

## **TERMS OF REFERENCE**

### **IMPACT ASSESSMENT OF CLIMATE-SMART WATER CONSERVATION PRACTICES AT THE FIELD LEVEL**

#### **1. Introduction & background:**

WWF-Pakistan's Food & Markets Programme (F&M) was established in 2004 with the aim of building the capacities of around 200 farmers on sustainable practices in the cotton landscape. The programme has grown significantly since then and is now one of the largest programmes within WWF-Pakistan. The Food & Markets Programme intends to mitigate the environmental impacts of input-intensive (water, agrochemicals, synthetic fertilizers) & pest-sensitive crops through farmers' capacity building on economically efficient ecological farming solutions and technologies, stakeholders' engagement and supply chain development.

WWF-Pakistan's Climate-smart Crop Production System (CSPS) project, a part of the Food & Markets Programme (F&M), promotes both mitigation and adaptation strategies to manage climate change impacts on the agricultural sector. The project focuses on climate-smart crop production, climate-smart soil health improvement and Agricultural water stewardship, and is an effort to upscale, holistic and integrated approach across cotton farming communities within the core cotton growing landscape of Pakistan i.e., Central Indus Eco region. This project has the potential to reduce climate change impacts due to its environmental, economic and social benefits in the form of enhanced crop productivity, GHG emission reduction and improved food security.

Water is an essential natural resource that is adversely affected by climate change impacts. Pakistan is an agriculture-based economy and is becoming a water scarce country. Moreover, the available water for crop is not adequate to meet the crop water requirement. To address these issues WWF-Pakistan, under the CSPS project, is working in Agricultural water stewardship with the purpose of conserving water through climate-smart practices. To achieve the target, WWF-Pakistan facilitates the project farmers with several interventions such as Laser Land Levelling, Multiband Planter, Water Course Improvement/Lining and Ablution water reuse system/structures at the field level. This assessment process aims to assess the impact of these interventions in terms of resource conservation.

#### **2. Objectives**

The mandate of the task is to (a) assess the impact of water conservation practices at the field level (b) compute the crop water requirement of cotton and wheat crops in project areas (Multan, Khanewal, Bahawalpur, and Sukkur).

#### **3. Scope of work:**

Conduct field level study to calculate water savings from interventions carried out under the project and compute the crop water requirement of cotton and wheat crops in project areas through multiple field visits to observe the interventions and interact with relevant communities.

#### **4. Specific Tasks:**

Following is the list of specific tasks under this consultancy:

- Define and share the methodology to assess and calculate the water savings through project interventions.
- Define and share the methodology to calculate the crop water requirement specifically for cotton and wheat crops.
- Plan and conduct field visits in districts Bahawalpur, Multan, Khanewal (Punjab), Ghotki and Sukkur (Sindh) to collect the relevant data. WWF-Pakistan's CSPA project team will facilitate consultant(s) for field visits.
- Identify gaps/hurdles related to the adoption of climate-smart water conservation practices if any, at the field level and suggest possible remedies to fill these gaps.
- The consultant(s) will share all relevant raw data, including, hard performas, excel sheets, word documents, video, audio recordings and pictures acquired during this consultancy.
- The consultant(s) will draft a report based on information gathered from the field including conclusions and possible suggestions. The consultant(s) will also present his findings to the project team in presentation file format.
- The consultant(s) will draft a policy brief and recommendations for the promotion of water conservation practices.
- Consultant will be responsible for the publication of research article/paper from this study. However, WWF-Pakistan will bear the publishing cost/expenses if any

#### **5. Expected Outputs/Deliverables:**

- Assessment methodology prior to field visits.
- Final report comprised of all relevant information, analyzed data, graphical presentation of the results, and recommendations to mitigate the identified gaps, if any.
- Presentation of the assessment results to the project team.
- Article published from this work/study.
- All relevant collected data, including, hard performas, excel sheets, word documents, video, audio recording and pictures acquired during this consultancy.

#### **6. Duration:**

The consultancy will be undertaken over a period of three months. Work will commence immediately after contract signing.

#### **7. Responsibilities of WWF Pakistan's F&M team**

- Provide support for organizing meetings at the field level.
- WWF-Pakistan will bear boarding, lodging, and travelling expenses. Remuneration will be provided to consultant(s) as per agreement.
- WWF-Pakistan will accommodate the consultant(s) for travel from project offices to the Project area/field and vice versa.
- No additional or accidental cost will be borne by WWF-Pakistan.

#### **8. Required Qualifications/Skills of Consultant:**

Ph.D. Degree in Agriculture/ Agricultural Engineering/Water Resource Engineering/ Hydrology with 10 years of experience in research/field studies related to water management, hydrology, etc  
Adhere to WWF's values, which are: Courage, Integrity, Respect and Collaboration

## **9. Guideline for submission of proposal/expression of interest:**

Interested consultants should submit the following documentation to **Muzzammil Ahmed** ([mahmed@wwf.org.pk](mailto:mahmed@wwf.org.pk)) and **Maham Zahara** ([mzahara@wwf.org.pk](mailto:mzahara@wwf.org.pk))

Work plan

- Application form available at Consultancy section of WWF Website
- A technical proposal not exceeding 10 pages
- An understanding and interpretation of the TORs
- Methodology to be used in undertaking the assignment
- Time and activity schedule
- Evidence of relevant experience and samples of products related to the assignment
- Curriculum vitae of the lead consultants to undertake the assignment
- Work Plan
- A financial proposal consist of the cost of assignment in lump sum including all applicable taxes of the Government of Pakistan and out of pocket expenses.

## **10. Selection Criteria:**

Applicant's proposal shall be evaluated based on Quality and Cost Based Selection (QCBS) method. Under QCBS both technical and financial proposals shall be evaluated as per following criteria against a maximum score of 100 points.

- a. Technical Proposal 70%
- b. Financial Proposal 30%

The following criteria shall be used as a basis for evaluation of technical proposals:

- Qualifications (maximum 30 points)
- Experience relevant to the assignment (maximum 30 points)
- Adequacy of the proposed methodology and work plan (maximum 20 points)
- Skills & Competencies for the assignment (maximum 10 points)
- Prior experience with WWF-Pakistan (maximum 10 points)

Note: Late/ incomplete submissions will not be accepted. Only three (03) top-ranked firms will be included in the comparative process.