Government of West Bengal
Department of Science & Technology and Biotechnology

Vigyan Chetana Bhavan, 26/ B, DD Block, Sector I, salt Lake, Kolkata 700064

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Request for Expressions of Interest

For Conducting Problem Specific Solution Based Pilot Projects

The Department of Science & Technology and Biotechnology (DSTBT), Government of West Bengal, invites Expressions of Interest (EoI) from eligible and interested Research Organizations, Academic Institutes, Technology based Startups, Professional Agencies, or individuals (hereinafter referred to as 'Applicants') **for undertaking Problem Specific Solution based Pilot Projects in the State of West Bengal.**

To develop a strong network the Dept. intends to collaborate with competent entities having proven domain expertise, tested methodologies/ models and adequate technical, managerial and financial capacity to design, execute and demonstrate time-bound, result-oriented pilot projects through scientific and physical survey, data collection and validation, pilot scale experimentation, technology demonstration, field testing and Lab-to-Land implementation.

1. **Introduction**

The Department, is willing to leverage **Scientific Data Based Study and Translate Technological Applications in practical** to address pressing societal, environmental, economic and infrastructural challenges through pilot Technology Demonstration, Deployment and Capacity Building interventions.

In this context, partners capable to undertake problem-driven pilot projects that demonstrate scalable, replicable and cost-effective solutions may get aligned with the Dept. for various collaborative initiatives.

2. **Scope of Services**

The scope of services under the proposed pilot projects may include, but shall not be limited to, the following:

• Problem identification and baseline assessment • Scientific and physical surveys, data collection and validation • Design and execution of pilot scale experiments • Demonstration of new or improved technologies, tools, models or processes • Field testing and performance evaluation • Lab-to-Land implementation • Documentation, reporting and dissemination of outcomes • Recommendations for scale-up, replication.

3. **Indicative Areas of Intervention**

For example, some relevant areas of intervention are given as follows (**further to be updated from time to time in this website**):

A: **Urban/ Semi-urban Landscape, Facility Management and Hazard prevention—**

- Urban Flooding, Sewerage and Public safety issues management
- Traffic System Optimisation, Urban Mobility and Infrastructure Mapping
- Scientific Assessment, Cutting edge technology intervention for pollution monitoring, control and Urban Heat Island & Changing Ecosystem
- Natural & Anthropogenic Disaster and Technology-enabled Response Framework
- Early Warning System, Predictive Analytics and Vulnerability Assessment Modelling
- Energy consumption, loss, efficiency management & alternative sources like green fuel
- Sub-surface Public utility mapping using tech to viz. Ground penetrating radar etc.

B: **Environmental Management and Resilience —**

- Abandoned mine potential trapped potable water and its availability
- Advanced method for water quality monitoring, bank erosion and preventive measures
- Soil quality, soil health monitoring and management strategies e.g. precision nutrient management
- Biodiversity, Climate Change and Environmental Risk Modelling
- E-waste Management, Segregation, Processing and Recycling Technologies
- Survey and Safe Disposal Mechanism for Hazardous Components
- Sensor based existing water body monitoring and management to avoid eutrophication
- Using disruptive technologies in micro level data collection and analysis e.g. sensor based soil health, IoT utilization, Crop health, sensor based methane emission from paddy field in plains of West Bengal, data collection, and health of aquatic life
- Vulnerability assessment of eco-sensitive zones and **strategies** for district-level climate change adaptation planning

C: Technology Demonstration and Pilot trial–

- Pilot Projects for Water Treatment, waste management focusing on Recycle and Reuse
- Demonstration of **low-cost sanitation and hygiene technologies** for rural habitations
- Scalable, cost effective and Circular Economy based Technology demonstration
- Smart Agriculture, viz. utilizing drone technology in augmenting Agri – Productivity
- Pilot demonstration of climate-smart farming models and crop diversification and **adaptive agronomic practices**

- Post-harvest loss management, storage, and value-addition technologies for local produce

D. Any other area suitable for Lab to Land Application of newer technology, tools, models or practice, backed by established scientific data/ information for betterment of society, economy, productivity, ease of living and environment in the State of West Bengal

4. **Submission of Application**

Interested Applicants must submit their Expressions of Interest in written form, duly signed by the authorized representative, within the stipulated time. The EoI should include:

Brief introductory profile of the organization / individual • Relevant experience and credentials • Domain expertise and proposed area(s) of intervention • Vision, Strategy, Role and proposed contribution for collaboration • Details of key personnel • Supporting documents and credentials

Applications with supporting attachments to be submitted to dstbt.projects.tfdc@gmail.com

5. **General Conditions**

• The applications shall be assessed and evaluated as per the norms set by the authority, depending upon the type and content and the Department reserves the right to accept or reject any application without assigning any reason. • Submission of EoI does not guarantee selection or award of any project. • DSTBT may modify, cancel or amend this EoI at any stage. • All decisions of DSTBT in this regard shall be final and binding.

Please visit the departmental website dstbt.bangla.gov.in for further details.

BRIEF FORMAT OF APPLICATION

GENERAL INFORMATION

1. Name of the Applicant (and of Organization / Company / Start-up etc.):

2. Status (Research/ Academic Organization / Pvt. Organization / Start-up / Others):

3. Description/ Area of Function of the Institute:

4. Contact Number (Mobile & Email, web links etc.):

ORGANIZATIONAL PROFILE / BACKGROUND

1. Areas of Expertise and Technical capabilities:

2. Availability of infrastructure, laboratories, field facilities and other resources (including human resources/ team members) relevant to the proposal:

3. Achievements to mention in this context:

TECHNICAL PROPOSAL

A. PROPOSED AREA(S) OF INTERVENTION

may indicate specific relevant areas:

B. STATEMENT OF THE PROBLEM & PROPOSED SOLUTION (BRIEF)

i. Description of the identified need or challenge:

ii. Relevance of the issue (from perspective of Society, Economy and Environment):

C. PROPOSED APPROACH & METHODOLOGY (as applicable)

A concise description of strategy to address - trial, demonstration, scalability, and cost-effectiveness

1. Baseline Assessment, surveys, data collection and validation

2. Design and execution of Pilot-Scale Experiments Or Demonstrations

3. Field Testing, Monitoring and Performance Evaluation

4. Lab-to-Land implementation and stakeholder engagement

5. Capacity Development

D. OUTCOME, TIMELINE & DELIVERABLES

LIST OF ENCLOSURES