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

### **TERMS OF REFERENCE**

### **FOR**

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

- 1. 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.
- 2. **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 Financial Management Expert will help in streamlining and improving the financial management systems within the WDC-PMKSY, while ensuring that the requisite financial management procedures are met for the REWARD project.

## **DUTIES AND RESPONSIBILITIES**

- Provide support to DoLR to ensure that (a) the service standards for financial management aspects indicated in the Financial Management Manual of the Project are met; (b) accounting books and records are up-to-date and satisfactorily maintained; (c) all financial and accounting reports are submitted to the Bank / DEA in a timely manner; (d) the Informal Unaudited Financial Report (IUFR) is submitted to the World Bank / DEA on schedule and without delay; (e) claims are put in expeditiously; (f) audits are carried out in a timely manner and audit reports submitted to the Bank on time; (g) the budgeting system and forecasting system are satisfactory as per Project's annual action plans.
- Ensure that Project implementing entities understand and follow all financial reporting formats.
- Supervise and guide the work of any subordinate staff in the Accounts Cell of the PIU if

required.

- Carry out trainings as per need in coordination with the Capacity Building Cell in the PIU.
- Provide continued technical assistance to Project states if required in setting up and operationalizing financial management systems.
- Carry out regular monitoring for financial management activities at the state level implementing entities.
- Interact with Internal Finance Division (IFD) of DoLR, submit accounts and periodical reports as required by IFD, carry out internal audit and compliances.
- Resolve any financial management related issues, including responses to comments and queries from the World Bank.
- Prepare communications and coordinate between DoLR and the World Bank for clearance of financial management document.
- Prepare various progress reports on financial management.
- Provide appropriate inputs to the Project Implementation Plan (PIP) and annual action plans.
- Report on a regular basis on any issues for the attention of DoLR and the World Bank.
- Any other related activity assigned by the DoLR.

### **EXPERIENCE AND QUALIFICATIONS**

## **ESSENTIAL QUALIFICATIONS**

- l) A Master's Degree or equivalent in Finance or Chartered Accountancy from a recognized University.
- 2) 10 years of working experience in financial management in World Bank financed Projects or similar large Projects or programme.

## **DESIRABLE QUALIFICATIONS**

- 1) Should have sound knowledge of the operation of accounting systems.
- 2) Familiarity with government and externally aided Projects.
- 3) Excellent communication skills including fluency in spoken and written English.
- 4) Good working knowledge of computer program including MS Word, Excel, etc.

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<sup>th</sup> day from the date of publication in news papers.

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

### TERMS OF REFERENCE

### **FOR**

## HYDROLOGIST / WATER RESOURCES 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	Revised National Watershed Guidelines informed by project
programs				experiences and lessons learned that will guide new national
				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 3<sup>rd</sup> 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

- 1. 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.
- 2. **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**

Hydrological information and modeling is an essential input for watershed assessment and planning. A water-focused planning approach based on sound hydrological principles is a key component for REWARD and gains further importance in the context of National Watershed Programe with its focus on the principles of conserving, provisioning, using and managing water for increased agricultural production. In this context, the DoLR proposes to engage the services of a Hydrologist/Water Resources Expert in the DoLR REWARD Project Implementation Unit.

### **DUTIES AND RESPONSIBILITIES**

- Coordinate with key partners at central and state levels in the application of hydrological and other tools for catchment planning, monitoring of surface and groundwater availability and use
- Ensure that Hydrological data /models are routinely applied in the planning for watershed Projects and are reflected in the DPRs
- Responsible for managing the partnership with National level institutions and state level
  institutions working on hydrological and water management issues under REWARD
  project.
- Assess state-level requirements for strengthening capacity of teams in using GIS and RS applications in watershed management and use of GIS based Decision Support Systems (DSS)
- Assess and recommend techniques for water use efficiency and water reuse at the community level and pilot these at the appropriate levels.
- Liaise with research and academic institutions and partner states as necessary to Main stream hydrological concerns within the watershed management approach.
- Identify suitable hydrological models for piloting and upscaling.
- Ensure that efficient water use based crop planning practices are demonstrated within the REWARD pilot watersheds.
- Take a lead with the urban watershed management concept and pilot applications under Component 3 to ensure that appropriate frameworks/models for urban watershed management are developed for diverse scenarios/ requirements.
- Assist with capacity building of Project stakeholders at different levels in hydrology/ water management in coordination with the Capacity Building (CB) team within the PIU.
- Conceptualize Project activities for the introduction of meteorological and hydrological gauging and stream flow measurement at watershed level.
- Pilot systems for monitoring stream flow in watershed Projects.
- Plan measures for improving small watershed level hydrological and sedimentation data collection and analysis in the planning process and by the M&E team. Ensure that monitoring parameters for hydrological outcomes are integrated into the overall M&E for the Project.
- Identify procedures for hydrological modeling of small watersheds to evaluate impacts of watershed structures on surface flow, groundwater recharge and crop planning.
- Contribute to documentation and knowledge sharing in the thematic area and facilitate data availability on the subject at the PIU level.

## **EXPERIENCE AND QUALIFICATIONS**

## **ESSENTIAL QUALIFICATIONS**

- l) Masters degree or equivalent in Hydrology or Water Resources Management from a recognized University.
- 2) 10 years of relevant work experience in India.

## **DESIRABLE QUALIFICATIONS**

- l) Sound knowledge of latest hydrological gauging tools and modeling techniques applicable in the watershed management context.
- 2) Experience of working with government and research institutions.
- 3) Applied research or applications at scale pertaining to the areas indicated.
- 4) Publications pertaining to areas of interest for the Project.
- 5) Experience of having worked in World Bank or other donor funded Projects.

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<sup>th</sup> day from the date of publication in news papers.

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# REJUVENATING WATERSHED FOR AGRICULTURAL RESILIENCE THROUGH INNOVATIVE DEVELOPMENT (REWARD)

### TERMS OF REFERENCE

### INSTITUTION & CAPACITY BUILDING 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 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.

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## 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	Percentage of targeted watershed area showing an increase in
outcomes in demonstration sites	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	Percentage of targeted landscape area showing an increase in Land
demonstration sites	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	capacit	ies of	Functional networks of scientific partners in project states;
watershed develo	pment in	stitutions	
Revised policie	es for	watershed	J 1 J
programs			experiences and lessons learned that will guide new national
			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 3<sup>rd</sup> 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

- 1. 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.
- 2. **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**

Capacity building as a key to effective and efficient watershed management was underscored in the Common Guidelines for Watershed Management Projects -2008 (revised in 2011) and a significant allocation of total funds was made available for the purpose. Experience shows that over the years, capacity building has not been addressed to the required extent and in a systematic manner across watershed Projects resulting in implementation delays and often sub-optimal results. Recognizing its key contribution, REWARD project lays significant emphasis on institutional strengthening and capacity building of stakeholders at different levels across the watershed landscape. In this context, the DoLR is the process of engaging the services of a Capacity and Institution Building Expert to be positioned within the REWARD Project Implementation Unit in DoLR.

## **DUTIES AND RESPONSIBILITIES**

- Spearhead the institution building and capacity building requirements of the project and develop a roadmap for strengthening administrative and management capabilities for effective implementation of the project.
- Identify nodal and specialized training organization at national and state-levels for the effective delivery of CB inputs.
- Assist in the development of training calendars and preparation of training material.
- Along with the M&E team in the PIU, prepare parameters for the monitoring of CB outcomes and impacts.
- Explore and implement non-traditional means and methods of CB delivery.
- Assist DoLR in providing support required by states beyond the REWARD partner states with any specific CB requirements or requests.
- Document and share CB best practices on thematic and process areas related to watershed management at the DoLR level.
- Strengthen human resource and institutional capacities in DoLR to plan, coordinate, deliver, evaluate and report on more effective, science –based national watershed programs.
- Building more robust systems and technologies in DoLR for improved program coordination, program monitoring, evaluation, and reporting and communications/outreach.
- Strengthen the application of remote sensing, GIS capability, and relevant DSS tools with the support of National Rainfed Authority of India.

### EXPERIENCE AND QUALIFICATIONS

### **ESSENTIAL QUALIFICATIONS**

- Masters degree in a relevant field including rural management, social work, agriculture, management, etc. or equivalent from a recognized University.
- At least 10 years of work experience in the thematic specialization with large-scale and multistate operations preferable down to the community level.

## **DESIRABLE QUALIFICATIONS**

- 1. Received specialized training in the field of Capacity Building.
- 2. Familiarity with Government Projects.
- 3. Excellent communication skills, including speaking and writing in English.
- 4. Good IT skills including familiarity with MS World, Excel etc.
- 5. Experience of having worked with World Bank or other donor funded projects in the relevant thematic area.

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<sup>th</sup> day from the date of publication in news papers.

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# REJUVENATING WATERSHED FOR AGRICULTURAL RESILIENCE THROUGH INNOVATIVE DEVELOPMENT (REWARD)

### TERMS OF REFERENCE

### MONITORING AND EVALUATION 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 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	Percentage of targeted watershed area showing an increase in
outcomes in demonstration sites	Normalized Difference Vegetation Index (NDVI) correcting for
	climate effects;
Improved agricultural outcomes in	Incremental change in agriculture/horticulture productivity and
demonstration sites	income for selected crops;
Improved water outcomes in	Percentage of targeted landscape area showing an increase in Land
demonstration sites	Surface Water Index (LSWI) correcting for climate effects;
Improved climate resiliency	Changes in resilience index composed of a set of variables
outcomes in demonstration sites	covering exposure, sensitivity to climate events and adaptive
	capacity;
Strengthened capacities of	Functional networks of scientific partners in project states;
watershed development institutions	i diletional networks of scientific partners in project states,
watershed development institutions	

Revised	policies	for	watershed	Revised National Watershed Guidelines informed by project
programs				experiences and lessons learned that will guide new national
				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 3<sup>rd</sup> 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

- 1. 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.
- 2. **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.

## 1. 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**

The M&E Expert will initially focus on the design of the ME&L framework and MIS for the Project, provide technical assistance to partner States in strengthening their ME&L processes and systems, and develop the detailed Terms of Reference for a 3<sup>rd</sup> party ME&L agency to operate during Project implementation. The M&E Expert will assist the DoLR to lay the groundwork for a state-of-the-art monitoring and evaluation system under the Project supported by a robust MIS and modern IT.

### **DUTIES AND RESPONSIBILITIES**

- Design a comprehensive ME&L framework that will include concurrent input-output monitoring, process monitoring, periodic outcome measurement and a final impact assessment with links to the grievance redressal systems. The ME&L framework would encompass application of state of the art IT and remote sensing technologies.
- Assist DoLR in developing a set of comprehensive ME&L indicators including disbursement linked performance indicators for all components and sub-components of the Project that would be integrated into the ME&L framework; align these with the ones already defined in the Results Framework for the Project for seamless data generation.
- Assist in the development of a robust internal MIS (in partnership with the MIS Expert in the PIU) as a backbone of the concurrent ME&L activities.
- Manage the 3<sup>rd</sup> Party ME&L Consultancy to ensure timely and quality deliverables.
- Manage the partnership with the NRSC for requisite and timely inputs.
- Ensure that a quality baseline dataset is prepared for the Project, especially in relation to the Projects pilot areas where quantitative outcomes are expected.
- Ensure that the M&E system set up for the Project is providing adequate, timely and quality information.
- Ensure that gender and equity parameters are captured through the M&E system even if not expressly indicated in various Project components.
- Support Partner States in setting up their ME&L systems and ensure that these are lined to the one at the national level.
- Provide training in ME&L to staff at DoLR, PIU and in the States on best practices in ME&L principles and their integration with a robust MIS.
- Work with the CB Cell in the PIU to organize all necessary CB inputs for M&E including trainings and learning material.
- Assist DoLR & States for the documentation and sharing of ME&L best practices.
- Work in coordination with the PIU experts on hydrology, agriculture etc. to assess key
  outcomes and keep them updated with feedback from the ME&L system including issues
  that may require immediate attention.
- Provide timely information to the PD- REWARD on any matter that may require immediate attention.

- The M&E Expert is expected to provide support to States beyond the REWARD partner States as and when requested by the DoLR.
- Monthly Progress Reports to be submitted
- Any other related activity assigned by DoLR.

# **EXPERIENCE AND QUALIFICATIONS**

### **ESSENTIAL QUALIFICATIONS**

- 1) A Master's Degree or equivalent in a related field including Rural Development, Economics, Environment, Management, etc. from a recognized University.
- 2) 10 years of experience directly related to M&E in the Rural Development, Natural Resource Management sectors.
- 3) Led the design and implementation of ME&L systems and related MIS in India for major rural development and /or natural resource management Projects.

## **DESIRABLE QUALIFICATIONS**

- l) Experience with operationalizing comprehensive ME&L systems including baseline development, input-output and process monitoring and impact assessments.
- 2) Experience with the development of computer-based MIS platforms for decentralized Projects, including field input of data with consolidation at district and/or state level.
- 3) Strong knowledge of remote sensing options and platforms to support ME&L, use of field-based data input technology such as with mobile phones and tablets, GPS and GPS-enabled digital cameras.
- 4) Demonstrated experience in successfully leading teams to develop and implement ME&L/MIS.
- 5) Experience with World Bank or other donor supported Projects.
- 6) Publications pertaining to areas of interest for the Project.

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

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### 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.

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# 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	Percentage of targeted watershed area showing an increase in
outcomes in demonstration sites	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	Percentage of targeted landscape area showing an increase in Land
demonstration sites	Surface Water Index (LSWI) correcting for climate effects;
Improved climate resiliency	Changes in resilience index composed of a set of variables
outcomes in demonstration sites	covering exposure, sensitivity to climate events and adaptive capacity;
Strengthened capacities of	Functional networks of scientific partners in project states;
watershed development institutions	
Revised policies for watershed	Revised National Watershed Guidelines informed by project

programs	experiences	and	lessons	learned	that	will	guide	new	national
	watershed pr	ogra	ms.						

### **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 subcomponents:

- **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 3<sup>rd</sup> 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

- 1. 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.
- 2. **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 landscapescale 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.

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# REJUVENATING WATERSHED FOR AGRICULTURAL RESILIENCE THROUGH INNOVATIVE DEVELOPMENT (REWARD)

### TERMS OF REFERENCE

### PROCUREMENT 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 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	Percentage of targeted watershed area showing an increase in
outcomes in demonstration sites	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	Revised National Watershed Guidelines informed by project experiences and lessons learned that will guide new national

programs	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 3<sup>rd</sup> 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

- 1. 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.
- 2. **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.

## 1. 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. Project with a focus on innovations and state of the art inputs, a large number of consultancies, both national and international, including firms and individuals are expected to be engaged at both national and state levels to enable the Project achieve its targets. It is thus imperative that a competent Procurement Expert be engaged by the Project to oversee these processes. Partner States are not fully capable of handling procurement-related actions in line with the World Bank procurement requirements and requisite capacity building and hand-holding support will be necessary.

### **DUTIES AND RESPONSIBILITIES**

- Assist and advise the project team in the PIU at all stages of procurement of various consultancies, other procurements as indicated in the procurement plan, to ensure that the correct procedures are followed.
- Prepare bid advertisement, bidding documents, requests for proposals for consulting services, evaluation reports, draft contracts, and minutes of contract negotiations following procedures of the World Bank/GOI.
- Provide technical assistance on pre-tender and post-tender activities (bidding and evaluation) including preparation, planning and contract management of the procurement packages.
- Update the procurement plan every three months, and set in place monitoring systems for procurement activities.
- Follow the procedures indicated in the Procurement Manual prepared for the Project and approved by the World Bank.
- Provide training and hand-holding support to the State procurement teams as per the need.
- Follow up with States and partner organisations to ensure that key procurement personnel have undergone necessary trainings on relevant procurement procedures.
- Resolve any procurement-related issues, including responses to comments from the World Bank and possible complaints from contractors, supplies, consultants.
- Prepare communications and coordinate between DoLR & the World Bank for procurement document clearance and other procurement related activities.
- Prepare and share monthly progress reports detailing progress on procurement-related actions.
- Any other related activity assigned by DoLR.

## **EXPERIENCE AND QUALIFICATIONS**

## **ESSENTIAL QUALIFICLATIONS**

- 1) A Master's degree or equivalent in management, economics, business administration, engineering or any other related field from a recognized University.
- 2) 10 years of work experience in public procurement, including at least 3 years in conducting procurement under World Bank financed Projects or similar large Projects or programmes.
- 3) Expertise on contract management.
- 4) Working knowledge of GFR and World Bank procurement regulations.

## **DESIRABLE QUALIFICATIONS**

1) Familiarity with government and externally aided Projects.

- 2) Excellent communication skills, including fluency in written and spoken English.
- 3) Good working knowledge of computer programmes such as word, excel, etc.
- 4) Certification related to public procurement.

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. Any relocation cost incurred will be borne by the successful candidate.

# 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<sup>th</sup> day from the date of publication in news papers.

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