



**GOVERNMENT OF ODISHA
DEPARTMENT OF WATER RESOURCES**

TERMS OF REFERENCE

Country:	India
Project Name:	Ground Water Recharge And Solar Micro Irrigation To Ensure Food Security And Enhance Resilience In Vulnerable Tribal Areas Of Odisha (Funded Activity: GCF-FP045)
Title of Consulting Services:	Development of Training Modules for the Stake holders under GCF (Jalamitra, Farmers & other households).
Contract Type:	QCBS (Lump-sum)
Date of Issue:	17th July, 2021



ODISHA COMMUNITY TANK DEVELOPMENT AND MANAGEMENT SOCIETY

7th Floor, Rajiv Bhawan, Bhubaneswar - 751001

TERMS OF REFERENCE

Development of Training Modules for the Stake holders under GCF

1 BACKGROUND

The Government of Odisha in partnership with National Bank for Agriculture and Rural Development (NABARD) is implementing “**Ground water recharge and solar micro irrigation to ensure food security and enhance resilience in vulnerable tribal areas of Odisha** (Funded Activity: GCF-FP045)” through “Odisha Community Tank Development and Management Society (OCTDMS)”, an SPV under the Department of Water Resources (DoWR). The activities will be monitored through a District Level Project Management Team (DLPMT) formed under the Chairmanship of the concerned District Collector.

The Green Climate Fund (GCF), designated as an operating entity of the financial mechanism under Article 11 of the United Nations Framework Convention on Climate Change and established pursuant to the governing instrument having its Head Quarters at Songdo, Incheon, Republic of Korea is assisting with a grant of USD 34.357 Million and Govt. of Odisha will support the project with about USD 117.735 Million. There will be a Community Contribution of about USD 14.205 Million through cash/ kind for the project.

The project aims at augmenting the ground water level through introduction of the structural measures such as to construct recharge structures in 10,000 tanks (About 1000 tanks of Minor Irrigation Organisation and 9000 tanks of Panchayat Raj & Drinking Water Department) in 15 districts viz., Bargarh, Bolangir, Boudh, Gajapati, Kalahandi, Kandhamal, Keonjhar, Koraput, Malkangiri, Mayurbhanj, Nawarangpur, Nuapada, Rayagada, Sambalpur and Sonepur to tap the additional water available during monsoon in the tanks (public/ community/ private) for post monsoon augmentation of the ground water. This would augment to additional availability of around 1.61 Lakh Ha.m of ground water which will be extracted to irrigate about 2.50 ha of land through micro irrigation for benefit of small and marginal farmers. Further, the project will install 1000 solar pumps on pilot basis for providing micro irrigation for agricultural purposes in line with national target of reaching 1,00,000 MW solar power by 2022 under the Jawaharlal Nehru National Solar Mission (JNNSM). The project will also support for the capacity building of the beneficiaries towards livelihood improvement,

The project will thus improve and ensure water security, food security, energy security with linkage to climate change and adaptation solution to about 5.2 million vulnerable SC/ST population in these 15 districts. Enhanced food security in these areas will enhance their adaptive capacity.

2.1 **Need of the Assignment:**

The project envisages participation of local para-professionals, farmers, women, landless & tribal people in the mission and trained or capacitated to develop them for a sustainable food security through micro-irrigation system.

- a) It is proposed to develop 20,000 "Jalamitras", to volunteer for different project activities. They will run and maintain the recharge wells to be installed in the tanks and also monitor the quality of water during the project implementation period and thereafter. The ground water level variation shall also be monitored prior to and during project implementation.
- b) In a pilot mode, 1000 Solar power based pumps will be installed where 2,000 (Two thousand) local para-professionals will be identified based on their qualification, attitude towards learning and implementation for operation and maintenance of pumps & Solar power systems to be installed in the project area.
- c) 1.50 lakh Landless households- especially women will be identified and covered under Capacity Building for livelihood activities in convergence with departmental schemes such as, post-harvest processing/ Backyard poultry/ Animal Husbandry.
- d) About 300,000 community members will be trained through demonstration in project area for efficient water use, water budgeting practices.
- e) The support required to enhance livelihood & build resilience will be formulated. There is also need to propagate various methods, technologies to enhance food security, energy security. To train such a big mass of community stake holders, a large number of Master Trainers will be also be trained.

2.2 **Objective of the Assignment is to prepare:**

2.2.1 Various training modules in the field and subjects as per the objectives narrated in para-2.1 need to be developed. The subjects of the Training Modules shall be grouped and named as per the following:

- a) Ground Water & its importance, water quality and its importance in various uses, conservation and recharge systems for ground water, maintenance of recharge wells.

- b) Methods of micro irrigation system, various types of materials/ implements used in micro irrigation, methods of repair & maintenance of the materials/ implements used in micro-irrigation.
 - c) Methods of Cultivation for various crops, crop water requirement and watering methods, crop water budgeting, cash crops versus paddy, use of pesticides, fertilisers, identification of pests and its controlling methods, mixed cropping, use of poly house, scope of controlled cultivation methods and water efficient crop practices etc.
 - d) Livelihood options in varying climates and calamities, post-harvest processing/ Backyard poultry/ Animal Husbandry, goatery, other small ruminants and introduction to other entrepreneurship options.
 - e) Solar power systems, solar pumps and its operation, minor repairs and maintenance methods, energy use and risks involved.
- 2.2.2 An intensive research is to be made to prepare training modules which shall be written in **English** and **Odia** in simple sentences/ language transcripts. The descriptions are to be supplemented with necessary multi-colour illustrations/ photos/ caricatures/ diagrams/ small educational videos etc for easy grasp of the methods and idea. The material shall duly cover the different project components with respect to the objectives as described. This should also indicate and describe the probable outcomes with rated indicators.
- 2.2.3 The training modules shall be prepared in chapters and periods of training in classes **of 45 minutes** each written as material for class-room study. Each of the chapter of 45 minutes class shall have questionnaires for revision of the studied chapter and to help in evaluation of instructions.
- 2.2.4 The assignment includes demo of the training modules to a selected audience.
- 2.2.5 The agency may/shall consult with the partnering agencies/ departments for preparing the details of activities and modalities;
- 2.2.6 The Agency may take the opinion of experts in the respective fields as suggested by the State Project Unit (SPU) of OIIPCRA;
- 2.2.7 The Agency shall keep the policies of the State Govt./ Gol/ GCF Board and NABARD in mind in preparation of Training Modules;
- 2.2.8 Only authenticated information shall be used in making and bringing up the Training modules;

2.2.9 The Agency shall maintain the confidentiality or secrecy of the information relating to or contents of Training modules. The information can't be shared with any other agency other than the SPMU, OCTDMS and without the permission of the Project Director, OCTDMS.

3 QUALIFICATION OF AGENCY

- 3.2.1 Agency/ Institution should be a registered organization/ company with minimum 5 (Five) years of existence in the relevant field.
- 3.2.2 Average annual financial turnover in last three years should not be less than One Crore INR. For registered educational/ Autonomous or Govt. aided Training institutions, the financial turnover is not required.
- 3.2.3 Agency/ Institution should have successfully executed similar nature of assignments in preparation of training modules/ course materials.
- 3.2.4 Prior experience of working with donor agency like World Bank, ADB, NABARD etc. in Agriculture and Climate Change sector, renewable energy sector, ground water recharge programme will be preferred.
- 3.2.5 The agency should not be blacklisted with the Govt. of Odisha/ NABARD/ World Bank or other UN agencies at the time of opening of the proposal or signing of contract for the consultancy.

4 TEAM COMPOSITION & QUALIFICATION

Sl. No.	Team composition	Minimum Qualification	Remarks
Key Experts:			
1	Team Leader	S/he should have an advanced degree at least Master's Degree in any discipline.	Experience in leading a team for preparation of over-all study materials, publication, editing services for at least one completed Project. He/ She should have at least 15 (Fifteen) years of post-qualification working experience in preparation/ publication/ Editing/ Writing of books relating to training/ study guides.
2	Hydrology/ Ground Water Recharge Expert	Master's degree in Civil Engineering with Specialisation in Hydrology/ Ground Water Hydrology.	Ten (10) years' of post-qualification working experience in Water Resources/ Ground Water development projects/ teaching experience.

3	Renewable Energy Expert	Bachelor's degree in Electrical Engineering with Solar Energy as a subject.	Five (5) years' of post-qualification working experience in electrical engineering works, Maintenance and installation of Solar Power projects, Solar electronics systems.
4	One Senior Agriculture Expert	PG in Agriculture / Agronomy/ Horticulture	Ten (10) years of post-qualification Experience in irrigated agriculture and farming systems, and having knowledge of both traditional practices and modern techniques for improving water use efficiency and agricultural productivity.
5	Social/ Institutional development	PG in Humanities subject.	Ten (10) years of post-qualification experience in rural management, supervision of household surveys or rigorous (experimental or quasi experimental) impact evaluations, training for formation of WUAs, Community mobilisation.
6	Animal Husbandry Expert	Bachelor's Degree in Veterinary Science	Ten (10) years of post-qualification Experience in Animal resources development in Govt. schemes, Skill trained in veterinary subjects.

5 DELIVERABLES BY THE CONSULTANT

- 5.2.1 Prepare and submit the document of the Training Modules as indicated in Paragraph: 2.2.
- 5.2.2 Documentation of data management processes, task and props over which the assessments were carried out or derived.
- 5.2.3 The Agency shall submit hard copies of 5 sets of Draft Report (s) (Black & White) & 15 sets of Final copies of Training Modules & materials (Colour printed in good quality glossy papers of 100 gsm and above with good micro laminated cover pages prepared in executive paper size or similar approved sizes) along with the original manuscript of all databases and the soft copy of final report in preparing the Training Modules & materials along with all databases in MS Excel sheet/ suitable & agreed data base format.

6 DURATION OF ASSIGNMENT

The assignment would be for **90 days** from the date of signing of contract.

7 COMPOSITION OF REVIEW COMMITTEE

A committee consisting of following members shall coordinate and monitor the Consultant's work and would extend their cooperation in making available the data and information, obtaining approvals and also deal with the problems, if any, faced by the Consultant in executing the Contractual obligations:

1. Project Director, OCTDMS. (Chair Person)
2. Additional Project Director (Tech),
3. Additional Project Director, Agriculture,
4. Project Finance Officer, OCTDMS
5. Superintending Engineer, OCTDMS
6. Executive Engineer, I/C GCF.
7. Executive Engineer, Procurement

The Committee may co-opt any additional member/ Change any of the members, if needed, with the approval of the Project Director, OCTDMS.

Monthly/Fortnightly review will be held at State Project Management Unit to monitor the progress of work for which the Consultant has to make necessary arrangements to submit data, information and progress of the works as desired by the Client.

8 PAYMENT SCHEDULING

SCHEDULE FOR COMPLETION OF TASKS & RELEASE OF PAYMENTS THEREOF

Sl. No.	Description of Work	Schedule Days of submission (from Date of signing of contract)	% of Fund release #	Remarks on release of payment
1	Inception report	15 Days	5%	On acceptance of tentative sub-heading & training module components, structuring & detailed outline and approach and process to prepare the modules.
2	1 st Draft report	30 Days	20% of the	After scrutiny of draft

3	1 st Draft sharing workshop at the OCTDMS-SPU	35 Days	contract amount.	training modules and interaction with the consultants during workshop and suggestions thereof to the consultant.
4	2 nd Draft report PIP	70 Days	35% of the contract amount.	After scrutiny of final draft and interaction with the consultants during workshop and suggestions thereof to the consultant
5	2 nd Draft sharing workshop at the OCTDMS-SPU	75 Days		
6	Submission of final report	90 Days	40% of the contract amount	On acceptance of final copies of all Training Modules & materials as per Para 5.2.3 above.
	Total:		100%	

NOTE:

1. % of Fund Release of as mentioned above will be made upon satisfactory performance of each task/ deliverables and upon satisfactory submission of bills/ vouchers/ timesheets etc.
2. # Percentage of fund release excludes reimbursable amount for travelling & night halt expenses incurred by the consultant. Travelling & night halt expenses will be released on production of bill voucher through the invoices.
