

Terms of Reference for operation and maintenance of the Environmental Laboratory through Outsourced Staff

1. Background:

World bank funded Jhelum and Tawi Flood Disaster Recovery Project (JTFRP) was launched in the aftermath of the devastating deluge of September 2014 that had enormous negative impact on state with massive infrastructure damages in which not only the major town but far flung area were also affected. A mission of the World Bank visited the state during February 1-6, 2015 in order to produce a rapid multi-sectoral assessment report of the damages and needs. The RDNA estimates the total damages and loss caused by floods at about INR 211,975 million. Component 1, 2 and 3 of JTFRP involves restoration of the critical infrastructures like school, hospital, bridges and roads effected by floods and also the critical flood control infrastructure for reliable forecasting of the floods.

In accordance with the World Bank policy, Environmental and social management framework (ESMF) has been developed to ensure the execution of the subprojects under various components in environmentally sound manner. Various short term adverse environmental impacts has been envisage in the ESMF, which are to be mitigated through implementation of environmental management plans (EMP). As per the Point 50 of the generic EMP attached with the ESMF, seasonal monitoring of air, water, noise and soil quality are to be undertaken to know the effectiveness of the EMP implementation.

2. Manpower to be engaged:- Following is the required staff positions along with the requisite qualification and experience:-

S. No	Staff	Positions	Qualification and Experience	Duties
1.	Air/ Noise analyst	1	<ul style="list-style-type: none"> • P. G. in Environmental sciences or life Sciences with at least one year relevant experience preferably in projects funded by multilateral institutions • Well versed with the related instrumentation and standards. 	<ul style="list-style-type: none"> • Conducting the monitoring of the air quality/ noise levels for the generation of the Baseline data and the periodic monitoring as per the schedule • Compilation of the data and preparation of reports
2.	Water analyst	1	<ul style="list-style-type: none"> • P. G. in Environmental sciences or life Sciences with at least one year relevant experience preferably in projects funded by multilateral institutions • Well versed with the related instrumentation and standards. 	<ul style="list-style-type: none"> • Testing the water quality parameters for the generation of the Baseline data and the periodic monitoring as per the schedule • Compilation of the data and preparation of reports
3.	Field	1	<ul style="list-style-type: none"> • At least Higher 	<ul style="list-style-type: none"> • Assisting the monitoring of the air

	staff		secondary pass with at least one year relevant experience preferably in projects funded by multilateral institutions <ul style="list-style-type: none"> • Well versed in the monitoring related instrumentation 	quality, water quality and noise levels for the generation of the Baseline data and the periodic monitoring as per the schedule
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3. Scope of work: the scope of the work for the outsourced staff includes the following tasks-

- To conduct Environmental quality-air quality, noise level and water quality on the sub-project sites under JTFRP, as per the schedule provide by the PMU- JTFRP:-
 - The air quality parameters- RSPM (PM10) and PM(2.5), SO₂ and NO₂
 - The water quality parameters – Temperature, pH, Electrical Conductivity (EC), Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD₅), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Turbidity, Total Alkalinity, Total Hardness, Calcium Hardness and Magnesium Hardness
 - Noise, the Day time L_{eq} Value
 - Any other parameters as prescribed by CPCB
 - All the tests shall be conducted in accordance with the CPCB guidelines.
 - To prepare monthly and quarterly reports on the monitoring conducted by the laboratories for the JTFRP sub projects.
 - Any other task deemed necessary for keeping the laboratory operational.
 - In fulfilling these tasks, the staff may have to travel in any district of the state and stay there for completion of the assigned work.

4. Deliverables: Following are the time bound deliverable are expected from the outsourced service:-

S. No:	Deliverables	Time schedule	Content and details to be provided
1.	Monitoring reports on environmental parameters	Monthly as well as quarterly	<ul style="list-style-type: none"> • Results of the monitoring exercise of the parameters of the Air quality, water quality and noise levels. • The data shall be presented in tabular form with the date of each test. • The report shall also mention the type of the construction activity at the time of the monitoring.

			<ul style="list-style-type: none">• The analysis of the results capturing its comparison with the national standards as prescribed by the CPCB and baseline data shall also be presented in the report.
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5. Responsibility of the Service provider:

- The service provider has to ensure that the staff is covered under life insurance coverage and social security schemes as per applicable laws.

6. Clients Responsibility:

- Shall provide the fully functional laboratories at Jammu and Srinagar equipped with all the equipment necessary for conducting the Air quality, water quality and noise levels as per the CPCB guidelines.
- Shall provide all the logistics in the form of vehicles for facilitating the monitoring exercise.
- Shall provide the monitoring schedule including the list of the sites to be monitored.