

REPUBLIC OF PAKISTAN

Government of Sindh

**Sindh Irrigated Agriculture Productivity Enhancement Program
First Phase Project**

**Agriculture Specialist
Terms of Reference**

I. Introduction

Background of the Project:

1.The Government of Sindh Province (GoSP) has received a loan from the World Bank towards implementation of the Sindh Irrigated Agriculture Productivity Enhancement Project (SIAPEP). The project supports Government of Sindh's efforts in efficient management of scarce water resources and is designed to augment adaptation under different climate change scenarios and population growth. Most of the project interventions are well tested and demand driven, with reasonable co-financing from beneficiary farmers. It comprises of four components briefly described below:

Component A: Community Water Infrastructure Improvement

This component consists of three sub-components. Sub-Component A1 will assist Government of Sindh efforts to: improve and rehabilitate tertiary distribution level water courses. Activities under this component will include farmer mobilization, establishment of Water Course Associations (WCAs) and their registration, survey and design, and construction. About 5,500 water courses will be improved through the provision of lining (corresponding to 30 percent of water course length). The farmers will co-finance 24 percent of the costs through provision of skilled and unskilled labour.

Sub-Component A2 will increase the resilience of the rural poor to floods through the strengthening of flood mitigation measures, including the establishment of shelters. It will finance the provision of approximately 380 permanent flood shelters of three types in the seven most vulnerable districts in the irrigated areas of Sindh to increase their resilience to water related disasters such as flooding and heavy rains. Land for construction will be largely public or community owned land located in non-cultivable areas, preferably on higher ground. Once constructed, these shelters will be transferred to the Provincial Disaster Management Authority (PDMA) and their affiliates at the district level for operations and maintenance; some will be used for community activities.

Sub-Component A3: This sub-component will finance the provision of supervision and implementation assistance consultants (PSIAC) for project design and construction supervision for activities under Component A. PSIAC will assist the Project Implementation Unit (PIU) in construction supervision, engineering and designs, procurement, financial management, quality control, and the timely completion of strategic studies and pilot projects.

Component B: Promotion and Installation of High Efficiency Irrigation Systems

Sub-Component B1 will support: installation of HEIS drippers and bubblers for growing high value crops on irrigated and irrigable land; provide technical assistance packages to farmers on operations and maintenance of HEIS; and provide additional training and assistance to farmers in the use of HEIS by specialists and consultants. Approximately 2,600 HEISs Farms will be installed on 14,300 ha (35,000 acres) of irrigated and irrigable land. HEIS' will be provided (on demand) to the farmers on a 40 percent cost sharing basis. They will be installed by Sales, Supply and Service Companies (SSCs) who will also provide a technical assistance package for the farmers in operation and maintenance of the system. Additional training and assistance will also be provided by the HEIS specialist in the field teams assisted by the technical assistance and training (TAT) consultants.

Sub-component B2 will support the establishment of HEIS demonstration sites and distribution of kitchen garden HEIS kits, consisting of drip irrigation equipment to female-headed households and landless farmers. It will include 48 demonstration sites of 2 ha (5 acres), two in each district, and the distribution of approximately 10,000 kitchen garden HEIS kits consisting of drip irrigation equipment for a plot of 10m x 10m, including a small water storage of 160 litres with a conveyance pipe for the daily provision of water. The 100 kitchen garden HEIS kits for demonstration purposes will be provided free of charge; individual households requesting a HEIS kit will need to contribute 10 percent of the investment cost of US\$100.

Component C: Improved Agriculture Practices

1. Sub-Component C1 will provide laser guided land levelling equipment and associated deep ripping equipment, and will facilitate training in the use of deep ripping equipment. These will help farmers save irrigation water, curtail irrigation time, improve efficiency of agriculture inputs such as fertilizers, and achieve uniform seed germination, resulting in increased crop yields. Sub-Component C2 will facilitate training to farmers to improve crop production and irrigation agronomy practices. Sub-Component C3 will provide Technical Assistance and Training (TAT) Consultants to provide training to field teams, public sector staff and farmers in HEIS installation, operation and repair, crop diversification, crop production under HEIS, soil measurement and fertilizer application, and to support piloting of activities under Sub-component B2 and training of trainers for operators in laser land levelling and deep ripping under Sub-Component C1.

Component D: Project Management and Monitoring and Evaluation and Strategic Studies

Sub-component D1 will provide support for project monitoring and evaluation and carrying out impact assessments. Sub-Component D2 will provide support for the Project Implementation Unit and Project district offices and field offices, and for carrying out strategic and feasibility studies for pilot activities.

Institutional and Implementation Arrangements

A specific Project Implementation Unit (PIU) consisting of appropriate experts headed by a Project Director within the Directorate General Agriculture Engineering & Water Management (DGAEWM) will have the overall responsibility for implementing the project and will report to the Agriculture Secretary of the Government of Sindh (GoS). The PIU will be responsible for all aspects of project implementation, including technical, operational, procurement, financial management, disbursement, and overseeing the technical assistance and training program. The PIU will be supported by a group of highly qualified staff at headquarters in Hyderabad and its regional implementation offices. The two Directors of On-Farm Water Management in Hyderabad and Sukkur will be responsible for the performance of the district teams and their associated field teams. The

project will be implemented by 100 field teams consisting of various experts representing all project components. Three sets of consultants - Project Supervision and Implementation Assistance Consultants (PSIACs), Technical Assistance and Training Consultants (TATC), and Monitoring and Evaluation Consultants (M&EC) – will support the PIU.

The following committees are established for project coordination: Steering Committee (PSC), to provide planning and strategic guidance and facilitate inter-agency coordination at the highest level; and Project Implementation Committee to review the physical and financial progress and ensure implementation of decisions of the PSC. A Grievance Redress Mechanism (GRM) will be established to deter fraud and corruption, mitigate risks, and provide project staff with practical suggestions to be more accountable, transparent, and responsive to beneficiaries needs. The project will undertake public information campaigns to promote demand for project activities and facilitate management and mitigation of project risks.

The proposed project is continuation of ongoing long-term efforts of the Government of Sindh in scaling up Modern Technologies and to increase crop yields and cultivating more land (such as Laser Land Levelling, Deep Ripping Equipment, High Efficiency Irrigation System, Capacity Building / Training of Farmers) for horticulture, vegetables, and other high value crops.

In order to ensure success of the intervention, the Project Implementation Unit (PIU) is constituted to have the full-time presence of an Agriculture specialist. These Terms of Reference define the Scope of Work, Qualifications and Experience, Duties Assigned/ Deliverables and Duration of the contract for the Agriculture Specialist.

OBJECTIVES OF THE ASSIGNMENT

Serving as the focal point for all activities related to Agriculture under the project, the Agriculture Specialist will work on full time basis to provide technical guidance and oversight support to ensure successful implementation.

SCOPE OF WORK

- i. Design and implement a robust program of training activities pertaining to Agriculture
- ii. As a technical liaison between various consultants and PMU, develop reporting mechanism and preparing annual work plans on trainings and progress reports (monthly, quarterly and annual reports) that should feed into Annual Workplan and any reporting required for results framework
- iii. Review and provide technical advice to Project on the Farmers' Training Manuals, Curricula and any other similar submission
- iv. Review and confirm the technical soundness of training activities; developed by various consultants, on the use of different modern machines/tools like Laser Land Levelers and Deep Ripping equipments
- v. Oversee at field level group training (including FFS) activities in Good Agriculture Practices and provide technical inputs to Project for contract management
- vi. Oversee validate and report training activities pertaining to IPM including lab and on-farm rearing (NEFR) and use of biological agents
- vii. Oversee, validate and report training activities pertaining to kitchen gardening
- viii. Oversee, validate and report training activities pertaining to crop agronomy under HEIS
- ix. Participate as technical expert in farmer's exposure visits to best production practices, trading centers and exhibitions
- x. Assist and review plans for establishment of information kiosks or ICT based extension service

- xi. Liaise with relevant consultants in overseeing development of training impact assessment reports

QUALIFICATION AND EXPERIENCE

The Agriculture Specialist should have;

- Degree in Agriculture (agronomy, horticulture, soil science, entomology, pathology and plant breeding & genetics) [minimum sixteen years of education]
- Fifteen (15) years general experience in the field of Agriculture
- At-least Five (05) years specific experience in training and technology promotion among farming community
- Excellent writing skills in English language - as evidenced from reports, papers and articles published
- Work experience in related computer tools (MS Office)
- Good writing skills in English - evidenced from the number of reports, papers, articles
- Knowledge of local language will be an advantage but not mandatory

DURATION AND TIMING

The project is under implementation from July 2015 and to be carried out over for a period of six years by December 2021. The **Agriculture Specialist** shall be engaged as per engagement requirements stipulated in legal agreement of Project with World Bank.

SELECTION PROCESS

The Agriculture Specialist will be selected in accordance with Section V of World Bank Guidelines for Selection & Employment of Consultants under IBRD Loans & IDA Credits & Grants, January 2011 through Individual Consultants method.