

MINUTES OF THE 231st MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR PROJECTS RELATED TO COASTAL REGULATION ZONE HELD ON 26th FEBRUARY, 2020 AT INDIRA PARYAVARAN BHAWAN, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE, NEW DELHI.

The 231st Meeting of the Expert Appraisal Committee for projects related to Coastal Regulation Zone was held on 26.02.2020 at Brahmaputra Conference Hall, Vayu Block, 1st Floor, Indira Paryavaran Bhawan, New Delhi. The members present are:

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| 1. | Dr. Deepak Arun Apte | - | Chairman |
| 2. | Dr. Anil Kumar Singh | - | Member |
| 3. | Dr. V. K. Jain | - | Member |
| 4. | Shri. Prabhakar Singh | - | Member |
| 5. | Dr. Manoranjan Hota | - | Member |
| 6. | Shri. N.K. Verma | - | Member |
| 7. | Shri. W. Bharat Singh | - | Member Secretary |

Dr. Anuradha Shukla, Dr. Rajesh Shah, Ms. Bindhu Manghat, Shri Narendra Surana, Shri Rajesh Debroy, Shri Sanjay Singh and Dr. M.V Ramana Murthy were absent.

In attendance: Dr. Saranya P, Joint Director, NoEFCC and Dr. Bhawana Kapkoti Negi, Technical Officer, 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 229th meeting are in order, confirmed the same with suggestions that in case any typographical/grammatical errors are noticed in due course, the same may be corrected suitably.

3.0 CONSIDERATION OF PROPOSALS:

FRESH PROPOSALS

3.1 Proposal for setting up SWRO Desalination Plant of 60 MLD Capacity at Kuthiraimozhi Village, Kadaladi Taluk, District Ramanathapuram by M/s Tamil Nadu Water and Drainage Board [IA/TN/CRZ/134194/2019] [F.No.11-7/2020-IA.III] - CRZ Clearance - reg.

The proposal of M/s Tamil Nadu Water and Drainage Board (TNWADB) is for setting up of a SWRO Desalination Plant of 60 MLD capacity at Kuthiraimozhi village, in Kadaladi Taluk, in District Ramanathapuram. The project proponent made a presentation and provided the following information:

- (i) The project proposal is for setting up of a 60 MLD SWRO Desalination Plant at Kuthiraimozhi village, in Kadaladi Taluk, in Ramanathapuram district of Tamil Nadu.
- (ii) The project site is located at Latitude 09°07'28.35" N and Longitude: 78°26'30.77" E.
- (iii) The proposed location of desalination plant is in CRZ-III. The intake and outfall points traverses through CRZ-III, CRZ-1B, CRZ- IVA.
- (iv) Total brine of 94.52 MLD will be generated.

- (v) Sea water will be drawn from sea by gravity piping system. The intake flow is 154.8 MLD and the system is designed for 180.24MLD (Demand 70MLD), 10% additional capacity considering biological growth. Hence intake pipe shall be designed for flow of 199.364 MLD. Intake and outfall details are given in table below:

Intake flow	154.8 MLD
Backwash & sludge in DMF	10.836 MLD
Feed to UF system	143.964 MLD
UF Filtrate	132.447 MLD
UF Losses	11.517 MLD
RO Feed	132.447 MLD
RO permeate	60.926 MLD
RO permeate per train	20.31MLD
Brine Outfall Rate	94.52 MLD

- (vi) The intake flow will be 154.8 MLD and the system is designed for 180.24 MLD (Demand 70 MLD). 10% additional capacity considering biological growth. Hence intake pipe will be designed for flow of 199.364MLD.
- (vii) The intake conduit will be a 1500 mm (internal diameter) pipe and sea water will be drawn at 2700 m from the shore.
- (viii) The intake conduit will have a SS screen of 100mm. The screen will be of 3.9m diameter, 1.5m high starting above seafloor, 6.3 m depth of water. The Screen velocity is of 0.14 m/s.
- (ix) The distance between the intake and outfall point will be 1200 m.
- (x) The total estimated power requirement will be 234 MW. The power supply arrangement for the desalination plant is based on provision of one number 110 kV feeder from a substation available nearby to be procured and operated by TANGEDCO. The major area for power demand is R.O treatment plant.
- (xi) During construction phase about 18 kg/day (40%) organic solid waste and 27 kg/day (60%) inorganic solid waste will be generated.
- (xii) During operational phase about 11.2 kg/day (40%) organic solid waste and 16.8 kg/day (60 %) inorganic solid waste will be generated.
- (xiii) The employment likely to be generated during construction phase will be about 100 Nos and operation phase will be 63 persons.
- (xiv) The total cost of the project is about Rs. 670 cr.
- (xv) The Tamil Nadu Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 80/EC.3/2017-1, dated 10th January, 2017.

2. The Committee noted that the proposed project site is within the eco-sensitive zone of Gulf of Mannar Marine National Park and at approximately only about 25 m away from its boundary. The Committee desired to understand the compelling reason for location of the site at such a sensitive area and decided that the location should be shifted elsewhere. The Committee noted that the justification cited by the project proponent is unacceptable. It was observed that fishermen are dependent on the Gulf of Mannar for their livelihood and the release of brine certainly will impact not only on fish catch but also the reefs, seaweeds, seagrass and the overall ecosystem of the area.

3. The Committee noted that no detail marine EIA study have been carried out and the EIA report submitted carries no information on the impact due to the proposed project on the

marine ecosystem including flora, fauna and coral reefs etc. The Committee further noted that the project did not have brine dispersion model result which is important to understand the fate and dispersion of the brine discharge from the desalination plant.

4. The Committee took note that another proposal of a desalination plant by M/s Tamil Nadu Water and Drainage Board (*Item No.3.2*) of 60 MLD is proposed at Alanthalai, the site of which seem fine. The Committee, therefore, suggested that M/s Tamil Nadu Water and Drainage Board may explore the possibility of scaling up the capacity of the desalination plant at Alanthalai for 120 MLD such that the water demand at for the intended recipients can be met by the scaled up plant at Alanthalai. Alternatively, the Committee suggested that in case the project proponent desires to retain this site, the project proponent shall explore the possibility of 100% reuse of the brine water by giving it to authorized salt-pan agencies instead of discharging into sea or setting up of a salt industry/allied facilities which can consume all brine generated.

5. Based on the deliberations held, the Committee observed that the proposal is premature for appraisal in its present form and decided as follows:

- i) The proposed project site shall be shifted elsewhere, at an appropriate distance away from the Gulf of Mannar Marine National Park followed by studies as mentioned below submitted. Alternatively, the project proponent shall explore the possibility of 100% reuse of the brine water by giving it to authorized salt-pan agencies instead of discharging into sea or setting up of a salt industry/allied facilities which can consume all brine generated in case the project proponent desires to retain the same site.
- ii) A detailed Marine EIA report including data on the existing marine flora and fauna, of water quality and likely impact on marine ecosystem downstream of the discharge point shall be submitted.
- iii) Brine dispersion model studies for the proposed outfall location shall be submitted.
- iv) Appropriate financial allocation as per the Office Memorandum issued by the Ministry, dated 01.05.2018, on CER, for activities to be undertaken under CER shall be earmarked and detailed plan of action shall be submitted.

Accordingly, the proposal was deferred for reconsideration at a later stage once the above information/documents/actions are submitted.

3.2 Proposal for setting up SWRO Desalination Plant of 60 MLD Capacity at Alanthalai in Keela Tiruchendur Village, Taluk Thiruchendur, District Thoothukudi by M/s Tamil Nadu Water and Drainage Board - CRZ Clearance - reg.
[IA/TN/CRZ/134114/2019] [F.No.11-10/2020-IA.III]

The proposal of M/s Tamil Nadu Water and Drainage Board is for setting up SWRO Desalination Plant of 60 MLD Capacity at Alanthalai in Keela Tiruchendur Village, Taluk Thiruchendur, District Thoothukudi. The project proponent made a presentation and provided the following information:

- (i) The project site will be located at Latitude 08° 27'31.08"N and Longitude: 78°05'39.07"E.
- (ii) The proposed location of desalination plant falls in CRZ-III. The intake and outfall points are in CRZ-III, CRZ-IB & CRZ-IVA.
- (iii) The distance between the intake and outfall point will be 1310 m.

- (iv) Total brine will be generated about 93.87 MLD.
- (v) During construction phase about 18kg/day (40%) organic solid waste and 27 kg/day (60%) inorganic solid waste will be generated.
- (vi) During operational phase about 11.2 kg/day (40%) organic solid waste and 16.8 kg/day (60 %) inorganic solid waste will be generated.
- (vii) The domestic wastes are segregated at source, collected in bins and composted.
- (viii) No hazardous waste will be generated.
- (ix) Total seawater requirement is approx.180.24 MLD. This water will be drawn from sea by gravity piping system.

<i>S. No</i>	<i>Description</i>	<i>Unit</i>
1	Construction phase	0.0045 MLD
2	Operation and Domestic (154.8MLD+0.0028MLD)	154.8MLD

- (x) The total estimated power requirement is 234 MW. The power supply arrangement for the desalination plant is based on provision of one no, 110 kV feeders from a substation available nearby to be procured and operated by TANGEDCO. The major area for power demand is RO treatment plant
- (xi) The employment likely to be generated during construction phase will be about 100 Nos and operation phase will be 63 persons.
- (xii) The total cost of the project is about Rs. 680 cr.
- (xvi) The Tamil Nadu Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 79/EC.3/2017-1, dated 9th January, 2017.

2. As deliberated in the earlier item (*Item No.3.1*), the project proponent shall explore the possibility of scaling up the capacity of the desalination plant at Alanthalai for 120 MLD such that the water demand for the intended recipients can be met by the scaled up plant at Alanthalai. The Committee therefore decided that a revised proposal duly endorsed by SCZMA in such a case shall be submitted, if the project proponent decides to take up accordingly. The Committee further noted that as deliberated in the previous item a detailed marine EIA study shall be submitted for the revised proposal.

Accordingly, the proposal was deferred for reconsideration at a later stage once the above information/documents/actions are received.

3.3 Proposal for construction of holiday Resort on Plot bearing S.No. 557/1,557/2,556/2,556/3 of Mauje Awas, Taluka Alibag, District Raigad by M/s Vee Tee Auto Manufacturing Co.Pvt. Ltd. [IA/MH/CRZ/128505/2019] [F.No.11-8/2020-IA.III] - CRZ Clearance - reg.

The proposal of M/s Vee Tee Auto Manufacturing Co. Pvt. Ltd. is for construction of Holiday Resort at Plot bearing S.No. 557/1,557/2,556/2,556/3 of Mauje Awas, Taluka Alibag, District Raigad. The project proponent made a presentation and provided the following information:

- (i) The 'Holiday Resort' is proposed to be constructed at Awas, Gat. No. 556/2, 556/3, 557/1 and 557/2, Taluka Alibag, in District Raigad of Maharashtra.
- (ii) Project location falls in CRZ III.

- (iii) Total plot area is about 13020.0 Sq. m and construction will be carried out over an area of 2254.70 sq.m.
- (iv) FSI will be 0.20 and height of structure will not exceed 9 m.
- (v) The water requirement will be about 4.5 m³/d and source will be sourced from Awas Gram Panchayat.
- (vi) An MBBR technology STP for treating 5.0 m³/d will be constructed from which about 3.6 m³/d of sewage will be generated.
- (vii) Rain water harvesting system will be installed.
- (viii) During operation phase the total solid waste of about 15.23 kg/day will be generated comprising of wastes as follows:

S.No.	Categories	Quantity (Kg/day)
1.	Organic Waste	8.8
2.	Non-bio-degradable waste	3.8
3.	Inerts	0.13
4.	Electronic Waste	2.5 Kg/yr
Total		15.23

- (ix) Power Requirement will be 10 KW and will be sourced from MSEDCL
- (x) Electronic ballasts and energy efficient lamp like CFL are proposed for common area & general lighting with automatic time based controls to save power at appropriate time. The estimated saving in common area lighting consumption is up to 15% due to adopting above measures.
- (xi) Solar water heating is being proposed. Solar photovoltaic system shall be considered for partial external / Landscape lighting depending on space availability.
- (xii) All above energy saving measures will contribute to overall energy saving target of 20-25 % for the proposed project.
- (xiii) The employment likely to be generated about 10 persons.
- (xiv) The total cost of the project will be about Rs. 893.78 cr.
- (xv) The Maharashtra Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. CRZ 2017/CR 396/TC 4, dated 16th October, 2019.

2. The Committee was informed that the project site is located in notified area of Mumbai Metropolitan Region Development Authority within recreational Zone-1, which falls in CRZ-III. The Committee took note that water requirement will be sourced from Awas Gram Panchayat and necessary permission in this regard was obtained vide letter No. 523/2017-1L, dated 23.10.2017. The Committee was also informed that the rain water harvesting facilities will be created at the project site in the form of aquifer recharge.

3. The Committee noted that the area is endowed with good vegetation with serene environment and the project proponent shall be mindful of ensuring that a robust waste management system is adopted. The Committee observed that the project proponent shall develop the Holiday Resort as a role model for others in the business.

4. Based on the deliberations held the Committee recommended the project for CRZ clearance subject to the following conditions:

- i) No groundwater shall be extracted to meet with the water requirements during the construction and/or operation phase of the project. Necessary permission for water requirement for construction and operation may be obtained from the competent authority as per the extant Act/Rule of the State.
- ii) No excavated material during the construction shall be dumped in water bodies or adjacent areas. The site shall be restored to its near original condition after completion of construction of resort.
- iii) As committed by the project proponent, rain water harvesting facilities shall be created at the project site in the form of aquifer recharge.
- iv) The project proponent shall be mindful of ensuring that a robust waste management system is adopted.
- v) The project proponent shall develop the Holiday Resort as a role model for others in the business
- vi) The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM No.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
- vii) As per the Ministry's Office Memorandum F.No. 22-65/2017-IA.III dated 1st May, 2018, and proposed by the project proponent, an amount of Rs. 8.94 crores i.e @1% of project Cost shall be earmarked under Corporate Environment Responsibility (CER) for the activities such as support to local government, schools, sanitation and health including construction of public toilets in the surrounding villages, as per need based assessment carried out. The activities proposed under CER shall be restricted to the affected area around the project. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

3.4 Proposal for expansion of additional Storage tanks 12 Nos. and 1 No. of Hot Water Generator (6 LKC) in the existing Storage Transit Terminal at No.18/19, New Ennore Express High Road, Thiruvaniyur Village, Ambattur Taluk, Tiruvallur District by M/s KTV Oil Mills Private Ltd., Chennai [IA/TN/CRZ/133928/2019] [F.No.11-9/2020-IA.III] - CRZ Clearance reg.

The proposal of M/s KTV Oil Mills Private Ltd., Chennai is for expansion of additional Storage tanks 12 Nos. and 1 No. of Hot Water Generator (6 LKC) in the existing Storage Transit Terminal at No.18/19, New Ennore Express High Road, Thiruvaniyur Village, Ambattur Taluk, Tiruvallur. The project proponent made a presentation and provided the following information:

- (i) The project proponent obtained CRZ Clearance for the laying of pipeline for 5.2 Kms and establishment of storage transit terminal at No.18/19, New Ennore Express High Road, Thiruvaniyur Village, Ambattur Taluk, Tiruvallur District. The present proposal is for addition of 12 more storage tanks for transit storage of food grade vegetable oil (crude palm oil). The total storage capacity of the 12 tanks will be 51,830 KL and will be located within the existing premises.
- (ii) Details of additional storage tanks under the present proposal are as follows:

<i>S.No.</i>	<i>Capacity (KL)</i>	<i>Quantity</i>
1	883	4 Nos
2	1571	2 Nos
3	3534	1 Nos

4	4021	5 Nos
		Total 12 Nos

Details of existing storage tanks:

<i>S.No.</i>	<i>Capacity (KL)</i>	<i>Quantity</i>
1	2261	4 Nos
2	4021	2 Nos
3	6283	2 Nos
4	5098	3 Nos
5	3437	1 Nos
6	3447	1 Nos
		Total 13 Nos

- (iii) The proposed location falls in CRZ- II.
- (iv) The project proponent has also proposed to establish 1 No. of Hot Water Generator with a capacity of 6 lakh kilo calories for bottom oil heating purpose.
- (v) The domestic wastewater generation in the terminal is treated in the septic tank and followed by dispersion trench and disposed on industry own land. No effluent is generated from process / storage.
- (vi) The employment likely to be generated about 25 persons.
- (vii) The total cost of the project is about Rs. 4.9 crores
- (viii) The Tamil Nadu Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 20977/EC.3/2019-1, dated 9th December, 2019.

2. The project proponent informed the Committee that vide Order dated 19.02.2020, the Hon'ble Tribunal (SZ) in the matter of Appeal No. 62 of 2017, has dismissed the appeal for cancellation of the CRZ clearance issued on 12.07.2017. The Committee noted that the proposed expansion entailing 12 Nos. of additional storage tanks and 1 No. Hot Water Generator (6 LKC) seem to have been done with no adequate consideration for spacing between the storage tanks and safety aspects. The Committee, therefore decided that the proposal need a revision accordingly.

3. The Committee also noted that the Ministry had accorded CRZ clearance for the project 'Laying of pipeline for the transfer of edible oil from Chennai port to transit storage terminal and establishment of storage transit terminal at No. 18/19, New Ennore express high road, Thiruvottiyur, Chennai' vide its letter dated 12th July, 2017. The Committee therefore decided that since the project proponent has now come for an expansion, a compliance report of the earlier clearance, duly certified by the regional Office of Ministry need to be submitted.

4. Based on the deliberations held, the Committee decided that the proponent shall submit the following information /documents:

- i) Revised proposal for setting up additional storage tanks with due consideration from safety angle and duly endorsed by the concerned agency.
- ii) Endorsed by the State Coastal Zone Management Authority of the revised proposal.
- iii) Compliance report for the CRZ clearance issued on 12.07.2017, duly certified by the regional Office of the Ministry.

- iv) Appropriate financial allocation as per the Office Memorandum issued by the Ministry, dated 01.05.2018, on CER, for activities to be undertaken under CER shall be earmarked and detailed plan of action shall be submitted.

The proposal was accordingly deferred for reconsideration at a later stage.

3.5 Proposal for redevelopment for school building on plot bearing CTS No.1026 & 1027, FP No.19A, 21-22 of TPS II, Santacruz, Village Juhu, Juhu Tara Road, Santacruz (W), K/W Ward, Mumbai by Maneckji Copper Education Trust - CRZ Clearance- reg. [IAMH/CRZ/131023/2019] [F.No.11-12/2020-IA.III]

The proposal of M/s Maneckji Copper Education Trust is for redevelopment for a school building at plot bearing CTS No.1026 & 1027, FP No.19A, 21-22 of TPS II, in Santacruz, village Juhu, Juhu Tara Road, Santacruz (W), in Mumbai. The project proponent made a presentation and provided the following information:

- (i) The Maneckji Cooper Education Trust has proposed to undertake reconstruction of a school at plot bearing C.T.S. No.1026 & 1027 of Village Juhu, (F.P. No.19-A, 21, 22, 23 & 24 of TPS II Santacruz) Juhu Tara Road, Taluka Andheri, Santacruz (West), in Mumbai.
- (ii) The project falls in CRZ-II as per the CZMP of CRZ Notification of 2011.
- (iii) The site falls under well-developed Town Planning Scheme II of Santacruz - Juhu Sector.
- (iv) Total area/Built-up area is 13, 278.06 m² and FSI ratio will be as per the governing town planning rules/ Regulations: 2.874, As Per Development Control Rules 1967, Under 33(2).
- (v) The previous structure, which was also a school, was a Ground + Five Upper Floors. The said school building was an old RCC structure and dilapidated. For the safety of the students and in order to get extra F.S.I benefits, thereby accommodating greater number of students, staff and so as to provide better educational, recreational and sports facilities to the children in the surrounding locality, a new structure comprising of basements for parking and storage + Gr. Floor + 7 upper floors for class rooms, play area, auditorium etc. having 29.75 Mt. height is envisaged.
- (vi) The phase wise Demolition and Reconstruction permission was sought from the Building Proposal Dept. of the Municipal Corporation of Greater Mumbai, on 22/07/2019. And the structure was later demolished.
- (vii) Proposed school required floor basement + ground + upper 7 floors. The total height of building from ground level will be about 29.75 Mtrs.
- (viii) FSI will be 2.874 as against permissible 4.0.
- (ix) The employment likely to be generated during construction phase will be about 25 persons
- (x) The expected cost of the project is about Rs. 59 crores.
- (xi) The Maharashtra Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No No. CRZ 2019/CR 88/TC 4, dated 30th December, 2019.

2. The Committee was also informed by the project proponent that the reconstruction of school will ensure that adequate space of 6 m around the building for emergency purposes and firefighting equipment is available and the same has been also approved by the Chief Fire Officer of MCGM. The Committee observed that the school has a history of service to the

society and need encouragement. It was also observed that the school is also learnt to have been catering to a large section of marginalised society children in the area.

3. Based on the deliberations held the Committee recommended the project for CRZ clearance subject to the following conditions:

- i) The project proponent shall ensure that as committed, adequate space of 6 m around the building for emergency purposes and firefighting equipment is provided.
- ii) No groundwater shall be extracted to meet with the water requirements during the construction and/or operation phase of the project.
- iii) No excavated material during the construction shall be dumped in water bodies or adjacent areas. The site shall be restored to its near original condition after completion of construction.
- iv) The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM No.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.

3.6 Proposal for setting up desalination plant of 60 MLD Capacity at Mullakadu Village, Taluk & District Thoothukudi by M/s State Industries Promotion Corporation of Tamil Nadu (SIPCOT) [IA/TN/CRZ/135643/2020] [F.No.11-13/2020-IA.III]- CRZ Clearance - reg.

The proposal of M/s State Industries Promotion Corporation of Tamil Nadu (SIPCOT) is for setting up Desalination Plant of 60 MLD Capacity at Mullakadu Village, Taluk & District Thoothukudi. The project proponent made a presentation and provided the following information:

- (i) The proposed project involves setting up Desalination Plant of 60 MLD Capacity at Mullakadu Village, Taluk & District Thoothukudi, Tamil Nadu.
- (ii) This proposed project location of intake/ outfall point is 78°10' 20" E, 8°44' 09" N / 78°12' 06" E, 8°43'01" N respectively and is at about 10.2 km from the Gulf of Mannar.
- (iii) Details of proposed intake and Outfall Diffuser in CRZ area.

<i>S. No</i>	<i>Proposed Pipeline</i>	<i>CRZ Classification</i>	<i>Length (meters)</i>	<i>Total Length (meters)</i>
1	Proposed Intake	CRZ -IB	124.85	1575.07
2		CRZ-II	340.26	
3		CRZ-IVA	1110	
4	Proposed Outfall Diffuser	CRZ -IB	147.52	5408.59
5		CRZ-II	333.69	
6		CRZ-IVA	4297.4	

- (iv) The total length of pipeline will be 5405.59 m and will pass through CRZ-II, CRZ-IB and CRZ-IVA.
- (v) The length of pipeline traversing in CRZ area will be 405.59 m.
- (vi) The capacity of desalination plant will be 60 MLD. The intake volume is 148.62 MLD and the brine discharge will be 88.27 MLD.
- (vii) The intake point will be at depth of about 4.4 m CD and the outfall discharge point will be at 8.6 m CD and at about 5000 m from the shoreline.

- (viii) Dimensions of chemical storage building will be 25m x 25m x 5m.
- (ix) The employment likely to be generated during construction phase will be about 50 persons
- (x) The expected cost of the project will be about Rs. 580 cr.
- (xi) The Tamil Nadu Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 20974/EC.3/2019-1, dated 4th December, 2019.

2. The Committee observed that the project proponent may explore the feasibility of reuse of the brine water either by way of giving it to authorized salt pan agencies instead of discharging into sea or arrange to facilitate setting up of a salt manufacturing unit. The Committee also suggested that there are now porous concrete blocks available and these promote growth of artificial coral reefs with few years of its installation. The Committee also observed that setting up of salt pans is good for migratory birds as they use the salt pans as habitats for feeding. The Committee desired that the project proponent can set an example of a sound conservation effort if a successful model for brine use as suggested above can be implemented.

3. Based on the deliberations held the Committee recommended the project for CRZ clearance subject to the following conditions:

- i) No storage reservoir for sea water shall be permitted and only pipelines conveyance system shall be installed.
- ii) No groundwater shall be extracted to meet with the water requirements during the construction and/or operation phase of the project.
- iii) No excavated material during the construction shall be dumped in water bodies or adjacent areas.
- iv) The project proponent shall ensure that the temporary structures installed for laying of pipe lines are removed within one month of accomplishment of the work.
- v) As committed, drinking water for nearby villages shall be supplied as part of its CSR activities.
- vi) The project proponent shall explore the feasibility of supplying brine water to authorized salt pan agencies instead of discharging into sea or arrange to facilitate setting up of a salt manufacturing unit in the area. The project proponent shall explore setting up of salt pans is good for migratory birds as they use the salt pans as habitats for feeding. The project proponent can set an example of a sound conservation effort if a successful model for brine use as suggested above can be implemented.
- vii) The Committee also suggested that there are now porous concrete blocks available and these promote growth of artificial coral reefs with few years of its installation.
- viii) As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 1st May, 2018, and proposed by the project proponent, an amount of Rs.5.8 crores i.e @1% of project Cost shall be earmarked under Corporate Environment Responsibility (CER) for the activities such as support to local government, schools, sanitation and health including construction of public toilets in the surrounding villages, as per need based assessment carried out. The activities proposed under CER shall be restricted to the affected area around the project. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

AMENDMENT IN CRZ CLEARANCE

3.7 Proposal for construction of holiday Resort on Plot bearing Gut No. 532, Mauje Kihim, Taluka Alibag, District Raigad by Smt. Savitri Nandkishore Dube [IA/MH/CRZ/136783/2020] [F.No.11-2/2017-IA.III]- Amendment in CRZ Clearance

The project proponent made a presentation and provided the following information: M/s Savitri Nandkishore Dube was accorded CRZ Clearance on 30.06.2017 for construction of Holiday Resort at Plot bearing Gut No. 532, Mauje Kihim, Taluka Alibag, District Raigad. The present proposal is for an amendment to the CRZ clearance as under:

S.N	Description	Approved as per CRZ Clearance issued on 30.06.2017	Proposed amendment
1.	Total Plot area	4460 sq. m	4460 sq. m
2.	Built up area	857.96 sq.m	851.70 sq. m
3.	Structure A1	Reconstruction 184.04 sq.m	To be retained 184.04 sq.m
4.	Structure B1	New Construction 673.92 sq. m	169.63 sq. m
5.	Structure B2		47.42 sq. m
6.	Structure B3		356.58 sq. m
7.	Structure B4		95.01 sq. m

2. The Committee observed that the project site is located in notified area of Mumbai Metropolitan Region Development Authority as indicated in the letter issued vide TPS-1484/2684/UD 5, dated 27.05.1985. The Committee took note that the proposed amendment is a reduction in built up area by 6.26 sq.m, against the approved built-up area of 857.96 sq.m. The Committee also noted that the proposed amendment has been recommended by the Maharashtra Coastal Zone Management Authority vide letter No. CRZ 2018/CR 396/TC-4, dated 14th October, 2019.

3. The Committee observed that the instant proposal does not warrant an amendment of the CRZ clearance dated 30.06.2017 as there is no change in the scope of the project and only entails reduction on the built-up area of the resort. The Committee therefore decided that the Ministry may inform the project proponent formally to this effect.

3.8 Proposed pilot development of Suheli Island villas, Eco Tourism projects initiated under Island Development Agency by SPORTS / Lakshadweep Tourism Development Corporation Ltd. - CRZ Clearance - reg.

3.9 Proposed pilot development of Kadmat Island villas, Eco Tourism projects initiated under Island Development Agency by SPORTS / Lakshadweep Tourism Development Corporation Ltd. - CRZ Clearance - reg.

3.10 Proposal pilot development of Minicoy Island villas, Eco Tourism projects initiated under Island Development Agency by SPORTS / Lakshadweep Tourism Development Corporation Ltd. - CRZ Clearance - reg.

The above three pilot tourism project proposals are considered in sequel since issues are similar and the proposal belong to the same project proponent. These proposals of Society for Promotion of Natural Tourism and Sports (SPORTS) now rechristened as Lakshadweep

Tourism Development Corporation Ltd. is for development of water villas, land villas and eco-tourism projects and initiated by Island Development Agency, Government of India. Adviser (NRE), Niti Aayog; Managing Director of SPORTS; and Group Head (SFD), NIOT along with other officials SPORTS and NIOT were also present in the meeting.

2. A brief background of the proposed projects in the three islands of Lakshadweep viz. Suheli, Minicoy and Kadmat was made by Managing Director, SPORTS and it was informed that the UT Administration and NITI Aayog having recognized the economic potential of tourism sector in the islands through the project had undertaken preparation of concept development plans and detailed master plans for Holistic development of Package-III Islands (Minicoy, Bangaram, Thinnakara, Cheriya and Suheli Islands) in Lakshadweep. That assessments and stakeholder consultations were also conducted under the project and it clearly reflected that tourism is the key driver for socio-economic progress of these islands. Islands like Bangaram, Thinnakara, Minicoy, and Kadmat already have a presence of some touristic activities with basic supporting infrastructure facilities which paves way to further expand the potential of tourism in Lakshadweep Islands.

3. It was also informed that as a part of recommendations under the aforementioned project on Holistic Development of Islands, several projects were proposed for many islands to boost the overall development of the islands and ensure sustainable progress of the islanders. Tourism being the prime sector, included proposals for several hospitality projects and other recommendations to engage tourists over a longer duration of time through provision of variety of activities in the project islands. Amongst these, three anchor projects at Suheli, Minicoy and Kadmat are being taken up as pilot projects under PPP based development model. These projects include beach and water villa based premium resorts in the islands. It was stated that considering the sensitive nature of these islands, Detailed Project Reports (DPR) has been formulated with an intention to guide the development process of this mentioned premium pilot resort project in the islands and also provide clear development guidelines to the successful private developer, with ultimate objective of aiming to boost tourism in the islands without adversely impacting the sanctity of its ecosystem.

4. The Committee was informed that Lakshadweep Islands is an archipelago comprising of 36 coral islands in total, of which 10 islands are Agatti, Amini, Andrott, Bitra, Chetlat, Kadmat, Kalpeni, Kavaratti, Kiltan and Minicoy. From the tourism perspective, Kavaratti, Kalpeni, Minicoy, Kadmat, Agatti and Bangaram Islands are regarded as the major tourist focal islands in Lakshadweep Islands. Out of these, a few islands offer water-based recreational activities such as diving, snorkeling, and other water sports. However, the focal point and the distinctive features of these islands of Lakshadweep are its natural landscapes, sandy beaches, turquoise blue lagoons and sea, abundant floral and faunal species and a relaxed, soothing and serene lifestyle of these islands, which, in unison, reciprocate in providing an unmatched travel and living experience to the tourists. And in this sense, the Island Water Villa Resort at Suheli, Kadmat and Minicoy Islands will further supplement and grow the tourist potential and offer an exclusive experience to the tourist with more variety of tourist activities in a sustainable and responsible manner. Among the project islands in Lakshadweep, Suheli has very strong potential to be developed as an international tourist destination. Owing to its large land and lagoon area juxtaposed with its rich and complex cultural realm, the Island has tremendous scope to be explored as a global tourism destination.

5. The project proponent stated that at present, Maldives, Bora Bora, Moorea, Caribbean and Tahiti are the select few locations which have some of the world's best and most famous

of such resorts. The concept of Island Water Villa resorts has never been explored in India before. Considering the vast untapped tourism potential of Lakshadweep – the Coral Paradise of India – as well as the natural setting that is considered ideal for the establishment of such resorts in the three island provides an opportunity to carve a small but significant share in this niche market segment.

6. The project proponent further informed that this proposed resort projects are planned to be a mix of land-based beach villas and lagoon-based water villas (often termed as over-water bungalow) to offer a significant investment opportunity to qualified private investors. It was also stated that during the process of market assessment conducted by NITI Aayog and suggestions received during the investors meet, typical water-villa resorts in other destinations around the world offer a bouquet of services and accommodation options, including beach villas, and water villas, in addition to other facilities such as spa/wellness, gymnasium, banquets, etc. and hence combination of water and beach villas as a single project was agreed unanimously by all stakeholders. That furthermore, this integration also enabled suitable packaging of land based and water-based components (including shared infrastructure wherever possible) would also ease the packaging of land-based and water-based components as a single PPP project in these islands.

7. It was stated that the islanders including the Panchayat have full support of the proposed project and a number of stakeholders consultations have been undertaken in this regard. It was also stated that utmost concerns of the social character of the island will be kept in implementing the project. It was further stated that 75% of the employment generated will be locals. The project proponent made a presentation and provided the following information for the three project proposals:

(A) SUHELI:

- i) Suheli Cheriyakara Island is one among the 26 uninhabited islands of Lakshadweep groups with a total land area of about 0.4 Sq.km and a lagoon of about 78.6 Sq.km.
- ii) The proposed development of the Island water villa resort is a mix of both land-based Beach villas and Lagoon-based water villas (Over-water bungalow) over an area of 9.283 Ha.
- iii) Details of total land area and built-up area are as follows:

S.No	Description	Land Area (ha)	Water Area (ha)	Total (ha)
1.	Area	03.823	06.00	9.283
2.	Built-up area	0.9945	0.6300	1.6245

- iv) Total 110 keys are proposed as part resort development, of which 50 keys are water villa and 60 keys of beach villas.
- v) The detailed classification of villas are as follows:

Villa Type	Number of units
No of Beach Villas	45 Duplex villas, 15 single villas
No of Water Villas	48 suites, 2 presidential suites

- vi) Details of built-up components within the island water villa resort will be as follows:

Project Component	On Land	On Water
Public Space	Reception Restaurant	Spa & Wellness Centre

	Banquet Facilities Retail Bar	
Private Space	Beach Villa Single Beach Villa Duplex Beach Villa Staff Accommodation	Water Villa Presidential Suite
Infrastructure	Rain Water Harvesting Tanks Sanitation Zone – STP, OWC, etc DG Sets Desalination Plant Solar panel Control Unit Water Treatment Plant Roads	Floating Solar Panels

- viii) The proposed desalination plant (SWRO technology) will be established with a capacity of 82 KLD. The plant is proposed on the shore towards east side with a foot print of 100 sqm with facilities of intake and storage tank with a capacity of 82 KLD.

<i>Parameter</i>	<i>Value</i>	<i>Remarks</i>
Distance of intake structure from shore.	70 m	Metallic lantern at 3 m depth
Distance of outfall point from the plant.	700 m	Multiport diffuser at 3 m depth (200 m on land)
Area of desalination facility	100 sq.m	On land

	<i>Plant</i>	<i>Intake location</i>	<i>Outfall location</i>
Latitude	10°02'44.70" N	10°02'46.36" N	10°02'28.49" N
Longitude	72°17'10.57" E	72°17'08.99" E	72°17'27.43" E
Distance from shore (m)		65	530

- ix) Discharge outfall is proposed around 500 m from the shoreline towards the eastern side lagoon area.
- x) The infrastructure details of the proposed project are as follows:

<i>Item</i>	<i>Quantity</i>	<i>Treatment/storage/disposal method</i>
<i>Water and sanitation</i>		
Total Water Requirement (Fresh water + Recycled water)	213 KLD	
Total Fresh Water Requirement <i>70% through desalination plant 30% through rainwater harvesting</i>	117 KLD	Desalination plant capacity (RO technology) 82 KLD Rainwater Treatment Plant capacity: 35 KLD
Rainwater storage tanks capacity <i>(considering dry period of 120 days)</i>	4.7 ML	No. of over ground tanks: 6 No. of tanks under stilts: 21
Wastewater generated	102 KLD	STP capacity: 112 KLD Technology: MBBR

		Treatment effluent quality: BOD <3 mg/L, COD<10 mg/L
Recycled water	97 KLD	Recycled water is used in flushing, HVAC makeup water, DG set cooling tower, Landscaping and Horticulture.
Wastewater discharge (during monsoons)	29 KLD	
Solid Waste		
Waste during Construction phase 1. Inert Metallic waste 2. Solid waste 3. Normal debris	104 kg/day 52 kg/day 300 kg/day	<ul style="list-style-type: none"> • Temporary toilets with attached septic tanks to be constructed for construction workers • Waste will be collected and handed over to licensed vendors. • Normal debris will be utilized for land filling/levelling at the site
Waste during operation phase <ul style="list-style-type: none"> • Biodegradable waste - STP sludge • Non-biodegradable waste 	275 kg/day 165 kg/day 19 kg/day 110kg/day	<ul style="list-style-type: none"> • Organic waste processor capacity: 100 kg/day • Co-composting process to be adopted for sludge and biodegradable waste. Manure will be used in landscaping and gardening. • Non-biodegradable waste to be sent to mainland <p>Developer's responsibilities:</p> <ul style="list-style-type: none"> • Adhere to all existing regulatory framework • Furnish legal agreement with registered scrap dealers for safe disposal of waste. • Promoting efficient packaging and decreasing import of plastic into the island. • Encourage locals to pick beach litter and plastics providing them with money in exchange by the resort developers.
Power		
Total power requirement (50% from solar PVs and 50% of DG sets)	2879 KVA	Floating Solar power plant: 1.58 MW Diesel power plant: 0.71 MW

- xi) A total of 220 people will be permanently employed during the operation phase of the project and out of which, 154 will be native islanders (70%).
- xii) Temporary employment during both construction and operation phase of the project are 100 and 10 respectively.
- xiii) The employment likely to be generated is for 330 persons.
- xiv) The proposed development will not impact the pristine nature of the island ecosystem and sustained voluntary conservation measures will be undertaken.

- xv) The total cost of the project is about Rs 247.0 crores.
- xvi) The Lakshadweep Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 9/5/2019-S&T(Part.I), dated 25.02.2020.

(B) KADMAT:

- i) Kadmat Island is the fourth largest inhabited island in the Lakshadweep groups with a total land area of about 3.12 Sq.km and a lagoon of about 18.1 Sq.km.
- ii) The proposed development is a mix of both land-based beach villas and Lagoon-based water villas, comprising of land based villas of 5.557 ha and water area 6.0 ha.
- iii) Height of structure will be 12 m and FSI ratio will be 0.09 as per the governing Town Planning regulations.
- iv) Total 110 keys are proposed as part resort development, of which 35 keys of water villa and 75 keys of beach villas. In beach villas, 57 Duplex villas, 18 single villas will be and in water villas 33 suites and 2 presidential suites are proposed.
- v) Details of built-up components within the island water villa resort will be as follows:

Project Component	On Land	On Water
Public Space	<ul style="list-style-type: none"> • Reception • Restaurant • Banquet Facilities • Retail • Bar 	<ul style="list-style-type: none"> • Spa & Wellness Centre
Private Space	<ul style="list-style-type: none"> • Beach Villa ➤ Single Beach Villa ➤ Duplex Beach Villa • Staff Accommodation 	<ul style="list-style-type: none"> • Water Villa • Presidential Suite
Infrastructure	<ul style="list-style-type: none"> • Rain Water Harvesting Tanks • Sanitation Zone – OWC, STP, etc. • DG Sets • Desalination Plant • Solar panel Control Unit • Water Treatment Plant • STP • Roof top solar panels 	<ul style="list-style-type: none"> • Floating Solar Panels

- vi) Total water requirement is estimated to be 213 KLD. Fresh water requirement of 117 KLD proposed to be met from desalination plant (70%) and rain water harvesting (30%).
- vii) Rainwater storage tanks capacity of 4.7 ML is proposed to be installed with 6 over ground tanks and 21 tanks under stilts, considering dry period of 120 days.
- viii) A desalination plant and rainwater harvesting system is proposed with capacities of 82 KLD and 35 KLD respectively.
- ix) A desalination plant is proposed in Kadmat island with the capacity of treating 24 KLD. However, there is an additional requirement of 58 KLD more in order to meet the water requirement of the resort. Therefore, a combined desalination plant of 82 KLD is proposed using SWRO technology.

<i>Parameter</i>	<i>Value</i>	<i>Remarks</i>
Distance of intake structure (m)	200	Metallic lantern at 3 m depth
Distance of outfall pipe (m)	500	Multiport diffuser at 60 m depth
Area of desalination facility (sqm)	100	On land (NDZ)

	<i>Plant</i>	<i>Intake location</i>	<i>Outfall location</i>
Latitude	11°11'04.47" N	11°11'1.681" N	11°10'58.222" N
Longitude	72°45'46.10" E	72°45'37.9" E	72°45'49.645" E
Distance from shore (m)		100	150

- x) Discharge outfall is proposed around 500 m from the shoreline towards the eastern side open sea, beyond the fringing coral reefs, at a depth of 60 m.
- xi) The total waste water generated from the resort will be 102 KLD, which will be treated in a Moving Bed Biofilm Reactor (MBBR) based STP of capacity 112KLD. Treated wastewater of capacity 97 KLD will be recycled for various non-potable purposes such as greenbelt development, flushing, DG set cooling water, etc. Only during monsoon season, 29 KLD of treated waste water will be discharged into the sea.
- xii) The solid waste generated will be as follows:

<i>Solid waste</i>	<i>Quantity</i>	<i>Treatment/Storage/disposal</i>
Waste during construction phase <ul style="list-style-type: none"> • Inert metallic waste • Solid waste • Normal debris • Used oil 	92 kg/day 46 kg/day 300 kg/day 0.3 kg/month	<ul style="list-style-type: none"> • Temporary toilets with attached septic tanks to be constructed for construction workers • Solid waste will be collected and handed over to licensed vendors • Normal debris will be utilized for land filing/levelling at the site
Waste during operation phase <ul style="list-style-type: none"> • Biodegradable waste <ul style="list-style-type: none"> - STP sludge • Non-biodegradable waste 	275 kg/day 165 kg/day 19 kg/day 110kg/day	<ul style="list-style-type: none"> • Organic waste processor capacity: 100 kg/day • Co-composting process to be adopted for sludge and biodegradable waste. Manure will be used in landscaping and gardening. • Non-biodegradable waste to be sent to mainland <p>Developer's responsibilities:</p> <ul style="list-style-type: none"> • Adhere to all existing regulatory framework • Furnish legal agreement with registered scrap dealers for safe disposal of waste • Promoting efficient packaging and decreasing import of plastic into the island

		<ul style="list-style-type: none"> Encourage locals to pick beach litter and plastics providing them with money in exchange by the resort developers.
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- xiii) Power requirement will be met by the solar panels (50%) and DG sets (50%). Total power requirement of the facility is 2879 kVA, with a split-up of 0.71 MW from DG Sets and 1.58 MW from floating solar panels.
- xiv) A total of 220 people will be permanently employed during the operation phase of the project, out of which, 154 will be native islanders (70%).
- xv) Temporary employment during both construction and operation phase of the project are 100 and 10 respectively.
- xvi) The employment likely to be generated is for 330 persons.
- xvii) The total cost of the project is about Rs 240 crores.
- xviii) The Lakshadweep Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 9/5/2019-S&T(Part.I), dated 25.02.2020.

(C) MINICOY:

- i) The project for development of Island Water Villa Resort at Minicoy, Union Territory of Lakshadweep.
- ii) Minicoy is the second largest inhabited island in the Lakshadweep. Minicoy is located at the southern limit of the Lakshadweep archipelago.
- iii) The proposed project in the Minicoy Island will be developed in two sites on the southern portion of the island.
- iv) Total area (land area 8.54 ha and water area 6.00 ha) will be 14.54 and Built-up area (land area 13702.5 ha and water area 5020 ha) is about 1.8722 hectares. Height of structure will be 12 m and FSI ratio will be 0.13 as per the governing town planning rules/regulations.
- v) Detailed classification of Villas are as follows:

Villa Type	Number of units
Land Parcel 1	
No. of Beach Villas	28 Duplex villas, 26 single villas
Land Parcel 2	
No. of Beach Villas	41 Duplex villas, 15 single villas
No. of Water Villas	40

- vi) Details of built-up components within the island water villa resort will be as follows:

Project Component	On Land	On Water
Public Space	Reception Restaurant Banquet Facilities Retail Bar	Spa & Wellness Centre
Private Space	Beach Villa Single Beach Villa Duplex Beach Villa	Water Villa Presidential Suite

	Staff Accommodation	
Infrastructure	Rain Water Harvesting Tanks Sanitation Zone – STP, OWC, etc DG Sets Desalination Plant Solar panel Control Unit Water Treatment Plant	Floating Solar Panels

- vii) The project location falls in ICRZ-II and the Water villa falls in Conservation Zone.
- viii) The proposed desalination plant will be established at site 1 with a capacity of 114 KLD using SWRO technology.

<i>Parameter</i>	<i>Value</i>	<i>Remarks</i>
Distance of intake structure (m)	400	Metallic lantern at 3 m depth
Distance of outfall pipe (m)	700	Multiport diffuser at 60 m depth
Area of desalination facility (sqm)	100	On land (NDZ)

	<i>Plant</i>	<i>Intake location</i>	<i>Outfall location</i>
Latitude	8°16'32.18" N	8°16'24.15" N	8°16'17.70" N
Longitude	73°01'06.88" E	73°01'00.85" E	73°00'58.79" E
Distance from shore (m)		300	500

- ix) Discharge outfall is proposed around 700 m from the shoreline towards the eastern side open sea, beyond the fringing coral reefs, at a depth of 60 m.
- x) The infrastructure details of the proposed project are as follows:

<i>Sector</i>	<i>Quantity</i>		<i>Treatment/Storage/disposal</i>
	<i>Site 1</i>	<i>Site 2</i>	
Water and Sanitation			
Total water requirement	108 KLD	187 KLD	
Fresh water requirement (70% through desalination plant) (30% through rainwater harvesting)	61 KLD	103 KLD	Desalination plant capacity (RO technology): 114 KLD Rainwater treatment plant capacity: <ul style="list-style-type: none"> • Site 1: 18 KLD • Site 2: 31 KLD
Rainwater storage tanks capacity (total) (considering dry period of 120 days)	6.48 ML		No. of over ground tanks: <ul style="list-style-type: none"> • Site 1: 7 tanks • Site 2: 7 tanks No. of tanks under stilts: 45
Wastewater generated	50 KLD	89 KLD	STP capacity: site 1- 60KLD Site 2- 99 KLD Technology: MBBR

			Treatment effluent quality: BOD <3 mg/L, COD <10 mg/L
Recycled water (treated wastewater)	48 KLD	85 KLD	Used for various non-potable purposes such as greenbelt development, flushing, DG set cooling water, etc
Wastewater discharge (during monsoon)	Nil	25 KLD	
Solid waste			
Waste during construction phase <ul style="list-style-type: none"> Inert metallic waste Solid waste Normal debris Used oil Demolition waste 	44 kg/day 22 kg/day 100 kg/day 4 kg/month 463000 kg	77 kg/day 39 kg/day 200 kg/day 8 kg/month Nil	<ul style="list-style-type: none"> Temporary toilets with attached septic tanks to be constructed for construction workers Solid waste will be collected and handed over to licensed vendors Normal debris will be utilized for land filing/levelling at the site
Waste during operation phase <ul style="list-style-type: none"> Biodegradable waste - STP sludge Non-biodegradable waste 	135 kg/day 81 kg/day 19 kg/day 54kg/day	240 kg/day 144 kg/day 17 kg/day 96 kg/day	<ul style="list-style-type: none"> Organic waste processor capacity: 100 kg/day Co-composting process to be adopted for sludge and biodegradable waste. Manure will be used in landscaping and gardening. Non-biodegradable waste to be sent to mainland <p>Developer's responsibilities:</p> <ul style="list-style-type: none"> Adhere to all existing regulatory framework Furnish legal agreement with registered scrap dealers for safe disposal of waste Promoting efficient packaging and decreasing import of plastic into the island Encourage locals to pick beach litter and plastics providing them with money in exchange by the resort developers.
Power			
Total power requirement (50% from solar PVs and 50% of DG sets)	3900 kVA		Solar power plant (total capacity): 2.15 MW <ul style="list-style-type: none"> Floating solar PV: 1.33 MW

		<ul style="list-style-type: none"> • Rooftop/on-ground solar PV: 0.82 MW Diesel power plant: 0.96 MW
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- xi) A total of 21 trees will be removed from the proposed project site. A compensatory greenbelt involving native species has been proposed as part of the project.
- xii) The employment likely to be generated is for 440 persons.
- xiii) The total cost of the project is about Rs. 319 crores.
- xiv) The Lakshadweep Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. 9/5/2019-S&T(Part.I), dated 25.02.2020.

8. The project proponent informed the Committee that the shoreline change data for the period 1999-2016 for **Suheli** indicates average accretion rate at about 0.58 m/year. That since the island is uninhabited, Suheli is experiencing accretion rather than erosion unlike other inhabited islands such as Kalpeni, Kavaratti, Kadmat etc. It was stated that from the data collected, beach area of Suheli has increased from 0.054 sq. Km over a period of 14 years from 1999 to 2013 and Suheli Island has approximately 3.46 km of coastline covered by sandy beaches. Eastern side of Suheli Island has a length of about 1.76 km and accreting at the rate of 0.64 m/year. It was also informed that the lagoon present in Suheli is comparatively shallow with a depth of about 0.5-2m except in the central part characterized by intermediate (1-2.5m) and deep lagoon (>2.5m) that open to the oceanic waters. Healthy coral reefs are observed towards the southernmost and south-western side of the lagoon. The area, including the lagoon and outside, acts as a good fish resource and thus, pole and line fishing is concentrated in this area and the island is used as a base.

9. The project proponent during the course of the presentation stated that Marine EIA has been undertaken by NIOT and the study in respect of Suheli project indicates that to achieve only 7 ppt increase in the final discharge brine, an additional amount of 12.53 m³/hour of sea water is blended to the brine resulting in 22.17 m³/hour of discharge at a salinity of 42 ppt. It was also stated that the brine discharged at a depth of 3m and into the open sea will disperse completely within 10m from the point of discharge point and so will have no impact on the ecosystem in the lagoon. Similar acceptable observations but with slight changes in the parameters have been observed in the brine dispersion models of projects in Kadmat and Minicoy.

10. The Committee was further informed that the UT Administration had done due diligence in so far as compliance with the orders of the Hon'ble Supreme Court in Civil Appeal No. 4625-4626 of 2012, taking into consideration the recommendation of Justice Raveendran Committee on the subject. That the UT administration had also taken legal opinion from Law Officer in the Ministry of Law & Justice and accordingly proceeded with the present proposals.

11. The Committee deliberated the proposal and observed that Suheli, Kadmat and Minicoy are islands, endowed with rich and unique corals and an inclusive development keeping the ecology intact and in harmony with nature is called for. It was observed that Suheli is one of the important nesting area of Hawksbill Sea Turtle on the entire west coast of India which is an endangered species. It was observed that the lagoons and the beaches in Kadmat and Minicoy are home to Hawksbill, Green Sea and Olive Ridley turtles in large numbers. The Committee observed that the EIA reports for these projects are not detailed enough on the preservation and conservation measures proposed to be adopted for the turtles and its likely foray in the water villas and the beaches. The DPR of the project was not circulated to the

members and infact only one copy was provided during the meeting. This has prevented Committee members to examine project details. There is no clarity on movement of tourists, location of sea plane landing, sea plane hub, evacuation plans in case of medical and other weather related emergencies etc. Also impact of storage and leakages of diesel for power generation on lagoon ecology is not studied. There is no robust plan of solid waste disposal. The Committee also noted that the EIA report mentions that loss in primary productivity due to shading caused by water villas and floating solar panels nearly negligible as it will constitute only 0.029% of the lagoon area but does not dwell on the flora, fauna likely to be present beneath the proposed location of the solar panels and water villas. It was also observed that the EIA reports also do not stated clearly which kind of water sport activities will be undertaken nor it has adequately addressed the likely impact of the same on the corals and the lagoon ecosystem at large.

12. It was noted that the EIA lacks thorough listing of flora and fauna of these reefs and thus mitigation measures cannot be decided. Large number of endangered species listed in Schedule 1 of Wildlife (Protection) Act, 1972 occur on sandy lagoon areas as well as reefs of Suheli islands. Some notable Schedule 1 and rare species occurring here are *Cassis cornuta*, *Cypraeassis rufa*, *Charonia tritonis*, *Harpulina arausiaca*, *Tridacna maxima*, *Tridacna squamosa* and several species of sea cucumbers and hard corals. Schedule IV species include *Lambis lambis*, *Harpago chiragra*, *Harpago chiragra arthritica*, *Lambis truncata*, *Lambis scorpius indomaris*, *Lambis crocata*, *Strombus plicatus sibbaldi*, *Staphylaea limacina*, *Leporicypraea mappa*, *Talparia talpa*, *Pleuroploca trapezium*, *Rochia nilotica* and *Turbo marmoratus*. These are among several other endangered flora and fauna. Kadmat and Minicoy lagoon and reefs also house similar rich marine fauna. None of these found mention in EIA document.

13. The Committee also observed that the livelihood of fishermen of the islands should not be hampered due to the development of a luxury activity and stated that access to fishing cannot be denied to the islanders for which a clear picture is not available as of now. That in case, such a situation should arise, the alternative measures need to be firmly in place at this stage. The Committee therefore felt that a mechanism of alternative livelihood to the affected fishermen is therefore required to be first in place, in case the project is going to affect fishermen livelihood. It was opined that such a plan should mention the affected families/persons in numbers if not by name and the remedial /alternative committed livelihood options spelt out.

14. In Kadmat, it was noted that 70% of the Kadmat island exhibits erosion and the UT administration has taken up shore protection measures for nearly 57.4% of the coast using hard structures such as tetra pods, retaining wall, dumping of rocks, sand bags etc. The Committee however was informed that the proposed project site falls in low erosion, stable, low accretion and medium accretion zone as per the shoreline change assessment study done NIOT. It was also informed that the proposed overwater villas and floating solar panels will be supported by piles of minimal diameter to ensure no change in existing hydrodynamic flow and along shore sediment transportation. The DPR of the project was not circulated to the members and infact only one copy was provided during the meeting. This has prevented Committee members to examine project details.

15. The Committee was informed that in Minicoy, compared to the entire lagoon area of 30.6 sq. km, the shadowing area due to the proposed water villas and floating solar panel will be only 0.069%, which is nearly negligible. The Committee noted that Minicoy has a total shore length of 23.07 km and has approximately 24 km of coastal length covering sandy

beaches all along the coast. That almost 48% of the Minicoy Island exhibit erosion and hence the UT Administration has taken up shore protection measures of nearly 19% to protect the coast using hard structures such as tetrapods, retaining wall, dumping of rocks, sand bags etc. The Committee was therefore concerned that the project proponent need to be mindful of the safety and sustainability of the villas. The DPR of the project was not circulated to the members and infact only one copy was provided during the meeting. This has prevented Committee members to examine project details.

16. Based on the deliberations and information available, the Committee observed that the proposed developments in Kadmat and Minicoy can be agreed in-principle, there still remain major gap of information as noted above in the preceding paras above, before a final decision is taken. Regarding, Suheli it was observed that the Committee would need to visit the site as Suheli is unique in terms of its ecology compared to the other islands. The Committee also agreed that a strong conservation action plans in all three islands for turtles to be implemented by UT administration shall be put in place and submitted for further perusal. This is specifically important as in most of the islands, deployment of tetrapods have destroyed sea turtle nesting by preventing them to access nesting (sandy areas above high tide mark) areas and only nesting areas available are Suheli, Bangaram and Tinnakara islands.

17. The Committee finally observed that a site visit during March 19-23, 2020 to Suheli and Kadmat Islands by a Sub-Committee comprising of Chariman, EAC Dr. Deepak Apte; Dr. V.K. Jain, Member (EAC); Shri Prabhakar Singh, Member (EAC) and representative of the Ministry. The Committee finally decided that based on the findings of the site visit and follow up action by the project proponent as mentioned in paras 11 to 14 above, the proposal shall be taken up for re-consideration at a later stage. The Committee shall visit the project locations at Suheli and Kadmat jointly with the officials of UT administration, Lakshadweep forest department, technical experts of LCZMA and SPORTS so as to facilitate discussions and understanding of the ground situation and assess the project for its ecological impacts. Meanwhile project proponent should provide soft copies of DPR to the Committee members.

3.11 Proposal for laying of HDPE pipeline of total length 17.50 km from existing disposal point at Forest Naka Ambernath to Ulhas Creek for disposal of treated effluent from Ambernath, Additional Ambernath and Badlapur MIDC Industrial Area by M/s Maharashtra Industrial Development Corporation (MIDC) [LAMH/CRZ/126822/2019] [F.No.11-11/2020-IA.III] - CRZ Clearance - reg.

The proposal of Maharashtra Industrial Development Corporation (MIDC) is for laying of HDPE pipeline of total length 17.50 km from existing disposal point at Forest Naka Ambernath to deep into Ulhas Creek for disposal of treated effluent from Ambernath, Additional Ambernath and Badlapur MIDC industrial area. The project proponent made a presentation and provided the following information:

- i) M/s MIDC has proposed laying and Jointing of HDPE pipeline of length 17.50 km for disposal of Treated Effluent from CETPs situated in Ambernath, Addl. Ambernath and Badlapur Industrial areas from existing disposal point to deep into Ulhas Creek at outfall location suggested by National Institute of Oceanography (NIO).
- ii) The total length of Pipeline will be 17.50 km, out of which 5000 m length of pipeline will traverse in CRZ area.
- iii) MIDC has taken up this work in compliance to order of NGT in the matter of Vanshakti Public Trust and Other Vs Maharashtra Pollution Control Board & Others Vide

Application No 37/2013 (Execution Application No 15/2016) before Honorable NGT, Western Zone, Bench Pune.

- iv) The depth of excavation 3 m and width of excavation 1.71 meter.
- v) The capacity of desalination plant will be 25 MLD. The said pipeline will carry approx. 22.25 MLD effluent from CETPs situated in Ambernath, Additional Ambernath and Badlapur Industrial area's 17.50 Km away from existing disposal point at deep into Ulhas creek.
- vi) ETP with Advance Treatment Technology and disposal in Creek at Point suggested by NIO.
- vii) The employment likely to be generated is for 35 persons.
- viii) There are no Mangroves in the entire alignment of the laying of the pipeline.
- ix) The total cost of the project is about Rs.124.73 crores.
- x) The Maharashtra Coastal Zone Management Authority has recommended the above proposal for clearance vide their letter No. CRZ 2019/CR181/TC-4, dated 4th November, 2019.

2. The Committee noted that the proposed alignment of disposal pipeline runs along the natural stream bed flowing parallel to Railway track (Ambernath to Ulhasnagar to Vittalwadi) and further to Ulhas river creek bed up to the disposal point suggested by NIO at 19°16'51.98" N and 73°01'14.63"E. However, the Committee observed that the pipeline is proposed all along a route which is extensively lengthy as the project proponent has considered only in terms of ease of obtaining ROW. The Committee therefore desired that the project proponent shall change the alignment of discharge point further taking a shorter route so that length of proposed pipeline shall be minimized. The Committee also decided that NIO may submit a justification for selection of the proposed discharge point location which seem highly undesirable.

3. The Committee was also informed of the order dated 05.02.2020 of Hon'ble Supreme Court in the matter Civil Appeal No(s). 10582/2017 directing Government of Maharashtra to monitor the upgradation work of CETP and laying of pipeline for effective disposal of treated wastewater from Ambernath, Additional Ambernath, Badlapur, MIDC industrial area into the Ulhas Creek. The Committee during the course of its deliberation agreed that an independent assessment of the treated effluent quality is required. It was further agreed that the names and type of industries along with details of effluent quantity and its characteristics from each member industry shall be collated, compiled and furnished to the Committee for its perusal.

4. Based on the deliberations held, the Committee decided that the proposal is premature for consideration in its present form and decided that the project proponent shall first submit the following information /documents:

- i) Revised proposal with a changed alignment of pipeline and the discharge point further down to deep sea taking a shorter route or adequate justification from NIO for selection of the proposed discharge point location.
- ii) Endorsement of the MCZMA with the new alignment.
- iii) Effluent characteristics of member industries of CETP, the water quality data / report after upgradation of CETP carried out by nationally reputed institute and endorsed/certified by the State PCB.
- iv) The project proponent shall submit an in-built mechanism for ensuring that the member of the industries is held accountable for lapses (if any) for eventuality of non-conformity of the CETP discharge with the standards prescribed by the Central/State Pollution Control Board.

The proposal was accordingly deferred for re-consideration at a later stage on receipt of the above information/documents.

4.0 Any other item with the permission of the Chair.

There being no agenda item left, the meeting ended with a vote of thanks to the Chair.
