

## Section 7. Terms of Reference

### Sindh Water and Agriculture Transformation (SWAT) Project Terms of References

#### Project Management Consultants (PMC)

##### A. Background

**SWAT Project** is designed to start the transformation process at the water-agricultural nexus in Sindh Province on several fronts, including: (i) creating an institutional framework for Integrated Water Resources Management (IWRM); (ii) modifying a century-old system of rigid irrigation practices through a modernization process centered on flexibly meeting the water needs of farmers; (iii) moving away from a system of perverse agricultural subsidies to smart subsidies that encourage high-value, water-thrifty crops; (iv) increasing investments in agricultural technology and promoting value chain development that boost agricultural productivity from the supply and demand sides, respectively; and (v) synchronizing agricultural and irrigation investments through a community driven development process at the Farmer Organization level (approximately 5000 Ha) that will help ensure on-the-ground results that directly benefit farmers. Underlying the transformation process is the promotion of key policy reforms using an Investment Project Financing (IPF)-Performance-Based Conditions (PBC) modality.

The overarching theme is *water and agricultural nexus and synergies* with project development objective to increase agricultural water productivity in selected Farmer Organization command areas, improve integrated water resources management and contribute to restoring crop production by small farmers affected by 2022 floods.

The Project is being implemented by the Government of Sindh, mainly Irrigation Department and Agriculture Department through Sindh Irrigation & Drainage Authority (SIDA), Agriculture Delivery Unit (ADU) and Project Coordination & Monitoring Unit, P&D Department supported by Area Water Boards (AWBs), Farmer Organizations (FOs), Directorates of Agriculture and assistance from the Consultants.

The Project will be implemented in hydraulic boundaries of twenty two districts of Sindh Province including Hyderabad, Badin, Mirpurkhas, Sanghar, TM Khan, Sukkur, Ghotki, Dadu, Larkana, Jamshoro, Jacobabad, Kashmir, Qamabr Shadad Kot, Khairpur, Umerkot, Sajawal, Naushero feroze, Matiayri, Tando Allahyar, Shikarpur, Thatta, Shaeed Benazirabad, and Tharparkar.

SWAT Project comprises of following five components to be implemented during the six years' time period:

##### **Component-1: Water Resources Management:**

This component will provide foundation for integrated water resources management in Sindh by supporting policy and institutional reforms by formulation of new water law, restructuring irrigation department, pricing reforms.

##### **Component-2: Water Service Delivery:**

Under this component, water services will be improved including water supply and drainage for farmers, cities, and industries.

##### **Component-3: Agricultural Subsidies and Investments:**

This component promotes the adoption of climate smart practices for traditional crops such as wheat, rice, cotton, and sugar as well the transition to higher value, water thrifty crops such as oilseeds, pulses, fruits, and vegetables.

**Component-4: Project Coordination and Monitoring:**

The Component provides support to the Project Coordination & Monitoring Unit (PCMU) P&D Development to provide overall coordination of project activities to ensure synergy between the different project components and implement component-1 with support of Irrigation Department and also manage the PBC process between the World Bank and the Sindh Government.

**Component-5: Flood Emergency Response Component.**

During project preparation and approval process, Sindh experienced unprecedented flood. The deluge devastated almost 60% of the irrigable command area and infrastructure thereupon. Thus, with the consensus of donors, the existing sub components are slashed down to create space for emergency repairs to render the system operative. In Agriculture sector standing Kharif crop was destroyed leaving no financial ability for farmers to bear sowing expenses. As such provision is created to assist farmers in forthcoming crops in form of seed, fertilizer and land preparation.

The Project follows all IPF procedures and disburses only against eligible expenditures. In addition, for a predefined set of these eligible expenditures, the GoS must also meet the associated PBC for the expenditures to be eligible for Bank financing.

PBC Number	PBC	Amount
<b>PBC-1: New Water Bill</b>	The Sindh Law and Parliamentary Affairs Department submits a draft water resources bill for consideration by the Sindh Provincial Assembly that replaces the Irrigation Act (1879) and the Ordinance to create a unified legal framework for integrated water resources management and irrigation services.	[\$5 M]
<b>PBC-2: Water Pricing Reform</b>	The Sindh Irrigation Department undertakes a water pricing reform study, and increases <i>Abiana</i> rates after due consideration of study recommendations.	[\$5M]
<b>PBC-3: Wheat Strategic Reserve Monitoring</b>	The Sindh Food Department puts in place a wheat market monitoring system to increase transparency and predictability, and publishes an annual report based on said system for at least two years in a row.	[\$5 M]
<b>PBC-4: New Policy on Agriculture Research and Extension (R&amp;E)</b>	The Sindh Cabinet adopts a program that includes an increase of the provincial budget for agriculture and livestock research as a percentage of Sindh agriculture GDP; and establishes an autonomous SARB with representatives from government, academia, private sector, and farmers to plan, allocate funds, and monitor the provincial R&E system.	[\$5 M]

**B. Project Organization**

The PCMU will be the nodal coordinating agency while SIDA and ADU will be the primary implementing agencies for the project. The PMC will be contracted by the PCMU and report to the Project Coordinator, PCMU. The SIDA being PIU is headed by Project Director (for irrigation

component), and the AD PIU will be headed by its Project Director, ADU. All three entities (PCMU, SIDA, and ADU) have experience with World Bank-financed projects and have demonstrated project management capacity, the PMC is intended to provide supplemental support to an already solid foundation.

### **C. Overall Objective of the assignment**

The objective of the Project Management Consultants (PMC) is to provide implementation support and technical assistance to the three project implementing units (PIUs): PCMU, SIDA and ADU to achieve the project objectives. The broad scope of work includes the three general sets of activities:

- a. ***Provide project management support*** to PCMU, SIDA, and ADU and other agencies involved in the project, including but not limited to project planning, procurement, financial management, progress monitoring, evaluation and reporting.
- b. ***Provide technical assistance support*** to PCMU, SIDA, and ADU across all project activities, including (but not limited to) support in supervision of consultancy contracts including quality assurance.
- c. ***Facilitate institutional synergy and coordination*** to help interactions between the PCMU, ID/SIDA, and ADU, and ensure close coordination between FAO activities and SWAT.
- d. ***Facilitate*** achievement of all four PBCs.

### **D. Project Management Support:**

**Procurement Support:** Provide general procurement support to PCMU, SIDA, and ADU in all aspects of procurement and contract management for goods, works, consultancy, and non-consultant services and ensuring compliance with World Bank Procurement Regulations. The consultant shall help prepare and maintain procurement plans, develop procurement manuals, and train staff from the PIUs.

**Financial Management:** There are three Designated accounts (Das), one for each PIU: PCMU, SIDA, and ADU. Project funds will be disbursed into each segregated DA to be opened and maintained at the National Bank of Pakistan. The PMC consultants shall provide general financial management support to PCMU, SIDA and AD, including but not limited to the following:

#### **For SIDA:**

As SIDA has well developed financial management system and HR, the PMC will be providing the overall guidance on financial matters including taxes, financial aspects of contract management and assistance in minimizing financial risks as indicated in Project Agreement of SWAT Project.

#### **For ADU & PCMU:**

- a. Preparing and reviewing annual budgets for project implementation and supporting prioritization for fund allocation.
- b. Developing/updating the finance management manual (FFM) as necessary.
- c. Providing support in the consolidation of project accounts and compilation of quarterly expenditure reports to be submitted to the World Bank for reimbursement of claims.
- d. Supporting the review of the Internal Audit reports.
- e. Supporting the finalization of the annual accounts to be presented for audit.

### **Monitoring & Evaluation:**

Provide general Monitoring & Evaluation (M&E) support to **PCMU, SIDA** and **ADU** including:

- a. Monitoring the progress achieved across components towards achieving the Project Development Objectives (PDO), as well as progress achieved against the PDO Indicators and Intermediate Results Indicators as specified in the Project's Results Framework.
- b. Monitoring the conformity of project activities with all provisions listed in the project's Environment and Social Management Framework (ESMF), Akram Wah ESIA and Corrective Action Plan/Resettlement Action Plan.
- c. Support the PCMU, SIDA, and ADU in preparing regular progress reports (including quarterly, semi-annual, annual progress reports), mid-term and project completion reports (for each phase), other M&E reports and briefs as required.
- d. Prepare overall semiannual and annual reports covering all aspects of M&E.
- e. Project Management Consultants will also implement a Project management information system for SWAT Project, which will help streamline project processes, improve communication and collaboration among stake holders, and provide real-time data and insights into the project's progress. With a PMIS, the project management consultants will centralize all project-related information, such as project plans, schedules, budgets, and risk assessments, in one place.

#### **E. Technical Assistance**

The PMC will provide technical assistance to the PIUs in the procurement, contract management review, and quality assurance for a variety of consultant assignments undertaken by other firms and individual consultants. Specific tasks include:

**Support for Large Consultant Firm Contracts:** The large firm contracts to be contracted under SWAT are listed below. The PMC will assist the employer (i.e., PCMU, SIDA, or ADU) in all aspects of these assignments, and in particular ensuring coordination and quality. It is anticipated that there will be additional medium-sized consultant firm contracts under SWAT.

- a) Project Implementation Consultants (PICs) for Design Review, Contract Management and Construction Supervision of Improvement and Rehabilitation works of Akram Wah (***US\$4.66 million***).
- b) Rehabilitation of Akram Wah Canal (Works) under component 2 with estimated cost of ***US\$ 85.95 million***.
- c) Hydro-Agro Informatics (HAI) Technical Assistance (***US 2 million***). Will provide technical assistance to the Irrigation Department/SIDA, AD, and PCMU in the start-up of the HAI Center and related activities under Component 1.3.
- d) University Support for HAI Center (***US\$ 1.0 million***). Will provide local technical assistance to the Irrigation Department/SIDA, AD, and PCMU in HAI Center operations and related activities under Component 1.3.
- e) Preparation of the Sindh Strategic Water Plan (***US\$3.69 million***). In coordination with the Irrigation Department and associated Sindh government departments prepare the Sindh Strategic Water Plan.
- f) FO Subprojects Implementation Support Consultant (***US\$2.3 million***): To support all aspects for the FO subprojects under Components 2.1 and 3.1.

- g) Consultancy Services for Preparation of Feasibility Study, Detailed Design, ESIA, RAP, and bidding documents for Dadu, Rice, NW Canals (*US\$3 million*)
- h) AWB Operational Technical Assistance Consultant (*US\$1 million*): To help improve the performance the three AWBs under the SWAT Project.
- i) TA on Canal Modernization Process (ITRC) (*US\$0.25 million*): The Irrigation, Training, and Research Center from the California Polytechnical University at San Luis Obispo has provided support to SIDA in the irrigation modernization process during project preparation process and will continue to provide high-level support through implementation.
- j) FAO Technical Assistance Contract (*US\$2.084 million*). FAO will be contracted to provide on-demand services related to water resources management, irrigation modernization, climate smart agriculture, and other agriculture related specialized services.

#### **Support for Individual Consultant (IC) Contracts.**

Many individual consultants, both domestic and international, will also be contracted to support more specialized activities. In consultation with the responsible implementing entity (i.e. PCMU, SIDA, or ADU) the PMC shall identify the specific needs for ICs, help prepare TORs, support procurement, and ensure coordination and quality. A representative example of ICs is provided below and will be refined during project implementation.

- a) *Component 1.1*: Support in the formulation of a new water law to meet PBC-1 (water law) and institutional restructuring of the Irrigation Department.
- b) *Component 1.1*: Formulation of water pricing reforms and rate increases to help meet PBC-2 (water pricing)
- c) *Component 3.2*: Support in the formulation and implementation of the smart subsidy regime, and the development of wheat procurement reforms to meet PBC-3 (wheat procurement reforms).
- d) *Component 3.3*: Support in the formulation of a new agricultural research and extension policy to meet PBC-4 (agricultural R&E). Support in the implementation of activities related to agriculture statistics, crop and price monitoring.

#### **Provision of on-demand Technical Assistance:**

In addition to overseeing firm and IC contracts the PMC may be requested by the PCMU to provide stand-alone products to support overall project implementation and achieve project objectives. These will be agreed upon beforehand through the Consultant Assignment Reports (CAR) process described below.

#### **F. Institutional Synergy and Coordination**

The PMC shall work under the supervision of the PCMU to help achieve synergies and coordination between different organizations and initiatives, including but not limited to the following areas:

- a) Coordination between the ID/SIDA, AD, FAO, and the HAI Center Support University to ensure an integrated set of water and agriculture information services under Component 1.3.
- b) Coordination between the Sindh Strategic Water Plan consultant and the multiple Sindh agencies and stakeholders involved in the planning process.
- c) Coordination between SIDA, AD, and FAO in the implementation of the approximately 15 F0 subprojects under Components 2.1 and 3.1.

- d) Support the ADU to ensure coordination between the various directorates in the Agriculture Department, including: On-Farm Water Management, Agriculture Extension, Agriculture Research, Agriculture Crop Reporting, and Agriculture Statistics.
- e) Coordination between FAO and the various SWAT-related project activities.
- f) Coordination between the Food Department, Agriculture Department, and the Government of Sindh in the wheat procurement reform process under Component 3.2.

### **G. Reporting**

The PMC contract shall be a time-based contract with an estimated total duration of 60 months (5 years). Due to the dynamic nature of the assignment, the primary deliverables shall be PMC “Consultant Assignment Reports” (CAR) that describe activities, deliverables, staff, and travel inputs, etc. for the previous period. The CAR should also include a PCMU agreed-upon work plan that describes activities, deliverables, staff, travel, etc. for the forthcoming period. Through the CAR process, the PMC and PCMU shall collaborate to ensure that overall costs and staffing inputs are properly distributed to meet the workload and in alignment with the contract value. The consultant should provide a template and proposed process for the CAR in the methodology section of their technical proposal. The template and process will be further discussed and agreed upon during contract negotiations.

In addition to the outputs required to complete the tasks identified in this TOR, the PMC shall deliver following reports:

- i). **Inception CAR** (draft submitted within 2 months of contract signing). The inception report allows further detailing of the methodology and includes an elaborated work plan.
- ii). **Quarterly CAR.** The Assignment Progress Report is a key deliverable of the PMC. The progress report allows the PMC to retrospectively provide justification of time spent on individual tasks, travel, and activities completed and demonstrate substantial compliance with the TOR for the given period. It also lays out a schedule of activities, inputs, travel, and deliverables that should be agreed upon with PCMU for the next 3-month period. The Consultant is requested to provide a template of the CAR in its technical proposal. The format of the CAR will be agreed upon during contract negotiations and adjusted periodically as required.  
  
**Mid-Term CAR:** This is an extended version of a CAR which summarizes PMC activities for the first half of the assignment, takes stock of overall SWAT implementation, and proposes adjustments in methodology or working arrangements for the second half of the assignment.
- iii). **Completion CAR:** This is the final report that summarizes PMC activities, accomplishments, and inputs for the entire assignment and provides evidence of substantial compliance with this TOR.

### **H. Facilities to be provided by Client**

The PCMU will provide the PMCs with the following facilities and services:

- a. Access to all reports, studies, data, photographs, maps, and institutions relating to the works, access to all sites.
- b. Assistance to procure all necessary administrative documents including, but not limited to, visas, exchange control documentation, import licences, exemption certificates, work permits, driving licences, resident visas/work permits for international staff.
- c. PMCs is required to provide its own computers, printers, and other electronic devices. Printing and communications costs for SWAT purposes shall also be borne by PMCs.
- d. PMCs will be housed in PCMU office in Karachi.

## **I. Team Composition**

The Consultant is tasked with the presentation of a team of experts, suitable to carry out all duties under this Terms of Reference. The following table describes key staff and non-key staff positions required for this assignment. ***The total estimated person-months for the assignment is 130.*** Since this is a time-based contract, the Bidder is requested to specify proposed man-months for each staff position per the table below in their financial and technical proposals to ensure equal basis for comparison of financial proposals. The actual deployment of specific staff will depend upon the project requirements and will be planned through the CAR process described above. All other additional costs, such as support personal (administrative support, drivers, etc.) and logistical costs (vehicles, office equipment, etc) should be included in the financial proposal at the discretion of the Consultant.

<b>Key Staff positions</b>		
	<b>Consultant</b>	<b>Qualification and experience of key staff that will be scored in the evaluation of the technical proposal.</b>
<b>K1</b>	<b>Team Leader (TL)</b>	The TL will have an advanced degree in Engineering with extensive management experience and expertise in leading project teams, developing and implementing project plans, managing budgets and resources, and communicating with clients. Minimum of 15 years of relevant experience, preferably with water related projects. The Team Leader should have experience in leading a multi-disciplinary team of experts and should have demonstrable experience with MDB-financed projects, such as ADB or World Bank. The TL should also have extensive experience outside of Pakistan to demonstrate global expertise. The TL is expected to be available on a half-time basis <b>(30 months)</b> .
<b>K2</b>	<b>Financial Management Specialist (FMS)</b>	The FMS will have a degree in finance or a relevant field and have a minimum of 10 years working experience in financial management of MDB projects. The FMS is expected to be available on at least a quarter-time basis <b>(15 months)</b> .
<b>K3</b>	<b>Procurement Specialist (PS)</b>	The PS will have a degree in engineering, law, or business administration or equivalent. The candidate will have a minimum of 10 years of experience in public procurement including experience with MDB projects. The PS should have expertise with the World Bank and/or ADB procurement regulations. The PS should have extensive experience outside of Pakistan to demonstrate global expertise. The PS is expected to be available on at least a quarter time basis <b>(10 months)</b>
<b>K4</b>	<b>Senior Water Resources Specialist (WRS)</b>	The WRM should have an advanced degree in civil engineering or a related discipline, , and at least 15 years' experience. The WRS should have demonstrated experience in water resources planning and management, including preparation of regional water resources plans, experience in institutional development of water resource agencies, and knowledge of water law and institutions. The WRS is expected to be available on at least a quarter-time basis <b>(15 months)</b>

<b>K5</b>	<b>Senior Agricultural Specialist (SAS)</b>	The SAS should have an advanced degree in agriculture or agronomy with at least ten years of experience. The AS should have demonstrated experience in the application of climate-smart agriculture practices, and research and extension activities. The SAS should have extensive experience outside of Pakistan to demonstrate global expertise. Previous experience in Pakistan is desirable. The SAS is expected to be available on at least a quarter-time basis <b>(15 months)</b> .
<b>K6</b>	<b>Senior Agricultural Economist (SE)</b>	The SAE should have an advanced degree in Agricultural Economics or a related discipline with at least ten years of experience. The SE should have extensive experience outside of Pakistan to demonstrate global expertise. Previous experience in Pakistan is desirable. The SE is expected to be available on at least quarter-time basis <b>(10 months)</b>
<b>K7</b>	<b>Safeguards Specialist (SS)</b>	The SS should have a post-graduate degree in environmental management, civil engineering, or equivalent with a minimum of 7 years' experience in environmental management of infrastructure projects. The specialist should have experience working as a safeguard specialist on multi-lateral development bank projects. The specialist is expected to be available on at least a quarter-time basis <b>(10 months)</b> .
<b>K8</b>	<b>M&amp;E Specialist</b>	The M&E Specialist should have Master's degree in social sciences/ Business Administration with an experience of minimum 10 years in field of M&E. The Consultants should have knowledge of use of logical framework, theory of change and would carry out the progress monitoring of the project, analyzing key performance indicators in accordance with project results framework by providing reports before the WB Missions, and provide quarterly progress reports, for submission to the PSC and the Bank. <b>(15 months)</b>
<b>K9</b>	<b>PMIS Specialist</b>	The PMIS Specialist should have master's degree in Project Management Information System or equivalent with minimum of 10 years' of experience in PMIS implementation, configuration, and administration to meet client and project's requirements. <b>(10 months)</b>