

Sindh Water and Agriculture Transformation (SWAT) Project

**Terms of Reference for
Project Implementation Consultants (PICs)**

Agriculture Component

Agriculture Delivery Unit/PMU (ADU)

May 2023

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A. Background

1. **SWAT Project.** The project will help kickstart a transformation process that will boost resilience to future climate shocks, such as floods and droughts, through three mechanisms: (i) creating a modern integrated water resources management (IWRM) system; (ii) demonstrating proof of concept in increasing agricultural water productivity for selected farmer organisation (FO) subprojects; and (iii) adjusting key policies that will provide the enabling environment to scale up these successes in the future. A successful demonstration of significant increases in agricultural water productivity at the FO level will have a transformational impact, potentially leading to replication in other areas of Sindh. The project supports critical policy reforms by using the investment project financing (IPF) with Performance based Conditions (PBC) modality.

2. **PBCs:** There are four PBCs, each with an associated amount of US\$5 million, attached to the first disbursement category. The total amount of WB financing for eligible expenses for this category is conditional upon the number of PBCs achieved as shown in Table A1.2. The status of each PBC will be included in every semi-annual project report, every interim financial report submitted for disbursement, and also noted in annual audit reports. Achievement of a PBC is dependent upon verification by the PCMU and written acceptance by the WB team leader. Advances over the applicable financing limit are allowable, but in the event the PBC(s) are not achieved then it will be necessary to refund the funds.

Financing Limits by number of PBC achieved

Number of PBCs Achieved	4 PBCs	3 PBCs	2 PBCs	1 PBC	0 PBCs
WB Financing Limits (US\$ million)	177.2	172.2	167.2	162.2	157.2

3. **Project components:** The project has started its six-year implementation period from January 2023 with the following 4 major program components. Component 3 will be the focus of this consultancy services. The detailed project design and description of each project component is provided in the Project Appraisal Document and the Operations Manual, a copy of which will be made available to the consultants. The project will be implemented by 3 entities i.e., PCMU (P&D), SIDA/Irrigation Department and Agriculture Department (ADU).

1. *Water Resources Management:* This includes support for policy and institutional reforms; Sindh strategic water plan development; and establishment of a hydro-agro informatics centre. This is being implemented by PCMU.
2. *Water Service Delivery:* This includes support for upstream distributary canal modernization works; institutional strengthening of FO, AWB and SIDA; rehabilitation of left bank main canal; and preparatory studies for the right bank canal. This is being implemented by SIDA.
3. *Agriculture Incentives and Investments:* This includes support for on-farm water management; smart subsidy to incentivize a shift to water-thrifty crops like horticulture, oils seeds and pulses; cost-sharing grants for farmers and SMEs to develop value chains of high value crops like horticulture; improve agriculture

statistics management; modernization of market information management; improve management of salinity-affected lands and water; and help farmers adopt climate-smart agriculture practices. This is being implemented by ADU.

4. *Agriculture Flood Emergency*: This includes support to farmers affected by the floods of August 2022 in their endeavors for restoration of crop cultivation. This is being implemented by ADU.

4. Detailed Component 3 Description.

Component 3: Agricultural Incentives and Investments (US\$ 55.16 Million). This component promotes the adoption of climate-smart practices for traditional crops such as wheat, rice, cotton, and sugarcane as well as the transition to higher value, water-thrifty crops such as oilseeds, pulses, fruits, and vegetables. It promotes climate-smart agriculture to increase sustainable productivity, strengthen farmers' resilience, reduce agriculture's greenhouse gas emissions, and increase carbon sequestration. The activities are implemented by the Agriculture Department through five subcomponents:

Subcomponent 3.1 Integrated FO Area Development (US \$13.93 million)

A CDD approach is utilized to select a package of synergistic irrigation and agriculture investments to improve agriculture water productivity under the same 15 FOs supported under Component 2.1.

3.1.1 On-Farm Water Management: This subcomponent finances investments related to on-farm water and drainage management such as community watercourse rehabilitation, selective use of solar powered high-efficiency irrigation systems (HEIS), precision land leveling, on-farm drainage rehabilitation/improvements, and conversion of electric/thermal powered lift pumps on community watercourses to solar power. Farmers are required to contribute, in kind and/or cash, to funds for investments according to an agreed-upon schedule for each specific investment type ranging from 20% to 40%.

3.1.2 Climate Smart Agriculture – CSA (US \$2.9 million). Under this sub-component, training and support will be provided to farmers to help them adopt climate smart agriculture practices to help them achieve the triple outcomes of increased productivity, climate resilience and reduced emissions. These practices include: ridge sowing, precision land leveling, crop rotation, green manuring, use of biological control agents, raised bed cultivation, alternate wetting and drying, use of improved/certified varieties, mulching including retaining of crop residue, zero tillage, integrated soil fertility management, inter-cropping etc. These practices will be applied to all major cropping systems of the project area which include rice- wheat, cotton – wheat, and sugarcane etc.

Subcomponent 3.2 Financing smart subsidy payments to farmers and facilitating wheat procurement reform (US \$16.8 million). A smart subsidy scheme is piloted under this component to support farmers switch to growing water thrifty crops like oil seeds and pulses. The support includes: (i) subsidy for inputs; and (ii) awareness and training. The

smart subsidy program will be primarily for small and medium-sized farmers with landholdings up to 25 acres.

Subcomponent 3.3 Improving the agricultural information and technology base (US\$ 6.0 million) This component strengthens agriculture extension mostly with rehabilitation of office facilities and its ICT service (3.3.2); improves agricultural statistics with support to crop reporting service (3.3.4); digitize market information services with training and IT support to agriculture marketing department (3.3.1); and establishes a salinity and water logging research & development program that includes laboratory upgradation/rehabilitation; construction of a ‘Center of Excellence’ and training of farmers (3.3.3).

A new Sindh Agriculture Research and Extension (R&E) Policy will be adopted under PBC-4, and an autonomous Sindh Agriculture Research Board (SARB) will be established to plan, coordinate, fund, and monitor the provincial agriculture R&E system with a focus on improving agricultural water productivity.

The HAI program developed under Component 1, particularly the remote sensing activities, helps provide new types of data.

Subcomponent 3.4 Developing the agriculture value chain (US \$15.1 million): This subcomponent helps to enhance the agriculture value chain for high-value crops like horticulture and water-thrifty crops like pulses and oil seeds. It supports farmer groups and medium-sized agribusinesses to address infrastructure and technical bottlenecks, with the aim of improving crop productivity and quality, reducing post-harvest losses, and better linking producers and the market. Recipients are required to provide matching funds for physical investments according to an agreed-upon matching grant schedule for specific type of investment.

Subcomponent 3.5 Agriculture Delivery Unit (ADU) support (US \$3.33 million): The ADU was established under the Agriculture Department in 2022 with a broad mandate to support policy formulation and implementation, identify and monitor sector development plans, programs and projects with the overall objective of achieving the strategic objectives of the 2018 Agriculture Policy. It also has overall responsibility for implementing the agricultural parts of the project. This component supports the start-up of the ADU, including consultant support, equipment, and incremental operating costs.

5. Project geographical area for component 3: The project area consists, broadly the command area of the 3 AWBs and within that (to be) selected 15 FO areas on selected branch canals. For some components like value chain, crop reporting, market information management, ICT based extension service, work, partly outside these areas, will be required.

B. Project Organization for Component 3:

6. The Agriculture Department will be responsible for implementation of the agriculture component (3) of the project through its Agriculture Delivery Unit/ Project Implementation Unit (PIU). The Project Implementation Consultants (PICs) will be

contracted by the ADU/PIU and will report to the Project Director or its senior representative nominated by the PD.

The ADU/PIU will establish Project Support Units (PSUs) for each subcomponent. This will be a PSU under OFWM for sub-component 3.1.1, a PSU under Agriculture Extension Department for sub-components 3.1.2, 3.2, 3.3.2 and 3.4, a PSU under Agriculture Research for 3.3.3, and a PSU under Crop Reporting Service for sub-component 3.3.4 and one under Agriculture Marketing Department for sub-component 3.3.1. Each PSU will be headed by their respective Departments. Each Department has large number of staff both in the field and at the head office and will be fully deployed for project implementation. Further, procurement of specialized consultancy services is envisaged to support implementation of specific tasks under some of the sub-components e.g. a Sub-project Implementation Support Consultants (SISC) for sub-component 3.1.1, an IT firm for agriculture market information management; a firm for the work of the crop reporting service; an M&E firm; and a third party validation firm based at the PCMU. The ADU will also have a number of market-based staff for various roles complementing this consultancy. PCMU will be responsible for ensuring the achievement of all PBCs, except PBC 4 which will be the responsibility of PIC under the project.

The Agriculture Department, has experience with the World Bank-financed projects and has demonstrated project management capacity, hence the PIC is expected to provide supplemental support for execution of the component 3 of the project.

Some of the component activities, will become part of the 'FO Area Development Plans' developed for each FO by the SISC. The PIC will assist in contributing inputs to those plans. The general process to prepare a FO subproject and the contents of the Area Development Plan are provided in annex-1.

C. Overall Objective(s) of the assignment

7. Consultancy services are required to ensure that the project implementation is carried out towards achieving the overall PDO and specific Component 3 objectives in a timely and efficient manner with high standards of project implementation, including technical assistance and support the design & supervision of the civil works to be carried out under the agriculture component along with due considerations to the environmental and social standards agreed as part of the project design.

D. Scope of Services, Tasks (Component-wise) and Expected Deliverables

8. The Project Implementation Consultants (PICs) will work with the Project Director, Agriculture Delivery Unit, Agriculture Department to support implementation of the component 3 of the project.

The tasks and activities would broadly include, but not limited, to:

- (i) Prepare and supervise farmers' mobilization for engagement with the project. Special outreach efforts will be made to encourage woman farmers/beneficiaries' participation in the project.
- (ii) Assist SISC in developing 'FO Area Development Plans' by conducting due diligence of agricultural activities and constraints in the FO area and providing inputs on the plan with relation to relevant component 3 activities. These activities would include: training on improved agronomic and in-field water management practices; climate smart agriculture; value chain development; and water logging and salinity management on farmer fields.
- (iii) Support ADU to collect data and conduct field visits to each FO participating in the project to assess productive potential, constraints and opportunities for improvement with the aim of increasing agricultural water productivity.
- (iv) Prepare training and capacity building program for farmers and staff of the department (substantially involved in the project activities). This program will include detailed training needs assessment; curricula development; selection of venue/institutions; duration; budgets; supervision of execution and training reports.
- (v) Support ADU in preparing a new policy on Agriculture Research and Extension under PBC 4 of the project.
- (vi) Support SISC in the establishment of the improved irrigation scheduling process, and the training of farmers and FOs on the implementation of this process.
- (vii) Conduct feasibility/value chain studies for crops from the horticulture, oil seeds and pulses groups, prioritized in consultation with farmers and MSMEs. These studies should help in identifying the training and technology needs of beneficiaries and give estimates of their costs.
- (viii) Prepare a detailed communications strategy and implementation plan for raising awareness on project objectives and document and disseminate project results (focusing on Component 3). This task will be implemented in close coordination with SISC.
- (ix) Support ADU with procurement process through bidding documents and evaluation of bids for selected civil works as per approved procurement plan for the department of agriculture and assist in preparation of all relevant documents for contract award. Assist in design and supervision of civil works.
- (x) Develop a detailed project implementation/work plan (PIP) which should include yearly distribution of activities with estimated costs under each project

component for the full duration of project implementation period in line with the legal agreement and other project documents.

- (xi) Support in overall project management and regular reporting requirements based on modern concepts, implementation of all project components including environmental and social management.

9. Detailed tasks description:

2.1 Mobilization of Farmers/Producers Groups and MSMEs

The project will need to mobilize large number of men and women farmers and some MSMEs to provide investment support and training under component 3. PIC will do this particularly for 4 subcomponents i.e. smart subsidy, value chain development, climate smart agriculture, and water logging and salinity management. The PIC will work together with the SISC for this mobilization. The target number of beneficiaries for these subcomponents is given in the results framework of the project. For successful mobilization, the consultants will:

- Undertake a detailed assessment to identify FO areas and farmers/producers/MSMEs that should benefit from each sub-component. The firm is expected to map out various facilitating and restricting factors as well as change agents that will need to be mobilized.
- Prepare report on how many commodity groups and training groups/FFSs will be formed by FO/area and by crops¹/crop cycles², using the criteria provided in the project operations manual and PC-I
- Oversee the formation process for farmers/producers' groups and training groups who will be eligible to participate in project activities and receive training and technology/input packages as per need/demand of the farmers.
- Support the district offices of Agriculture Department involved in mobilization and technical support and capacity building/trainings/ FFS.
- Develop a detailed monitoring system for assessing quality of mobilization and level of participation of mobilized farmers/producers under each selected sub-component and the FO area.

2.2 Training and Capacity Building

The project will need to train large number of (men and women) farmers in value chain development & cultivation of water thrifty crops (70,000 men and 10500 women), climate smart agriculture (14,000 men & women) and; manage water logging and salinity (5,000 farmers), under various sub-components. The project will train men and women staff of the department via TOTs to conduct farmers' training in the field. There will also be a separate

¹ Under value chains, smart subsidy scheme and water lagging and salinity management subcomponents

² Under the climate smart agriculture subcomponent

training program, developed for staff of the department, in how to effectively manage its routine business. The Consultants will:

(a) carry out a detailed training needs assessment of identified farmers that will include:

- areas and topics of training to be provided on high value and water thrifty crops proposed under the project. For some sub-components like climate smart agriculture, already a detailed plan has been prepared based on the experience from the FAO-GCF project and that will have to be taken into consideration for updating that plan. Same also for the water-logging and salinity sub-component.
- Identify who will be the participants for various training activities.
- Identify training method such as class-room and field-based training, farmer-to-farmer study tours/exposure visits to other production areas within province or elsewhere in the country as well as in other countries in the region as appropriate.
- As required in the Gender Action Plan (GAP), work out sessions that should be held separately for women farmers and disseminate information about training via media channels used by women and men.
- Conduct ToTs of the men and women staff of the department in the areas identified for farmers.
- Provide a detailed work plan with timeline of training and capacity building activities. This plan will feed into the FO area development plan.

(b) Capacity building of staff for effectively managing its routine business:

- identify who will be the participants for various training activities. The priority will be those that are engaged in the project activities.
- carry out a detailed training needs assessment of identified line department officials to help develop a tailored curriculum.
- Identify the areas and topics of training to be provided. Already a list has been prepared and that should be the starting point.
- Identify who will conduct the training including information on local and international training providers.
- Identify training method such as class-room and field-based training and tours/exposure visits to other production areas within province or elsewhere in the country as well as in other countries in the region as appropriate.
- Provide a detailed work plan with timeline of training and capacity building activities.

(c) Assist in hiring Subject Matter Specialists for help in developing training curriculum for training of farmers/producer groups and TOT of staff of the line department. The curriculum may include:

- i. Information and guiding material on cutting edge knowledge on agronomy and crop management for the given commodity.
- ii. Information and instructional materials on agribusiness approaches for the selected value chains.
- iii. Hands-on practices and demonstration materials.

- (d) Support SISC in the establishment of the improved irrigation scheduling process, and the training of farmers and FOs on the implementation of this process.
- (e) Monitor post-training outcomes and change in behavior by reporting on periodic basis and suggest improvement in training content/format/methodology based on the monitoring.

2.3 Communication Strategy and Awareness Campaign

- (a) Develop a detailed communications strategy with an implementation plan including but not limited to the following:
 - i. Type, frequency and target audiences for regular awareness campaigns about component activities.
 - ii. Types and frequency of communications products
 - iii. Dissemination of communications materials
 - iv. Project website with information on project objectives, activities under all project components and implementation progress reports
 - v. Address barriers to communication in the strategy with appropriate interventions.
 - vi. The communications strategy and implementation plan, for raising awareness on project objectives, should ensure different channels of communication to reach out to a wide range of stakeholders varying from highly education to less/non literate people, specially farmers.
 - vii. Means of making communication interactive by providing opportunity to stakeholders to provide their feedback/inputs or ask questions.
 - viii. Suggesting a mechanism to updated/revise communication content/material based on the new developments and any feedback received from stakeholders.
 - ix. Suggesting ways to ensure that the communication material is contextually correct, easily accessible and understandable to all types of stakeholders irrespective of where they are and what are their levels of understanding
- (b) Prepare bidding documents for hiring of media firm for implementation of communication and awareness campaign and delivery of various communications products as approved by the competent authority.

2.4 Project Management and Implementational Support:

(a) Implementational Support:

- i. Develop a detailed project implementation/work plan (PIP) which should include yearly distribution of activities with estimated costs under each project component and sub-components for the complete duration of project implementation period.
- ii. Prepare and update annual work plans for approval of the competent authority
- iii. Review and update project operations manual as and when required.
- iv. Prepare regular progress reports to support their invoices.

- v. Prepare the GRM document for the component 3.
- vi. Assist ADU in preparing project restructuring documents/revisions of PC-1
- vii. On need basis, provide any other specialized assistance to the ADU.

(b) Technical Support:

The consultants will also provide additional support to the following selected sub-components.

i. **Component 3.1 Integrated FO Area Development**

3.1.1. On-farm Water Management: This sub-component will be supported through Sub-project Implementation Support Consultants (SISC) working under the supervision of SIDA and in concert with sub-component 2.1. The PIC will keep liaison with them for planning and reporting. The PIC will support the establishment of the improved irrigation scheduling process, and the training of farmers and FOs on the implementation of this process. PIC's agronomist will help in training HEIS farmers in crop production and will produce crop advisory leaflets and manual.

3.1.2. Climate Smart Agriculture: The consultants will assist the ADU (Agri. Extension) for planning and execution of this intensive training program in climate smart agriculture for farmers using a tailored FFS approach.

- ii. **Component 3.2 Financing smart subsidy payments to farmers and facilitating wheat procurement reform.** Preparing a detailed implementational mechanism, based on the existing one, for piloting the smart subsidy component that covers the following elements: i) eligible districts; ii) list of crops and varieties to be supported in specific agro-ecological zones; iii) criteria for participation in the program; iv) levels of financial support and transfer mechanisms offered through income support; v) partner organizations and vi) farmer registration system vii) Mechanism to ensure that the subsidy reaches the most deserving ones, ensuring that any particular interest group doesn't capture benefits, transparent transactions system, meaningful utilization of subsidy without diverting to any other purpose, timely disbursement when the support is required, information dissemination, GRM and monitoring mechanism

- iii. **Component 3.3 Improving the agricultural information and technology base.**

Sub-component 3.3.1: Market Information Management: The consultants will support ADU (Marketing Department) in its strategy and work plan development for improved market management system; data analysis and writing analytical reports.

Sub-component 3.3.3: Salinity and waterlogging management: The consultants will support the ADU (Agriculture Research) in program development for addressing waterlogging and salinity at the farmers' fields including assistance in designing research and development agenda on waterlogging and salinity; development of plan for modernisation of research facilities; developing partnerships with relevant national and international organisations.

- iv. **Component 3.4 Developing the agriculture value chain:** The consultant will be required to conduct detailed feasibility/value chain studies to identify training and technology needs/demands of farmers and MSMEs for value chain development of crops from horticulture, pulses and oil seeds crop groups. The consultants will develop a comprehensive execution plan and supervise its implementation.

The consultants will also facilitate the review/selection of committees that will be reviewing the proposals including business plans from the MSMEs submitted for agribusiness (cost sharing) grants and supervise their implementation.

Prepare awareness campaigns and materials about the value chain grants for the education of potential beneficiary farmers and entrepreneurs/firms.

The consultants will also review and revise the sections in the project operational manual related to value chain development which should elaborate the selection criteria for beneficiary, cost sharing arrangements, award mechanisms, procurements mechanisms for technology packages and pre- and post- award supervision and support.

2.5 Project Environmental & Social Management Framework (ESMF) Implementational Support:

The consultants will assist the project teams in implementation and the ADU in supervision of the safeguard instruments, to ensure compliance of the project implementation with the various social and environmental safeguard requirements.

- a) Assist in Implementing activities in compliance with the Environmental and Social Management Framework of the Project (Agriculture Component 3 except 3.1.1 which will be the responsibility of SISC).
- b) Assist in screening and thereafter prepare generic or site specific ESIA's or ESMPs or any other safeguard instrument of sub-projects and submit the same to the ADU/PMU for review and clearance from the World Bank prior to bidding of civil works.
- c) Ensure that ESMPs or other safeguard documents are adequately included in the bidding documents (technical specification and Condition of Contract).

- d) Assist in conducting (where and when needed) baseline environmental (physical and biological) and social survey (i.e. household etc.) or any other survey to support preparation of ESIA, ESMPs or other safeguard document.
- e) Assist in supervision of implementation of ESMPs and associated plans including occupational Health and Safety (OHS) and Community Health and Safety (CHS) plans or other safeguard instrument.
- f) Assist ADU in training of field teams in the relevant environmental and social safeguards risk management and implementation monitoring and reporting of mitigation measures.
- g) Assist ADU to ensure GRM is effective and functional.

3. Outputs of the consultants / reporting requirements

Deliverable	Description
Inception Report	<ul style="list-style-type: none"> ➤ Outline of overall methodology to be used for the component and sub-components. ➤ Detailed Implementation Plan / PIPs ➤ Deployment schedule of key staff ➤ Formats for Reporting ➤ Prepare Inception Report
Regular Reports	<ul style="list-style-type: none"> ➤ Summary of work completed and report on periodic basis. ➤ Key issues for attention of ADU ➤ Presentations/Documentation/Videos...
FO Area Development Plan	<ul style="list-style-type: none"> ➤ Support the SISC in preparing FO area development plan by providing input on the selected component 3 related activities.
Value chain study reports	<ul style="list-style-type: none"> ➤ Prepare value chain study reports, for prioritized crops from each crop groups of horticulture, pulses and oil seeds.
Training program	<ul style="list-style-type: none"> ➤ For staff and farmers and MSMEs taking part in activities of the various sub-components
Project implementation plan/Annual work plans	<ul style="list-style-type: none"> ➤ Developed in advance of each financial year.
PIP for smart subsidy scheme	<ul style="list-style-type: none"> ➤ Prepare a detailed 'Implementation Plan' for the smart subsidy scheme and revise based on the lessons learnt from implementation.
Project Operational Manual	<ul style="list-style-type: none"> ➤ Review and revise the existing manual based on the lesson learnt during implementation-as needed.
Social and Environmental Safeguard Management	<ul style="list-style-type: none"> ➤ Generic or site specific Environmental and Social Management plans or any other safeguard instrument. ➤ Staff Training plan in safeguards management.

HEIS advisory leaflets/manual	Crop	➤ Prepare leaflets/manuals for advising farmers on best methods of crop production under HEIS.
Communication Strategy		➤ Prepare project communication strategy for the component and develop annual action plans including budgets. Help in procurement of services required in project communication.
Grievance Redress Mechanism		➤ Prepare the GRM document for the component 3
Project restructuring		➤ On need basis, help ADU in revising project PC-1/prepare project restructuring paper
Civil works		➤ Prepare Design, BoQs, and bidding documents.
Other Reports		➤ Any special reports as may be necessary from time to time for specific item/issues within the scope of the assignment.

The consultant will submit copies of all the reports and documents. All data and reports will also be submitted electronically in commonly used software formats.

4. Review procedure to monitor consultant's work

4.1 The consultant shall submit the details of work plan together with their proposal. This work plan should include the details of activities, quality indicators and their schedule. This schedule of which will be judged to evaluate the progress of activities forms the backbone to review the consultant's work. Some other aspects include:

- Timely completion of the activities that include inception report, Market Survey/ Analysis Reports/ Need Assessment Reports etc.
- Content of the reports.
- Methods of data analysis and presentation.

5. Qualification / Experience of the Consultant

5.1 The firm should have a minimum 10 years of experience as Project Implementation Support Consultant in the last 15 years. The firm must have successfully completed 2 projects preferably, donor funded. Preference will be given to the firms which have prior experience in complex (agriculture) projects of similar nature i.e. value chain development, training of farmers, subsidies for farmers and project management experience. In this regard project (contract) completion certificates along with satisfactory performance certificates should be provided.

5.2 The qualification of the consultants and the national professionals to be involved in the consultancy is described in the Table below. It is believed that bulk of the tasks can be done by national consultants with the full participation of implementing staff under the supervision of the Team leader, whereas short term international

consultants may be proposed where new knowledge is to be infused at short intervals at the inception or later during the implementation period.

5.2 The Core Team of the Consultants would include the following full time/part time experts:

S.No.	Position	Job description & Qualification	No. of Years of Experience	Man months
1	Team Leader	Overall management of the PIC consultants' tasks and responsible for delivery of the expected outputs of consultancy under component 3. The consultant would have Master's degree in Agriculture/ Agribusiness/Agri. Economics/ Agri. Marketing or relevant field with Business and/or Project Management focus and experience of having managed similar consultancy services with demonstrated ability to work with government officials, technical field staff, NGO representatives, and farmers/producers.	15 years of substantial proven competence and experience in respective field and at least 5 years of experience as team leadership of large donor financed projects/ government.	72 months
2.	Sr. Training and Capacity Building Specialist	Master's degree in Agriculture with demonstrated ability for having managed and conducted training of trainers, development of training materials and post-training performance monitoring. Organized and conducted FFS including on climate smart agriculture and crops produced under HEIS. Support SISC in the training of farmers and FOs on the implementation of the improved irrigation scheduling process.	10 years of total experience with at least 5 years of relevant experience. Understanding of the socio-economic context of rural areas, Sindhi language skills.	48 months
3.	Sr. Agribusiness and	Master's degree in agribusiness and / or agri. Marketing or related subjects with direct experience in agricultural processing and	10 years of total experience with at least 5 years of	48 months

	Marketing Specialist	marketing of agriculture products. Will work on the crops promoted under the smart subsidy scheme; the value chain development component and the crops under the HEIS technology. Will also support the marketing department in their market information management activities.	relevant experience.	
4.	Sr. Agriculture Specialist	Overall responsible for the agronomic aspects of the horticulture, pulses, oil seed crops promoted under the value chain and the smart subsidy scheme of the project. Support the training specialist in the training program development and execution on climate smart agriculture and crops grown under the HEIS. Will prepare crop advisory leaflets/manuals. Assist SISC in the establishment of the improved irrigation scheduling process, and the training of farmers and FOs on the implementation of this process. Master's Degree in Agriculture with specialization in agronomy. Sound knowledge of crop production technologies with improved and modern irrigation methods.	10 years of total experience with at least 5 years of relevant experience. Experience in climate smart agriculture will be an advantage.	60 months
5.	Sr. Environmental & Social Safeguard Specialist	Assist ADU on monitoring, evaluating and ensuring compliance with ESMF requirements. Design and conduct surveys and studies to assess environmental impact of the project.	10 years of total experience with at least 5 years of relevant experience. Working Experience in social/	36 months

		<p>Development of training material and delivery of training to staff and field teams in E&S safeguards.</p> <p>Prepare progress reports on the status of implementation of the safeguards' aspects of the sub-projects</p> <p>Contribute to regular M&E reports, MTR report and ICR.</p> <p>MSc/MS/ME in Environmental science/engineering/agriculture or any other relevant field.</p>	<p>environmental compliance of World Bank/donor funded project will be an advantage</p> <p>Experience in agriculture and water related projects will be desirable.</p> <p>Experience in preparation of ESIA's and ESMPs</p> <p>Experience in the development and delivery of training modules on E&S risk management</p> <p>Experience in the preparation of OHS and CHS plans</p>	
6.	Sr. Salinity/ and Water Logging Expert	<p>Will support the project in program development for addressing waterlogging and salinity at the farmers' level; assist in research and development on waterlogging and salinity; assist in modernisation of research facilities; help in developing partnerships with relevant national and international organisations.</p> <p>Master's degree in soil sciences.</p>	10 years of total experience with at least 5 years of relevant experience.	60 months

Other Field Level Staff				
7.	Field Level Supporting staff	The team leader may propose other disciplines that may be necessary for the balancing of the team for inclusion/consideration. The field team would have an engineer responsible for the civil work supervision of the construction of the sites under the project.	Number of years of experience proposed as per requirement of the team leader. i.e. <ul style="list-style-type: none"> - Field Coordinators - Field Assistants - Monitoring Officers - Computer Operators - Contingent staff etc. Should have sound understating of rural social setting.	72-man months for each. The number of field staff for project implementation should be proposed by the bidding firm as a part of the proposal.

6. Client's Input and Counterpart Personnel

- 6.1 The Project Director would make available required number of assisting staff for the implementation of the project in a successful manner. The Project Director ADU/PMU will be the Clients' representative supervising the work of consultants. He / She will be responsible for making available all data and reports related to earlier projects to the consultants. The PD will provide the resources through the project to cover all training and field activities to be conducted by the consultants in pursuance to their TOR.
- 6.2 Project Director will also resolve various administrative issues relating to consultants arising during the course of assignment. The Consultants' Team Leader will be the principal contact and will be expected to be readily available during project implementation.

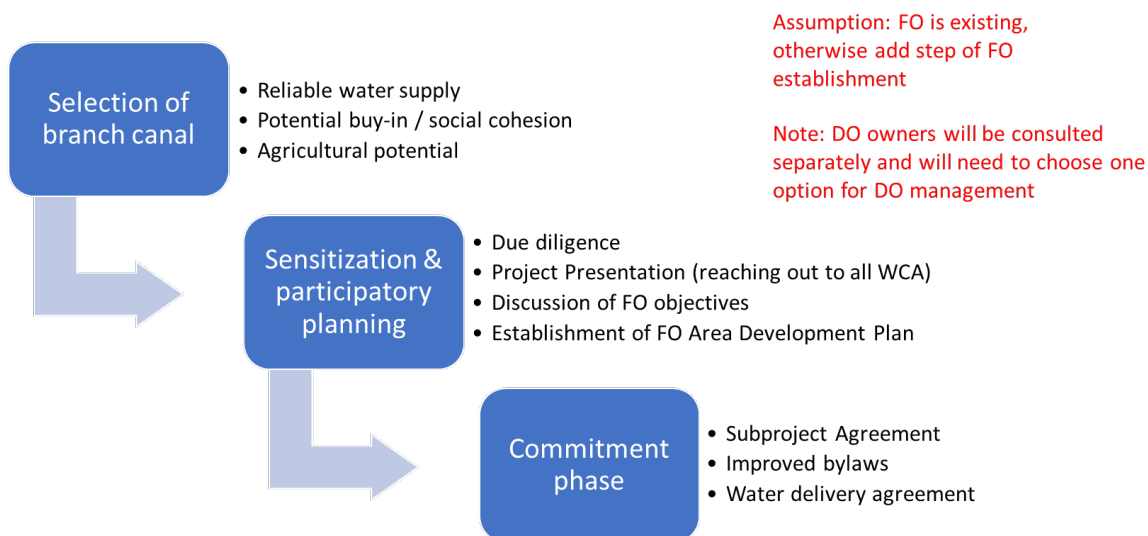
7. Selection Process

- 7.1 A consulting firm will be selected in accordance with Quality and Cost Based Selection (QCBS) method set out in the World Bank's Procurement Regulations: Selection and Employment of Consultants by World Bank Borrowers (November 2020) www.worldbank.org/procure.

E. Annex-1: FO Subproject Process and Contents of FO Area Development Plan

The steps for the subproject preparation and approval process are summarized in Figure 1 below.

Figure 1. FO Subproject Preparation Process



The implementation process will be demand driven. However, to avoid fragmentation of the implementation area the process will be phased by branch canal. This means that one branch canal will be selected initially by each AWB and the project will be presented to all FOs within this branch canal's command. They will need to fulfill the eligibility criteria to get access to the project's funding. Once the modernization of a branch canal is well advanced, another branch canal can be added, and so on.

The activities to be included under the Subproject will be prioritized by the FO based on the menu of interventions proposed by the project. These priorities will be reflected in an "FO Area development Plan" which will set the objectives of the FO and the required resources.

Direct Outlets (DO) owners will be offered various options for an improved irrigation service including (i) becoming a member of an adjacent FO; (ii) forming their own FO with other DO owners; and (iii) remaining an individual client of the AWB. Specific conditions and terms of service will be defined for each option. The options will be tailored for each specific location.

All FO members and participating DO owners will be sensitized on Component 3 activities and invited to apply for project support. Demands will be prioritized based on main constraints and opportunities found in the FO area to establish the Area Development Plan.

FO Area Development Plan
<p>Objectives of the Development Plan</p> <ul style="list-style-type: none"> • Statement of objectives and expected results <p>Activities implemented at the SIDA/AWB level</p> <ul style="list-style-type: none"> • Headworks Improvement <ul style="list-style-type: none"> ○ Improvement of water level control in the Branch Canal ○ Head Regulator improvement/calibration ○ Possible Flat Long-Throated Flume (FLTF)

FO Area Development Plan

- Training at Hyderabad

Activities implemented at FO level

- Canal Improvement Works:
 - Canal modernization works on distributary / minor canal (under operational responsibility of FO): LCWs, WC Outlets, Canal berms (ensuring required freeboard)
 - Additional (optional) canal works on distributary / minor canal: canal prism, inspection paths, compaction, social structures
- Groundwater monitoring /management works within FO command area
- Other works: FO office
- Transitional funding of FO's Incremental Operating Cost (part of the subproject with degressive funding and as complement to on-going ID support):
 - Additional / better remunerated staff
 - Financial management and auditing cost
 - Incremental operating cost (meetings etc.)
 - Mobility (motorbikes etc.)
- Training costs for FO representatives and staff on organizational and financial management, leadership, communication, technical skills and so on

Activities implemented by WCA (with list of beneficiary WCAs)

- Watercourse lining works
- Solarization of watercourses with lift pumps
- On-farm drainage rehabilitation

Activities implemented by individual farmers (with list of beneficiary farmers)

- HEIS equipment
- Land levelling and other land improvement / reclamation works (waterlogging and salinity management)
- Training on improved agronomic and in-field water management practices; climate smart agriculture
- Value chain development
- Subsidy for water thrifty crops