

REQUEST FOR PROPOSAL (RFP)

Engagement of Technical Agency for Water Resource & Hydrogeological Assessment

Issuing Organization	Technology Informatics Design Endeavour (TIDE)
Date of Issue	8 th October 2026
Last Date for Submission	16 th October 2026
Assignment Duration	10 days
Geographical Coverage	2 villages in Gudibande Taluk of Chikkaballapur district, Karnataka

1 Background and Context

The organisation is implementing a village-level climate-resilience programme in partner villages. The programme framework requires a comprehensive Water Resource & Hydrogeological Assessment to generate the technical evidence necessary to plan and design water-security interventions.

The assessment is intended to build upon the Year 1 baseline and support technically feasible, scientifically designed and locally relevant interventions. The underlying framework identifies hydrogeological survey, borewell inventory and groundwater assessment, topographic survey, watershed and catchment analysis, water budgeting, site suitability assessment for recharge and storage structures, and engineering surveys as the core activities for the water assessment.

2 Purpose of the Assignment

The purpose of this assignment is to appoint a qualified technical agency to undertake the required water resource and hydrogeological assessments across the identified partner villages and translate the findings into a practical Water Security Plan, technically appropriate intervention recommendations, technical drawings, Bills of Materials (BoMs), and cost estimates.

3 Objectives

- Establish the existing status of water resources, groundwater and relevant water infrastructure in the partner villages.
- Assess the physical and hydrogeological characteristics that influence water availability, recharge and storage.
- Map topography, drainage, watersheds and catchments relevant to village water management.
- Prepare village-level water budgets based on available water resources and water requirements.
- Identify and technically assess suitable locations for water recharge and storage interventions.
- Prioritise technically feasible water-security interventions based on assessment findings and local requirements.
- Develop technical designs, drawings, BoMs and cost estimates for shortlisted interventions.
- Prepare a consolidated Water Security Plan and technical assessment reports for implementation planning.

4 Scope of Work

The selected agency shall undertake the following work packages:

4.1 Hydrogeological Survey

Undertake a village-level hydrogeological assessment to understand groundwater occurrence, recharge characteristics, groundwater conditions and factors influencing water availability. The agency shall document the methodology, field observations, analytical approach and key findings.

4.2 Borewell Inventory and Groundwater Assessment

Prepare a comprehensive inventory of relevant borewells and existing groundwater sources. The assessment shall capture available information on location, status, depth and other relevant field parameters, together with groundwater observations necessary for planning. The agency shall identify key groundwater-related constraints and opportunities.

4.3 Topographic Survey

Conduct appropriate topographic surveys to establish elevation, slope, drainage pathways and other site-level characteristics required for water-resource planning and engineering design. Survey outputs shall be suitable for GIS analysis and subsequent technical design.

4.4 Watershed and Catchment Analysis

Delineate relevant watersheds and catchments and assess drainage and runoff pathways. The analysis shall identify locations and hydrological characteristics relevant to rainwater capture, recharge, storage and other water-security interventions.

4.5 Water Budgeting

Prepare a village-level water budget assessing water availability and demand. The water budget shall clearly document the assumptions, data sources, calculation methodology, major demand categories, seasonal considerations where data permit, and identified water gaps or surpluses.

4.6 Site Suitability Assessment

Identify and assess technically suitable locations for recharge and storage structures. Each shortlisted site shall be assessed against relevant physical, hydrological, hydrogeological, land/site and implementation considerations. The agency shall provide a clear rationale for the recommended intervention at each priority site.

4.7 Engineering Surveys, Designs and Costing

For shortlisted interventions, undertake the engineering surveys and prepare technical drawings, design details, quantity calculations, BoQs and cost estimates adequate for implementation planning and procurement.

5 Expected Deliverables

Deliverable	Minimum Content
1. Hydrogeological Assessment Report	Findings from the hydrogeological survey, groundwater assessment, maps/figures and recommendations relevant to water security.
2. Borewell & Groundwater Inventory	Structured database and maps of assessed borewells/groundwater sources, with relevant field observations.
3. Topographic Survey Outputs	Survey drawings/data and elevation/drainage outputs required for analysis and engineering planning.
4. Watershed & Catchment Analysis	Delineated catchments/watersheds, drainage analysis and identification of relevant runoff/recharge opportunities.
5. Water Budget Report	Village-level water availability and demand assessment, assumptions, calculations, gaps and implications for intervention planning.
6. Site Suitability & Intervention Prioritization	Priority intervention sites with technical rationale, recommended intervention type and key constraints.
7. Water Security Plan	Consolidated village-level plan linking water-resource findings with prioritised interventions.
8. Technical Drawings	Drawings and design documentation for shortlisted interventions.
9. BoQs & Cost Estimates	Quantity calculations, BoQs and cost estimates for shortlisted interventions.
10. Final Consolidated Report & Digital Data Package	Final reports, GIS layers, databases, survey outputs, drawings and editable/source files, as applicable.

6 Technical Standards and Data Requirements

- All field data shall be geo-referenced wherever applicable and provided in an organised digital database.
- GIS outputs shall be provided in editable/native formats along with map exports suitable for reporting.
- Survey and engineering outputs shall be internally consistent and suitable for subsequent design and implementation planning.

- The agency shall clearly state data sources, assumptions, limitations, methods and quality-control procedures.
- All calculations used for water budgeting, site prioritisation and costing shall be traceable and reproducible.

7 Methodology and Approach

Bidders shall propose a detailed methodology demonstrating how they will integrate field investigations, hydrogeological analysis, topographic and watershed assessment, water budgeting, GIS analysis and engineering assessment. The methodology shall clearly show the pathway from baseline data to intervention prioritisation and design.

The proposal should address at minimum:

- Desk review and mobilisation
- Field reconnaissance and stakeholder consultation
- Primary data collection and verification
- GIS and spatial analysis
- Hydrogeological and water-resource analysis
- Water budgeting
- Site suitability and intervention prioritisation
- Engineering assessment and design
- Quality assurance and validation
- Final reporting and data handover

8 Stakeholder Engagement

The agency shall engage relevant community representatives and local stakeholders as required to validate water-resource conditions, understand local water-use practices and constraints, and support the identification and prioritisation of feasible interventions. Stakeholder inputs shall be documented and incorporated into the assessment where technically relevant.

9 Team Composition and Qualifications

The bidder shall propose a multidisciplinary team appropriate to the assignment. The proposed team may include, as relevant:

- Team Leader / Water Resources Specialist
- Hydrogeologist
- Hydrologist / Watershed Specialist
- GIS and Remote Sensing Specialist
- Topographic Survey / Survey Engineering Specialist

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- Civil / Water Infrastructure Engineer
- Other technical specialists required for the proposed methodology

Bidders shall provide CVs of key personnel, clearly indicating qualifications, years of relevant experience, similar assignments undertaken and proposed role in this assignment.

10 Eligibility and Experience Requirements

- The agency should demonstrate relevant experience in water-resource assessment, hydrogeology, watershed/catchment analysis or comparable assignments.
- Experience in village-level water-security planning and design of water-related interventions shall be considered relevant.
- Experience in GIS-based resource mapping, topographic surveying and preparation of technical drawings/BoQs shall be demonstrated.
- The bidder shall provide details of comparable assignments, including client, geography, scope, duration and key deliverables.

11 Proposal Submission Requirements

- Covering letter
- Organisation profile
- Understanding of the assignment
- Detailed technical methodology and work plan
- Team composition and CVs
- Relevant experience and reference assignments
- Proposed deliverables and reporting schedule
- Quality-assurance approach
- Financial proposal with a clear cost break-up
- Any assumptions, exclusions or dependencies

12 Technical Evaluation Criteria

Criterion	Weight
Understanding of assignment and proposed technical approach	25%
Relevant experience in hydrogeology and water-resource assessment	20%
Experience in watershed, GIS and topographic assessment	10%
Experience in water-security intervention planning/design	15%

Qualifications and experience of proposed team	15%
Work plan, quality assurance and data-management approach	5%
Financial proposal	10%
Total	100%

13 Assignment Duration and Work Plan

The bidder shall propose a realistic schedule covering mobilisation, field investigations, analysis, validation, site prioritisation, engineering surveys, design, costing and final reporting. The final duration shall be agreed with the selected agency during contracting.

14 Reporting and Review

- The agency shall participate in inception and review meetings as required.
- Draft outputs shall be submitted for review before finalisation.
- Assessment findings and priority interventions shall be validated with the client and relevant stakeholders.
- The agency shall incorporate agreed comments and submit final deliverables in both PDF and editable formats, as applicable.

15 Data Ownership and Handover

All primary data, processed datasets, GIS layers, survey outputs, calculations, drawings, BoQs, reports and other assignment-specific outputs generated under this engagement shall be handed over to the organisation in the agreed digital formats. The bidder shall clearly identify any third-party data or software dependencies.

16 Payment Schedule

Payment milestones shall be linked to acceptance of agreed deliverables. The bidder shall propose a milestone-based payment schedule in its financial proposal. Final payment shall be subject to acceptance of the complete final deliverable package.

17 Key Consideration for the Assignment

The selected agency is expected to go beyond descriptive data collection. The assignment should produce actionable technical evidence that enables the organisation to identify, prioritise, design and cost water-security

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interventions. Recommendations shall be supported by field evidence, spatial analysis, technical rationale and documented assumptions.

18 Annexure – Indicative Output Matrix

Assessment Activity	Indicative Output
Hydrogeological Survey	Hydrogeological Assessment Report; maps; technical findings
Borewell & Groundwater Assessment	Borewell/groundwater inventory and database
Topographic Survey	Survey outputs; elevation/drainage information
Watershed & Catchment Analysis	Catchment/watershed maps and analysis
Water Budgeting	Water Budget Report
Site Suitability Assessment	Site assessment and intervention prioritisation
Engineering Surveys	Technical drawings; BoQs; cost estimates
Integrated Planning	Water Security Plan