

MINUTES OF THE 210th MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR PROJECTS RELATED TO COASTAL REGULATION ZONE HELD ON 18th MARCH, 2019 AT INDIRA PARYAVARAN BHAWAN, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW DELHI.

The 210th Meeting of the Expert Appraisal Committee for projects related to Coastal Regulation Zone was held on 18.03.2019 at Indus Conference Hall, Jal Block, Ground Floor, Indira Paryavaran Bhawan, New Delhi. The members present were:

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| 1. | Dr. Deepak ArunApte | - | Chairman |
| 2. | Dr. V.K Jain | - | Member |
| 3. | Shri Anil Kumar Singh | - | Member |
| 4. | Dr. N.K Verma | - | Member |
| 5. | Dr. Manoranjan Hota | - | Member |
| 6. | Shri W. Bharat Singh | - | Member Secretary |

Shri T. P. Singh, Shri Prabhakar Singh, Dr. Anuradha Shukla, Shri Narendra Surana, Dr. Mohan Singh Panwar, Shri N.K. Gupta, and Shri Sanjay Singh were absent. Dr. M.V Ramana Murthy expressed inability to attend owing to prior commitments.

In attendance: Dr. Saranya P, Deputy Director, MoEFCC. The deliberations held and the decisions taken are as under:

2.0 CONFIRMATION OF THE MINUTES OF THE LAST MEETING.

The Committee having noted that the Minutes of the 209th meeting are in order, confirmed the same with suggestions that in case any typographical/grammatical errors are noticed the same may be corrected suitably.

3.0 FRESH PROPOSALS:

At the onset Chairman briefed the Committee that he is also part of Maharashtra State Board for Wildlife (MSBWL) which is examining this proposal and there are some actions envisaged to be undertaken by BNHS (as directed by MSBWL) as a cumulative impact mitigation of MAHSAR, Dedicated Freight Corridor (DFC/DFCCIL) and Multi-modal Corridor (MMC). This is to disclose the existing involvement of BNHS where Chairman of the Committee is also the Director of BNHS and it was felt that any recommendations with BNHS involvement (if at all) should be independent of the Chair.

3.1 Proposed Mumbai-Ahmedabad High Speed Railway (MAHSR) Project by National High Speed Rail Corporation Ltd., New Delhi [F.No. 11-12/2019-IA.III][IA/MH/MIS/99096/2019] – CRZ Clearance - reg.

The proposal of National High Speed Rail Corporation Ltd. - a Joint venture of the Government of India and participating states, a special purpose vehicle formed by Ministry of Railways. intends to implement the first ever bullet train in the Country. The project proponent made a presentation and provided the following information:

- i) The project is a part of the Ministry of Railways, Government of India, “Indian Railway Vision 2020”, aimed at modernization of the existing conventional lines and enhance capacity as well as develop high speed railway lines.
- ii) Seven routes were selected as candidates for the high speed railway system. Among them, the Mumbai-Ahmedabad route was given top priority by the Experts Committee on modernization of India’s national railway.
- iii) Japan International Cooperation Agency (JICA) and the Ministry of Railways, Government of India, signed a Memorandum of Understanding for joint feasibility study in October, 2013 and the Joint Feasibility Study (Joint F/S) for Mumbai-Ahmedabad High Speed Railway (MAHSR) project was conducted from December 2013 to July 2015.
- iv) The Government of India created a Special Purpose Vehicle (SPV) viz. National High-Speed Rail Corporation Limited (NHSRCL) for implementing the MAHSR project from planning to execution, construction, operation and maintenance.
- v) The Prime Minister of Japan and the Indian Prime Minister issued a joint statement in December 2015, agreeing to introduce the Shinkansen High Speed Railway System on the Mumbai-Ahmedabad route.
- vi) Prime Minister, Shri Narendra Modi and his Japanese Counterpart H.E Shinzo Abe laid the foundation for a high-speed train network. Both heads of States announced the launch of Mumbai-Ahmedabad High Speed Railway (MAHSR) Project in Sabarmati on 14thSeptember, 2017.
- vii) Of the total cost of the project, 81% of the cost will be provided by Japanese soft loan at 0.1% per annum with repayment period over 50 years – including grace period of 15 years. This is the first time in India that an infrastructure project is being funded under such favourable terms.
- viii) The total length of the corridor is 508.17 km and includes 8 tunnels of 26.915 km, 23 bridges of 6.42 km and 476.3 km is on elevated viaduct. The corridor passes through Maharashtra, Gujarat and the UT of Dadra and Nagar Haveli.
- ix) The length across the State of Maharashtra will be 155.642 Km and across Dadra & Nagar Haveli it will be 4.302 Km. The total length across the state of Gujarat will be 348.226 Km
- x) It will pass through the districts of BKC, Thane and Palghar in Maharashtra.
- xi) The MAHSR runs on elevated viaduct in major portion of the alignment. The viaduct length is approximately 474.834 km. The ground elevation of the viaduct is 10-12m and the width is 12.5 m for dual carriageway. A total of 8 tunnels totaling length of 26.915 km has been proposed in MAHSR alignment. The longest tunnel is 20.375 km passing under the creekbed (30 m depth) at Thane Creek.
- xii) The MAHSR alignment passes through major rivers at 23 locations [Maharashtra (Mithi River, Thane, Ulhas River, Vasai Creek and Vaitarna River) andGujarat (Narmada River, Bharuch)] and ponds at 32 locations. The MAHSR alignment traversing through CRZ-III and CRZ- IVB affected area is 0.1849 ha and under CRZ- IA & IV B is 43.0634 ha.
- xiii) In Maharashtra, 32.4302 ha of Mangrove forests falls under the right of way of MAHSR alignment, out of which only 13.3668 ha of mangroves forests shall be removed.
- xiv) The proposed alignment in CRZ areas in Maharashtra will be as follows:

Location	CRZ Category	Length (m)	Area (Ha)	Type of Structure
Mithi River	III & IVB	135.94	0.1849	Underground Tunnel

Thane Creek	IA & IVB	9299.61	12.6475	Underground Tunnel
Ulhas River near Dombivili	IA & IVB	2795.67	15.1750	Viaduct
Ulhas River near Vasai Creek	IA & IVB	5423.60	9.4913	Viaduct
Vairarna River	IA & IVB	4258.99	5.7496	Viaduct
Total		21913.84	43.2483	

The details of mangroves affected will be as follows:

Forest Division	Taluka	Total area of Mangrove forest diversion (Ha)	Area of mangroves Cutting (Ha)	No. of mangroves to be cut	Proposed Structure
Mumbai Mangrove Cell	Kurla	8.3976	NIL	NIL	Underground Tunnel
	Thane				
Thane	Thane	12.2200	13.33668	53467	Viaduct (Elevated Structure)
	Bhiwandi	10.3350			
	Vasai	1.4776			
Total		32.4302	13.3668	53467	

- xv) As per CZMP for BKC and Thane & Palghar District prepared based on CRZ Notification, 2011, the proposed project for High speed Railway runs through some stretches in CRZ-IA, CRZ-III and CRZ-IVB areas. The structure in the form of viaduct, tunnel, bridges shall traverse through the CRZ-IA at four locations.
- xvi) Demarcation of HTL/LTL has been carried out by National Institute of Oceanography, Goa.
- xvii) Cost of the project is estimated at Rs. 1,08,000 Crores.
- xviii) MCZMA has recommended the project for CRZ clearance vide its letter no. CRZ-2018/CR-189/TC-4, dated 7th March, 2019.

2. The Committee noted that the MAHSR is being built in accordance with the Indian Railway Vision 2020 that envisages a modern, high capacity and self-sustaining railway network to meet the rapidly growing transport needs of our country and is expected to meet India's International commitments to reduce greenhouse emissions. The MAHSR is first of the seven routes selected for High Speed Railway (HSR). Extensive prefeasibility and feasibility studies were conducted between 2013-2015 including social and environment impact. The project received approval after duly fulfilling the requisite criteria and commissioning for the project is scheduled for 2022. The final route alignment has been selected after an extensive engineering survey, considering all possible alternatives and with due regards to minimize effects on existing social and environmental ecosystem. The length of the corridor is 508.17 m and includes 8 tunnels of 25.48 km and 476.3 km is on elevated viaduct. The corridor passes through Maharashtra, Gujarat and the UT of Dadra and Nagar Haveli. The starting points is Bandra Kurla Complex in Mumbai and terminates at Sabarmati, Ahmedabad. There will be 12 stations, 2 depots and 7 maintenance yards.

3. The project proponent informed the Committee that the MAHSR project would bring major benefits such as: (a) reduction in travel time between Mumbai and Ahmedabad from

6.5 hrs. to 2.5 hours; (b) high carrying capacity of about 750 passengers per train; (c) dedicated corridor enables high frequency of operations; (d) major connectivity boost to less developed areas along the corridor like Palghar and Valsa with major cities like Mumbai and Ahmedabad and industrial towns like Vapi and Bharuch; (e) potential for development of new production bases and townships along the corridor; (f) boost construction activity, (g) technological enhancement of railways, long term infrastructure development; (h) creation of temporary and permanent employment. The construction phase will employ about 20,000 people. Operations and Maintenances will employ (direct) approximately 4,000 people and about 16,000 indirect jobs are also expected to be generated; (g) decongestion of conventional rail, road, and air traffic between Mumbai and Ahmedabad; (h) reduction in greenhouse gas emissions due to more energy efficient transport option; (i) development of state of the art manufacturing and software system; (j) the Japan External Trade Organization (JETRO) will be assisting the Government of India in identifying potential areas for 'Make in India' localization:

4. The Committee noted that a detailed EIA study has been carried out which consists of the primary data collection, laboratory testing, intensive site visits and detailed assessment, consultations with stakeholders and the analysis of available secondary data. The Committee also noted that a CRZ map has been prepared by NIO, Vishakhapatnam and Conservation and Management Plan for Thane Creek Flamingo and other faunal species has been prepared by Zoological Survey of India. In addition, Mangrove Society of India, Goa has prepared Conservation and Management Plan of mangroves affected by MAHSR project. It was noticed that the plan submitted was based on old information and without consultation of mangrove cell, Thane and also lacks information on land availability for plantation and its protection and management. The Mangrove Cell, Thane, Government of Maharashtra has been created to protect, conserve and plant mangrove in the State with all the resources and technical knowhow. The Committee felt that based on the current data on mangrove felling along with plantation and management plan for mangrove should be prepared and implemented by the Mangrove Cell, Forest department, Government of Maharashtra. The additional mangrove plantation in the ratio of 1:5 is the mandatory requirement under CRZ regulation over and above compensatory plantation against diversion of forest under FC Act. The Committee also observed that the Conservation and Management Plan for Thane Creek Flamingo prepared by ZSI is inadequate to highlight the impact of vibration on mudflats and flamingoes. It requires major revision. In this regard, the Committee suggested that the BNHS has been working in this seascape for over two decades and can be requested to develop a robust Conservation and Management Plan for Thane Creek Flamingo Sanctuary with detailed action plan for immediate implementation in consultation with the concerned agency in the State.

On this Project Proponent stated that there are no such studies known and is not possible to predict the impact of vibrations till the work starts. While the Committee appreciated to take tunnel route to avoid direct destruction of mudflat or mangrove in the Thane Creek region, the Committee disagree to the view that impacts cannot be studied. Considering, that the Thane Creek Flamingo Sanctuary and adjoining waters host over 1 lakh flamingoes (Lesser and Greater Flamingo) and over half a million waders the site is of global significance. The area is also already under stress due to the construction of MTHL and NMIA, and other ongoing project, knowing impacts is necessary and as abundant precaution, and to make project truly sustainable, full extent of impacts of vibrations on mudflat and its characteristics must be thoroughly studied by a competent agency (dealing with geological studies). Also that this Project is Class A project as stated by the project proponent in point no 5 below, and

may have significant adverse impacts on environment and society and therefore special attention has to be given to mitigation measures required to balance the need of the project and the environmental consequences.

5. The project proponent informed the Committee that the project financier viz. Japan International Cooperation Agency (JICA) has a strict guideline for environmental and social consideration formulated in 2010 for all JICA funded project. It was informed that JICA classifies projects under four categories (A, B, C, and F1) according to the extent of environmental and social impacts similar to the funding agencies categorization like World Bank (WB), Asian Development Bank (ADB) and Japan Bank for International Cooperation. That this Project is Class A project and may have significant adverse impacts on environment and society and therefore special attention has been given to mitigation measures required to balance the need of the project and the environmental consequences. It was further informed that in line with JICA's Guidelines for Environment and Safety (E&S) considerations, the following international requirements have also been considered, as relevant to the project: World Bank E&S Safeguards; International Finance Corporation's (IFC) Performance Standards, 2012; EHS Sector Guidelines of IFC, 2007 (for Railways); General EHS Guidelines of IFC, 2007.

6. The project proponent stated that MAHSR project alignment intersects 23 nos. of river / streams and rivulets and 32 nos. of ponds. No major impact is envisaged either in construction or operational phases of the MAHSR project as it runs on viaduct at these locations. Potential impacts during construction phase have been identified and their mitigation measures have been addressed. It was stated that option for embankment has been changed to Viaduct and thus the right of way (RoW) and subsequent land acquisition has been significantly reduced. There will be balancing culvert near Brahmangoan on the northern bank of Ulhas River for uninterrupted tidal exchange to mangrove forest.

7. The issues raised in the public hearings held was deliberated and it was also informed by the project proponent that a detailed and extensive stakeholders consultations were carried out during environmental baseline and socio-economic survey stage with various sections of affected persons which include traders, women, squatters, kiosks and other inhabitants. It was stated that these consultations were held at all levels with representation from prospective Project Affected Persons (PAP) and officials from key Government Departments. That the objective of such consultations were to inform affected persons about the project, its features expected impacts, policies that govern project related land acquisitions and R&R benefits such as compensation, income restoration, employment generation, information flow, grievance redress etc. It was also stated that a report incorporating all issues raised during public consultations and recommendations for institutional strengthening measures in response to issues raised have been made. It was also stated that public consultations were conducted with the cooperation of the district administration and NHSRCL and adequate public disclosure as per JICA norms was ensured through newspaper advertisements and participation was open to all public and the Panchayat heads were informed by letters in addition to the publishing in the local newspaper. That in addition 50-60 participants were approached over phone or through direct visits and conscious efforts were made to ensure higher representation of women, amongst the project affected persons.

8. The project proponent further informed that an efficient grievances redressal mechanism shall be developed by NHSRCL as well as its contractors to assist the Project Affected Persons (PAPs) in getting their grievances resolved.

9. On a query as to why there seem to be a mismatch on the number of mangroves required to be cut, given in the 'report on Integrated Mangrove Conservation & Management Plan' prepared by Mangrove Society of India, Goa on behalf of the project proponent, it was informed that the figure given in the said report is an old information based on preliminary study before the centerline of the proposed MAHSR alignment was not established on the ground and the Right of Way (RoW) was earlier envisaged as 36 m, as against 17.5m now required, after a decision to adopt Viaducts instead of embankments. It was further stated that the final figure of mangroves affected i.e 53467 have been arrived after a joint inspection along with the Forest Officials of Thane Forest Division. The Committee noted that details of tree species that will be felled is not provided. In absence of it mangrove conservation plan cannot be complete. This is a significant loss of mangroves and Committee further advised to see if this could be further reduced by using better technology for construction.

10. The Committee also observed that the muck management will be an additional burden not only on the ambient air environment but also on the Mumbai traffic. It was stated that already the city roads are ceased with environmental issues arising from muck transportation generated from development of Coastal Road, ongoing Metro work and additional burden due to huge quantity of muck required to be transported for MAHSR project will compound the issue. The Committee therefore desired that the project proponent shall explore/examine the possibility of alternative mode of transportation of muck. The Committee desired that a feasibility study on muck transportation shall be commissioned early and status of the same shall be submitted to the Ministry within six months for further examination and possible inclusion as part of the project programme.

11. The Committee highlighted the need or otherwise for a separate clearance from the Dahanu Taluka Environment Protection Authority and informed the project proponent that necessary action in this regard shall be given due diligence and appropriate action taken. The project proponent was informed of a representation received from a Mumbai based NGO. The content of the representation was deliberated and it was decided that the project proponent shall submits a written response for records.

12. Based on the deliberations held and submissions made, the Committee decided that in larger public interest, the instant proposal can be considered for CRZ clearance for project areas falling in CRZ areas of Maharashtra State subject to the following conditions:

- i) The clearance is subject to obtaining prior clearances from the Standing Committee of National Board of Wildlife, Dahanu Taluka Environment Protection Authority, as may be applicable.
- ii) Prior clearance under Forest (Conservation) Act, 1980 for diversion of mangrove forests as may be applicable shall be obtained before start of work in mangrove areas and mangrove buffer.
- iii) Prior approval of the High Court of Mumbai shall be obtained in view of the direction issued in connection with felling of Mangrove and its conservation before execution of the project.
- iv) Based on the current data on mangrove felling, the Mangrove Cell, Thane, Forest Department, Government of Maharashtra shall prepare a comprehensive mangrove plantation and management plan for plantation, management and protection of Mangrove and the same shall be implemented by the Mangrove Cell, Forest Department, Government of Maharashtra during the course of execution of the

- project. This plan is for additional mangrove plantation in the ratio of 1:5 mandatory requirements under CRZ regulation. Requisite funds for the same are to be deposited to Mangrove Cell.
- v) As committed, the project proponent shall develop a comprehensive grievance redressal mechanism before execution of the project and shall display for public information the contact person for placing grievances by project affected persons including the details of an ombudsman for justice in the vent of non-resolution of grievances.
 - vi) A revised and robust Mitigation Plan for Thane Creek Flamingo Sanctuary for immediate implementation in consultation with the Wild Life Department, Govt. of Maharashtra, Mangrove Foundation and BNHS shall be prepared within **six months**.
 - vii) A study on likely impact due to vibrations on mudflat and changes in the characteristics of mudflats must be carried out by a competent agency (dealing with geological studies) and it shall precede the revised Mitigation Plan for Thane Creek Flamingo Sanctuary plan required to be submitted. While preparing the plan the data and study available with BNHS on Thane creek habitat and Flamingo behavior shall be taken into account. The revised Mitigation Plan for Thane Creek Flamingo Sanctuary plan shall be referred back to the Expert Appraisal Committee for review and for possible inclusion of stricter conditions to the clearance granted as may be necessary.
 - viii) The project proponent shall explore/examine the possibility of alternative mode of transportation and a feasibility study on this shall be commissioned within **six months**. The status of the feasibility study report shall be submitted to the Ministry for further examination and possible inclusion as part of the project programme. The project proponent while formulating the muck disposal plan shall be mindful to include the utility of muck and its disposal site/s clearly demarcated and also the traffic study of the area already under stress.
 - ix) No groundwater shall be extracted to meet with the water requirements during the construction and/or operation phases.
 - x) Flow of natural tidal water to mangroves should remain un-affected and thus adequate measures to be provided to maintain un-interrupted tidal water to mangroves. Design for the same could be decided in consultation with Mangrove Cell.
 - xi) Fisherman should have un-interrupted access including but not limited to boats to their livelihood and fishing activities.
 - xii) Construction camps (if any) shall be located outside the CRZ areas.
 - xiii) A third party monitoring and evaluation by an independent national Institute/Institutes of repute shall be roped in. The said institute shall carry out periodical monitoring and evaluation of the implementation of the recommendation during the construction period. Representatives of Mangrove Cell not below rank of APCCF should be associated during the course of monitoring and evaluation by the said Institute.
 - xiv) 0.25% CER i.e. Rs 270 Crores per the Office Memorandum issued by the Ministry, dated 01.05.2018, on CER, for activities to be undertaken under CER shall be earmarked, of which 50% i.e. Rs 135 Crore shall be given to Mangrove Foundation of Maharashtra as corpus fund towards flamingo, mudflat and mangrove monitoring, conservation and mitigation. A detailed plan of action contemplated shall be submitted to the concerned agencies within six months of receipt of clearance letter.
 - xv) A Committee under the Chairmanship of PCCF (WL) Maharashtra comprising of representatives from agencies such as MAHSR, Wildlife wing of Thane Division, Mangrove Cell, Mangrove Foundation, MMRDA and BNHS be constituted to oversee the implementation of the mangrove afforestation and flamingo, mudflat and

mangrove conservation and restoration, and other recommendation as stipulated above.

4.0 Any other item with the permission of the Chair.

Site visit to M/s Saurashtra Chemicals Ltd. (Nirma Division)

The Committee was informed that the long pending site visit to M/s Saurashtra Chemicals Ltd. (Nirma Division) could not be materialised so far. The Committee in its 205th Meeting held on 17.12.2018 had decided that the site visit shall be completed not later than 1st week of January, 2019 by a team comprising of Shri N.K. Verma, Member EAC and Shri N.K. Gupta, Member (EAC). This also could not materialise due to compelling reasons of the team. It was then decided in the 207th Meeting held on 25.01.2019 that the site visit shall be undertaken by Shri N.K. Verma, Member, EAC; Dr. V.K. Jain, Member, EAC; and a representative of the Ministry and a report submitted early, preferably, before the next meeting. The Committee was informed that this also could not materialise due to medical issues in the family of a member of the Committee.

The Committee decided that under the circumstances a site visit shall be undertaken by Dr. Apte, Chairman, EAC, representative of the Ministry and GCZMA in the month of April 2019.

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