Terms of Reference

for

Climate Change Vulnerability Assessment of the Better Cotton Project Area (Ghotki, Sukkur & Khairpur Districts) regarding Cotton Crop

Project Name:
BCI-GIF Project, Sindh

Project Background:
Cotton is grown over more than 32 million hectares in the world, which makes up 0.8% of the cultivated area of the earth’s surface. Annual production of ginned cotton is 18-20 million tons. Cotton is an important cash crops and the most important raw material for the textile industry. Cotton and cotton textile industries are engines of economic growth in both developed and developing countries. Cotton is grown in more than 100 countries accounting for 40% of the world fibre market. Cotton crop not only provides fibre for the textile industry, but also plays a role in the feed and oil industries with its seed, rich in oil and protein. An estimated 350 million people are engaged in cotton production either on-farm or in transportation, ginning, baling and storage. Cotton is raised in diverse climates such as tropical, subtropical and temperate climates. Since many years the cotton crop in the country is suffering with severe climatic issues such as, sudden changes in weather conditions, unexpected raining patterns, changes in humidity, etc.

The Better Cotton Support Programme addresses environmental and social challenges associated with cotton production, with a goal to help shift the industry towards a more sustainable future. WWF-Pakistan works with farmers to help them comply with Better Cotton Production Principles & Criteria, to improve sustainability of cotton production, resulting in substantial benefits for people, environment and the cotton sector. The Better Cotton Farmers Support Programme is being implemented in Sindh and Punjab provinces. The programme is meant to address the most pressing sustainability issues in cotton farming such as pesticide use, water efficiency and working conditions including child labour, gender inequities in wages and poverty. Currently, WWF-Pakistan is implementing Better Cotton Projects in Punjab (07 cotton producing districts) and Sindh (03 cotton producing districts) provinces.

Objective of the Study:
To assess the vulnerability of cotton crop and cotton farmers’ livelihood under changing climatic conditions especially related to changes in weather, rainfall patterns and humidity in the project districts (Ghotki, Sukkur & Khairpur Mirs).

Scope of Work:
The vulnerability Assessment will be helpful to assess vulnerability of cotton crop in the context of climate change in the project areas.

Specific tasks:
- Consultant(s) / firm will review already conducted research and approaches regarding vulnerability assessments specifically related to cotton crop.
- Consultant(s) / firm will be responsible to collect, compile and interpret the required information from relevant research institutions, academia and commodity markets etc. for CCVA, if required.
- Consultant(s) / firm will define the methodology to carry out the climate change vulnerability assessment including sharing the detailed workplan for CCVA.
- Consultant(s) / firm will develop formats and data sheets for field data collection and compilation.
- Consultant(s) / firm will be responsible to collect the metrological data of the target districts to be used in CCVA.
- Consultant(s) / firm will be responsible to visit cotton field areas in Ghotki, Sukkur & Khairpur districts to collect ground level information/data, required for CCVA.
- Consultant(s) / firm will develop the set of recommendations / best practices regarding (climate smart) for the cotton crop including three Years Plan for Climate Change Mitigation and Adaptation for cotton farmers.
- Consultant(s) / firm will draft a detailed report based on information gathered from the field.
- Consultant(s) / firm will also present its findings to project team and donor in the form of PowerPoint Presentation.
- Consultant(s) / firm will support the project in developing three years mitigation and adaptation strategy.

**Deliverables:**
- Detailed report and presentation (ppt) about Climate Change Vulnerability Assessment of Cotton Crop; current status and way forward including Baseline Data.
- Three Years Plan for Climate Change Mitigation and Adaptation for cotton farmers.
- Set of recommendations / best practices for the cotton growers regarding Climate Change and its Mitigation at field level.
- One research paper to be published in collaboration with WWF-Pakistan’s Food & Markets Programme Team and the consultant / firm.

**Timeline:**

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<tr>
<th>S. No</th>
<th>Tasks</th>
<th>Deadlines</th>
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<tbody>
<tr>
<td>1</td>
<td>Literature Review, Methodology and detailed visit plan</td>
<td>16.08.2022</td>
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<tr>
<td>2</td>
<td>Field Visits</td>
<td>15.09.2022</td>
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<tr>
<td>3</td>
<td>Final Draft Report and Presentation</td>
<td>30.09.2022</td>
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**Required Qualifications/Skills**
- PhD / M. Phil. / Master Degree in Agriculture, having good expertise in climate smart agriculture and sustainable production and Climate change scenario generations and climate change impact assessment.
- Adaptation and mitigation strategies development for sustainable crops production under different climate change scenarios.
- Monitoring of weather and environmental variables and their impact on agricultural crops.
- Experience of conducting field studies/consultancies in agriculture sector.