

Annexure-1

Terms of Reference: Preparation of Comprehensive Shoreline Development Plan and Pre-Feasibility Assessment for Chennai Shoreline Renourishment and Revitalisation Projects for Chennai.

A. Background

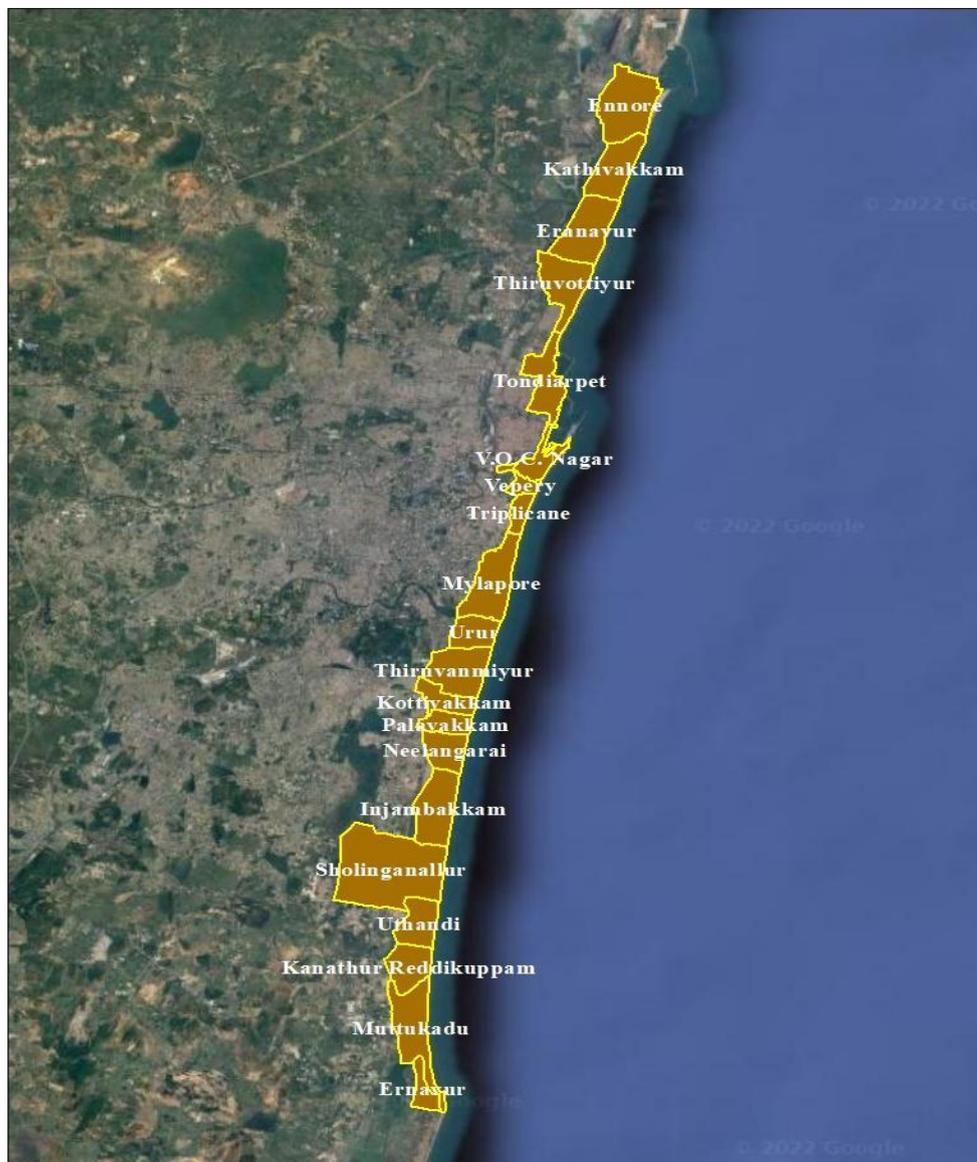
1. Chennai is a coastal city with a shoreline that extends in stretches between Ennore Creek in the North and Kovalam in the South. Despite having a natural and long coastline, its access is discontinuous and fragmented into stretches, and the conservation of the coastline from a climate perspective remains unattended. Marina Beach and Elliots Beach (Besant Nagar) are the most popular of these stretches where the majority of the public gather for recreation and leisure. Other than these two beaches, there are approximately 20 other disconnected shore fronts which are neglected and decaying due to pollution and lack of infrastructure but have great potential for transforming into natural public spaces for the city.
2. Further, coastal erosion and accretion are phenomena that can cause adverse effects to the surroundings. According to a report in 2018 by the National Centre for Coastal Research, Chennai "The National Assessment of Shoreline changes along Indian Coast: Status report for 26 years (1990 - 2016)", a stretch of 3 km along the coast faces low erosion and approx. 7 km face low accretion. Although the levels of erosion and accretion are low, it is the right time to initiate the environmental conservation and effective management of the coastline as a whole.
3. During the discussion on demand for grants on 20/04/2022 on the floor of Legislative Assembly, the Hon'ble Minister for Housing and Urban Development Department has made an announcement for Chennai shoreline renourishment & revitalization, from Marina to Kovalam (CSRR) (approx. 30 km), at the estimated cost of Rs.100 Crores by CMDA. It was proposed that the CSRR project may be taken up by involving all the stakeholder departments. The project can be implemented in phases and CMDA will explore the possibility of extending the shoreline revitalization beyond Kovalam.

B. Objectives

4. The objective of this consultancy assignment is to procure a consulting firm (Consultant) to prepare the Comprehensive Shoreline Development Plan (CSDP) for Chennai; to facilitate CMDA disclose the Plan in line with World Bank guidelines; and to prepare pre-feasibility reports for critical development projects that will need to be executed by CMDA towards implementation of the CSDP. While preparing the CSDP, the Consultant(s) is/are expected to:
 - a. ensure sustainable coastal revitalization and renourishment including through conservation of the natural marine environment and eradication of pollution due to wastewater and other waste material discharge into the marine environment and to manage the same.
 - b. identify prominent nodes along the stretch for developing as public spaces with distinctive themes and design by adopting international best practices.
 - c. enable a shoreline connect for people by ideally planning the coordinated development of fragmented portions of beaches focusing on non-motorized transport (including cycling), soft infrastructure development and use of environment friendly construction material and technologies acceptable to CRZ

norms.

- d. ensure comprehensive community engagement with key internal (government) and external stakeholders including fishermen, hawkers and other petty traders, particularly integrating the local communities whose livelihoods are dependent on the sea and beaches.
 - e. identify safeguards risks in line with the World Bank's safeguards policies and prepare a risk management strategy ensuring required stakeholder participation and consultation ensuring that stakeholder feedback are adequately discussed and incorporated in the final risk management strategy prepared.
5. To meet the objectives of this consultancy assignment, CMDA would like to encourage firms with international and national experience of undertaking similar assignments to bid. Bidders are encouraged, where required, to associate or form a Joint Venture to strengthen their bids ensuring that the best of international and national experience can be brought into implementation of this assignment.



C. Scope of Study

6. **CSDP and TMP.** The CSDP will be a sub-plan of the Third Master Plan (TMP)

Chennai which is expected to be notified in 2026; preparation of the TMP is currently underway by CMDA. Since the TMP which take time to prepare and notify, the proposed CSDP will consider land use plan, public space policy and physical connectivity as laid down in the Second Master Plan Chennai and various physical plan documents of CMDA. In addition, the proposed CSDP will be expected to be developed in conceptual tandem with the ongoing visioning exercise for the TMP Chennai. The Consultants will need to work closely with the Master Plan Unit of CMDA, in addition to the Shoreline Development team and the TNHHDP PIU. The proposed CSDP will be expected to be fully integrated with the Chennai Climate Action Plan, the existing one prepared by GCC as well as the one under preparation by CMDA.¹

7. Identification of conceptual Zones: The entire CSDP boundary to be zoned based on the existing characters, users activity, risk profile, environmental significance, CRZ regulation and Environmentally sensitive areas. The consultant should map this in 1:10,000 scale.
8. **Identification of critical projects.** The proposed CSDP is expected to include a list of potential development projects for the identified conceptual zone along with a list of institutions under whose remit implementation of these projects would lie. The project should include the following proposals
 - a. Coastal protection and management
 - b. Basic Infrastructure and amenities
 - c. Public facilities/public spaces
 - d. Proposal focusing on fishermen community enhancement.
 - e. Operation and Maintenance

In addition to the preparation of CSDP, the consultant is expected to identify at least ten critical projects compatible to the identified conceptual zones based on a need assessment conducted for the project area (and its area of influence), that will be implemented by CMDA.

9. **Pre-feasibility assessment.** The Consultant will prepare pre-feasibility reports for the identified ten critical projects. The pre-feasibility reports will be expected to include an alternative analysis exploring various technically feasible solutions for implementation of the proposed critical projects, along with their social, environmental, financial and economic impact assessments, based on which the most optimal technical solution will be proposed. The Consultant will also draft terms of references (ToR) for hiring of consultants for undertaking the feasibility study/prepare detailed project reports of these proposed critical projects.
10. **CSDP boundary.** The CSDP boundary will be the Ennore Village Boundary in the north to Kovalam village boundary in the South (inclusive of both villages), and the low tide line in the east and to the nearest arterial road in the west.
11. Suggested stages of this consultancy assignment are given below but bidders are encouraged to review and suggest alternate approach to optimize the expected outputs and outcome of this assignment:

Stage 1: Shoreline Inventory and review of previous studies and reports

12. Prepare a shoreline inventory including but not restricted to study boundary, regulatory framework, watershed/drainage basin, land use/land utilization, land

¹ Climate Action Plan for Chennai is done by GCC for GCC boundary alone and shared link below https://drive.google.com/file/d/1GjidWOIk80LqV2XyL73JaDQ-W-UDlnZ/view?usp=share_link. Similarly CAP study for CMDA is under process by Environmental Specialists.

ownership, physical characteristics, biological characteristics, development activities, among others. The Consultants are expected to categorize the inventory based on consultation with CMDA – these could be categorizing by similar ecological characteristics, administrative boundaries, or any other criteria useful for CMDA for planning purposes including the beachfront (especially Blue Flag tagged beach heads).

13. Identify data gaps, present their level of significance (on shoreline plan preparation), suggestions how gaps can be plugged, and document other relevant information required for meeting the objectives of this development plan
14. Delineate the 'Influence Area' for the CDSP – in addition to the Plan area, this will also include neighbouring areas that are expected to 'influence' nature of development and land utilization within the Plan area. All subsequent social and environment assessments will need to be undertaken for the 'Influence Area'.
15. List of all major ongoing and past (upto last 10 years) developmental projects relevant to the plan within the Influence Area (with costs above Rs.3 crores), along with their objectives, parent agency who have commissioned/implemented such projects, status of project (preparation, procurement, implementation, O&M status, among others), including 'Blue Flag' certified beach developments. This should be spatially mapped to understand/explain the geographic scope of 'major' development projects already underway/in existence and its anticipated impact (Environmental and Social) on the shoreline development.
16. Synthesis review of studies, reports, etc. of ongoing development projects which are considered relevant to this assignment. The Review shall also cover study of available secondary data on the following topics²:
 - a. Ecological conservation³ and environmental planning, specific to the subject matter "Chennai shoreline from Ennore creek to Kovalam".
 - b. Efforts taken to get 'Blue Flag' beach tag and maintain this tag for beaches within the study area.
 - c. Review of all applicable global, national and state policies, laws and regulations, especially related to environmental protection and conservation and social sustainability.
 - d. Review of Central and State Government Programs/Projects/Schemes which are being implemented or proposed for the Influence area including their (wherever applicable) social and environment impact assessment documents.
 - e. Review at least three cases of coastal revitalization program at global level / national level have encountered similar challenges to that of Chennai's coastline and the beachfront and draw suitable interventions that could be implemented in the proposed site.
 - f. Relevant studies undertaken by National Centre for Sustainable Coastal Management (NCSCM) and National Centre for Coastal Research (NCCR), Chennai
 - g. Review of various implementation mechanisms and institutional frameworks (Globally and Nationally) namely Special Purpose Vehicles (SPV) for similar kind of projects. These can be, ideally, SPVs set-up to manage shoreline development or riverfront development. The information collected from national/international SPVs should be presented in a matrix format that would

² this is not an exhaustive list and the consultants are expected to review all studies relevant to the meet the current project objectives

³ Shoreline Change Assessment along Tamil Nadu Coast as part of N-SAS report by NCCR, March'2022.

support CMDA in making decisions on functions of the entity, its governance and management structure, its management of human resources, delegation or transfer of powers, ability to coordinate between various departments/agencies, among others.

- h. Study successful models of Shoreline management and development, nationally and globally to analyze replicable learnings, models, for drawing benchmarks and potential models applicable to the subject site, as well as for developing a results framework for assessment success/progress of CSDP implementation.
- i. Study experiences of Indian coastal states in coastal management (including disaster preparedness) and shoreline protection through hard and soft infrastructure development. Draw key inferences for CSDP.

Stage II: Establishment of Principles, Goals and Policies for the Shoreline Plan

- 17. Establish the final jurisdiction / boundary of the Shoreline Boundary/Plan.
- 18. Establish goals and policies of the proposed Shoreline Plan – based on Stage 1 findings/learning, prepare proposed draft Shore Plan policies, goals and objectives. The policies should be broad and ideally be between 3-5 policies that will determine the Plan preparation as well as influence the nature of development that GoTN will carry out within the Plan boundary for its horizon period. There can be multiple goals (with one objective per goal) required to translate the achievement of Policy outcomes. However, the list of goals should ideally be ten (prioritize top ten goals) to ensure that the Plan remains comprehensive.
- 19. The Consultant will need to present the draft policies, goals and objectives in a stakeholder workshop and taking on board feedback received from CMDA and other stakeholders, draft policies/goals/objectives should be submitted for formal clearance of CMDA.

Stage III: Detailed Assessments

Site Visits and Preliminary Assessments

- 20. Conduct project reconnaissance survey which would include physical verification of site details provided by the CMDA.
- 21. Collection of relevant data available with CMDA and other Govt agencies regarding present and proposed planned development within the influence area of the site. CMDA will facilitate collection of data/information available with other agencies through initial communication and meetings/workshops, as required, but follow-up will have to be done by the consultant.
- 22. Study the requirements of overall accessibility including approach roads with regard to the potential development with other supporting infrastructure facilities.
- 23. Study the requirements of differently abled people, vulnerable groups, vendors, fishing community, safety of women and children and needs of senior citizen
- 24. Study the current coastal ecosystem (in context of the stretch from Chennai to Kovalam) and its relation/interdependency with coastal and marine ecosystems like etc. and other biodiversity rich hotposts along the coastline.
- 25. Based on satellite imageries (available with CMDA), studies/reports and any other available information, assess and determine pristine areas with high level of ecological attributes which need to be protected and conserved.
- 26. Consider the coastal regulation zones (CRZs) as per CZMP of the state of Tamil

Nadu to ensure a regulatory compliant CSDP.

27. Carry out detailed SWOT analysis of the Sites along the shoreline, including beachfront areas, and identify the various development and conservation opportunities. SWOT analysis of site, constraints, and characteristics of the surrounding areas around the site shall be carried out.
28. Review sidewalk areas next to the shorefront and recommend methods for improving and enhancing the continuity and quality of the environment and safety and accessibility for differently abled people and the potential for enhancement of the promenading experience.
29. Evaluate existing public transit, pedestrian (including senior citizen), other vehicular connections and parking spaces to the identified nodes and recommend enhancements and improvements including the requirements of the laws for the differently abled people.
30. Map all the stakeholders and carry out a preliminary consultations with key stakeholders on the overall objective of the plan and their needs.

Environmental Assessment

31. Identify various sources of pollution, including solid waste, sewage disposal, marine plastics, generation, and discharge of industrial waste in the stretch between Ennore creek to Kovalam.
32. Assess the fresh water/salt water intrusion in estuaries.
33. Identify sand dunes, vegetation (quality and quantity) especially emerging vegetations including mangroves and other ecological factors, etc., which exists along the shoreline between Ennore creek to Kovalam. Identify and map critical areas for conservation and protection along this stretch, as per the CZM plan of the state. This mapping should include geo-referenced information so that later the metric developed can be used for establishing no net loss (NNL) and Net Gain (NG) metrics with proposed measures.
34. Explore potential for conservation efforts and blue-carbon solutions (for e.g. increase mangrove cover via blue carbon financing; if salinity is changing due to fresh/sea water intrusion – can different mangroves be planted, among others).
35. Assess the habitats of various marine species that are classified as endangered, critically endangered such as olive ridleys and leatherback turtles, etc.
36. Assess the erosion and accretion pattern (through secondary sources like National Centre for Coastal Research (NCCR), National Centre for Sustainable Coastal Management (NCSCM) and National Institute of Ocean Technology (NIOT), existing coastal models & available data sets and ground validation), High Tide Line (HTL) and Low Tide Line (LTL) of the coastal stretch between Ennore creek to Kovalam.
37. Conduct stakeholder meetings (at least three) with concerned departments, environmental experts, relevant NGOs, public and communities whose livelihood is dependent on the sea.
38. In addition to the above, the Consultant must undertake Environment Sensitivity analysis for the stretch in line with accepted international good practices.
39. Review hydrology, geomorphology and water quality of the proposed project area.
40. Keeping the Climate Action Plan prepared by GCC and the proposed CAP for CMA under preparation by CMDA, develop climate change scenarios. This should establish the status-quo vis-à-vis projections associated to potential shoreline infrastructure works in context of increased frequency and severity of extreme climate events (which may restrict certain type of grey infrastructure being developed close to shoreline). The scenarios should be developed largely based on secondary information available but should be used to develop forward-looking simulations of

different scenarios (upto 3).

Social Assessment

41. Identify users and those dependent on the existing shoreline for livelihood.
42. Identify communities at risk from increased coastal erosion based on erosion and accretion patterns observed and map risks to such communities in short, medium and long term (physical or economic resettlement be resettled either physically or economically, communities that don't need to be resettled but could be subject to some sort of social safety net mechanism, etc.
43. Assess existing early warning systems, evacuation systems, etc. in context of likely shoreline regeneration activities.
44. Determine alternatives to land management practices along the shoreline that would enhance land uses. Assess what alternatives or options to land acquisition/development may be considered to minimize impacts and resettlement, if any, in context of the updated Town and Country Planning Act (or the proposed amendments).
45. Assess risks scenarios due to expected climate change (based on secondary observations available) from social perspective including assessment if people are likely to have to be resettled anyways for their own safety, impact on livelihoods, among others.
46. Assessments of existing practices and framework for land conflict resolution and Grievance Redress Mechanism/system with a view to identifying gaps, if any, and to propose measures for improvement.
47. Assess the likely adverse social impact that may arise with the development of the shoreline and opportunity to enhance benefits and develop a comprehensive social management framework that aligns with the country laws and policies and international standards on social sustainability and good practices. The framework is to guide the detailed preparation, implementation and monitoring of the mitigation plan.
48. Map the hotspots from the lens of gender and children safety and other criminal activities and assess gaps in existing measures/systems and recommend guidelines for enhancing safety of all stakeholders.
49. Review and assess the practices of stakeholder engagement especially with the vulnerable stakeholders and develop a road map for consultation for planning and implementation of the plan and mechanism for citizen feedback.
50. Review the implementation of the legal provisions that safeguards the rights of the Differently abled people, vendors and utilization of the Nirbhaya funds for ensuring safety of women along the existing shoreline and identify gaps and recommend guidelines for the shoreline plan.
51. The Consultant will prepare a detailed assessment report capturing all highlights of all assessments undertaken in this stage, and present the key takeaways that need to inform the preparation of the CSDP.

Stage IV: Preparation of Structure (Concept) Plan and Identification of Development Nodes

Structure (Concept) Plan

52. Based on the detailed evaluation of existing shoreline and surrounding areas, as well as the CSDP objectives finalized, the Consultant will prepare a Structure Plan for the entire study area. The Structure (Concept) Plan will present the (conceptual) approach to connectivity, land use, infrastructure, ecology, inclusion and human interface to promote a sustainable long-term growth vision for the CSDP area. The

Consultant will present this draft Structure Plan to CMDA (and stakeholder invited by CMDA) through internal workshop(s) to ensure agreement across the table on the same.

53. Based on the Structure Plan developed, the Consultant will identify a set of character zones across the CSDP area. Character zones refer to indicative zones created for purpose of preserving and/or creating a distinct urban form. Further, the Consultant will be expected to have an integrated development approach (short, medium and long-term) for an aggregated set of similar character zones.

Identification of Development Nodes

54. Based on the Structure Plan and character zone-specific strategies, the Consultant will identify a set of priority development nodes.
55. Consultants will select priority development nodes keeping in mind CSDP objective and goals to be achieved and a set of considerations that may include, but not limited to, availability of land, ecology, cultural heritage, connectivity (with potential for non-motorized transport or public transport), locational advantage, among others, while ensuring its environmental and social sustainability. It is expected that the beachfront areas will figure as critical development nodes.
56. For each priority development node, the Consultant will map the physical (including sensitive social and environmental) characteristics (and its influence area), available infrastructure, challenges and constraints for development to understand the carrying capacities and environmental footprint of proposed development.
57. Based on above, the Consultant shall rank the priority development nodes in terms of its development potential and importance in terms of its contribution to achieve CSDP objectives. The Consultant will also specify the most suitable implementation agency based on roles and functions currently assigned to public agencies expected to be involved in CSDP implementation. The top ten priority development nodes assigned to CMDA for implementation (either directly or through the proposed Shoreline SPV being set-up) will be selected for undertaking pre-feasibility assessment (Stage VI). It is expected that at least two of these ten priority development nodes will be beachfront development or related to inter-connection of beachfront areas. Beachfront developments are expected to remain effective in high storm events, protect and enhance the near shore natural landforms, ecology and biodiversity, protect and enhance traditional livelihoods like that of fishermen and creating vibrant public areas for the city.

Stage V: Comprehensive Shoreline Development Plan

58. Based on the agreed Structure Plan, the Consultant will prepare a CSDP. This will be a spatial plan. The CSDP will be prepared at a 1:10,000 scale. The CSDP will include, among others, the following layers:
 - a. Overall land utilization such as recreational, residential, heritage, and so on considering the CRZ, environmental sensitivities and relevant rules/regulations/codes in which the subject site falls into.
 - b. Infrastructure plan showing the location and network of all identified infrastructure components (such as water supply, power supply, storm water drainage, solid waste management etc.) existing and proposed for meeting the CSDP objectives.
 - c. Schematic representation of key design features within the development like gateways, key nodes, junctions, plazas etc., as a guidance for development by the clients in the future.
 - d. Open space and landscape plan presenting the inter-relationships between different landscape and built form existing and proposed under the CSDP

- e. Environmental and ecological conservation plan to mitigate pollution risks and improve the health of related ecosystems. Preparation of Management plans for street vendors, to create local employment opportunity, also to encourage community participation.
59. In addition to the spatial (land use) plan, the CSDP should include:
- a. Proposed institutional architecture that will be required for effective implementation of the CSDP.
 - b. Overall estimated cost of implementation of the CSDP, which should be developed based on costing of all development activities proposed under the Plan – this will be at the same level at a Rough Order of Magnitude (ROM) estimate.
 - c. All major downstream development activities proposed under the CSDP should take cognizance of the Environment and Social Standards of the World Bank's ESF.
 - d. The Consultant will be required to prepare Environment and Social Management Strategy (including Strategic Management Plan) clearly identifying risk management approaches that respective implementation agencies need to consider expanding on further while preparing feasibility studies/detailed project reports later. The Strategy should also include a negative list of the downstream investments. This Strategy and Plan will need to be presented to CMDA for its concurrence (for disclosure). All the proposals / proposed downstream investments of the plan should take cognizance of the 10 Environment and Social Standards of the World Bank's ESF.
60. The draft Environment and Social Management Strategy (including Strategic Management Plan) will be disclosed by CMDA on their website. Following this, with adequate notice, CMDA will call for a workshop of all stakeholders wherein the Consultant will present the Strategy and the Management Plan. Relevant feedback received from stakeholders will be agreed with CMDA and incorporated into the Environment and Social Management Strategy.
61. The Consultant will present the draft CSDP to CMDA, and stakeholders identified by CMDA, and take onboard its views and update the draft CSDP.

Stage VI: Pre-Feasibility Assessment and Area Development (Zonal) Plan

62. The Consultant will need to prepare a pre-feasibility assessment of the top ten priority development nodes assigned to CMDA for implementation (drawing from Stage IV) including at least two beach/beachfront development nodes. The pre-feasibility assessment should allow CMDA to understand overall feasibility of three (or more) alternate development scenarios for each Node. The criteria for assessment of each scenario should include - but not be limited to - technical, financial, economic, ecology, culture/heritage, social and environment considerations of these scenarios. For each development node, the optimal scenario would be identified, and agreed with CMDA.
63. For each optimal scenario identified, the Consultant will need to develop an Area Development/Zonal Plan at 1:5000 scale. These Plan shall include, but not limited to, the following:
- a. Clear demarcation of zones with optimum development potential, limited development potential and no-go conservation zones based on all the assessments and mapping undertaken in earlier stages.
 - b. Proposed land use and allied infrastructure (water, waste, access, etc.) requirements.

- c. Landscape master plan including demarcation of softscape and hardscape areas, street furniture, planting strategies, among others.
 - d. Schematic representation of key design features and built form interventions within the development like gateways, key nodes, junctions, plazas, vending zones, commercial zones, etc.
64. In addition to the spatial (land use) plan, the Area Development Plans should include:
- a. Management plans for informal activities occurring within the development nodes already including street vendors to create local employment opportunities and also to encourage community participation
 - b. Preparation of block cost estimates for the Area Development Plan.
65. The plan is required to be informed by the Environment and Social Strategy and Strategic Management Plan prepared in Stage V.
66. The Consultant will present each Area Development Plan to CMDA, and stakeholders identified by CMDA, and will update the draft Plans based on relevant feedback received and submit the final Plan and the final Report.
67. The Consultant will be required to prepare terms of reference (TORs) for recruitment of consultants to undertake the detailed project report/feasibility report preparation for CMDA.
68. The Consultant will prepare a project completion report indicating all key outputs achieved from this consultancy, and identify gaps and next steps that need to be addressed by CMDA to ensure effective implementation of the CSDP and the Area Development Plans.

D. Data services and facilities to be provided by the client

69. The consultant can access all basic information from the CMDA website www.cmdachennai.gov.in. The available data in the available format shall be provided by the client to the consultant. The consultant has to verify and ascertain the details on their own

E. Key Professionals

70. Table 1 presents a set of suggested core positions to achieve the terms of reference. However, bidders are welcome to suggest alternate/additional team structure clearly indicating the reason for doing so.
71. Consultant's team members should be available for discussions with key personnel from concerned state departments/public agencies involved during various stages of the study as and when required, in addition to reviews by CMDA. Sometimes, the notice for such consultations may be as short as a few days. Given this, it is suggested that bidders consider maximizing field-based inputs and limit home based inputs to the extent possible. Given the relaxing of COVID pandemic related restrictions, it is expected that the core team will spend atleast 80% of their time in field, while extended team will be entirely field based.

Table 1: List of Key Professionals

S.No.	Key Professional	Experience	Man Months (CSDP)	Man Months (Pre-Feasibility)
Core Team (to be scored)				
1	Team Leader: Urban planner	<ul style="list-style-type: none"> • Postgraduate in planning/urban design from a recognized institution. • Preferably a full-time employee of the Consultant(s) [lead or associate or JV]. 	4.5	1.5

S.No.	Key Professional	Experience	Man Months (CSDP)	Man Months (Pre-Feasibility)
		<ul style="list-style-type: none"> • Minimum of 15 years of experience of working on urban regeneration, coastline/waterfront development, and urban environment improvement projects. • Experience of working in at least two coastline/waterfront projects, ideally in senior positions with substantive inputs. • Experience of working in at least two international projects. Experience of working in India preferable to have. • Should demonstrate strong communication skills including interactions with government and non-government stakeholders. • Should preferably demonstrate experience in land management/land use change related (alternative) assessments, ideally in waterfront and/or urban projects. • Fluency (reading/writing/speaking) in English mandatory. 		
2	Urban Design Expert	<ul style="list-style-type: none"> • Postgraduate in Urban Design from a recognized institution. • Minimum seven years of experience of working on urban regeneration and coastline/waterfront development projects. • Minimum five years of work experience of working in public space design/landscape design projects. • Experience of working in at least two urban regeneration, coastline/waterfront development projects. • Experience of working in at least two public space design/landscape design projects at block-level or city level scale demonstrating ability to work on these areas across multiple plots of differing land use. • Experience of working in at least one international project of similar nature. • Should demonstrate ability to work with/for architecture councils or associations of architects to meet project development objectives. • Fluency (reading/writing/speaking) in English mandatory. 	3.5	1.5
3	Landscape Architect - 1	<ul style="list-style-type: none"> • Postgraduate in landscape architecture or graduate architect (degree) from recognized institution with additional three years of relevant work experience in areas mentioned below. • Minimum seven years of experience of working on landscape related work in urban regeneration or coastline/waterfront projects or urban environment improvement projects. • Experience of working on at least one shoreline/waterfront project. • Experience of working on at least one 	3	4

S.No.	Key Professional	Experience	Man Months (CSDP)	Man Months (Pre-Feasibility)
		<p>international project is preferable.</p> <ul style="list-style-type: none"> Fluency in English (reading/writing/speaking) mandatory. Ability to communicate in Tamil preferable. 		
4	Architect/Planner (project coordinator)	<ul style="list-style-type: none"> Graduate degree in Architecture from recognized university or a postgraduate in planning with graduation in architecture/physical planning/engineering/environment sciences. Should be a full-time employee of the Consultant (lead or associate/JV). Minimum seven years of work experience in urban regeneration and site planning projects. Should demonstrate ability to manage complex assignments as part of work experience. Experience of working on atleast one project on coastline/waterfront development and/or urban environment improvement projects. Should demonstrate strong communication skills including interactions with government and non-government stakeholders. Fluency (reading/writing/speaking) in English mandatory. Ability to communicate in Tamil good to have. 	7	2
5	Urban Engineer	<ul style="list-style-type: none"> Graduate degree in engineering (preferably civil engineering) from a recognized university. Preferably a full-time employee of the Consultant(s) [lead or associate or JV]. Minimum 12 years experience of working on urban regeneration <u>or</u> coastline/waterfront development, <u>and</u> urban environment improvement projects. Experience of working in atleast one coastline/waterfront projects, ideally in senior positions with substantive inputs. Experience of working in atleast two large urban environment improvement projects preferably focusing on environmental improvements in coastal/waterfront areas. Should demonstrate leadership roles in atleast two large and complex urban environment improvement or coastline/waterfront development projects. Fluency (reading/writing/speaking) in English mandatory. Ability to communicate in Tamil good to have. 	5	3
6	Environment Expert	<ul style="list-style-type: none"> Postgraduate in environmental engineering/environment planning Minimum seven years' experience of undertaking environmental assessments and preparation of environment management plans of large and complex urban regeneration or urban environment improvement projects. Experience of undertaking environment 	3	3

S.No.	Key Professional	Experience	Man Months (CSDP)	Man Months (Pre-Feasibility)
		<p>assessments of atleast three projects that are on coastline/waterfront and have integrated/evaluated impact of development on large water bodies as part of assessments.</p> <ul style="list-style-type: none"> • Experience of undertaking atleast three environment impact assessment (EIAs) of large complex urban projects meeting GOI norms <u>OR</u> experience of undertaking environment assessment and preparation of environment safeguard documents for atleast two large complex urban regeneration projects financed by international financing institutions and having completed atleast one EIA study meeting GOI norms. • Should demonstrate strong communication skills including interactions with government and non-government stakeholders. • Fluency (reading/writing/speaking) in English mandatory. Ability to communicate in Tamil good to have. 		
7	Community Development/ Social Development	<ul style="list-style-type: none"> • Postgraduate in Social Sciences/Planning/Social Work/Sociology from a recognized institution. • Experience of undertaking atleast three projects of structuring and identifying stakeholders, undertaking consultation exercises, and developing strategies to strengthen participatory engagement during preparation and implementation phases in urban environment improvement, coastline/waterfront development projects. • Demonstrated strong understanding of social safeguards requirements of projects financed by international financing institutions. • Experience of at least two projects of mainstreaming cross-cutting social/gender issues during project planning/implementation in urban/waterfront setting. • Experience of working on strengthening of grievance management systems, especially informal systems (conflict resolution using culturally accepted practices) would be beneficial. • Fluency (reading/writing/speaking) in English and fluency (speaking) in Tamil mandatory. 	3	3
8	Financial Expert	<ul style="list-style-type: none"> • Postgraduate in Business Administration/Chartered Accountancy/similar qualification from a recognized institution. • Minimum of 10 years of experience of working on infrastructure project financing and undertaking financial assessments of public sector or public-private set-ups (such as Special Purpose Vehicles) focusing on urban development and/or coastline/waterfront development. • Experience of three projects demonstrating 	2	3

S.No.	Key Professional	Experience	Man Months (CSDP)	Man Months (Pre-Feasibility)
		<p>working with Government agencies (centre, state, municipal bodies, Public Sector Undertaking, etc.) for conducting financial feasibility and/or project structuring of large and complex projects in urban/waterfront setting.</p> <ul style="list-style-type: none"> • Experience of two projects wherein project structuring was done for infrastructure projects with private sector engagement (either through PPPs or direct private sector stakeholders). • Experience of working with Government set-up SPVs would be preferable. • Fluency (reading/writing/speaking) in English mandatory. 		
Extended Team (Additional Positions – will not be scored)				
9.	Landscape Architect – 2	Same qualifications and work experience as for Landscape Architect – 1	0	4
10.	Architect/Planner-2	Same qualifications and work experience as for Architect/Planner	0	4
11.	Architect/Planner-3	Same qualifications and work experience as for Architect/Planner	0	4
12.	Civil Engineer – 2	Same qualifications and work experience as for Civil Engineer	0	4
13.	Civil Engineer – 3	Same qualifications and work experience as for Civil Engineer	0	4
14.	Project Researcher – 1	<ul style="list-style-type: none"> • Atleast five years of experience of working on projects in urban regeneration and/or coastline/waterfront setting • Fluent in English (reading/writing/speaking) and Tamil (reading/speaking) 	5	4
15.	Project Researcher – 2	<ul style="list-style-type: none"> • Atleast five years of experience of working on projects in urban regeneration and/or coastline/waterfront setting • Fluent in English (reading/writing/speaking) and Tamil (reading/speaking) 	0	4
16.	Project Research Assistant – 1	<ul style="list-style-type: none"> • Atleast two years of experience of working on projects in urban regeneration and/or coastline/waterfront setting • Fluent in English (reading/writing/speaking) and Tamil (reading/speaking) 	5	4

F. Timelines and Deliverables

72. The time of completion of assignment is 10 months. Table 2 presents the key timelines and deliverables with payment terms proposed.

73. The Consultant has to summarize each deliverable in a PowerPoint slide deck after submission of the draft deliverable and present it to CMDA and other stakeholders who may be invited by CMDA. All presentations will be led by the Team Leader and will include all relevant core team members.

74. The consultant has to submit 10 (Ten) copies for each of the deliverables and submit

hard and soft copy of all reports, data ,3D drawings and renders, GIS files and AutoCAD drawings. All the designs, data and editable version of the reports shall be submitted in the softcopies. The final report (Approved version) shall be submitted in hard bound10 (Ten) copies with soft copy (both editable & non editable and all drawings etc.,) in Pen Drive. The report layout and arrangement of chapters shall be shared with the client to prior to submission of the reports.

Table 2: Timelines and Deliverables

S. No.	Deliverable	Remarks	Timeline ('T' - date of issue of work order)	Payment (% of total cost)
1.	Inception Report	Should include updated approach and methodology, workplan, staffing schedule and schedule of deliverables. Indicative influence area may be shared.	T+0.5 months	5%
2.	Shoreline Inventory, Influence Area Delineation and List of Major Projects	Complete shoreline inventory as per ToR and identification of gaps where available information is not available. List of all major development projects as per ToR. Influence area of the SCDP to be finalized. Both deliverables need to include geo-referenced (presented spatially)	T+1.5 months	10%
3.	Interim Report 1 – Synthesis Review and Benchmarking Study	Presentation of key findings and learnings from the synthesis review of areas identified in ToR. Preparation of an 'outline' benchmark based on synthesis study learning against which a results / monitoring framework for CSDP to be developed.	T+2.5 months	10%
4.	Interim Report 2 – Principles, Goals and Policies for CSDP	CSDP policies (overarching). CSDP goals (to achieve policies). CSDP objectives (to achieve goals).	T+3.5 months	10%
5.	Interim Report 3 – Detailed Assessments	Report presenting detailed assessments carried out capturing key takeaways that need to inform the preparation of the CSDP.	T+5 months	10%
6.	Structure (Concept) Plan and Development Nodes	Spatial Structure Plan and report with conceptual approach to the CSDP. Character zones identification. Development Nodes identification and ranking of development nodes identifying ten priority development nodes for pre-feasibility assessment	T+6.5 months	15%

S. No.	Deliverable	Remarks	Timeline ('T' - date of issue of work order)	Payment (% of total cost)
7.	Comprehensive Shoreline Development Plan	Draft and final spatial CSDP along with CSDP report including institutional architecture, costs, environment and social management strategy (including strategic management plan)	T + 8.5 months	20%
8.	Pre-feasibility assessments (x10) and Area Development Plans	Pre-feasibility assessment of ten priority nodes along with spatial Area Development (Zonal) Plan of preferred option	T+9.5 month	15%
9.	Project Completion Report	Key outputs, gaps and next steps to be addressed by CMDA for effective implementation of the CSDP and the Area Development Plans. ToR for feasibility studies.	T+10 month	5%

G. Counterpart Facilities

75. The Consultant will be expected to set-up an office in Chennai as space constraints will make it very difficult for CMDA to allocate space within CMDA premises. CMDA will extend all data available with it (digital and spatial) for purpose of this study. For data/information available with other government agencies, CMDA will set-up introductory meetings with such agencies but the Consultant will have to undertake necessary follow-ups to collect the data/information. Satellite maps procured by CMDA will be shared with the Consultant that should be used for undertaking GIS related assessments as well as for preparation of CSDP.
76. The Nodal counterpart official from CMDA for this study will be the Chief Planner, Master Plan Unit, CMDA.

H. Others

77. All data/information gathered, and plans and reports produced under this consultancy will remain property of CMDA which retains the right to use them in whatever way or form it deems appropriate. The Consultant does not have the right to use data/information/plans/reports gathered or produced for publication or presentational purposes without the prior written approval of Member Secretary, CMDA.