**Rejuvenating Watershed for Agriculture Resilience through Innovative Development (REWARD)**

**TERMS OF REFERENCE**

**FOR**

**NATIONAL WATERSHED MANAGEMENT EXPERT**

## BACKGROUND OF THE PROJECT

The Department of Land Resources, Government of India has initiated a World Bank supported multi-State project namely *Rejuvenating Watershed for Agricultural Resilience through Innovative Development* (REWARD). It is expected to positively influence by promoting resource efficient growth in selected watersheds, investing in human capital at State and National levels, and developing networks of scientific and technical partners. The project will enhance productivity and net income of farmers and contribute significantly to Lighthouse India by implementing new science and data-driven approaches for climate resilient watershed management, land resource inventory, land use planning, and precision farming in a range of agro-ecological conditions in participating states. The project will directly address key strategic actions around agricultural and rural development, including doubling farmers' incomes, more crop per drop, water to every plot, soil health, and promotion of entrepreneurship through technical and financial support for better delivery and impacts through improved planning approaches, capacity building, coordination and convergence, and supportive research and development. The outcomes are prevention of soil run-off, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. This enables multi-cropping and the introduction of diverse agro-based activities, which help to provide sustainable livelihoods to the people residing in the watershed area.

REWARD is being implemented in three to four Indian States. It is proposed as a 6 years Project. The total allocation for the Project is approximately USD250 million of which USD178.5 million is International Bank for Reconstruction and Development (IBRD) loan from the World Bank and the balance is funded by the Government of India/ State Governments.

## PROJECT OBJEVTIVES AND RESULTS

The Project Development Objective (PDO) is to: improve land and water conservation and climate resilience in selected watersheds, and strengthen capacities of national and state institutions to deliver more effective science-based watershed development programs.

## KEY RESULTS

| PDO Element | Potential PDO Indicator(s) |
|---|---|
| Improved land conservation outcomes in demonstration sites | Percentage of targeted watershed area showing an increase in Normalized Difference Vegetation Index (NDVI) correcting for climate effects; |
| Improved agricultural outcomes in demonstration sites | Incremental change in agriculture/horticulture productivity and income for selected crops; |
| Improved water outcomes in demonstration sites | Percentage of targeted landscape area showing an increase in Land Surface Water Index (LSWI) correcting for climate effects; |
| Improved climate resiliency outcomes in demonstration sites | Changes in resilience index composed of a set of variables covering exposure, sensitivity to climate events and adaptive capacity; |
| Strengthened capacities of watershed development institutions | Functional networks of scientific partners in project states; |
| Revised policies for watershed programs | Revised National Watershed Guidelines informed by project experiences and lessons learned that will guide new national |

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| | watershed programs. |

**PROJECT COMPONENTS:**

The project will deploy institutional and technical solutions to address the PDO across four components, and over six years, as follows:

**Component 1.Improved National Watershed Governance and Institutional Capacity Building**
This component will strengthen capacities and systems primarily in DoLR, for delivering national watershed programs. The component will be delivered through two sub-components:

**1.1 Institutional strengthening and capacity building.** The sub-component will strengthen human resource and institutional capacities in DoLR to plan, coordinate, deliver, evaluate and report on more effective, science-based national watershed programs. It would support overall project monitoring and reporting based on coordinated status and monitoring reports from states.

**1.2 Technology transfer**. The sub-component will support DoLR to coordinate the improved transfer of knowledge and experiences across Indian states and globally through national and international workshops and conferences, and international and national study tours/exposure visits.

**Component 2: Improved State Watershed Governance and Institutional Capacity Building.**
This component will strengthen capacities and systems primarily at state levels for planning methodology, technology development, decision-support tools, and delivery models. The component would ensure climate change considerations are integrated into all activities. The component will be delivered through four sub-components:

**2.1 Institutional strengthening and capacity building.** The sub-component will strengthen human resource and institutional capacities in relevant line departments at state, district and field levels to implement more effective and science-based programs in watersheds. The sub-component would provide resources to build capacities for state and field level safeguards oversight.

**2.2 Technical support to states**. Following a lighthouse approach, the sub-component will finance the participation of the Karnataka Watershed Development Department, their experienced scientific and technical network of top caliber scientific partners, and other institutions as needed to help new project states and DoLR prepare the project and establish and train their own partners.

**2.3 Research and development.** The sub-component will finance existing scientific and technical partners from Karnataka, and new state, national and international partners as needed, to undertake applied research and development for improved watershed development, including creating and piloting the projects.

**2.4 Monitoring and Evaluation**. The sub-component would finance 3rd party M&E directly tied to project activities, including baseline surveys, input and output monitoring, process monitoring, impact assessments, acquisition of necessary remote sensing images, and case studies to guide project implementation.

**Component 3: High Impact Demonstration Watersheds in Rainfed Agricultural Areas.**
This component will support the development of model watersheds in rainfed areas in each of the participating states. Component 3 would be delivered through three main sub-components:

**3.1 Improved integrated watershed plans using science-based data and tools**.

**3.2 Establish Model Watersheds**.

**3.3 State specific innovations and pilots, urban watersheds, etc.** The sub-component will support piloting of small-scale innovations to address land, agriculture, water, and climate change issues unique to each participating state, for example urban/peri-urban watershed management planning and investments, managing landscapes in arid regions, biodiversity management, major gully rehabilitation, solar pumps for small-scale irrigation, etc. The sub-component will also institutionalize knowledge and lessons learned from these pilots for future upscaling in government programs.

**Component 4: Project Management and Coordination.**
Project management and coordination will be supported at central and state levels. The sub-component would support incremental administration costs and specialists, travel, meetings, financial management, internal/external audit and procurement, and equipment.

**PROJECT AREA**

9. A flexible approach will be adopted in participating states to select watersheds for developing improved data bases and watershed plans, as well as a sub-set of sites to establish model watersheds. Participating states would be committed to establishing an agreed number of model watersheds. Each site will be approximately 5,000 ha. An average target of 10-15 model watersheds per state would be taken up. It is expected that the model watersheds would be spread variably across the states, with some states being able to establish more sites than others. As was the case in Karnataka, the broader LRI work and watershed planning process would be scaled far beyond the model watersheds in the states. It is anticipated that each of the states could complete LRI work, LRI and hydrology atlases, water security plans, and integrated watershed plans on an additional 1,500 to 2,000 watersheds.

10. **Technical design:** States are familiar with implementing national watershed schemes. However, REWARD will be different from "business as usual" watershed programs because the new states will be expected to adopt modern technologies and data-focused land resource inventorization for watershed planning and implementation, work with technical partners, and expanding the application of data bases and DSS tools to help farmers improve productivity and climate resiliency.

**Project Management Support**

The Project would predominantly focus on supporting watershed management activities in the partner States viz. Andhra Pradesh, Karnataka and Odisha. However, certain activities of the Project would have nation-wide application. While primary Project engagement would be with the State-level Nodal Agencies (SLNAs) of these States, engagement at the district and watershed level is foreseen in certain cases.

**OBJECTIVE OF THE ASSIGNMENT**

REWARD Project Objective is to: improve land and water conservation and climate resilience in selected watersheds, and strengthen capacities of national and state institutions to deliver more effective science-based watershed development programs. The objective of the National Watershed Management Expert is to *lay a strong foundation for Component 3 that will generate significant knowledge to key stakeholders involved in REWARD during project implementation.* The National Watershed Management Expert will help in streamlining and improving the watershed management systems in the DoLR as well as the States, while ensuring that the requisite watershed management procedures are met for the REWARD project.

**DUTIES AND RESPONSIBILITY**

- Spearhead piloting the use of new decision-support models for more holistic planning at both landscape-scale catchment and micro-watershed scales, and better site selection;

- Network and liaison with technical agencies for developing comprehensive digital data bases for improved integrated watershed management planning, pulling together available state-level date, images, and map layers, and establishing and watershed portal for universities; and
- Initiate piloting of community-based monitoring and documentation through simple water monitoring equipment and IT tools as well as training on participatory M&E. Learning and water management with the help of M&E Expert.
- Provide technical leadership to DoLR in the design of a Central Data Center on REWARD that would link with proposed digital data bases in focus States (under Component 2). The overall system would support improved integrated watershed management planning, Monitoring, Evaluation & Learning and policy analysis. It would pull together available state-level data, images, and map layers, and establish a watershed portal for wider data access by stakeholders such as other state government department and universities;
- Lead DoLR through a structured, stakeholder driven process with key R&D partner agencies and clients to identify urgent and important priorities for R&D to support REWARD as well as National Watershed Programme;
- Develop the major outputs from the structured process into a clear and concise strategic plan for watershed management to be supported by the project, including options for implementation with key partner at national and state levels;
- Providing appropriate inputs into Projects Implementation Plan (PIP);
- Any other related activity assigned by DoLR.

**EXPERIENCE AND QUALIFICATION**

**ESSENTIAL QULIFICATIONS**

The Expert should, at a minimum, the following:

- Minimum Master's degree in a relevant fields including agriculture/water resource/natural resource management /forestry/any other related field.
- At least 10 years experience in handling watershed development projects of centrally sponsored schemes / bilateral & related policies and research program.

**DESIRABLE QUALIFICATIONS**

- Demonstrated experience with strategic planning processes for research and development
- Sound knowledge of research organizations related to agriculture, forestry, water, horticulture, etc, in India.
- Demonstrated knowledge and experience dealing with development of complex natural resources data bases
- Good knowledge of watershed management and broader natural resource management in India.

Serving Officers belonging to the Central Govt. or Govt. of States or Union Territories or Central / State Govt. Public Sector Undertakings / Autonomous Bodies holding the post equivalent to Deputy Secretary / Director level at the Govt. of India having requisite qualification and work experience as stated above are also eligible to apply. In such case of selection the relevant Government rules regarding deputation will apply for regulating the terms and conditions of service during deputation to this position.

**AGE - LIMIT:**

The maximum age limit for applying the position shall be not exceeding 65 years as on date of advertisement of the post.

**FEE AND ALLOWANCES**

For selected candidates other than the candidates selected on deputation, the compensation package will be paid within Rs. 1.50 lakh to Rs. 2.00 lakh per month, as decided by the Departmental Consultancy Evaluation Committee (CEC) based on the candidate's qualification, experience and suitability to the post.

**REPORTING**

The position directly reports to the Project Director – REWARD or his / her designate.

**LOCATION**

The position is based in the REWARD, PIU Office in New Delhi.

**TERMS AND CONDITIONS OF THE CONTRACT**

The position is contractual and coterminous and with the duration of the REWARD Project. The initial contract is for a period of 1 year with provision of extension on an annual basis on satisfactory performance of duties. There will be a probationary period of 4 months during which period the contract can be terminated with immediate effect. Beyond this period, the contract can be terminated after a notice period of one month by either party. The expert shall be transferred to the rolls of the Project Management Consultant Agency (PMCA) once the same is appointed under REWARD Project. The terms of conditions of the contract will remain the same in case of such transfer.

**APPLICATION PROCEDURE AND DEADLINE**

Applications are expected to submit a CV detailing their qualifications and experience that match the eligibility criteria. A covering letter highlighting why the applicant feels she /he would be good choice for the indicated position should accompany the CV.

All applications must be submitted electronically (signed /scanned/PDF) via email to the following id. **recruit.reward-dolr@gov.in**. The position applied for should be clearly stated in the subject line. The deadline for submission of application is 15$^{th}$ day from the date of publication in news papers.

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