

## **TORs for the Impact Evaluation of the Punjab Rural Sustainable Water Supply and Sanitation Project (PRSWSSP)**

### **BACKGROUND**

1. Pakistan's low human capital accumulation is a fundamental development challenge. A key contributing factor is the high rates of stunting and malnutrition among Pakistani children. The absence of significant investments in the treatment of drinking water and safe management of fecal waste is an important reason for the persistently high rates of stunting in rural areas. The lack of attention to quality of sanitation infrastructure and virtually no attention to fecal waste management has resulted in an unprecedented concentration of untreated fecal waste near human settlements and the consequent contamination of water and soil.

2. This contamination, coupled with poor hygiene practices and the use of inadequately treated water for drinking purposes, has exacerbated the incidence of diarrhea and environmental enteropathy in young children. The latter causes malabsorption and maldigestion of nutrients, undermining the impact of improved diets and leading to a host of growth and developmental issues that are manifested in child stunting. This challenge is especially acute in rural areas where households' abstract groundwater from shallow depths for drinking purposes. In addition to the direct pumping of contaminated groundwater, the poor quality of well construction leads to bacteriological contamination of drinking water even in cases where the underlying groundwater is clean.

3. The province of Punjab is home to over half of Pakistan's population and characterized by stark socioeconomic divides between north and south and rural and urban areas. Almost 98 percent of rural households in Punjab have access to an improved water source but continuous and treated piped water supply is rare and most households rely on groundwater pumping that is vulnerable to contamination. Most rural households in Punjab thus rely on groundwater as their main source of water, either through public supply or private investment. Access to improved sanitation is still low across rural Punjab and fecal waste is generally not safely disposed. There is almost no public investment in the treatment of fecal waste.

4. Taking cognizance of above issues, the Government of Punjab has established the "Punjab Rural Municipal Services Company" (PRMSC) (hereinafter referred to as "Client") as a Company under section 42 of the Companies Act, 2017) by the Government of Punjab. The Company has been placed under the Punjab Local Government and Community Development (LG&CD) Department, Government of Punjab.

5. PRMSC is a government owned not for profit-company that will provide critical municipal services related to water, sanitation and waste management to rural villages in Punjab.<sup>1</sup> The company will build and maintain safely managed water supply and sanitation schemes for single or multiple villages, where feasible.<sup>2</sup> Solid waste will also be managed safely, with only residual waste, after recycling, composting of food and green waste, sent to landfills, The goal of the company is to ensure that all major sources of contamination through human and animal waste are minimized and villages are converted into healthier, more

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<sup>1</sup> 73 percent of the province's population live in 23,000 revenue villages, and are in dire need for investments to improve WASH.

<sup>2</sup> As per SDG6, drinking water will be treated before supply and wastewater will be fully treated before reintroduction into surface or ground water systems.

hygienic and more pleasant living spaces with improved civic amenities. In this regard, the Client will also focus on behavior change and capacity building for the sustainability of the improved WASH services.

6. The Government of Punjab through the Government of the Islamic Republic of Pakistan has received financing from the World Bank to supplement the above initiative in the form of a project titled “Punjab Rural Sustainable Water Supply and Sanitation Project” with an aim to provide equitable and sustainable access to safely managed water and sanitation and reduce child stunting in 2000 revenue villages of Punjab located in 16 tehsils of 16 different districts of the province. Each Revenue Village may have multiple Bastis/settlements and all such Bastis/settlements shall be covered. The order in which villages will be provided services will be randomized to ensure equity. The 16 tehsils/districts, listed below, to be covered by this phase of the project were selected using an index of need.

Districts	Tehsil	No. of Villages	Districts	Tehsil	No. of Villages
Chakwal	Kallar Kahar	60	Bahawalnagar	Bahawalnagar	238
Khushab	Noorpur Thal	87	Bahawalpur	Khairpur Tamewali	107
Mianwali	Isa Khel	64	Lodhran	Karor Pacca	102
Sargodha	Kot Moman	117	Multan	Shuja Abad	83
Bhakkar	Darya Khan	94	Muzaffargarh	Alipur	124
Chiniot	Bhowana	105	D.G. Khan	Taunsa	196
Jhang	Ahmad Pur Sial	99	Rahim Yar Khan	Liaquatpur	286
Pakpattan	Pakpattan	159	Rajanpur	Rojhan	88

7. The Project consists of following major components:

- (a) Water Supply and Sanitation Infrastructure Development
- (b) Behavior Change and Capacity Development
- (c) Service Delivery Improvement
- (d) Project Management and Monitoring

## Introduction

The PRSWSSP’s core objective is to provide equitable and sustainable access to safely managed water and sanitation and reduce child stunting. To accomplish this, the project will combine infrastructure investments with a comprehensive behavior change and communication campaign and improved service delivery to provide potable water and safely managed sanitation facilities, through cost-effective and sustainable investments. The project will also address animal and solid waste comprehensively. The primary objective of the project is to reduce child stunting by reducing the total fecal burden in the village environment, providing safe drinking water to all village residents, and raising awareness to promote behavior change for better hygiene practices at the household and community level. In addressing all aspects of WASH, the project is also expected to have a significant impact on adult health and productivity outcomes.

The project is targeting districts in Punjab that are the poorest and have the worst outcomes on child stunting, access to and quality of sanitation infrastructure and bacterial contamination of drinking water at source and at point of use. The index uses data from the Multiple Indicator Cluster Survey for Punjab, completed in 2018 for all indicators except poverty for which the

latest available figures from 2015 were used. All districts were ranked using a principal components analysis (PCA) score. Districts in the province were then stratified into three regions: South, Central and North, with 50 percent of districts drawn from the South and 25 percent each from the Center and the North. Using this allocation criteria, 16 districts in Punjab have been selected. A Tehsil level index of deprivation (similar to the district level index) has been used to select one Tehsil in each selected district.<sup>3</sup> The Tehsil index also accounts for the number of villages in the tehsil, the number of households served and the proportion of the population that is rural. All villages within selected tehsils will be covered fully to ensure sustainable service delivery and ensure that the environmental benefits of sanitation coverage and behavior change are maximized. This will include the provision of safe water and sanitation services to all schools and health facilities in the village and full coverage of all settlements. Overall, the project is expected to cover approximately 2000 villages and serve a population of 6.65 million of the most deprived citizens of Punjab. Service delivery (Construction, O&M and billing) will be managed by the newly set up Punjab Rural Municipal Services Company (PRMSC) and all households connected to services will be responsible for the payment of water and sanitation bills with metered services for water, sanitation and waste removal.

The project will develop and use a comprehensive IT-based Management Information System (MIS) to track project implementation progress, WSS service delivery performance and grievance redressal, the flow of public and donor funds earmarked for WASH and related financial management information and outputs. A key feature of the MIS will be a focus on the role of the community in the monitoring of all project-related activities. The interface of the MIS will be web-based and user-friendly and allow for real-time monitoring by government and the public of high-level outcomes including WSS service delivery, water quality tests, financial flows and project implementation progress indicators. The MIS will thus ensure both accountability and transparency and allow for real time course corrections through a continuous process of monitoring project inputs, outputs and outcomes. In addition to project and service delivery monitoring, the MIS will also contribute to the impact evaluation of the project. In addition to the above, women who are trained as change ambassadors will record the birth weight and height of all babies born in the village and will also conduct periodic (6 monthly) anthropometric measurements of children aged 5 and younger.

The project has a robust impact evaluation (IE) plan. The design of the IE uses two features of project rollout: (i) All villages in a selected Tehsil will participate in the project over its lifetime. By randomizing village rollout across years, the villages that roll out last will serve as controls for the villages that roll out first. It is likely that multi-village water supply schemes will be feasible in a significant subset of villages, so village clusters, rather than individual villages will likely need to be randomized over time. (ii) Villages in neighboring tehsils that border project tehsils can also serve as controls for a Regression Discontinuity Design (RDD) evaluation, which would closely mimic a randomized design, since the odds of selection are known precisely. The core objective of the IE will be to credibly assess the impact of the project on child stunting, along with other metrics of child and adult health.

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<sup>3</sup> The 2011 MICS for Punjab was used for the tehsil index since it is the only available survey that is representative at the tehsil level.

The tehsils selected for the project are:

Region	District	Tehsil	Rank of district within region	Rank of tehsil within district
North	KHUSHAB	NOORPUR THAL	1	1
North	MIANWALI	ISA KHEL	2	1
North	SARGODHA	KOT MOMAN	3	1
North	CHAKWAL	KALLAR KAHAR	4	1
Centre	BHAKKAR	DARYA KHAN	1	1
Centre	PAKPATTAN	PAKPATTAN	2	1
Centre	CHINIOT	BHOWANA	3	1
Centre	JHANG	AHMAD PUR SIAL	4	1
South	RAJANPUR	ROJHAN	1	1
South	RAHIM YAR KHAN	LIAQATPUR	2	1
South	D.G. KHAN	TAUNSA	3	1
South	LODHRAN	KAROR PACCA	4	1
South	BAHAWALPUR	KHAIRPUR TAMEWALI	5	1
South	MUZAFFARGARH	ALIPUR	6	1
South	BAHAWALNAGAR	BAHAWALNAGAR	7	1
South	MULTAN	SHUJA ABAD	8	1

### Assignment Objectives and Scope of Work

The impact evaluation will provide evidence-based insights to a combination of internal and external stakeholders and will support, along with the MIS, any needed midterm course correction. It will also help highlight existing challenges in meeting SDG 6 targets and addressing critical water resource management concerns. Under this TOR, the selected firm will lead the work on the impact evaluation of the project. The design of the evaluation relies on a randomized rollout of the project to villages within each tehsil. The IE firm will be provided the village rollout plan as well as the sample of villages selected for the IE. All questionnaires to be used will also be provided. However, the selected firm will have the opportunity to provide inputs on all survey instruments and suggest potential expansions to the planned IE that are needed given emergent issues during project implementation. The firm will be in charge of survey implementation and quality control and will conduct the analysis of all surveys and associated data, including from the MIS.

The goal of seeking a qualified firm outside the operational ambit of the PRMSC is to ensure that the impact evaluation is done with a high degree of independence, credibility and quality.

The firm will also need to participate in and lead the effort to:

1. Determine the extent to which the project is delivering on its stated objectives and the benefits delivered to the rural communities being served
2. Examine and understand reasons for deviations from stated performance standards to help support any needed course correction
3. Disseminate lessons learned from PRSWSSP over the project's life.

The assessment of Project performance should have a special emphasis on:

- ♣ **Effectiveness** – the extent to which the project interventions have contributed to the project’s high-level objectives and outcomes
- ♣ **Efficiency** – the extent to which project inputs and resources have translated into concrete results in an economically feasible manner (based on the assessment of implementation delays, technical capacity issues, operational efficiency, and the economic rates of return)
- ♣ **Sustainability** – the extent the project benefits extend beyond the project duration including the assessment of the anticipated results and risks?
- ♣ **Impact** –the actual and expected changes that have occurred in the rural community and target group (including positive and negative, direct and indirect) as a result of project interventions
- ♣ **Time Gap**– to what extent the project has contributed to lessen the time poverty gap by improving health and quality of life as outlined in the project design documents

### Development Objectives (PDO) Impact Evaluation Indicators

Key Project Development Objectives	
i.	Reduction in child stunting (age 0 to 3) among children born in project villages after the intervention
ii.	Reduction in the incidence of diarrhea among children aged 0-5
iii.	Improvement in hygiene practices within households and in the village (baby WASH, solid and animal waste management, hygienic use of storm water drains, no open trash dumps etc.)
iv.	Hygienic use of the water and sanitation (WSS) services provided
v.	Sustained access for all rural habitations to minimum - liters per capita per day of water from improved and treated sources throughout the year
vi.	User satisfaction with water supply services and sanitation facilities
vii.	Payment of tariffs
viii.	Improved adult health and associated productivity benefits
ix.	Reduction of gap between women and men in average time lost per year from routine activities due to waterborne and gastrointestinal diseases in the family
x.	Reduction of gap between women and men in average time spent with household workloads (including fetching water to the household)
Project Input Related Interim Outcomes (not exhaustive)	
xi.	Female Ambassadors of Change trained for social influencing and behavior change in every village
xii.	Village level staff employed for street cleaning/solid waste collection
xiii.	Village Organizations created or strengthened to promote WASH-friendly community behaviors, led by a woman -20% share increase compared to baseline

xiv. Functioning and use of the MIS
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Based on this, the firm will need to undertake the following activities in Revenue Villages<sup>4</sup> in the 16 project tehsils:

**A. Baseline Activities:**

**The baseline will have three core components:**

The proposed timeline to complete all baseline activities is 12 months after the contract is awarded

**i. A village-level survey**

- The village survey will include modules that capture village layout (number of settlements and settlement characteristics etc.); infrastructure condition, current village-level practices related to water and sanitation, solid and animal waste and animal management. The village survey will need to improve village and settlement boundary information; collect location identifiers of all households as well as key village infrastructure (including tube wells, schools, health facilities etc.) to support the detailed design of water, sanitation and solid waste management systems and behavior change. It will also need to collect relevant data on public services available and participatory organizations/NGOs operating in the village and the services they provide etc.
- The purpose of this survey is to provide information on WSS, hygiene, animal and solid waste management practices etc. in the village at baseline. All existing village infrastructure will be mapped, and a photo record of village conditions will be taken. Surface, ground, and sewage water quality will also be tested in coordination with PCRWR which has already signed an agreement with the client for conducting water quality monitoring and testing.
- The village survey will be conducted in all villages prior to the start of the listing activity since the listing survey will require inputs from the village survey. All 2000 villages in project tehsils will be covered by both the village and listing surveys. It is expected that each village mapping will take approximately 3 days. Ideally the village survey and listing survey teams would move in a coordinated way, under the same supervision structure. The village-survey will also be done on a rolling basis (as will the listing survey). The whole exercise is expected to take up to 12 months.
- The village-level survey is outlined below; however, it is subject to refinement:

**Village Mapping and Survey Outline**

**(1) GIS Mapping of village**

- Detailed GIS perimeter mapping of the village and all settlements (Distances to the nearest settlement trackable)
- Road connectivity between settlements
- Mapping of all existing infrastructure – existing drinking water systems (including water storage systems such as overhead tanks, existing sanitation systems, functioning or stagnant ponds etc.), waste management

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<sup>4</sup> Revenue Village is an administrative unit of the government with fixed boundaries. Also referred to as Deh or Mouza. It can contain many settlements, bastis, gaon, habitations etc.

infrastructure, if any, collective animal management infrastructure, if any, all irrigation related infrastructure (tubewells, piped systems etc).

All infrastructure should be GIS tagged and pictures taken

**(2) School survey**

- School list will be completed during infra mapping
- Need a basic sense of school amenities -particularly drinking water availability and quality, bathroom functionality and sanitation systems, and whether gender segregated bathrooms are available

**(3) BHU survey**

- BHU list will be completed during infra mapping
- Need a basic sense of BHU amenities -particularly drinking water availability and quality, bathroom functionality and sanitation systems, and whether gender segregated bathrooms are available

**(4) Settlement level survey (to be done using focus group discussions at the settlement level)**

- Liquid waste disposal - methods – type of drains, treatment, village ponds
- Is wastewater used for irrigation in any way? Other uses?
- Pond: smell, mosquitos, any mingling of solid waste and wastewater
- Solid waste disposal methods
- Open ended questions to assess animal management practices and the potential for collective management
- All village level organizations currently active – what do they do, which parts of the village they work in
- Village political life and potential for conflict among groups etc. including political divisions in village or with neighboring villages
- Zaat categories and ranking
- A few open-ended questions to elicit what are seen as the most important issues facing the settlement
- Attitudes towards need for good drinking water, sanitation and solid waste management in the settlement

**ii. Listing Survey**

- The purpose of the survey is to identify pre-existing conditions in the village and in households before any interventions take place. This will also help assess the households that are living below the poverty line and collect data on various socio-economic indicators, such as quality of WASH assets (toilets, drinking water), education, housing quality and animal and solid waste management. Furthermore, it will collect core geo-coded data on all households in project tehsils, including cell phone numbers. This data will also be used to populate the household-level interface in the MIS. The listing survey is expected to take 35 minutes on average.
- The firm will be responsible for carrying out the survey by trained enumerators who visit households and collect data through a questionnaire. The survey is designed to be comprehensive and covers a wide range of topics related to the households' demographics and socio-economic status. The enumerators are expected to record all information including the geo-tagged location of the household. Enumerator observation of conditions in village streets and within the household will also need to

be completed. According to the census data, a total of 900,000 households will be surveyed. The complete listing survey activity is expected to take 12 months.

- The Listing survey is outlined below; however, it is subject to refinement:

## **Household Listing Instrument Outline**

### **1. Cover sheet**

- House identifiers [house id; house GPS, street id from village survey; house address], contact phone number(s) of head and one adult female]
- Zaat/Biradari (from village survey list. Record new *zaat/biradari* if not on list and reconcile with village survey respondents)

### **2. Full household roster [including literacy, school attainment and main occupation and parental identification for children 16 and younger]**

### **3. NSER info plus any needed SWIFT questions**

### **4. Housing characteristics**

- House quality, size
- Access to electricity for household consumption: connection to grid; hours power available
- Latrine/toilet
  - Type
  - Drains by type
  - Cleaning of septic tank?
  - Infant waste disposal
    - Is child feces disposed in the toilet or put out with the waste?
    - Type of nappies/diapers used and their disposal
  - Drinking water
  - Water source?
  - Taste and quality
  - Is there a rooftop/underground water storage tank?
  - Any secondary storage? How is it filled? How is it cleaned?
  - Any treatment of water?
  - Any use of bottled water?
  - Cost of purchased water per month
  - Any purchase of ice in the summer (if yes, source?)
  - Approximate water use per day [estimated by asking questions about bathing, laundry, cooking, bathing animals etc.]
  - Approximate energy bills for electricity and/or diesel for pumps
  - Willingness to pay for treated safe water provided by inhouse connection

### **5. Solid waste**

- Handling of food waste-mixed with other waste, given to animals etc.
- Any recycling of glass, paper etc. how is this done?
- How is residual waste dealt with – paid service? charges? Where is it finally disposed?
- Would you be willing to separate solid waste at home if a service was provided?

### **6. Animal Type and Management**

- Animals type and number
- Animal grazing and bathing practices for ruminants
- For each type of animal: where is/are animals kept? [outside the house, in the compound, separate communal area for animals, in/near agricultural fields]

- Handling and uses of animal waste
- Does the household get any help with grazing animals?
- What are the animals fed?
- If chickens – average egg yield per day and domestic consumption of eggs and eggs sold
- If milk, average milk yield per day and domestic consumption of milk and milk sold

**7. Land ownership and cultivation:**

- Total land owned (acres)
- Does household self-cultivate any land
- Tenancy status – establish if owner and/or cultivator
- Tubewell ownership -yes/no and number if yes
- Ownership of main types of farm machinery by type and number

**8. Internet connection & smart phone ownership**

**9. Enumerator Observation Household Level**

- Courtyard size and cleanliness – presence of solid waste, human waste, animal waste
- Cleanliness of toilet? Wash station near toilet? Soap visible?
- Does the household have any fruit trees in the compound? Any other trees?
- Is there a kitchen garden?
- Are animals (including chicken ducks etc.) in a separate space or are they roaming freely in the courtyard or other spaces where household members are sitting.

**10. Data needed from village survey for listing survey**

**Enumerator observation street level (street identified in GIS data with unique id)**

- Paved – soled, brick, unpaved
- Width of lane
- Condition of paving
- Open drains, closed drains, underground sewers, no drains
- Any visible solid waste
- Any visible animal waste
- Any standing water

[Get pictures of checklist for all streets and lanes]

**Zaat list** [with relative ranking- needed for all settlements by settlement identifier]

**iii. A detailed multi-purpose household survey**

- A more detailed household survey will be done in a selected subset of revenue villages from each tehsil. These villages will constitute the core sample for the impact evaluation of the project. In each village a subset of households will be interviewed. The household list will be drawn from the listing survey and will be provided to the firm. Households early in their life cycle will be prioritized to ensure a sufficient sample of infants post intervention, since the main objective is to assess child stunting. Approximately 600 villages (400 T and 200 C) will be selected for the impact evaluation. Approximately 25 households will be interviewed per village. The baseline will need to be done after the infrastructure design is completed for all villages so village clusters can be randomized over time.
- The total sample for the detailed multi-purpose household survey will be about 15000 households. The target population is households with at least 1 married woman - in prime childbearing years – with no children yet or oldest child is age 6 or younger. The

multipurpose household survey could take between 1 to 2.5 hours with a male and a female enumerator interviewing the male and female heads of the household (or other designated household adults). If needed households would be visited more than once to complete the survey. The household survey would be initiated in selected villages after the listing is done and the village has been assigned to treatment or control, On a rolling basis, the baseline is expected to be completed within 6 months for all 15000 households.

- The data collected will include information on: (i) household demographics; (ii) income, employment, assets, and poverty; (iii) WSS infrastructure in the household, payment for WSS, attitudes towards payment for WSS services, level of satisfaction with existing services, testing of source and POU water, and testing of soil etc.; (iv) existing health conditions, costs of health care, knowledge about the health costs of unsafe water and sanitation, knowledge of communicable diseases, like COVID-19; (v) adult anthropometrics; (vi) child module—child’s birth weight, anthropometrics, vaccinations, supplementation, care practices, diarrhea prevalence; (vii) maternal birth histories, ante- and post-natal care received, knowledge of child-care and feeding practices; (viii) women’s role in household and village decision making, participation in income earning activities and other metrics of empowerment; (ix) household practices around solid and animal waste; (x) dietary diversity and quality

### **Expected Outputs at Baseline**

- I. Weekly upload of clean data in Stata format for the listing, village and household surveys as surveys proceed
- II. Clean and well-documented datasets, available within 15 days after the completion of each month’s data collection for each field survey.
- III. Detailed clean shape files and maps of each surveyed village, its settlements and key infrastructure available within 15 days after the completion of each month’s data collection for the village survey
- IV. Provision of relevant data to the MIS team
- V. Pictures of all core infrastructure and village conditions available within 15 days after the completion of each month’s data collection for the village survey
- VI. A report on the main findings from the village survey
- VII. A report on the main findings from the listing survey
- VIII. A report on the main findings from the household baseline

### **Tracking and analysis of MIS data**

The underlying randomization will allow not just the surveys but also the MIS, and all other administrative data to contribute directly to the impact assessment, in addition to its use for the day-to-day management of the Project.

To make the best use of this, the MIS will need to maintain high quality and completeness, particularly in the reporting of births, recording of birth weights and child growth monitoring (weight, height, arm circumference) at birth and six months intervals henceforth. The IE firm will need to provide oversight and quality control for this data.

### **B. Midline activities**

#### **To be completed by end 2025 or the agreed date once the baseline is completed**

The baseline survey will be followed by two midline panel surveys, which will follow up with the same households 2.5 and 3.5 years into project implementation.

The households interviewed at baseline will be reinterviewed at each midline using more or less the same instruments with some tweaks to assess emerging outcomes or concerns. Modules on satisfaction with the WSS services provided by the Project and tariffs will be added at this stage.

### **Expected Outputs at Midline I and Midline II**

- (i) Mapping of new and refurbished infrastructure in the village and provision of clean shapefiles and maps
- (ii) Pictures of changes in village conditions
- (iii) Weekly upload of clean midline data in Stata format
- (iv) Clean and well-documented final datasets, available within 15 days after the completion of each month's data collection for each field survey.
- (v) A report on the main findings, including from all testing, with an assessment of project impact on a broad range of project metrics but specifically on child stunting and cognitive development, incidence of diarrhea and other gastro-intestinal diseases in all household members and labor days lost.

### **C. Endline activities**

To be completed in the last year of project implementation. at an agreed date at least 1 year after the last midline is completed

The endline survey will follow up with the same 15000 households in the last year of project implementation. It is expected to take roughly the same time as the baseline and midline, using more or less the same instrument as the midline with some additional tweaks to assess emerging outcomes or concerns.

### **Expected Outputs at Endline**

- (i) Mapping of new and refurbished infrastructure in the village and provision of clean shapefiles and maps
- (ii) Pictures of changes in village conditions
- (iii) Weekly upload of clean endline data in Stata format
- (iv) Clean and well-documented final datasets, available within 15 days after the completion of each month's data collection for each field survey.
- (v) A comprehensive final report on the main findings, including from all testing, with an assessment of project impact on a broad range of project metrics but specifically on child stunting and cognitive development, incidence of diarrhea and other gastro-intestinal diseases in all household members and labor days lost.

### **1. Data Entry Customization**

Data entry will take place concurrently. The data entry software will check for ranges and consistency of the data and generate reports indicating missing data, data outside of accepted ranges and inconsistent answers. These reports will be used by the supervisors to determine if the interviewer must revisit a household or village to complete the questionnaire or to clarify inconsistencies in the data. The selected institution will be responsible for data entry/data base management and will be responsible for monitoring data entry and ensuring that the data is of high quality, is clean and fully coded.

### **2. Training for Field Work**

The training of interviewers and team supervisors will require at least one trip to the field in a proximate locality. The training will need to ensure that the enumerators understand the requirements of each survey and field activity and the protocols for testing and ensure that all activities are done in a manner that ensures high quality and complete data and proper documentation. During training members of the IE team will provide inputs as needed. The firm will ensure that adequate supervision mechanisms are created.

### **3. Data Access**

All of the data produced will be the property of PRMSC

### **4. Qualification of the Consultant Firm**

The firm should be registered in consulting/ advisory business for past 10 years

Should have documented experience of having completed at least three assignments of comparable scale consisting of high-quality surveys with all requisite quality control mechanisms

Shall have adequate logistical capacity

Since the firm will be required to contribute to the design of the IE as well as all analysis – demonstrated experience with the design and implementation of similar large scale randomized evaluations is critical as is the inclusion of a high-quality research team to lead the impact evaluation, undertake all analysis and lead the writing of reports.

The qualification of the principal investigators (PIs) will be the key factor in the evaluation of the proposal. The qualifications of PIs are listed below. The firm should provide the list of PIs designated by the firm to lead the impact evaluation through the IE's lifetime, including their CVs. PIs must commit to leading the IE through its lifetime. The firm should also indicate its past work with the designated PIs.

The firm should also have documented experience of implementing high-quality surveys with all requisite quality control mechanisms. The selected firm will be responsible for all survey related activities including the pilot testing of instruments, the hiring and training of enumerators; the implementation and monitoring of field operations to ensure completeness, quality, data analysis and writing of all reports. All data collection will need to be done using CAPI. If the IE firm plans to use a partner survey firm, then that firm must independently have demonstrated experience in conducting high quality surveys that have contributed to high quality impact evaluations, leading to publications in major international journals. If it plans to use inhouse survey facilities, its main survey staff should have similar levels of experience.

The firm may propose inputs required to execute the assignment as per the defined objectives and should propose corresponding staff requirements, in support of its proposed methodology while mindful of the budget and procurement process adopted for the outsourcing. The firm must be specialized and have the capacity to carry out the required services of the proposed works. However, an indicative staff requirement with level of expertise, is given hereunder:

## 5. Key Staff

Sr. #	Description of Personnel	Qualification	Quantity	Person-months	Total
<b>Key Staff</b>					
1	Principal Investigator(s) (PIs)	A PhD in Economics or Public Policy, with at least 10 years of experience in leading large scale and complex randomized impact evaluations resulting in recent (within the past 5 years) publications in reputed peer reviewed international journals is required. Peer reviewed publications that include a focus on public health, WASH, behavior change related to public health, child health including stunting, and community participation in development will be a significant plus.	2-3	12	24
2	Research Manager	A Master's degree in Economics or, Public Policy, or a relevant discipline. The candidate will primarily be responsible for hiring, supervising, and providing technical support to the PIs, RAs and the field staff. In general, 7 years of handling administrative issues (such as grant reporting and procurement) in comparable projects. S/he will work towards operationalizing the research design and impact assessment into operationally relevant implementation strategies.	1	12	12
3	Research Associate	A Master's degree in Economics, Public Policy, Social Sciences, or a relevant discipline. In general, 05 years of relevant work experience in matters related to data analysis, report writing and assisting the PI in any matters pertaining to the project. Preferably, experience of working in similar projects/assignments in a similar capacity, with international donors, and in organizations with comparable conditions.	3	12	36
4	Survey team lead staff	A Master's Degree in economics, sociology, psychology, public policy or a related discipline with at least 15 years of experience in organizing, training and coordinating survey activities on the scale of this	2	12	24

		programme. Specifically, the survey team lead staff must have extensive experience in leading surveys for large scale randomized impact evaluations that require panel data collection over a significant time period and have resulted in high quality publications by project PIs in reputed peer reviewed international journals. Experience with using multiple survey modalities – PAPI, CAPI, CATI etc., experience with collecting panel data, training of field teams to conduct surveys at all levels, as well as framed field experiments and survey-based experiments and games is a must, as is the ability to guide GIS data collection and the extensive mapping and complete listing of revenue villages. The lead staff should also have strong communication skills, with ability to communicate effectively with PIs, international organizations and government entities in addition to training and coordinating survey staff.			
<b>Total Number of Key Positions</b>			<b>8</b>		
<b>Person Months</b>			<b>Sub Total - A</b>		<b>96</b>
<b>Non-Key Staff</b>					
1	Survey team supervisors (Listing Survey and Village Mapping)	A Bachelor's or Master's degree in economics, sociology, psychology, public policy or a related discipline with at least 10 years of experience with the field supervision of large survey teams in large scale projects that require panel data collection over a significant time period. GIS data collection, extensive mapping of communities, experience using multiple survey modalities – PAPI, CAPI, CATI etc. and experience with conducting framed field experiments and survey-based experiments and games a must.	30	12	360
2	Survey team supervisors (Baseline)	A Bachelor's or Master's degree in economics, sociology, psychology, public policy or a related discipline with at least 10 years of experience with the field supervision of large	8	12	96

		survey teams in large scale projects that require panel data collection over a significant time period. GIS data collection, extensive mapping of communities, experience using multiple survey modalities – PAPI, CAPI, CATI etc. and experience with conducting framed field experiments and survey-based experiments and games a must.			
3	Survey team supervisors (Midline-I)	A Bachelor's or Master's degree in economics, sociology, psychology, public policy or a related discipline with at least 10 years of experience with the field supervision of large survey teams in large scale projects that require panel data collection over a significant time period. GIS data collection, extensive mapping of communities, experience using multiple survey modalities – PAPI, CAPI, CATI etc. and experience with conducting framed field experiments and survey-based experiments and games a must.	8	12	96
4	Survey team supervisors (Midline-II)	A Bachelor's or Master's degree in economics, sociology, psychology, public policy or a related discipline with at least 10 years of experience with the field supervision of large survey teams in large scale projects that require panel data collection over a significant time period. GIS data collection, extensive mapping of communities, experience using multiple survey modalities – PAPI, CAPI, CATI etc. and experience with conducting framed field experiments and survey-based experiments and games a must.	8	12	96
5	Survey team supervisors (Endline)	A Bachelor's or Master's degree in economics, sociology, psychology, public policy or a related discipline with at least 10 years of experience with the field supervision of large survey teams in large scale projects that require panel data collection over a significant time period. GIS data collection, extensive mapping of communities, experience using multiple survey modalities – PAPI, CAPI, CATI etc. and experience with conducting framed field experiments	8	12	96

		and survey-based experiments and games a must.			
6	Enumerator (Baseline)	A Bachelor's degree in economics, sociology, psychology, public policy or a related discipline. At least 5 years of experience with conducting large scale panel surveys using different modalities, GIS data collection, and conducting framed field experiments and survey-based games a significant plus.	340	12	4080
7	Enumerator (Midline-I)	A Bachelor's degree in economics, sociology, psychology, public policy or a related discipline. At least 5 years of experience with conducting large scale panel surveys using different modalities, GIS data collection, and conducting framed field experiments and survey-based games a significant plus.	96	12	1152
8	Enumerator (Midline-II)	A Bachelor's degree in economics, sociology, psychology, public policy or a related discipline. At least 5 years of experience with conducting large scale panel surveys using different modalities, GIS data collection, and conducting framed field experiments and survey-based games a significant plus.	96	12	1152
9	Enumerator (Endline)	A Bachelor's degree in economics, sociology, psychology, public policy or a related discipline. At least 5 years of experience with conducting large scale panel surveys using different modalities, GIS data collection, and conducting framed field experiments and survey-based games a significant plus.	96	12	1152
10	Field Data Entry Specialist	A bachelor's degree in statistics, IT or a relevant discipline with at least 5 years of experience in field-based data entry, field checking and correction of errors and omissions with survey team and data upload, including both PAPI and CAPI modalities.	1	36	36

11	Mapping Specialist	A bachelor's degree in statistics, IT or a relevant discipline with at least 5 years of experience in conducting mapping activities. The candidate must have knowledge and expertise in using mapping GIS software and experience in the field with high quality mapping.	2	12	24
<b>Total Number of Non-Key Positions</b>			<b>693</b>		
<b>Person Months</b>			<b>Sub-Total B</b>		<b>8340</b>
<b>Grand Total (Positions)</b>					
<b>Grand Total (Person Months)</b>			<b>Total (A+B)</b>		<b>8436</b>

## 6. Key Deliverables

Under hybrid payment mode contracting, the following have been identified as key deliverables. However, the same shall be worked out based on the technical proposal of the Implementing Partner Firm and shall be mutually agreed:

Sr. No.	Deliverables	Timelines
(i)	Inception Report/Program Document	One month after signing of contract
(ii)	Listing Survey/village-level/multipurpose household level	<p>Bi-monthly upload of clean data in Stata format</p> <p>Listing and Village-level Survey Report: Within 12 months of signing of contract including uploading of data on MIS System</p> <p>Multipurpose household level Survey Report: Within 12 months of signing of contract</p> <p>Submission of primary data, GIS maps, and pictures</p>
(iii)	Baseline Activities	<p>Clean and well-documented datasets, available within 15 days after the completion of each month's data collection for each field survey.</p> <p>Detailed clean shape files and maps of each surveyed village, its settlements and key infrastructure available within 15 days after the completion of each month's data collection for the village survey.</p> <p>Pictures of all core infrastructure and village conditions available within 15 days after the completion of each month's data collection for the village survey</p> <p>Draft baseline Survey Report: Within 12 months of signing of contract</p> <p>Final Baseline Survey Report: Within 13 months of signing of contract including uploading of data on MIS System</p> <p>In addition to the above stated reports, the firm will be responsible for submitting primary data, GIS maps, pictures and quarterly progress reports (this shall include digitized MIS analysis report).</p>
(iii)	Mid-line Activities	<p>Clean and well-documented datasets, available within 15 days after the completion of each month's data collection for each field survey.</p> <p>Detailed clean shape files and maps of each surveyed village, its settlements and key infrastructure available within 15 days after the completion of each month's data collection for the village survey.</p>

		<p>Pictures of all core infrastructure and village conditions available within 15 days after the completion of each month's data collection for the village survey</p> <p>Midline-I Final Report including uploading of data on MIS System December, 2025</p> <p>Midline-II Final Report including uploading of data on MIS System December, 2026</p> <p>In addition to the above stated reports, the firm will be responsible for submitting primary data, GIS maps, pictures and quarterly progress reports (this shall include digitized MIS analysis report).</p>
(iv)	End-line Activities	<p>Clean and well-documented datasets, available within 15 days after the completion of each month's data collection for each field survey.</p> <p>Detailed clean shape files and maps of each surveyed village, its settlements and key infrastructure available within 15 days after the completion of each month's data collection for the village survey.</p> <p>Pictures of all core infrastructure and village conditions available within 15 days after the completion of each month's data collection for the village survey</p> <p>Draft End-line Survey Report including uploading of data on MIS System November, 2027</p> <p>Final End-line Survey Report including uploading of data on MIS System December, 2027</p> <p>In addition to the above stated reports, the firm will be responsible for submitting primary data, GIS maps, pictures and quarterly progress reports (this shall include digitized MIS analysis report).</p>
(v)	Final Consolidated Report and Presentation	<p>December, 2027</p> <p>This report shall include a report on all activities (Baseline, Midline and Endline). All findings should be clearly reported.</p>

## 7. Selection Method

A firm will be selected in accordance with Least Cost-based Selection (LCS) method, which is similar to QCBS as per the World Bank's "Procurement Regulations for IPF Borrowers – July 2016 (Revised November 2017 & August 2018)"