

Consultancy Services for External Monitoring of Environmental Management Plan Implementation of Chennai Peripheral Ring Road Project Sections II & III

Terms of Reference (ToR)

A. Background

1. Chennai is the capital of Tamil Nadu, located on the coast of the Bay of Bengal and has grown as perfect base in respect of institutions and automobile, information technology, hardware manufacturing and health care industries. The total extent of Chennai Metropolitan Area (CMA) is 1189 Sq.km. In the face of rapid developments in the districts surrounding Chennai and the expansion of the City, a new regional planning model is being examined by the Chennai Metropolitan Development Authority (CMDA) which suggests better infrastructure facilities like developing a larger road network, implementing an integrated transport plan, etc.
2. Government of Tamil Nadu is in the process of identifying and implementing projects to bridge the huge gap in the demand supply of infrastructure projects. One of the major projects included in VISION 2023 is Chennai Peripheral Ring Road.
3. Chennai Peripheral Ring Road (CPRR) is conceptualized to provide better connectivity around the city catering future traffic requirements and provide efficient commercial transportation by enhancing port connectivity.
4. The Chennai Peripheral Ring Road (CPRR) Project is a 6-lane access-controlled divided main carriageway with 2-lane service road on both sides of the 6-lane carriageway, with a number of interchanges and various grade-separated crossings. This Project is expected to meet increasing traffic demands in Chennai Metropolitan Area and is part of the wider Chennai Peripheral Ring Road that has five sections as detailed below;

Section	CPRR Project	Length (km)
I.	Northern Port Access Road– Ennore port to Thatchur on NH 16	25.31
II.	Thatchur on NH 16 to Start of Thiruvallur Bypass	26.10
III.	Start of Thiruvallur Bypass to Sriperumbudur on NH 48	30.10
IV.	Sriperumbudur on NH 48 to Singaperumal Koil on NH 32	23.80
V.	Singaperumal Koil on NH 32 to Mahabalipuram	27.471
	Total	132.781

5. Under Project Section II, procurement of Contractors in Two Packages (EPC 01 & EPC 02) is in progress. Under Project Section III, procurement of Contractors will be done in three packages (EPC 03, EPC 04 & EPC 05). The construction period is 3 years and maintenance period is 7 years for each packages.
6. This Terms of Reference (TOR) is for the “*Consultancy Services for External Monitoring of Environmental Management Plan (EMP) Implementation of Chennai Peripheral Ring Road Project (CPRR) Sections II & III*” (the “Consultants”) for monitoring the Environmental Impacts Assessments (EIA) and Environmental and Social Due Diligence (ESDD) for CPRR Project & its Associated Facilities for the section II & III of CPRR. The Consultant will be selected for both Section II & III, the appointment of consultant is based on Consultant’s Quality based Selection (CQS). The Total Length of the Section II and Section III of CPRR project is 56.20 Km.
7. Tamil Nadu road Infrastructure Development Corporation (TNRIDC) PIU intends to retain an external monitoring agency to conduct third-party monitoring as per Environmental Management Plan (EMP) of the Environmental Impacts Assessments (EIA) and Environmental & Social Due Diligence (ESDD) for CPRR as well as its Associated Facilities for section II (Two Packages) & III (Three Packages) of CPRR

Project (total of five packages) and to verify the information/data submitted by the Construction Contractors through Supervising agency of Section II & III of CPRR Project.

8. Concurrent monitoring is an integral part of Environmental Management Plan (EMP) of Environmental Impact Assessment (EIA) & Environmental and Social Due Diligence Report (ESDDR) implementation, intended for a periodical assessment of implementation work progress and providing feedback on ground truthing and offering suggestions and alternatives to the implementing agency (the Construction Contractor and the PIU/Client (TNRIDC). This will also ensure timely implementation in realizing the Environmental Management Plan (EMP) of EIA & ESDDR objectives and outcomes.

B. Objectives of the Assignment

The objectives of the assignment is to: (a) assess the implementation progress of EMP as per the EIA & ESDDR provisions and processes; (b) monitor the schedules and the implementation targets; and, (c) evaluate whether the objectives and outcomes of EMP as per the EIA & ESDDR provisions for the above roads are met.

- a. To conduct third-party monitoring of implementation of the Environment Management Plan (EMP) requirements under the Project;
- b. To ensure that the Project will be implemented in conformity with the policies of Government of India (GoI), Government of Tamil Nadu (GoTN), as well as AIIB' E&S policies;
- c. To identify issues related to the environment and social implementation and the required corrective actions, and to reflect these in a time-bound corrective action plan for Tamil Nadu Highway Department (TNHD)- PMU to implement;
- d. To capture social, environmental and economic benefits, and in particular any potential benefits to the poor and vulnerable groups (project affected persons) in the Project alignment;

- e. To engage with and involving users and stakeholders in the monitoring process; and
- g. To strengthen the capacity of the TNRIDC-PIU/TNHD-PMU to manage and replicate on its own third-party monitoring and engagement with road users and stakeholders. To identify trainings needs of the stakeholders(Client staff, Contractor staff and project affected people and other interest person)
- h. To update /revise the EMP as per the requirements of the Project from time to time.

C. Scope of Work

The scope of work includes, but not limited to;

- a. Undertake monitoring of EMP implementation to ascertain the compliance of performance indicators in all stages in accordance with the provisions of EMP & EIA;
- b. Advise and guide the construction Contractor who are supporting TNRIDC in implementation of EMP in accordance with this Terms of Reference;
- c. Assist the field staff/units of TNRIDC to oversee the implementation of EMP;
- d. Verify whether the EMP implementation and other related tasks are proceeding as per applicable laws (EC, NOC from CRZ and Forest Department, E&S covenants from the AIIB loan agreement, civil work contracts, resettlement action plan, gender action plan, indigenous people's plan(if applicable) and assist the implementing agency for any additional guidance is needed to address the environment related aspects of project implementation;
- e. Undertake reviews on behalf of TNRIDC of all documents and reports related to EMP implementation received from construction Contractors & other consultants and advise TNRIDC for taking appropriate decisions on such reports;

- f. Assist the TNRIDC to respond to the AIIB/OPEC on any matters related to EMP implementation and related matters and also coordinate the AIIB/OPEC visits to the CPRR project roads and facilitate discussions with the supervision Consultant/Contractors.
- g. Monitor the schedules and the achievement of targets given in the EMP;
- h. Provide periodical suggestion and recommendations for mid-stream alteration based on the requirements of implementation process as it is progressing;
- i. Report on the working of Grievance Redressal Mechanism (GRM) and analyses on the outcome of complaints dealt by GRMs;
- j. Undertake field visits, at least once in a quarter to check /verify the implementation status of EMP & HSE, document the good practices and lessons learned during the course of Construction Stage as well as O&M Stage;
- k. Review of Contractor's site specific construction EMP's based on final design and locations of construction camps, quarries and borrows areas etc.
- l. To monitor the civil works related to EMP implementation; and
- m. Review the Environmental Impact Assessment (EIA) with a focus on the EMP;
- n. Review the Environmental, Health and Safety clauses included in the civil works Contracts;
- o. Review the internal Environmental implementation reports;
- p. Review the grievances register logs at various Project sites;
- q. During field visits, oversee quantitative & qualitative environmental monitoring activities of TNRIDC/TNHD to confirm appropriate methodologies are being used and the results are correctly interpreted, and consult with potentially

affected people (Project Affected Persons & all other stakeholder) about any environmental impacts;

- r. Randomly interview the labourer about health and safety compliance by the Contractors;
- s. Assess the EMP implementation and performance based on the data/information submitted by the Contractor through supervising agency, when ever or where ever required the external monitoring agency may ask the Contractor/supervising consultant to conduct additional quantitative environmental monitoring as required;
- t. Discuss findings of various assessments with TNRIDC/TNHD, and provide recommendations to resolve any issues and problems on implementing the EMP, RRAP (under RFCT-LARR Act, 2013) and GAP as per the requirements of AIIB safeguard policies
- u. Prepare semi-annual external Environmental monitoring reports, which should confirm to the Project's compliance with the EMP, RRAP, GAP, also prepare & submit the time-bound corrective action plan for any non-compliances to the TNRIDC;
- v. Impart training to the stakeholders (Client staff, contractor staff and project affected people and other interest person) on the matters related to environment (EIA, EMP, HSE & Environment legislation) as and when required. as a part of capacity building.
- w. Any other tasks that is necessary in realizing the objectives of the assignments.
- x. Update/revise EMP from time to time as per requirements of the project work.

D. Mid-term Impact Evaluation:

This assignment also includes carrying out a midterm impact evaluation during the beginning of the 2nd year of the contract period to evaluate the following outcomes of EMP implementation.

- a. Verify whether the objectives of EMP are being realized.

- b. Impact assessment is to be compared with the baseline values of EIA & key socio-economic survey.
- c. Identify training requirements of the stakeholders. Based on field study and Focus Group Discussion (FGD) with stakeholders.
- d. Based on the mid-term impact evaluation, suitable remedial measures are to be proposed for any shortcomings.

E. Methodology

The External Monitoring Consultant should use rapid assessment of data/information furnished by the Contractor through supervising consultant &, checking of all relevant documents, Public consultations, Focus Group discussions, meetings with concerned officials/people, etc. The visits to the project sites should be undertaken at least once in each quarter and the Quarterly Progress Report (QPR) should be submitted within 30 days at the end of each calendar quarter.

F. Reporting.

The Consultants shall submit the following reports:

- (i) Inception Report stating the methodology, approach and deployment of resources, etc.
- (ii) Monthly Progress Reports (MPR) during the construction period of 3 years and first 2 years of Operation and maintenance period.
- (iii) Quarterly Progress Report during the construction period of 3 years and first 2 years of maintenance period.
- (iv) Annual Evaluation Report during the construction period of 3 years and first 2 years of maintenance period.
- (v) Final report outlining the experience, lessons learned, etc for Construction, Operation and Maintenance Period.

All reports should be submitted in hard copy and soft copy in editable as well as PDF formats for easy transmission.

The progress report shall be submitted to the Employer (TNRIDC). Further, all the draft reports will be reviewed by the client (TNRIDC) within 21 working days of submission of the reports and the comments/observation along with compliance need to be incorporated and appended in the final version by the consultant. The final approved version of all the reports shall be submitted to TNRIDC for onward transmission to AIIB/OPEC, Three copies of all reports should be submitted to TNRIDC (PIU).

G. Data, Services and Facilities to be provided by the Client

The TNRIDC will provide to the Consultants the copies of the EIA, EMP, RRAP, GAP and any other relevant reports/ data prepared by the DPR consultants & data, reports submitted by the construction contractor through supervising consultant. All facilities required in the performance of the assignment, including office space, office stationery, transportation and accommodation for staff of the Consultants, shall be arranged by the External Consultants them-selves.

H. Timeframe for Services

It is estimated that the services will be required for about **36 months (Construction period) & 24 months (Operation & maintenance period)** to undertake the assignment of concurrent monitoring and facilitating the Environmental monitoring and evaluating effectiveness of the implementation process of EMP as per the EIA & ESDDR provisions by the Contractor/ Client

I. Team Composition of the Consultant Team for the Assignment

The consultancy agency shall assign a team of professionals for assisting PIU in Concurrent Monitoring of the Environmental Management Plan (EMP) implementation. The monitoring Consultant team should have 3 key professionals and other supporting staff as

needed. The core team should have a combined professional experience in the areas of land acquisition, monitoring of EMP implementation, rehabilitation and resettlement, GAP, census and socio economic surveys and consultations.

S. No	Key Professional	No. of Persons	Man months	Qualifications and Experience
Key Professionals				
1	Team Leader Cum Environmental Expert	1	During construction period: 21 months (Intermittent) During maintenance period: 9 months (Intermittent)	<ul style="list-style-type: none"> ➤ S/he should be post-graduate in Environmental Engineering with minimum of 15 years of experience in the field of Environment. ➤ S/he should have monitoring and evaluation experience of at least 5 projects of which at least 2 should be Highway projects, preferably externally aided projects. ➤ Should have held responsible positions in the previous assignments including as Team leader. ➤ S/he should have adequate managerial skill and should be conversant with the region and fluent in Tamil and English.
Sub Key Professional				
2	Environmental Engineer & Socio-Economic Expert	1	During construction period: 21 months (Intermittent) During maintenance period: 9 months (Intermittent)	<ul style="list-style-type: none"> ➤ S/he should have Post Graduate in Environmental Engineering with knowledge and experience of minimum 10 years in the field of Environment. ➤ S/he should have experience of at least three projects of which at least one should be Highway projects

S. No	Key Professional	No. of Persons	Man months	Qualifications and Experience
				➤ S/he should have adequate managerial skill and should be conversant with the region and fluent in Tamil and English.
3	Field Support Staff, Chemistry, Biology & Zoology, Geology etc,	1	During construction period: 21 months (Intermittent) During maintenance period: 9 months (Intermittent)	➤ S/he should have Graduation in Any Degree (Preferably Civil Engineering) with knowledge and experience of minimum 5 years. ➤ S/he should have adequate managerial skill and should be conversant with the region and fluent in Tamil and English.

J. Payment Terms

Sl.No	Description	UNIT in No's	Payment in percentage of Total Contract Value	Total percentage
	During Construction Period (36 Months)			
1)	On submission and approval of Inception Report (Final approved Version)	1	3.00%	3.00%
2)	On submission and approval of Quarterly Progress Report.(Final approved Version)	12 (4 No's X 3 Years)	4.00%	48.00%
3)	On submission and approval of Annual Evaluation Report.(Final approved Version)	3 (1 No's X 3 Years)	3.00%	9.00%
4)	On approval of Final report outlining the experience, lesson learned, etc at the end of construction period of 3 years.	1	3.00%	3.00%

5)	Security Money (Shell be released after submission of Final Approved Report as mentioned in 4 th . Row	-	5.00%	5.00%
	During Maintenance Period (24 Months)			
1)	On submission and approval of Quarterly Progress Report.	8 (4 No's X 2 Years)	2.00%	16.00%
2)	On submission and approval of Annual Evaluation Report	2 (1 No's X 2 Years)	2.00%	4.00%
3)	On approval of Final report outlining the experience, lesson learned, etc. at the end of O&M period of 2 years.	1	2.00%	2.00%
4)	Security Money (Shell be released after submission of Final Approved Report as mentioned in 3 rd . Row	-	10.00%	10.00%
	Total			100%

K. Clients input Counterpart personnel.

Facilities:

- i. Office Building: As required shall be arranged by the consultant themselves.
- ii. Office furniture: As required shall be arranged by the consultant themselves.
- iii. Vehicles: Vehicles required for the key and sub-key professionals shall be arranged by the consultant themselves.
- iv. Accommodation: Accommodation for key and sub-key professionals shall be arranged by the consultant themselves.

Sd/--

**Executive Director (FAC),
TNRIDC.**