



# West Bengal Mineral Development and Trading Corporation Limited (WBMDTCL)

(A Government of West Bengal Undertaking)

## **Notice Inviting Quotations**

**Invitation of rate quotations for conducting  
Replenishment study of Sand & other  
Riverbed Material in Rivers of various  
districts of West Bengal as per District Survey  
Report (DSR)**

**Tender No. MDTC/SAND/002(iii)/1111 Dated: 13.05.2022**

**Data Sheet :**

Name of Work	Invitation of rate quotations for conducting Replenishment study of sand & other Riverbed material in rivers of various districts of West Bengal
Application Fee ( non refundable)	Rs. 17700 /- (Price- Rs 15000/- + 18% GST) Demand Draft in favour of 'West Bengal Mineral Development and Trading Corporation Limited' payable at Kolkata.
Last Date for receiving Pre-Bid Queries	19.05.2022 by 5pm on <a href="mailto:tenderwbmdtcl@gmail.com">tenderwbmdtcl@gmail.com</a>
Pre-Bid Meeting ( virtual mode )	20.05.2022 at 12noon
Last Date & Time for Submission of Bid	27.05.2022 by 2:00 pm.
Date & Time of Opening of Technical Bid	30.05.2022 at 2:30 pm
Date & Time of Opening of Financial Bid	30.05.2022 at 5 pm
Place of Opening of Bids	WBMDTCL H.O. ;WBIIDC Building, 3rd Floor, DJ-10, DJ Block, Sector-II, Bidhannagar, Kolkata-700091
Nodal Officer	Managing Director, WBMDTCL Email:tenderwbmdtcl@gmail.com Phone: 033 23590073
Tender Document No.	Tender No. MDTC/SAND/02(iii)/1111 dt. 13.05.2022

**1. Invitation of rate quotations for replenishment study of Sand & Other Riverbed Material Producing Rivers of West Bengal**

Quotations are hereby invited for conducting Replenishment study of sand & other Riverbed material in rivers of various districts of West Bengal

**2. Scope of Services:**

**The study should follow but not limited to the scope of services defined below. Prevailing guidelines, OM (MOEF &CC), Gazette Notifications, NGT Orders etc. pertaining to preparation of DSR, and guidelines of state if any must be followed during the course of this contract.**

- **Satellite Imagery Study:**

The bidder may avail the use of latest satellite images for replenishment study. Satellite images have to be used for map preparation related to physiography and land use/land cover of the river and catchment area. This study would involve Satellite image (FCC-False Color Composition) pre-processing, selection of suitable classification approaches, post classification processing, and accuracy assessment. According to the Visual Image Interpretation (Tone, Pattern, Texture, Shape, Color etc.) of the pixel has to be taken. The report also involves study of Pre monsoon – Post monsoon status of block/stretch through satellite imagery. Aerial extents of the profiles will be mapped through Satellite images.

- **Field Survey Activity. (Dron/Total Station. DGPS) :**

Replenishment study requires four surveys. The first survey needs to be carried out in the month of April for recording the level of mining lease before the monsoon. The second survey is at the time of closing of mines for monsoon season. This survey will provide the quantity of the material excavated before the onset of monsoon. The third survey needs to be carried out after the monsoon to know the quantum of material deposited/replenished in the mining lease. The fourth survey at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river. Based on the replenishment rate future auction may be planned. **For the current study, the first set of data generation has to be completed before the onset of Monsoon.**

The replenishment period may vary on nature of the channel and season of deposition arising due to variation in the flow. Such period and season may vary on the geographical and precipitation characteristic of the region and requires to be defined by the local agencies preferable with the help of the **Central Water Commission and Indian Meteorological Department.**

Survey activities need to be carried out with the help of Unmanned Aerial Vehicles (UAVs)/Drone, DGPS, Total station.

The surveyed database needs to be validated with the existing District Survey Report of the concerned district.

The bidder needs to submit Geotag images of the survey activity.

- **Demarcation of benchmarks etc. (Specification of Pillar):**

The conventional survey technique using DGPS and other survey tools are used to define the topography, contours and offsets of the lease area. The survey should clearly depict the important attributes of the stretch of the river and its nearby important civil and other features of importance. Such information will provide the eligible spatial area for mining. The contour and the elevation benchmarks will provide the baseline data for assessing the pre and post-study period scenario.

Physical benchmarks are to be fixed at appropriate intervals (preferable 1 in 30 m) and the Reduced Level (RL) shall be validated from a nearby standard RL. These RL should be engraved on a steel plate (Bench Plate) and shall be fixed and placed at locations which are free from any damages and are available in pre and post-study period. The bench plates shall be available for use during the mining period as reference for all mining activity. Reference pillar may also be used in place of Bench Plates with visible and readable demarcation on the ground as common reference points to control the topographic survey and mining activity.

The levels (MSL & RL) of the corner point of each grid should be identifiable and safety barriers (Non-Mining) demarcated as restricted in consensus with Mineral Concession Rules of respective State, and the provision mentioned in this Sustainable Sand Mining Management Guidelines.

A clear identification is required to be highlighted between grids under mineable and grids under the non-mineable area. These baseline data (pre and post) be subjected to stimulation with the help of data through appropriate volume estimation software, mine software to derive at the replenishment area and corresponding volume and estimated weight. Specific gravity of insitu sand conditions must be derived from NABL accredited Laboratory. Wherever there are Combination of Sand, Gravel and Pebbles, specific gravity of each of the component need to furnish by the successful bidder.

- **River Profile preparation – from Survey Data:**

Profile of rivers needs to be created at regular intervals and aggradation/deposition shall be identified along with water level. In the same study, benchmarks need to be created at a prominent location at regular interval for future surveying. Such study helps the mining departments to identify the source of sand.

- **Survey of Individual Sand Blocks.**

Potential blocks/areas where mining can be allowed or being continued to be identified and discussed in the replenishment study report. This report would also help to estimate the annual rate of replenishment wherever applicable.

Preparation of this report involve both primary and secondary data generation. The primary data generation involve the site inspection, survey, ground truthing etc. while secondary data has been

acquired through various authenticated sources and satellite imagery studies.

The report will also describes the general geographical profile of the river, distribution of natural resources, livelihood, climatic condition and sources of revenue generation.

In-stream mining directly alters the channel geometry and bed elevation. Therefore, the replenishment study report will guide mining of riverbed scientifically and based on statutory guidelines for conservation of land, river channels and sustainable development of the society.

- **Find out rate or replenishment from actual survey data and also from empirical formulae as stated in the EMGSM.**

The replenishment estimation is based on a theoretical empirical formula with the estimation of bedload transport comprising of analytical models to calculate the replenishment estimation. The iso-pluvial maps of IMD can be used for estimation of rainfall. Catchment yield is computed using different standard empirical formulas relevant to the geographical and channel attributes. eg.Strange's Monsoon runoff curves for runoff coefficient). Peak flood discharge for the study area can be calculated by using Dickens, Jarvis and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport using Ackers and White Equation or similar can be made. A simulation model is used with basic data generated from the field in the pre-study and post-study period (preferably pre-monsoon and post-monsoon) to estimate the volume of replenished material. The particle size distribution and bulk density of the deposited material are required to be assessed from a NABL recognized laboratory. Considering the bulk density and the volume, the estimation of replenishment in weight will be calculated after considering safeguards and stability of the slopes and riverine regime.

- **Suggestion for future mining**

Plans and sections need to be prepared based on the restrictions provided in letter of intent and provisions of Sustainable Sand Mining Management Guidelines 2016.

By the replenishment study the state Govt. can get a complete picture on list of Potential Mining Leases (Expiring & Proposed). The study can be also helpful to get information for Cluster & Contiguous Cluster details. Transportation Routes for individual leases and leases in Cluster can be established in the District Survey Report with the help of replenishment study.

Enforcement & Monitoring Guidelines for Sand Mining,2020, The sand Mining Policy for the State, WBMMCR, 2016, and other relevant & prevailing guideline needs to be followed by the successful bidder while preparation of Replenishment study report.

### **3. Eligibility Criteria :**

1. The bidder shall submit the documentary evidence on execution of similar works.
2. The bidder should have own survey team equipped with Total station/DGPS/Drone.
3. In case of bathymetric survey, bidder can do the work by engaging suitable agency.
4. The bidder should have RQP/Qp's, surveyors and GIS experts within the team.
5. Bidder should have experience in Preparation of Mining Plan for Sand Blocks.
6. Bidder or it's consortium/JV should be accredited in QCI-NABET.

7. The bidder shall submit valid GST certificate, PAN card and must possess a registered office address within the state of West Bengal.
8. The average annual turn over of the bidder should have a minimum of INR. 2 Crore. (Two Crore's) in the last 3 (three) financial years.

(Bidders have to submit evidence on above mentioned each criteria on demand)

**4. Pre Bid Meeting : Interested bidders are requested to attend the pre bid meeting through virtual link given below .**

West Bengal Mineral Development and Trading Corporation Limited(WBMDTCL) is inviting you to a scheduled Zoom meeting.

Topic: WBMDTCL's Zoom Meeting: Tender for Rate Quotation for Replenishment Study of Sand in Rivers of the Districts of West Bengal

Time: May 20, 2022 11:30 AM India

Join Zoom Meeting

<https://us06web.zoom.us/j/82525237090?pwd=Wi9LZE5SRHQzR1ZvYzNheFJaSXRMQT09>

Meeting ID: 825 2523 7090

Passcode: 794794

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## **5. Preparation of Bid**

Bidder's proposal (the Bid) will consist of following components and shall be submitted physically as separate sealed envelopes. Tender Number and Name of Bidder to be clearly stated on each of the envelope.

- i. Technical Bid including details of claim of eligibility criterion laid down in Notice inviting Bid
- ii. Financial Bid
- iii. Demand Draft of the value of application fee

Tender Number, Technical Bid/Financial Bid/Demand Draft and Name of Bidder to be clearly stated on each of the sealed envelopes. All the sealed envelopes should be placed inside a separate sealed cover and should be super scribed with Tender Number and Name of the Bidder. This sealed cover should be dropped in the drop box kept at the WBMDTCL office at WBIIDC Building, 3rd Floor, DJ-10, DJ Block, Sector-II, Bidhannagar, Kolkata-700091 within the scheduled date and time.

## 6. Bid Evaluation

The registered Company/Agency/LLP must submit the following documents during submission of their Technical Bid and Financial Bid quotation :

Sl.No.	Parameters	Documents Required
A.	The registered Company/Agency/LLP must have an office space in the State of West Bengal.	Self certified
B.	The bidder should have own survey team equipped with Total station/DGPS/Drone	Self certified
C.	The bidder should have RQP/Qp's, surveyors and GIS experts within the team	Self certified
D.	Bidder should have experience in Preparation of 01 (one) Mining Plan for Sand Block	CA Certified
E.	Bidder or it's consortium/JV should be accredited in QCI-NABET.	(i) Self certified certificate of QCI/NABET (ii) Self certified agreement in case of Consortium/J.V.
F.	The bidder shall submit valid GST certificate, PAN card and must possess a registered office address within the state of West Bengal.	Self certified
G.	The average annual turnover of the bidder should have a minimum of INR. 2 Crores (Two Crore's) in the last 3 (three) financial years i.e. for FY 2018-19, 2019-20 & 2020-21	C.A. certified
H.	The bidder has to submit a Technical Note stating details of the methodologies to be followed along with a Schedule in Pert chart of study completion.	Self certified

**Note:** All documents must be marked as A to H as above

The Bidder has to submit a Technical Note stating details of the methodologies to be adopted with a schedule in Pert Chart of study completion.

**Financial Bid:**

1. As per format enclosed.

**7. Terms and Conditions:**

- a. The successful bidder has to commence the job within 3 days from the date of award of the job.
- b. All logistic arrangement, maintaining liaison with local authorities, deployment of personnel and instrument is responsibility of the Successful bidder.
- c. Site activities are to be carried out in consultation with the district level officers.
- d. All raw data collected from site needs to be furnished in periodical manner.
- e. All processed data including CAD, Shape Files, Word Files, are to be submitted to the concerned officer in periodical manner.

**8. Evaluation :**

The Technical Bid shall be opened first and thereafter financial bid shall be opened for technically qualified registered Company/Agency/LLP. The Company(s)/Agency(s)/LLP(s) quoting L1 rates shall be offered the work

**9. Payment of Bills:**

- I. 30% of the contract amount shall be paid after site visit by survey team/GIS experts and submission of Raw data with a data validation certificate from the designated officer.
- II. Next 30% payment will be paid after submission of draft report in soft and hard copy format with all exercised data and upon acceptance of the report by the designated officer.
- III. Next 40% payment will be made after submission and acceptance of final report.
- IV.

**10. WBMDTCL reserves the right to change, modify, add or alter the document including cancellation of the tender at any time during the bidding process.**

**11. WBMDTCL reserves the sole right to accept or reject any or all bids without assigning any reason thereof.**

**12. Format :**

**Format for Submission of Financial bid :** The financial bid must be submitted in the format in INR in lump sum value, which should include all costs, requisite fees towards processing fees for Mining Plans as per prevailing norms. travelling, incidental costs, telecommunication costs, stationary costs and all local taxes (such as: value added or sales tax, social charges or income taxes on nonresident Foreign Personnel, duties, fees, levies) on amounts payable by WBMDTCL under the Contract. No extra payment on any such account will be payable by WBMDTCL at any point of time. The lump sum price quoted will be firm and fixed throughout the contract period. The bids should be unconditional and conditional bids would be out rightly rejected. All pages of the Financial Bid must be signed and stamped with official seal by the person having the Power of Attorney.



**Financial Bid Format :**

Financial Bid for Replenishment study of sand & other Riverbed material in rivers of various districts of West Bengal as per the draft DSR.

Tender reference No: MDTC/SAND/02(iii)/1111      dt. 13.05.2022

<b>Job</b>	<b>Total Fees for the assigned job (INR) excluding GST but including all other costs, taxes,</b>	
Job under Scope of Services	Name of the districts	INR (Rupees in words)
	Alipurduar	
	Bankura	
	Birbhum	
	Cooch Behar	
	Dashin Dinajpur	
	Darjeeling	
	Hooghly	
	Jalpaiguri	
	Jhargram	
	Kalimpong	
	Maldah	
	Murshidabad	
	Nadia	
	Paschim Bardhaman	
	Purba Bardhaman	
	Paschim Medinipur	
	Purba Medinipur	
	Purulia	
	Uttar Dinajpur	

NOTE: Bidders are informed to quote the rate in rupees in their own letter head in the concerned district column in which they are interested to participate. In the districts they do not wish to participate they can mention N.A. (not applicable)

- i. No other payment, except the price quoted will be payable. However GST as Applicable will be paid extra.
- ii. The Bidder shall bear all costs associated with the preparation and submission of his Bid and WBMDTCL will under no circumstance be responsible or liable for those costs and / or will not reimburse any expenditures / costs whatsoever it may be.

- iii. The RFP/Bid is not transferable.
- iv. For delay in completion of job for reasons attributable to the registered Company/Agency/LLP , Liquidated Damage @ up to 1% of the total contract value may be imposed per day of delay subject to maximum of 10% of the contract value.

### **13. FORCE MAJEURE :**

If, at any time, during the pendency of the contract, the performance in whole or in part, by either party is prevented or delayed by war, strike, riot, crime or due to any act of God such as hurricane, flooding, earthquake, volcanic eruption beyond the control of both the parties such as war, strike, insurrection, riot, earthquake, storm, flood, fire which are beyond the control of either party (hereinafter referred to as 'eventualities'), then provided notice of the happening of any such eventuality is given by either party to the other within 15 days from the date of occurrence thereof, neither party shall by reason of such eventuality be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance and work under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist and the decision of the WBMDTCL as to when the work has to be resumed shall be final and conclusive. The time of completion shall then be extended by a period equal to the period during which the eventuality was prevailing. In case of persisting delay of more than three months both the parties may consult each other and arrive at an appropriate decision regarding continuation or otherwise of the contract.

### **14. Limitation of Liabilities**

Notwithstanding anything contained in the contract, WBMDTCL agrees that the Bidder shall not be liable to WBMDTCL, for any losses, claims, damages, liabilities, cost of expenses ("Losses") of any nature whatsoever, for an aggregate amount in excess of the fee paid under the contract for the services provided under the contract, except where such Losses are finally judicially determined to have arisen primarily from fraud or bad faith of the Bidder. In no event shall the bidder, be liable for any consequential (including loss of profit and loss of data), special, indirect, incidental, punitive or exemplary loss, damage or expense relating to the services provided pursuant to this contract.