



ABSTRACT

Environment, Climate Change and Forest Department – Tamil Nadu Coastal Restoration Mission/TN-SHORE – Annual Action Plan for the year 2024-2025 – Administrative Sanction and Financial Sanction Approved – Orders - Issued.

ENVIRONMENT, CLIMATE CHANGE AND FOREST (FR.12) DEPARTMENT

G.O.(Ms) No:160

Dated : 19 .09.2024

குரோதி, புரட்டாசி-3

திருவள்ளூர் ஆண்டு-2055

Read:

1. G.O. (Ms) No.11, Environment, Climate Change and Forests (EC.4) Department, dated 10.01.2024.
2. From the Chief Mission Director, Tamil Nadu Coastal Restoration Mission, Letter C. No.03/TNCRM-2/2024, dated 12.07.2024.
3. From the Chief Mission Director, Tamil Nadu Coastal Restoration Mission, Letter C. No.04/TNCRM-2/2024, dated 13.09.2024.

ORDER:-

The Hon'ble Minister (Finance & Human Resources Management), in his Budget Speech for the year 2023-2024, has made the following announcement on the floor of the assembly: -

"Due to increasing vagaries of climate change and pressure caused by the burgeoning population, the coastal ecosystem and the livelihood of coastal population are likely to be severely affected in the near future. The Government will implement the "Tamil Nadu Coastal Restoration Mission" with the objective of preventing sea erosion, reducing marine pollution and conserving marine biodiversity. The mission will be implemented with World Bank assistance at an estimated cost of Rs.2,000 crore in the next 5 years."

2. In the Government Order first read above, the Government have issued orders for setting up of "Tamil Nadu Coastal Restoration Mission" with assistance from the World Bank. The estimated cost of the project is Rs.1675 Crore (World Bank assistance Rs.1172.5 Crore (+) Tamil Nadu State Component Rs.502.5 Crore) including the State share with activities spread over Financial Years 2024-2029 and also accord approval to the Tamil Nadu Green Climate Company and other concerned agencies to receive funds, manage, implement and monitor the Tamil Nadu Coastal Restoration Mission.

3. In the letter second read above, the Chief Mission Director, Tamil Nadu Coastal Restoration Mission has informed that based on the orders in the Government Order first read above, various activities like preparation of Detailed Project Reports, Environment and Social Due Diligence Report, Environmental Social Management Plan, Environmental and Social Impact Assessment, estimates, project proposals etc., are being taken up in order to make timely progress in the project implementation. The project would be implemented by various entities/departments such as:-

a. Forest Department including Green Tamil Nadu Mission & Wetlands Mission would be implementing activities

- i. under the component Enhance Coastal Biodiversity with activities like, Creation of Biodiversity Park at Kadambur, Dugong Conservation Centre; Construction of Sea Turtle Conservation Centres, Conservation and Restoration of Wetlands.
- ii. under component Coastal Protection, the activities like, Enhancing Coastal Resilience by way of Mangroves, Seagrass & Blue Carbon solutions, Erosion Control & Coral restoration at Kariyachalli Island of Gulf of Mannar.
- iii. under the Improving Livelihood component, the activities like, Sustainable Tourism & Diversified livelihood for thriving blue economy.

b. The Department of Environment and Climate Change would be implementing activities

- i. Blue Flag Beach Certification programme,
- ii. Climate Smart Coastal Villages, and
- iii. Strengthening Coastal Management through Integrated Coastal Zone Management, Marine Spatial Planning, Coastal Management Plan, Integrated Management Plans, etc.,

c. The Tamil Nadu Pollution Control Board would be implementing activities

- i. under the Pollution Abatement component like, Advancing Meendum Manjappai - Strengthening Plastic Circularity and
- ii. Ennore Creek Restoration programme.

4. In order to carry out the above mentioned activities, the Forest Department would be implementing through the District Forest Officers, Divisional Forest Officers & the Wildlife Wardens of the Coastal Districts. The Department of Environment & Climate Change would be implementing through the implementing agencies like, District Rural Development Agency, Municipal Administration Department and Greater Chennai Corporation. And for the activities related to Pollution Abatement, the Tamil Nadu Pollution Control Board would be executing the works through its unit offices at the

Districts and concerned department like Greater Chennai Corporation, Corporations, District Rural Development Agency, etc.

5. Further, he has stated that as part of the preparedness, the State Government has to mandatorily show progress on the 30% preparedness of the bidding related to the civil works at the time of negotiation by the Department of Economic Affairs with World Bank which is scheduled to happen anywhere during the month of October - November 2024 and before such time, the State has to have 30% of works under ready to award of contract stage. He has therefore submitted an Annual Action Plan for the year 2024-2025 for an amount of Rs.291.47 Crore.

6. In the letter 3rd read above, the Chief Mission Director, Tamil Nadu Coastal Restoration Mission has stated that after detailed discussion, the proposal have been modified as follows:-

Sl. No.	Name of the Activity	Amount (Rs. Cr.)
1	Construction of International Dugong Conservation Centre at Manora, Thanjavur district, Tamil Nadu	41.30
2	Building Bio-shields for Habitat Rehabilitation and Mangrove Restoration	38.362
3	Conservation and Restoration Works of Pallikarnai wetland	22.998
4	Wide-scale restoration of degraded seagrass beds and assessment of Blue Carbon potential in Gulf of Mannar, Tamil Nadu: an initiative to create comprehensive baseline and enhance environmental health and livelihood sustainability	18.171
5	Construction, Deployment, Data Collection and Analysis of Multipurpose Artificial Reef Modules at Kariyachalli Island, Gulf of Mannar Marine National Park, Ramanathapuram – Tamil Nadu	43.71
6	Implementation of Blue Flag Beach Programme, in Marina Beach, Chennai	6.00
7	Implementation of Blue Flag Beach Programme, in Silver Beach, Cuddalore	4.00
8	Implementation of Blue Flag Beach Programme, in Ariyamaan Beach, Ramanathapuram	4.00
9	Implementation of Blue Flag Beach Programme, in Kameshwarm Beach, Nagapattinam	4.00
	TOTAL	182.55

7. The Chief Mission Director, Tamil Nadu Coastal Restoration Mission has therefore requested necessary orders from the Government on the following: -

i) Considering the urgency to achieve the 30% readiness criteria of works, it is requested that the Annual Plan of Action for the year 2024-25 may kindly be approved.

ii) Necessary orders empowering Director of Environment and Climate Change to withdraw the funds from the treasury and deposit the same into the Tamil Nadu Green Climate Company's account, inturn route the amount to the Project Monitoring Unit i.e. Chief Mission Director, Tamil Nadu Costal Restoration Mission.

iii) Necessary orders empowering the nodal department / State Level Implementing Agencies to issue administrative sanction at their respective levels.

8. The Government after careful examination of the proposal of the Chief Mission Director, Tamil Nadu Coastal Restoration Mission accord administrative sanction for Rs.178,16,91,000/- (Rupees One Hundred and Seventy Eight Crore Sixteen Lakh and Ninety One Thousand Only) for implementation of Annual Action Plan under TN-SHORE/Tamil Nadu Coastal Restoration Mission including preparedness of the bidding related to the civil works as per the annexures to this order and accord financial sanction for a sum of Rs.70,00,00,000/- (Rupees Seventy Crore Only) for the year 2024-2025.

Sl. No.	Name of the Activity	Amount (Rs. Cr.)
1	Construction of International Dugong Conservation Centre at Manora, Thanjavur district, Tamil Nadu	40.94
2	Building Bio-shields for Habitat Rehabilitation and Mangrove Restoration	38.2944
3	Conservation and Restoration Works of Pallikarnai wetland	22.998
4	Wide-scale restoration of degraded seagrass beds and assessment of Blue Carbon potential in Gulf of Mannar, Tamil Nadu: an initiative to create comprehensive baseline and enhance environmental health and livelihood sustainability	18.0186
5	Construction, Deployment, Data Collection and Analysis of Multipurpose Artificial Reef Modules at Kariyachalli Island, Gulf of Mannar Marine National Park, Ramanathapuram - Tamil Nadu	39.9181
6	Implementation of Blue Flag Beach Programme, in Marina Beach, Chennai	6.00

7	Implementation of Blue Flag Beach Programme, in Silver Beach, Cuddalore	4.00
8	Implementation of Blue Flag Beach Programme, in Ariyamaan Beach, Ramanathapuram	4.00
9	Implementation of Blue Flag Beach Programme, in Kameshwarm Beach, Nagapattinam	4.00
	TOTAL	178.1691

9. The Chief Mission Director, Tamil Nadu Coastal Restoration Mission also directed as follows:-

(i) Manpower shall be proposed after completion of construction of Dugong Conservation Centre and lab be installed in nearby State Universities/Colleges and 2 Research Fellows be engaged.

(ii) The research labs be set up in State Universities and Colleges as far as possible so as to create research ecosystem to strengthen the local institutional research capabilities.

10. The expenditure sanctioned in para 8 above shall be debited to the following Head of Account:-

5425-00 CAPITAL OUTLAY ON OTHER SCIENTIFIC AND ENVIRONMENTAL RESEARCH - 208 Ecology and Environment - Externally Aided Projects - PA Conservation and Restoration of Ocean Resources under TNSHORE/TNCRM - 416 Major Works - 01 Major Works (DP Code: 5425-00-208-PA 41601) - Rs.70,00,00,000/-

11. The Director of Environment and Climate Change Department is authorized to draw and disburse amount sanctioned in para 8 above to the concerned.

12. This order issues with the concurrence of the Finance Department vide its U.O. No.7434728/Finance (ECC & F)/2024, dated 18.09.2024.

(BY ORDER OF THE GOVERNOR)

P. SENTHILKUMAR
PRINCIPAL SECRETARY TO GOVERNMENT

To

The Director,
Department of Environment and Climate Change,
Chennai-15.

The Principal Chief Conservator of Forests (HoFF),
Chennai-32.

The Principal Chief Conservator of Forests and Chief Wildlife Warden,
Chennai-32.

The Principal Chief Conservator of Forests and Member Secretary, Tamil Nadu State Wetlands Authority/
 Chief Mission Director,
 Green Tamil Nadu Mission (FAC), Chennai-15.
 The Chief Mission Director,
 Tamil Nadu Coastal Restoration Mission,
 Chennai-32.
 The Chief Executive Officer,
 Tamil Nadu Green Climate Company, Chennai-9.
 The Accountant General, Chennai-18.
 The Pay and Accounts Officer, Chennai-9.
 The Principal Secretary to Government,
 Finance Department, Secretariat, Chennai-9.

Copy to

The Special Personal Assistant to Hon'ble Chief Minister,
 Chief Minister's Office, Chennai-9.
 The Special/Senior Personal Assistant to the Hon'ble Minister (Finance & HRM), Chennai-9.
 The Hon'ble Chief Minister's Office, Chennai-9.
 The Private Secretary to Secretary-I to Hon'ble Chief Minister, Chennai-9.
 The Special/Senior Personal Assistant to the Hon'ble Minister (Forests), Chennai-9.
 The Special/Senior Personal Assistant to the Hon'ble Minister (Environment, Climate Change), Chennai-9.
 The Private Secretary to Chief Secretary to Government, Chennai-9.
 The Chairperson, Tamil Nadu Pollution Control Board, Chennai-32.
 The Private Secretary to Principal Secretary to Government, Environment, Climate Change and Forest Department, Secretariat, Chennai-9.
 The Private Secretary to Special Secretary (Environment, Climate Change), Environment, Climate Change and Forest Department, Secretariat, Chennai-9.
 The Private Secretary to Special Secretary (Forest), Environment, Climate Change and Forest Department, Secretariat, Chennai-9.
 Finance (E, CC & F/BPE) Department, Chennai-9.
 Stock File/Spare Copy.

// FORWARDED BY ORDER //

R. V. Kulkarni 19/9/24
 SECTION OFFICER

G.O. (Ms) No.160, Environment, Climate Change and Forest (FR.12) Department, dated 19.09.2024

ANNEXURE-I

International Dugong Conservation Center at Manora Pattukottai-PHASE-1
Estimate

S.no		Unit	Qty	Rate	Amount (Rs. In Crore)
1	DUGONG BUILDING (WITH CAFETERIA & SOURVENIER SHOP, TOILET ETC.,)				18.83
2	MARINE MUSEUM				4.17
3	GENERATOR, TRANSFORMER & UPS				0.91
4	ROAD				0.39
5	RETAINING WALL, GOOD EARTH FILLING AND FENCE WALL		276	8628	2.40
6	LANDSCAPING WORKS, ART INSTALLATION, ETC.,				0.95
7	TUNNEL AQUARIUM				2.63
8	Lab equipment expenses				0.75
9	BAMBOO PAVILION NEAR SEA, PRDESTRAIN STEEL BRIDGE AND MANGROVE WALKWAYS 1000m				2.40
10	Total estimated amount (Excluding GST)				33.43
11	PMC consultancy fees 2.5%				0.84
					34.27
12				18%GST	6.17
13	Total Estimated amount (including GST)				40.44
14	Miscellaneous Admin Expences (approvals, ESIA, NOCs)etc				0.50
15	DUGONG - PHASE 1 ESTIMATE				40.94

P. SENTHILKUMAR
PRINCIPAL SECRETARY TO GOVERNMENT

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R. Venkatesh
SECTION OFFICER

ANNEXURE-II

Sl. No	Name of the Component	Name of the District	2024-2025		2025-2026		2026-2027		2027-2028		2028-2029		2029-2030		Total (Rs. In lakh)
			Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	
1	Constitution and Empowerment of Village Mangrove Councils (VMC)														
i.	Constitution of Village Mangrove Councils & Eco-Development Committee for Restoration of Blue Carbon Eco-System @	Thiruvallur	-	-											
		Chengalpattu	2	0.5											
		Villupuram	-	-											
		Cuddalore	8	2											
		Myladuthurai	3	0.75											
		Nagapattinam	2	0.5											
		Thiruvarur	8	2											
		Thanjavur	-	-											
		Pudukkottai	2	0.5											
		Ramanathapuram	5	1.25											
		Thoothukudi	2	0.5											
		Kanniyakumari	2	0.5											
		Sub Total	34	8.5											
ii.	Preparation of comprehensive Micro-Planning for Restoration of Blue Carbon Eco-System @ 0.50 lakh / village	Thiruvallur	-	-											
		Chengalpattu	2	1											
		Villupuram	-	-											
		Cuddalore	8	4											
		Myladuthurai	3	1.5											
		Nagapattinam	2	1											
		Thiruvarur	8	4											
		Thanjavur	-	-											
		Pudukkottai	2	1											
		Ramanathapuram	5	2.5											
		Thoothukudi	2	1											
		Kanniyakumari	2	1											
		Sub Total	34	17											

Sl. No	Name of the Component	Name of the District	2024-2025		2025-2026		2026-2027		2027-2028		2028-2029		Total (Rs. In lakh)
			Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	
iii.	Provision for Revolving Fund for each Village Mangrove Councils @ Rs. 5 lakhs for 4 years for sustainability of the institution mechanism & continuous involvement of the public	Thiruvallur	-	-	-	-	-	-	-	-	-	-	-
		Chengalpattu	2	10	2	10	2	10	2	10	2	10	10
		Villupuram	-	-	-	-	-	-	-	-	-	-	-
		Cuddalore	8	40	8	40	8	40	8	40	8	40	40
		Myiaduthurai	3	15	3	15	3	15	3	15	3	15	15
		Nagapattinam	2	10	2	10	2	10	2	10	2	10	10
		Thiruvarur	8	40	8	40	8	40	8	40	8	40	40
		Thanjavur	-	-	-	-	-	-	-	-	-	-	-
		Pudukkottai	2	10	2	10	2	10	2	10	2	10	10
		Ramanathapuram	5	25	5	25	5	25	5	25	5	25	25
		Thoothukudi	2	10	2	10	2	10	2	10	2	10	10
		Kanniyakumari	2	10	2	10	2	10	2	10	2	10	10
		Sub Total	34	170	34	170	34	170	34	170	34	170	850
iv.	Training, Capacity building and awareness creation regarding Blue Carbon Eco- System & Engagement with Stakeholders - 3 events per village @ 0.10 lakh / event	Thiruvallur	-	-	-	-	-	-	-	-	-	-	-
		Chengalpattu	5	1.5	5	1.5	5	1.5	5	1.5	5	1.5	1.5
		Villupuram	-	-	-	-	-	-	-	-	-	-	-
		Cuddalore	16	6	16	6	16	6	16	6	16	6	6
		Myiaduthurai	8	2.25	7	2.25	7	2.25	7	2.25	7	2.25	2.25
		Nagapattinam	5	1.5	5	1.5	5	1.5	5	1.5	5	1.5	1.5
		Thiruvarur	20	6	20	6	20	6	20	6	20	6	6
		Thanjavur	-	-	-	-	-	-	-	-	-	-	-
		Pudukkottai	5	1.5	5	1.5	5	1.5	5	1.5	5	1.5	1.5
		Ramanathapuram	13	3.75	12	3.75	12	3.75	12	3.75	12	3.75	3.75
		Thoothukudi	5	1.5	5	1.5	5	1.5	5	1.5	5	1.5	1.5
		Kanniyakumari	5	1	5	1	5	1	5	1	5	1	1
		Sub Total	82	25	80	25	80	25	80	25	80	25	50
v.	Marketing Centre for value added produce using coastal resources @ Rs.10 lakh / village	Thiruvallur	-	-	-	-	-	-	-	-	-	-	-
		Chengalpattu	-	-	-	-	2	20	-	20	-	-	20
		Villupuram	-	-	-	-	-	-	-	-	-	-	-
		Cuddalore	-	-	-	-	8	80	-	80	-	-	80
		Myiaduthurai	-	-	-	-	3	30	-	30	-	-	30
		Nagapattinam	-	-	-	-	2	20	-	20	-	-	20
		Thiruvarur	-	-	-	-	8	80	-	80	-	-	80
		Thanjavur	-	-	-	-	-	-	-	-	-	-	-
		Pudukkottai	-	-	-	-	2	20	-	20	-	-	20
		Ramanathapuram	-	-	-	-	5	50	-	50	-	-	50
		Thoothukudi	-	-	-	-	2	20	-	20	-	-	20
		Kanniyakumari	-	-	-	-	2	20	-	20	-	-	20
		Sub Total	-	-	-	-	34	340	-	340	-	-	340

Sl. No	Name of the Component	Name of the District	2024-2025		2025-2026		2026-2027		2027-2028		2028-2029		Total (Rs. In lakh)
			Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)			
2	Coastal protection – Creation of bio-shield and restoration of mangrove eco-system												
i. Identification and mapping of suitable sites for New and Degraded Mangrove area @	Thiruvallur	-	-										
	Chengalpattu	2	0.5										
	Villupuram	-	-										
	Cuddalore	8	2										
	Myladuthurai	3	0.75										
	Nagapattinam	2	0.5										
	Thiruvarur	8	2										
	Thanjavur	-	-										
	Pudukkottai	2	0.5										
	Ramanathapuram	5	1.25										
	Thoothukudi	2	0.5										
	Kanniyakumari	2	0.5										
	Sub Total	34	8.5										8.5
ii.	Raising mangrove nursery for new mangrove plantation. 1100 nos / ha for 9 districts total 300 ha / Rs.41/1 no	165000	67.65	165000	74.25							141.9	
iii. Planting of New Mangrove by adopting modified fishbone design Area @ Rs. 1.14144 lakhs / hectare	Thiruvallur	-	-										
	Chengalpattu	10	10	10	11								
	Villupuram	-	-										
	Cuddalore	0	0	0	0								
	Myladuthurai	20	20	20	22								
	Nagapattinam	50	50	50	55								
	Thiruvarur	20	20	20	22								
	Thanjavur	-	-										
	Pudukkottai	10	10	10	11								
	Ramanathapuram	20	20	20	22								
	Thoothukudi	10	10	10	11								
	Kanniyakumari	10	10	10	11								
	Sub Total	150	150	150	165								315
iv.	Raising mangrove nursery for maintenance			82500	37.12	82500	40.92					78.04	

Sl. No	Name of the Component	Name of the District	2024-2025		2025-2026		2026-2027		2027-2028		2028-2029		Total (Rs. In lakh)
			Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	Physical Target (in ha)	Financial Target (in lakh)	
viii.	Promotion of Coastal Agro-forestry – 550 ha		-	-	137.5	178.5	137.5	178.5	137.5	178.5	137.5	178.5	714
ix.	Study Report on Projections for additional Blue Carbon Sink from the Baseline/Reference line (Temporal & Spatial Data, Ground Truthing, Feasibility Studies)				LS	100	LS	100					200
3	Monitoring & Evaluation												
i.	Concurrent and 3rd Party Monitoring and Evaluation		-	-	-	50	-	50	-	50	-	50	200
6	Preparation of Annual Reports, Documentation, including administrative expenses (Cost of fuel, maintenance of machinery, personnel and other contingencies etc.,)		-	20	-	40	-	40	-	50	-	50	200
Grand Total													3829.44

P. SENTHILKUMAR
PRINCIPAL SECRETARY TO GOVERNMENT

SECTION OFFICER

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R. M. J. [Signature]
19/11/24

G.O. (Ms) No.160, Environment, Climate Change and Forest (FR.12) Department, dated 19.09.2024

ANNEXURE-III

DETAILS OF PROPOSED WORKS UNDER TN SHORE PROJECT IN PALLIKARANAI MARSH LAND OF CHENNAI DIVISION, CHENNAI
CIRCLE DURING 2024-25

(A) REQUEST FOR BID

(Rs. In Lakh)

SI No	Component	Output	Activity	1st Year			
				Qty	Rate	Per	Amount
1	2	3	4	5	6	7	8
1	Protection & Consolidation	Output 2.2: Removal of Impediments	Activity 2.2.1: Removal of Impediments such as debris, solid waste, etc	6450 M3	0.00288	M3	18.58
		Sub Total					18.58
2		Output 2.3: Enhanced Access to Marshland	Activity 2.3.1: Formation of bund along the boundary of the Marsh	3500 RM	0.10185	Rm	356.48
3			Activity 2.3.2: Formation of walkpath using natural hard granite stone flooring with kerb	3500 RM	0.2985	Rm	1044.75
4			Activity 2.3.4: Small bridges across water ways in the Marshland. and bridge for connecting exsisting Eco-park and Proposed Wetland Conservation Centre	3 Nos	100	No	300
		Sub Total					1701.23

SI No	1st Year							
	Component	Output	Activity	Qty	Rate	Per	Amount	
1	2	3	4	5	6	7	8	
5	Eco-Restoration & Conservation	Output 3.1: Structural Measures	Activity 3.1.1: Removal of debris and clearing of blocks in the waterways that feed the marsh	20000	M3	0.00387	M3	77.4
6			Activity 3.1.2: Removal of debris in existing culverts	97000	M3	0.00103	M3	99.91
		Sub Total						177.31
7		Output 3.3: Removal of Aquatic & Terrestrial Weeds	Activity 3.3.1: Removal of Aquatic Weed : Water hyacinth	719400	M2	0.00029	M2	208.626
8			Activity 3.3.2: Removal of Terrestrial Weed: Prosopis juliflora	688150	M2	0.00009	M2	61.93
		Sub Total					270.56	
		Grand Total (A)					2167.67	
(B) REQUEST FOR QUOTATION								
1		Output 2.3: Enhanced Access to Marshland	Activity 2.3.3.Consolidation of bund by raising plantations on either side of walk path with taller size indigeneous tree species	3500	RM	0.03776	Rm	132.16
		Sub Total						132.16
		Grand Total (B)						132.16
		Grand Total (A + B)						2299.83

P. SENTHILKUMAR
PRINCIPAL SECRETARY TO GOVERNMENT

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R. Venkatesan
SECTION OFFICER 10/01/24

ANNEXURE-IV

Seagrass Restoration & blue carbon sequestration

Sl. No.	Component	Activities	Details	Cost (in lakh)	Total (in lakh)
1.	Seagrass restoration	Site selection within the identified degraded area, Substrate (PVC frames) construction, Collection and transplantation of sprigs, Underwater deployment of PVC frames tied with sprigs on the seafloor, and monitoring	Site section for 15 acres suitable restoration sites in three locations in Gulf of Mannar (Dive professionals, hiring of dive gears, boat hire, travel etc)	15.0	1214.0
			PVC frame construction (1 X 1 m) – 30000 Nos. (2000 Nos per 1 acre) @ INR.400 per frame for 30000 nos.	120.0	
			Collection and Transplantation of sprigs in 30,000 Nos. frames (120 sprigs/m ²) for 15 acre (Dive professionals, hiring of dive gears, skilled labours)	218.0	
			Underwater deployment of 30,000 Nos. PVC frames tied with sprigs - Manpower (Dive professionals, hiring of dive gears, skilled labours)	356.0	
			Hiring of Equipments (Underwater dive equipments)	75.0	
			Transportation (to bring dive equipments)	45.0	
			Contingency (including documentation)	15.0	
			Boat hire	150.0	
			Monitoring – 4 years (Dive professionals, support staff, boat hire, travel, hiring of dive gears, maintenance)	220.0	
Sub total				1214.0	

Sl. No.	Component	Activities	Details	Cost (in lakh)	Total (in lakh)
2.	Blue carbon assessment	Survey for site selection, sample collection, analysis and monitoring	Manpower (underwater sample collection using core, analysis, monitoring and reporting)	58.0	313.0
			Consumables (Nickel crucibles, glassware, PVC cores and containers)	10.0	
			Analysis charges (elemental Analyzer Testing, Radiometric dating of selected core samples) from laboratories aboard	122.0	
			Hiring of Equipments (Underwater dive equipments)	5.0	
			Hiring of boat for sample collection	11.0	
			Travel for filed sample collection and monitoring	12.0	
			Contingency (postage to send samples abroad for analysis, stationary etc)	15.0	
			Documentation and permission	10.0	
			International expert consultation (Consultant charges and travel)	50.0	
			Others (field incidental expenses, meetings, engaging filed labour etc)	20.0	
Sub total					313.0
					1527.0
4.	Taxes (GST 18%)				274.86
4.	Total Project Cost				1801.86

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G.O. (Ms) No.160, Environment, Climate Change and Forest (FR.12) Department, dated 19.09.2024

ANNEXURE-V

Kariyachalli Island Restoration

S.No.	Components	Activities	Details	Cost	Total (Rs in Lakh)
1	Multipurpose Artificial Reef (AR) Modules	Artificial Reef Modules: construction including Transporation	Providing and placing concrete of grade M40 for fabricating Artificial coral reef of size 2.5m x 1m x 2m(4250 Nos)and 4m x 1m x 3m(4250 Nos) including all labour, materials, tools, equipment, fuel, etc. Also, Supplying of TMT, Fe500D grade steel for reinforcement welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc (1% of concrete). (Total AR modules=8500 Nos with 7990 Cu. m) (Rate 0.199 Lakhs per cu. m)		1669.51
2		Transportation of AR from the construction yard and deployment at Kariyachalli Island as per the proposed layout	Transportation from shore to Island using barge, boat, crane, labours and manpower including professional scientific divers, dive equipments etc. (0.045888 Lakhs per cu.m)	366.65	366.65

S.No.	Components	Activities	Details	Cost	Total (Rs in Lakh)
3		Monitoring at the Rate of 2.5%	Monthly and biannually Environmental parameters, as underwater surveys, Shoreline morphology, bathymetry and fishery as per EMP including boat, dive equipments, manpower including profession researchers with dive capacity, travel, contingency etc.	41.73	41.73
4	Coral rehabilitation	Substrate construction, deployment, transplantation and monitoring	Site selection	5	
			Concrete frame (CF) construction [1mX 1m X 0.25m] CF-1,000 Nos (250 Nos per 0.5 acre) Rate: CF-@ INR 1,200 per frame	12	

S.No.	Components	Activities	Details	Cost	Total (Rs in Lakh)
5			Cement slabs(CS) construction [20cmx 5-cm x 1.5cm]. CS-12,000 Nos.(each concrete frame would have 10 slabs) Rate:CS-@ INR.90 per slab	10.8	136
			Deployment of substrates	8	
			Transplantation	8	
			Manpower(underwater dive professionals)	24	
			Hiring of equipments (underwater dive equipments)	7.5	
			Transportation (to bring dive equipments)	4.5	
			Contingency	4.2	
			Boathire	7	
			Others (Monitoring-3 years)	45	
Sub total				136	

S.No.	Components	Activities	Details	Cost	Total (Rs in Lakh)
6	Seagrass rehabilitation	Substrate (PVC frames) construction, deployment, transplantation and monitoring	Site selection	6	169
			PVC frame construction (1x1 m) -3000 Nos. (500 Nos per 0.5 acre) @ INR 400 per frame for 3,000 nos	12	
			collection and Transplantation of springs	22	
			underwater deployment of PVC frames tied with sprigs - Manpower (underwater dive professionals)		
			Hiring of equipments (underwater dive equipments)	9	
			Transportation (to bring dive equipments)	6	
			Contingency	5	
			Boathire	15	
			Others (Monitoring-3 years)	54	
Sub total				169	

S.No.	Components	Activities	Details	Cost	Total (Rs in Lakh)
7	Eco development activities	Training, Awareness creation and assistance to trainees, infrastructure	Training on livelihood schemes	70	1000
			Awareness	30	
			Revolving fund	400	
			Infrastructure like boat, snorkeling set, interpretation centers, upgradation of fishing landing centres, materials to start livelihood schemes	500	
Subtotal					1000
Total Excluding GST					3382.89
Taxes (GST18%)					608.92
Total Including GST					3991.81

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ANNEXURE-VI

Blue Flag Beach Programme in Marina Beach, Chennai

S. No	Items Particular (s)	Qty.	Total Amount including GST (In Rs.)
1	SS Cladded Container based Gents Block comprising of 3 seats (1 no IWC and 2 nos. EWC) and 5 urinals (4 for adults + 1 for kid) and as per specification & layout drawings duly fitted with bio-digester and other fittings Including Installation, commissioning, Civil Work & Freight	1	41,20,000.00
2	SS Cladded Container based Ladies Block comprising of 6 seats (3 nos. IWC +3 Nos EWC) and as per specification & layout drawings duly fitted with bio-digester and other fittings Including Installation, commissioning, Civil Work & Freight	1	44,40,000.00
3	Changing Rooms with attached Shower Panels comprising of 6 cabins 3 each for gents & ladies duly separated and equal number of shower panels placed outside the container and as per specification & layout drawings. Including Installation commissioning. Civil Works & Freight	1	38,90,000.00
4	Grey Water Treatment Plant for recycling shower. Urinal & wash basin water including Installation, commissioning, Civil Work & Freight.	1	40,00,000.00
5	Disabled friendly toilet block made of WPC walls complete with bio-digester and as per specification & layout drawings. Including Installation, commissioning, Civil Work & Freight.	1	15,62,500.00
6	Off-grid solar power plant 40KW, 300/320 Wp complete with PV cells, Battery room, inverters and other accessories with DC/AC ration of 0.97 including Installation, commissioning, Civil Work & Freight including soil testing.	1	81,25,000.00
7	Purified drinking water vending kiosk as per specification and layout drawing including Installation, commissioning, Civil Work & Freight.	1	8,12,500.00
8	Solid Waste Management complete with segregation conveyor belt, hopper, hot air dryer and automatic composting machine of 50 kg/day as processing capacity including Installation, Commissioning, Civil Work & Freight (Outside Beach Area)	1	21,25,000.00
9	LED street Lights with poles including Installation, Commissioning, Civil Work & Freight.	50	34,35,000.00

S. No	Items Particular (s)	Qty.	Total Amount including GST (In Rs.)
10	CCTV Cameras with Global access feature for security & surveillance.	1	7,62,500.00
11	Information Display Hoarding Board (Unipole) Design-size 20' 10' (200 sqft) as per specification and drawing including installation, commissioning foundation work & freight.	4	10,62,500.00
12	Beach Map Display Hoarding Board (Unipole) Design-size 10' x 6' (60 sqft) as per specification and drawing including installation, commissioning, foundation work & freight.	1	6,62,500.00
13	Access Pathway made of WPC in sq.mtrs (size 400 mtrs x 1.5 mtr) with installation base frame as per specifications including foundation work & freight.	600	39,00,000.00
14	Sand Cleaning Machine (Walk Behind) as per specification	2	25,00,000.00
15	Site office for CCTV Control Room with Chairs, table & storage almirah including Installation, commissioning, Civil work & Freight.	1	8,00,000.00
16	First Aid Station with Bed, chairs, table & storage almirah including Installation, commissioning, Civil Work & Freight.	1	6,60,000.00
17	Litterbins Pair made of Bamboo as per drawing & specifications including Installation, commissioning, Civil Work & Freight.	20	2,90,000.00
18	Seating bench made of wood/bamboo as per specification including Installation, commissioning, Civil Work & Freight.	12	2,91,600.00
19	Sit-out umbrella made of wooden poles & treated thatch including Installation, commissioning, Civil Work & Freight.	8	7,56,000.00
20	Recliner Bamboo Lounger Chairs including freight.	16	3,87,200.00
21	Watch Tower (Bamboo)- up to 5 meters as per specification and drawing	2	10,68,400.00
22	Bamboo Housing Enclosure Work for Grey Water Treatment Plant as per drawing	1	6,07,500.00
23	Bamboo Housing Enclosure Work for SWM Plant as per drawing	1	3,57,000.00
24	Bamboo Housing Enclosure Work for Solar Power Plant & Battery Bank Room	1	3,71,000.00

S. No	Items Particular (s)	Qty.	Total Amount including GST (In Rs.)
25	Bamboo Housing Enclosure with Shingle Roofing complete as per specifications for container based toilets Gents Block	1	4,99,500.00
26	Bamboo Housing Enclosure with Shingle Roofing complete as per specifications for container based toilets Ladies Block.	1	4,99,500.00
27	Bamboo Housing Enclosure with Shingle Roofing Complete as per specifications for container Changing Room with Shower Panels.	1	11,32,750.00
28	Bamboo Ramp with Side Walls/Railings(Both side) for Toilet Blocks & Changing Room (1 each for Toilet Blocks and 2 for Changing Room)	4	16,74,000.00
29	Bamboo work Housing Enclosure work for Purified Water Vending Unit	1	4,05,000.00
30	Bamboo work Housing Enclosure work for Site Office & CCTV Control Room Block	1	5,40,000.00
31	Bamboo work Housing Enclosure work for disabled friendly toilet block	1	2,70,000.00
32	Bamboo work Housing Enclosure work for First Aid Station Block	1	2,70,000.00
33	Bamboo Ramp with Side Walls/Railings (Both side) for Unisex Disabled Friendly Toilet Block	3	2,70,000.00
34	Bamboo made "Guiding Signage" complete with quantity, design & specification as per specifications, installation, commissioning, foundation work & freight.	16	56,000.00
35	Bamboo made "Signage Collage" complete with specifications, installation commissioning, foundation work & freight.	1	24,500.00
36	Bamboo Framed Display Boards for Environment Education & Safety, Do's & Don'ts.	25	2,87,500.00
37	Amphibious Wheel Chair	1	8,31,000.00
38	Spine Boards	2	93,000.00
39	Rescue Boards	2	1,97,500.00
40	Life Jackets	5	22,500.00
41	Rescue Throw Bags	5	12,500.00
42	Rescue Floaters	5	8,000.00
43	Rescue Tubes	5	1,23,500.00

S. No	Items Particular (s)	Qty.	Total Amount including GST (In Rs.)
44	Rescue Cans	5	57,500.00
45	Sheppard's Life Hooks	1	8,800.00
46	Portable oxygen cylinder	1	18,700.00
47	First Aid Kit	1	8,200.00
48	Binoculars	2	25,000.00
49	Whistle	10	1,000.00
50	Beach Safety flags as per ISO 20712 with poles	3	2,34,000.00
51	Biometric Attendance System	1	25,000.00
52	Sea Buoys, Rope & Anchor for cordon off the designated bathing area (in running meters approximately)	450	8,10,000.00
53	Tool kit comprising of basic electrical, plumbing and allied services	1	25,000.00
54	Office Automation comprising of Computer, Printer, Wi-Fi Connection-1 each	1	68,700.00
55	Flag masts (National Flag-8 meters height & BEAMS Flag - 7 meters height) with platform focus lights as per drawing & specifications complete with installation, commissioning, foundation & freight.	3	6,24,000.00
	Total Cost of Beach Infrastructure Items		5,61,08,850.00
	Administrative and Monitoring charges (10%)		38,91,150
	Grand total		6,00,00,000

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SECTION OFFICER 10/11/24