshore but there are no fishing activities within 1500 m from the shore. Accordingly, the location for the outfall diffuser was proposed, where there is a rocky bed.

The Committee therefore decide that the present proposal has been examined purely from CRZ angle and decided that in so far as CRZ issues are concerns, the project may be recommended for CRZ clearance subject to the following conditions:

- (i) Periodic monitoring of effluent discharge would be carried out to evaluate any change in waste water quality, sediment quantity and biological characteristics. Accordingly, the project proponent shall set up three effluent discharge monitoring points in the sea viz. one station within 100 m from the proposed outfall; and two stations at 1000 m on either side of the outfall point.
- (ii) Effluent not meeting with the CPCB/GPCB norms shall not be discharged and shall be stored in Guard Ponds and recycled back into the effluent Treatment Plant for further treatment to achieve the norms. Necessary facilities for this purpose shall be set up.
- (iii) The pipeline shall be monitored regularly for leakages and ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall immediately stop disposal through the said pipeline and take the corrective measures in consultation with the GPCB and the District Collector.
- (iv) It shall be ensured that there are no blockages to the creek/river/sandy shores due to laying of pipeline and free flow of water shall be maintained.
- (v) The outfall diffuser shall be located a 1325m distance offshore along the outfall route at 13m water depth, with diffusers 4 X 100 mm diameter parts inclined at horizontal. The outfall diffuser shall not have any sharp projection to avoid hurdles to the boats and fisherman moving around this region. The diffuser ports shall be placed on the seabed and the top of the ports shall remain well below the water sea surface.
- (vi) Marker buoys shall be placed closed to the outfall to help boats avoid collusion while crossing.
- (vii) Chorwad and adjoining areas have some excellent inter-tidal areas. The project proponent will develop baseline inventory of marine and coastal biodiversity of inter-tidal region of Chorwad and will develop conservation plan for the same. Adequate financial provision for the same be made in the project budget.
- (viii) A 2% of the cost of the project shall be apportioned for marine and coastal biodiversity protection and conservation measures, to be spent by the project proponent towards fulfilling its Corporate Environmental Responsibility (CER) during the currency of the project. Proper record and account of measures

taken should be maintained and should also be submitted to the CZMA every six months.

2.7 Project proposal for laying of natural gas Tie-In pipeline from Jaigarh to Dabhol, in District Ratnagiri, Maharashtra by M/s H. Energy Gateway Private Limited – Consideration for CRZ Clearance [F.No.11-16/2017-IA-III] reg.

The project proposal of M/s H-Energy Gateway Private Ltd is for laying 56 Km of Natural Gas Pipeline from Jaigarh to Dabhol from LNG Gateway Terminal at JSW Jaigarh Port.

2. The project proponent made a presentation and provided the following information:

- (i) The proposed project is laying of 56 Km underground cross country pipeline from Jaigarh to Dabhol to facilitate transportation of regasified LNG. The pipeline route passes through two Talukas, namely Ratnagiri and Guhagar in Ratnagiri District in Maharashtra State.
- (ii) The route is proposed to cross Shastri River (a tidal influenced river). The pipeline route does not exist within 10 km radius of any natural park, sanctuary and ecological sensitive zone therefore environmental clearance is not required as per EIA notification, 2006.
- (iii) The proposed pipeline (30 inch dia.) including CS conduit for OFC will use the trenchless technology like Horizontal Directional Drilling (HDD) to cross the Shastri River, in order to avoid disturbances to the river bed and mangroves.
- (iv) Appropriate disposal mechanism of bentonite and mud generated will be undertaken.
- (v) The pipewall thickness will be in the range of 14.27 – 19.05 mm and will have external 3 LPE coating and cathodic protection. The design pressure will be 117 kg/cm²g and operating MAOP will be 115 kg/cm²g, with operating life of 40 years.
- (vi) The depth of pipeline will be minimum 1.0 - 2.5 m (typical cover for different location along the Pipeline as per PNGRB and OISD standards), minimum 7.0 m below the scour level for Shastri River crossing (meeting the Maharashtra Maritime Board requirement).
- (vii) It is proposed to install 3 SV stations along the pipeline to facilitate maintenance of system and to allow speedy isolation in the event of damage. Leak and corrosion detection system will be installed.
- (viii) It is proposed to set up an LNG Re-Gasification terminal with a base capacity of 8 MMTPA, and will be located at approximately 330 km South of Mumbai on the West Coast of Maharashtra. As an early start plan, it is contemplated to start a facility utilizing Floating Storage Re-gasification Unit (FSRU) with a capacity of 4 MMTPA.
- (ix) LNG from potential suppliers, will be received, unloaded, stored and re-gasified. The re-gasified LNG from Jaigarh will be delivered to GAIL's Gas trunk pipeline (at Dabhol) through a 56 km cross country Pipeline which will act as Tie-In Line for further distribution to potential gas consumers.

- (x) H-Energy Gateway Private Ltd. (HEGPL) has been authorized by Petroleum and Natural Gas Regulatory Board (PNGRB), Government of India, to Lay, Build, Operate and Expand this Tie-In connectivity vide letter no. Infra/PL/TIC-JD/H-Energy/01/15 dated 18th May 2015 with completion date of 30th June 2018.
- (xi) CRZ mapping was done by Anna University. As per CRZ mapping, proposed pipeline will pass through CRZ I (1028.33m), CRZ – III (520.07m) and CRZ – IVB (321.06m) zones. Hence, a total 1.86 km length of pipeline is proposed to pass through CRZ areas.
- (xii) MCZMA has recommended the project in its 114th CRZ meeting held on 2nd and 3rd November 2016.
- (xiii) The proposed pipeline will not pass through any wildlife sanctuary, national park, coral reefs and any ecologically sensitive areas.
- (xiv) Cost of the project will be Rs. 400 Crores.
- (xv) The project will after completion will provide clean and cheaper fuel to domestic and industrial customers and will aid in providing sustainable economic growth to the State of Maharashtra.

3. The Committee deliberated the proposal and observed that permission from Maharashtra Maritime Board has been obtained on 02.01.2016 and MCZMA has recommended the proposal for CRZ Clearance vide its letter no. CRZ-2016/CR-245/TC-4, dated 07.02.2017.

4. The Committee noted that *Xylocarpus granatum*, a rare mangrove specie is available in and around the region and therefore as a matter of abundant precaution, the project proponent shall ensure that the depth of pipeline shall be at minimum 10 m depth especially where it is passing beneath mangrove areas.

5. The Committee was also informed of a representation received from an NGO. The Committee deliberated the contents of the representation and the clarification provided by the project proponent as under:

S.N	Objections/Representations	Clarification by M/s H-Energy
1.	The proposed pipeline will pass through the mangroves present along the banks of the Shastri River. The CRZ Map uploaded on MoEF&CC website shows that the proposed pipeline will pass through mangroves and the mangroves 50m buffer zone. Though the project proponent has stated that Horizontal Directional Drilling technique will be used in the section traversing Shastri River, the depth stated in the documents to lay the pipelines is not adequate to protect the mangroves.	In the "Form 1 for seeking clearance for project attracting CRZ notification" submitted by H Energy Gateway Pvt Ltd. along with our application to MOEF&CC vide letter HEGPL/MOEF/MCZMA/JDPL/03/01, dated 8 th March, 2017, we have stated the following at Sl.No. 1.1 and 1.2: a) Pipeline would be laid across Shastri by HDD (Horizontal Directional Drill) methodology with minimum 7 m cover below the scour level. b) The proposed pipeline passes through following three CRZ Zones: <ul style="list-style-type: none"> • CRZ IA due to presence of mangrove along the bank of Shastri River. • CRZ III

		<ul style="list-style-type: none"> • CRZ IVB <p>However, mangroves and river bank will not be disturbed because pipeline will be laid underground using the trenchless method such as HSS etc</p> <p>H-Energy confirms that the proposed pipeline depth is considered to be adequate to protect the mangroves as the Pipeline would be at approximately 19.00 meters below the highest flood level/15 meters below the mean sea level.</p>
2.	<p>Excerpts from the EIA report at page no. 111 states, '<i>The Pipeline shall be put below the river bed (about 3 m below the bed level) from nearly 80-90 m from the banks at either sides, hence there will be no significant impact on the mangroves, water quality as well as the fauna of the river ecosystem during the construction activities</i>'.</p> <p>The pipeline should be laid at a depth of 10 meters below the mangroves without cutting and/or disturbing the mangroves so that the pipeline does not touch the roots of the mangroves. Similar HDD technique (of laying the pipeline at depth of 10 meters) was undertaken by various industries. Some of which are:-</p> <ul style="list-style-type: none"> • Reliance Gas Pipeline Ltd. For the Dahej-Nagothane Ethane Pipeline (DNEPL). The proposed project crosses Amba river which has mangroves on both the banks. Apart from this, the applicant had undertaken to lay the pipeline 785 meters keeping the entry and exit point of HDD much farther from the mangroves. Order dated 06.05.2016 in the Notice of Motion (L) No. 214 of 2016 in PIL No. 87 of 2006 has been annexed for reference. • Bharat Petroleum Corporation Ltd. For Mumbai Manmad Pipeline Re-routing project 	<p>As dedicated out above in answer to 1st query pipeline would be laid across Shastri by trenchless technology like HDD (Horizontal Directional Drill) methodology with minimum 7 m cover below the scour level. The scour depth level is 12.5 meters (approximately) below the High Flood level of river at the proposed HDD location. Pipeline would laid at about 19.00 meters from the highest flood level/15 meters below the mean sea level. Also the length of the pipeline crossing would be around 1000 meters, such that the entry and exit point need to be located well away from mangroves. <i>Hence it is confirmed that the proposed Pipeline would be laid at an adequate length and depth below the mangroves without cutting and/or disturbing the mangroves so that the pipelines will not touch the roots of the mangroves.</i></p>

	<p>passing through the Vashi Creek and Kashali Creek at Kalyan.</p> <ul style="list-style-type: none"> Hindustan Petroleum Corporation Ltd. For the LPG Pipeline crossing Karanja Creek in Ghasakoshi village (Uran Tehsil) and Patalganga river in Kharpada village (Pen Tehsil) 	
3.	<p>An undertaking should be submitted by the project proponent stating that no mangroves will be cut or destructed by the proposed pipeline project.</p>	<p>"From 1 for seeking clearance for project attracting CRZ notification" submitted by H Energy Gateway Pvt. Ltd along with our application to MOEF&CC vide letter HEGPL/MOEF/MCZMA/JDPL/03/01 dated 8th March, 2017 we have stated the following at Sl.No. 1.2:-</p> <p>Mangroves and river bank will not be disturbed because pipeline will be laid underground using the trenchless method such as HDD etc. <i>Once again we submit herewith that no mangroves will be cut or disturbed by the proposed pipeline project.</i></p>
4.	<p>From the minutes of the 114th MCZMA Meeting held on 2nd and 3rd November 2016, wherein the proposed project was recommended to MoEF&CC, following conditions were laid by the authority-</p> <ol style="list-style-type: none"> Proposed laying of natural gas pipeline should be as per the provisions of CRZ Notification, 2011 (amended from time to time) Leak and corrosion detection programs for the gas pipeline should be undertaken. PP to implement the Environment Management Plan while implementation and operation phase of the project. PP to ensure that proper disaster management plans is in place for the proposed. PP to ensure that piers in creeks should not disturb the tidal flow of creek water. 	<p>The pipeline shall be laid down as per the provisions of CRZ Notification 2011. Best Industrial Practices shall be followed to detect and arrest leak and corrosion related issues. The Pipeline will have corrosion mitigation and leak detection systems installed in Operations, prior to commissioning of pipeline. The Pipeline will be externally coated with 3 Layer Polyethylene coating as primary protection against corrosion protection method. Latest leak detection system software will be installed to detect any leakage. The success of the mitigation system will be monitored in accordance with OISD standards.</p> <p>The EMP stated in the EIA report and CRZ clearance presentation, shall be adhered. Disaster Management Plan has been prepared to manage the onsite and offsite emergencies. Also, PNGRB and OISD norms shall be adhered by the Project Proponent</p> <p>The pipeline shall be laid down 7 meter below the scour level (19 m from the high flood level/15 meters below the mean sea level) of Shastri River. <i>No pier will be constructed and thereby there will not be any disturbance to the tidal flow</i></p>

	<p>f) Prior High Court permission should be obtained, if mangroves are affected due to project.</p> <p>g) PP should restore the site after completion of the proposed activities</p> <p>h) PP to carry out compensatory mangrove replantation.</p> <p>i) No Mangroves should be cut during construction phase.</p> <p>j) All other required permissions from different statutory authorities should be obtained.</p> <p>k)</p>	<p><i>of creek water. No Mangroves shall be cut or removed from this project.</i></p> <p>The site will be stored after completion of the project activity. As stated above, since no mangroves will be cut or removed, the project does not attract compensatory Mangrove Replantation.</p>
5.	There is no mangrove replantation plan submitted in any of the documents uploaded on MoEF&CC website.	The project does not attract compensatory afforestation/plantation since no forest area is involved in the route of the Pipeline under this project. One of the best Industrial management practices namely trenchless laying of pipeline shall be followed so that the mangroves along the banks of Shastri River will not be impacted.
6.	It seems that no forest clearance has been applied by the project proponent, even though the proposed pipeline will pass through the mangroves.	The project shall adhere all the conditions laid down in CRZ Notification 2011 and no Mangroves area will be affected by project. Hence, the project does not involve Forest Clearance.
7.	As per the Google Earth imagery dated 18.12.2015, it is observed there are dense mangrove present. The project proponent should ensure that the tidal flow to the mangroves is not blocked even partially by the proposed pipeline. The blocking of the flow would lead to the death of the mangroves.	As stated in our Form-I, it is reiterated that no Mangroves are getting impacted either at Shastri River bed or at banks due to project activities, as the pipeline shall cross Shastri River at 7 meter below the scour level and 19 meters below the high flood level/15meters below the mean sea level.
8.	There are many fishing villages located along the banks of the Shastri river. Regular monitoring should be undertaken so that the livelihood of the fisherfolk communities is not impacted by the proposed project.	The proposed will neither disturb the flow of Shastri River nor allow any discharge into the Shastri River. All mitigation measures shall be taken to maintain the existing water quality of Shastri River during the construction period.

6. The Committee noted that even though the project may not entail physical diversion/removal of mangrove, but in the interest of mangroves conservation, the project proponent shall deposit 2% of the cost of the project in the Mangrove

Foundation of the State of Maharashtra for conservation of coastal and marine biodiversity in the state. The 2% contribution shall be deposited as a corpus fund and its interest will be used to undertake activities specific to marine and coastal biodiversity conservation in the area. *Based on the deliberations held and information provided by the project proponent, the Committee recommended the proposal for CRZ clearance subject to the following specific conditions:*

- (i) No mangroves shall be cut or disturbed by the proposed pipeline project.
- (ii) Horizontal Directional Drill methodology shall be adopted and no pier shall be constructed so as to ensure that there are no disturbances to the tidal flow of creek water.
- (iii) As specific specie of mangroves are available in and around the region, therefore as a matter of abundant precaution, the project proponent shall ensure that the depth of pipeline shall be at 10 m depth or more (where ever pipeline is passing under mangrove cover) in order to ensure that the roots of the mangroves (if any) are not touched due to the proposed pipeline laying.
- (iv) A 2% of the cost of the project shall be apportioned for marine and coastal biodiversity protection and conservation measures, to be spent by the project proponent towards fulfilling its Corporate Environmental Responsibility (CER) during the currency of the project. Proper record and account of measures taken should be maintained and should also be submitted to the CZMA every six months.
- (v) Management of wastes shall be in accordance with Waste Management Rules, 2016.

2.8 Proposed Resort at S.No. 163 and 168 at village Mouje Munage Sadewadi, in Tal. Devgad, in District Sindhudurg, in Maharashtra by M/s Karveer United Leisures Pvt. Ltd. - Consideration for CRZ Clearance [F.No.11-15/2017-IA-III] reg.

The proposal of M/s Karveer United Leisures Pvt. Ltd. is for construction of a resort at S.No. 163 and 168, at village Mouje Munage Sadewadi, in Tal. Devgad, in District Sindhudurg, in Maharashtra. The project proponent made a presentation and provided the following information to the Committee:

- i) The proposed site is situated near the existing Malvan port & Sindhudurga approximately 18 km. The GPS location of the project is N 16°14'53.99" and E 73°25'01.97". It is located within 200 m to 500 m from HTL of Seafont
- ii) Beach resort near Chilwala & Tarkali beach is at 20 km from project site.
- iii) The total plot area is 138023.00 sqm and total proposed built up area will be 6427.56 sqm.
- iv) Height of the building at maximum point will be 9 m and FSI will be 0.33.
- v) The total cost of the proposed project is Rs 9.0 Crores.
- vi) The proposed area falls in CRZ III.

The Committee observed that as per information available, the present landuse classification of the proposed site is questionable and there is no documentary evidence to support that the proposal fits into the landuse of the site as per revenue

records. The Committee therefore declined to peruse further and decided that the proposal is pre-mature for consideration in its present form. The proposal was therefore dropped.

2.9 Proposed addition/alteration & extension in the premises of the existing Breach Candy Hospital at Mumbai, Maharashtra - Consideration for CRZ Clearance [F.NO. 11-18/2017-IA-III] reg.

The proposal of M/s Breach Candy Hospital by addition/alteration and extension within premises of the existing premises of Breach Candy Hospital at Mumbai, Maharashtra. The project proponent made a presentation and provided the following information to the Committee:

- i) The proposed site is situated at property bearing C.S. N. 1/881 of Malbar Hill Division, at 60-A, Bhulabhai Desai Road, Mumbai. The project site falls within 500m line from HTL of Arabian sea.
- ii) The total plot area is 11810.36 sqm, the area of proposed construction is 3300.68 sqm. The total BUA is 19,505.95 sqm including the existing hospital building.
- iii) The project comprises of one new additional wing Gr + 1st to 6th (Pt) upper floors (with 29 Nos. Of beds, ICU and post operation rooms, nurse stations, Doctors rest room) by demolishing existing doctors quarters structure, 2 store rooms, 1 (one) ancillary structure and 1 (one) pump room.
- iv) The proposed project site falls within the 500 m line from the HTL of Arabian Sea and falls in CRZ II area.
- v) The construction of new building will be started after obtaining all statutory requirements. We are not proposing basement, therefore, the deep excavation is not proposed. Excavation for the building's foundation will only be done.
- vi) Solid Waste will be treated using mechanical composting and Sewage treatment plant will be provided for sewage.
- vii) There will be only construction workers and staff personnel during construction period of the project. Project will result in influx of patient, their relatives and hospital staff including non-residential population of approximately 250 no. of people.
- viii) Total water requirement is 13.50 KLD, Source from MCGM. Detail Water Balance Statement is attached.
- ix) Total Municipal Solid Waste generated will be 150 kg/day Bio medical waste: 60 kg/d.
- x) It is a fully developed area with full-fledged drainage network. However, there, will be no discharging of excess treated water into the drains.
- xi) The total cost of the proposed project is Rs 42.46 Crores.
- xii) MCZMA has issued its recommendation for CRZ Clearance on 07.02.2017.

The Committee noted that the proposal entails no CRZ implications as the construction activities is within the existing premises of the hospital and to be carried out by demolition of existing doctor's quarters.

Based on the deliberations held and information provided by the project proponent, the Committee recommended the proposal for CRZ clearance subject to the following specific conditions:

- (i) There shall be no disposal of solid or liquid wastes on the coastal area. Solid Waste management shall be as per Wastes Management Rules, 2016.
- (ii) In case, DG Sets is proposed to be used as back-up power, it shall be ensured that well designed acoustic enclosures are installed in the DG sets such that a desirable insertion loss viz. 25 dB(A) is achieved.

3.0 The meeting ended with a vote of thanks to the Chair.
