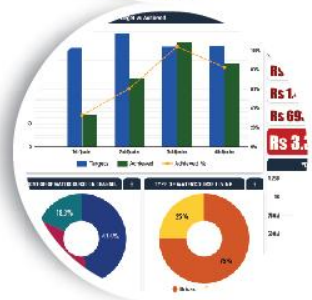
FEDERAL PROJECT MANAGEMENT UNIT
MINISTRY OF NATIONAL
FOOD SECURITY & RESEARCH
ISLAMABAD - PAKISTAN



BASELINE SURVEY REPORT
(FINAL)

WATER CONSERVATION IN BARANI AREAS OF KHYBER PAKHTUNKHWA (WC-KP)

MONITORING, EVALUATION AND IMPACT EVALUATION (ME&IE) CONSULTANTS

A Joint Venture of
G3 Engineering Lead Firm
Consultants (Pvt.) Ltd.

EASE-PAK

ADA
Consultants Inc.

Federal Project Management Unit (FPMU)
Ministry of National Food Security & Research, Islamabad

Monitoring, Evaluation, and Impact Evaluation (ME&IE) Consultants
for
Water Conservation in Barani Areas of Khyber Pakhtunkhwa

BASELINE SURVEY REPORT (FINAL)

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ACRONYMS

ADA	Assistant Director Agriculture
AF	Acre-Feet
ALCI	Agronomist Low-Cost Intervention
BCR	Benefit Cost Ratio
CB	Capacity Building
CSRD	Center for Social Research and Development
CD	Check Dam
DAE	Directorate of Agriculture Engineering
DDA	Deputy Director Agriculture
EAs	Executing Agencies
FOs	Farmers Organizations
FPMU	Federal Project Management Unit
FWMC	Federal Water Management Cell
GAP	Gender Action Plan
GIS	Geographic Information System
IAs	Implementing Agencies
ICR	Intermediate Completion Report
ICT	Islamabad Capital Territory
IRR	Internal Rate of Return
ICT	Information & Communication Technology
ITW	Installation of Tube Wells
KP	Khyber Pakhtunkhwa
ODK	Online Data Key
LCBWCD	Low-Cost Brush Wood Check Dam
LPS	Litter Per Second
LSCD	Loose Stone Check Dam
M&E	Monitoring and Evaluation
MAF	Million Acre Feet
ME&IE	Monitoring, Evaluation, and Impact Evaluation
MIS	Management Information System
MNFSR	Ministry of National Food Security and Research
MTs	Monitoring Tools
MWD	Micro-Watershed Development
S&WC	Soil & Water Conservation
SBS	Stream Bank Stabilization
STW	Solarization of Tube Wells
SDS	Sand Dunes Stabilization
WCBA	Water Conservation in Barani Areas
WP	Water Pond
WR	Water Reservoir
WSHG	Water Seepage Harvesting Galleries

EXECUTIVE SUMMARY

Agriculture serves as a critical driver of economic growth in Khyber Pakhtunkhwa (KP), with significant forward and backward linkages across all sectors. Despite its importance, the sector has suffered from low water-use efficiency for decades. Nearly 50% of agricultural land in KP is rain-fed, severely constraining crop water productivity and limiting agricultural potential. Water scarcity in the Barani (rain-fed) areas poses a serious threat to food and energy security and exacerbates poverty in the region. Notably, agriculture contributes approximately 20% to KP's provincial GDP and employs around 44% of its labor force.

To address these challenges, launched the "**Water Conservation in Barani Areas of Khyber Pakhtunkhwa**" Project in 2019, with completion targeted for 2024. The project aimed to enhance water availability for agriculture, livestock, and human consumption by promoting modern water conservation techniques and bridging the development gap between rain-fed and irrigated areas.

The Project as per PC-I included the following 13 interventions.

1. *Construction of 5,000 water ponds*
2. *Construction of 3,000 Check dams*
3. *Construction of 330 Water Reservoir*
4. *Construction of 2,500 Stream bank stabilization*
5. *Construction of 1,000 Gated field Inlet Outlet/Spillway*
6. *Development of 370 acres land for terracing*
7. *Development of 70 numbers of micro-watershed areas*
8. *Constructing 370 numbers of water Seepage harvesting Galleries*
9. *800 numbers of Agronomic low-cost interventions*
10. *230 acres of Sand Dunes stabilization*
11. *500 Nos. Capacity Building*
12. *Procurement and installation of 700 Solar, pumping System and 300 Tube Wells.*
13. *700 on-site training of farmers in adaptation of new techniques for pumping sub-surface water.*

To evaluate the project's starting conditions, a comprehensive Baseline Survey was conducted by ME&IE Consultants using a stratified 5% sample of completed activity units. The survey covered 278 intervention sites across 35 districts, grouped into five agro-ecological zones. Data was collected using pre-tested Android-based digital questionnaires, with strong quality assurance protocols to ensure accuracy and consistency.

A total of approximately 16,000 activity units were planned, out of which 5,457 were reported completed by the end of the project.

Key Findings:

The majority of the surveyed farmers (67%) operated small farms of 12.5 acres or less, with 93% being landowners. The average farm size was recorded at 13.5 acres. Land use intensity across all farms stood at 75%, indicating considerable underutilization of cultivable land. Cropping intensity was observed at 98.3%, reflecting a predominantly single-cropping system with limited diversification.

Wheat dominated the cropping pattern, accounting for 60% of the cultivated area, followed by maize (27%). Yields were modest, with wheat averaging 18.1 maunds per acre and maize at 20.1 maunds per acre. High-value crops like vegetables and orchards showed greater productivity, yielding 91.5 and 84 maunds per acre respectively, but occupied relatively smaller portions of land.

Overall crop production was led by wheat (30,033 maunds), followed by maize (14,964 maunds) and orchards (10,323 maunds). Agricultural employment was also significant, with over 82,000 man-days recorded across all crop activities—wheat and maize alone accounted for nearly 86% of total labor demand.

Economically, the average net income per acre was Rs. 52,790, with vegetables and orchards offering the highest returns (Rs. 81,200 and Rs. 101,200 per acre, respectively). In contrast, staple crops like wheat and maize yielded moderate profits of Rs. 33,000 and Rs. 35,320 per acre, respectively.

CHAPTER-1: INTRODUCTION

Agriculture is the lifeline of 70% of the population of the country, accounting for 22.67 percent of the gross domestic product (GDP), employing 37.54 percent of the labor force and providing raw material for several value-added sectors. But unfortunately, crop yields, particularly in rain fed (Barani) areas are low and most of the cultural land in Barani areas is not being cultivated because rainwater is not being harvested and conserved properly and hence crop yields need to be enhanced and cultivated area to be increased through modern water saving/ conservation techniques to ensure national food security and poverty reduction in rural areas. Moreover, the rapid growth of Pakistan's urban areas is also increasing the demand for high-value perishable agricultural commodities such as fruits, vegetables, dairy, and meat.

Thus, the Government is focusing to increase the crop yields per acre and cultivated area through improving agricultural infrastructure such as lining of watercourses, constructing water storage tanks, introducing high efficiency irrigation systems, providing laser Levelling equipment to the farmers, and introducing water conservation techniques etc., on the one hand and investing in rural roads, reliable transport networks and other building blocks for improving supply chains.

The Water requirements of KP are different from the other provinces as about half of the total cultivated area is rain fed and in addition to it more than one million hectares are lying barren waste land due non availability of irrigation water. The reasons may include the difference of terrain, topography, climate and cropping pattern in practice and hence necessitates the development of need-based proposals. The objectives of KP's water conservation efforts differ as it requires small investments in infrastructure which can be implemented though local governments. The main economic characteristics of KP province are detailed below.

KP has an agrarian economy where (80%) of the population resides in rural areas and agriculture is their main source of livelihood. The low-income people of the rural areas are in agriculture occupations.

The share of agriculture in the provincial Gross Domestic Product is 22%, whereas it provides employment to 44% of the total labor force. However, 15.5% and 5.8% of the provincial population continues to be moderate and severe food unsecured.

Farm size in KP is small and people depend on the available land for their basic food needs. Although there is irrigated agriculture in KP (0.870 million hectares), yet about 0.760 million hectares are rain fed producing one crop per year with exceptionally low production. An area of 1.245 million hectares is lying barren because of want of water and has been termed as cultivable waste land. Out of the total of 35 districts in the province (including the newly merged tribal districts), 19 districts are entirely rain fed while the remaining irrigated districts have major tracts of land, which depends on rainfall for agriculture.

Barani areas lack the basic infrastructure to harbor sustainable crop growth and uplift of the community at large. Due to low yield or no yield. The barren lands are usually sown from runoff water producing little to no crop in that area. The purpose of the Project entitled "Water Conservation in Barani Area of Khyber Pakhtunkhwa" is to ensure availability of abundant water for crops, livestock as well as for human consumption through modern water saving/conserving techniques to bring those areas at par with those of irrigated lands.

1.1. OBJECTIVES

Baseline surveys are crucial for understanding the initial conditions of a project or program. They serve as a reference point to assess whether the objectives of a particular intervention have been achieved over time.

The objective of the project, "Water Conservation in Barani Areas of Khyber Pakhtunkhwa," is to evaluate the economic and social impacts of its interventions. This assessment is based on the key indicators outlined below:

i. Crops Yields,
ii. Cropped area,
iii. Cropping intensities,
iv. Cropping patterns,
v. Culturable and Cultivated area,
vi. Livestock sector,
vii. Rural incomes and employment,
viii. Gender empowerment

CHAPTER-2: METHODOLOGY

This chapter inter alia covers the survey methodology, total number of activity units to be covered under the project, sample size and sample selection, baseline survey, survey tools/questionnaires, pretesting and finalization of questionnaires, field teams' mobilization and data collection, quality assurance during data collection and analysis, etc.

2.1. Survey Methodology

The baseline assessment has been carried out using a 5% stratified random sample approach. To establish initial benchmarks for various water conservation interventions, surveys were conducted following the issuance of Technical Sanctions and prior to the implementation of intervention activity units. The baseline survey aimed to gather data on key agricultural, social, and economic indicators, including cropping intensities, cultivated area under different crops, crop yields per acre, total production, household income, and employment levels. This data provides a reference point for monitoring future progress and evaluating the effectiveness of the interventions over time.

2.2. Baseline Sample Size

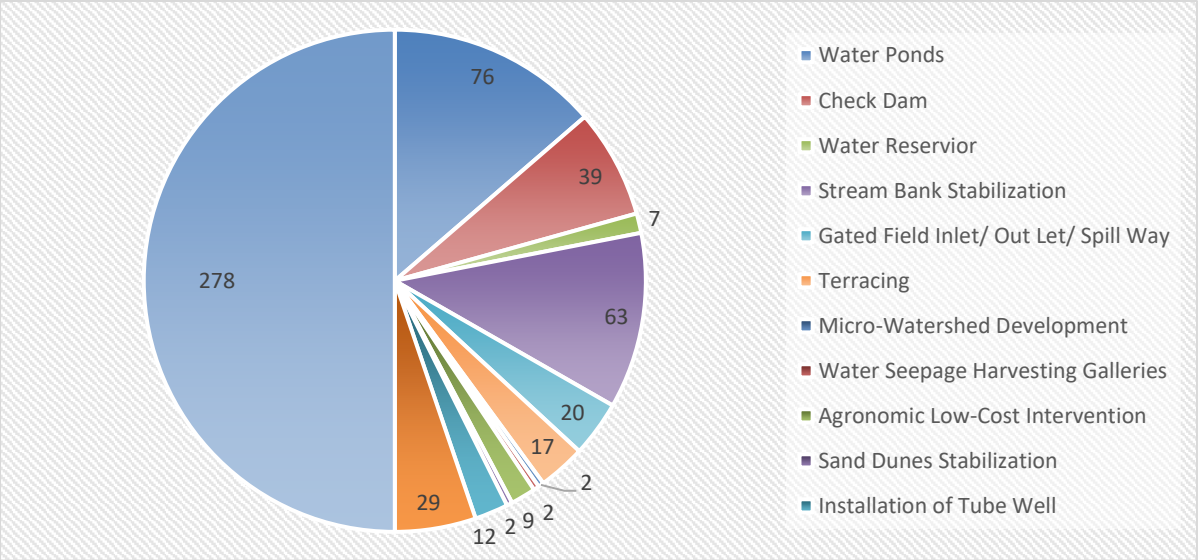
The Baseline Surveys of WC (Rainfed) areas in KP were carried out under the mandate of the ME&IE consultant, as outlined in the project's Terms of Reference (TORs). This assignment commenced approximately 2 ½ years after the initiation of the WC Project.

To establish a credible baseline for future impact assessments, the survey focused on interventions already implemented under the WC Project, with input and validation from the technical team. A total of 278 interventions were assessed across various categories. These included 76 (27%) water ponds, 39 (14%) check dams, 7 (3%) water reservoirs, and 63 (23%) stream bank stabilization measures. In addition, the survey documented 20 (7%) gated field inlet/outlet spillways, 17 (6%) terracing works, 2 (1%) micro-watershed development efforts, 2 (1%) water seepage harvesting galleries, 9 (3%) agronomic low-cost practices, and 2 (1%) sand dune stabilization interventions.

The baseline survey also encompassed 12 (4%) tube wells and 29 (10%) solarized tube wells, which emerged as highly sought-after interventions due to their practical utility and significant potential for improving water accessibility in the project areas.

Table-1: Baseline Sample Size

Activity	Completed	5% Sample	Baseline
Water Pond	1,666	83	76
Check Dams	816	41	39
Water Reservoir	121	6	7
Stream Bank Stabilization	1,320	66	63
Gated Field Inlet Outlet/Spillway	403	20	20
Terracing	342	17	17
Micro-Watershed Development	26	1	2
Water Seepage Harvesting Galleries	37	2	2
Agronomic Low-Cost Intervention	176	9	9
Sand Dunes Stabilization	43	2	2
Installation of Tube Well	141	7	12
Solarization of Tube Well	366	18	29
Overall	**5,457**	**272**	**278**



2.3. Sample Selection of Water Conservations Activity units

As per the PC-I, approximately 16,000 activity units were planned for implementation over the five-year duration of the project, encompassing 11 distinct interventions. By the conclusion of the project, a cumulative total of **5,457** activity units had been completed.

In accordance with the Inception Report, a 5% sample of the completed units was to be selected for baseline surveys, resulting in a required sample size of 272 activity units. These surveys were conducted in three phases: Baseline Survey Phase I (BLS-I) covered 67 units, Phase II (BLS-II) included 93 units, and Phase III (BLS-III) covered 118 units bringing the total number of surveyed activity units to 278.

Sample units were selected from various districts of Khyber Pakhtunkhwa (KP) to ensure broad geographic representation. The districts were grouped into five zones based on terrain, topography, soil characteristics, rainfall, and other climatic conditions. The distribution of districts under each zone is provided in **Table 2**.

A total of surveyed activity units was implemented under the Water Conservation (WC) Project, categorized across the five defined zones. District-wise and intervention-wise details of the completed activity units are provided in **Annex I.**

Table-2: Project Zones with Districts

Zone	Districts in Zones	No. of Districts
Zone-1	Bajaur, Buner, Lower Chitral, Upper Chitral, Malakand, Shangla, Swat, Upper Dir & Lower Dir.	9
Zone-2	Abbottabad, Batagram, Haripur, Kolai-Palas, Lower Kohistan, Mansehra, Tor Ghar & Upper Kohistan.	8
Zone-3	Mardan, Swabi, Charsadda, Khyber, Mohmand, Nowshera & Peshawar.	7
Zone-4	Kohat, Karak, Bannu, Hangu, Kurram & Orakzai.	6
Zone-5	Dera Ismail Khan, Lakki Marwat, Tank, North Waziristan & South Waziristan.	5
Total Districts		**35**

2.4. Approach and Methodology

Monitoring and Evaluation (ME&IE) Consultants have developed a methodology for monitoring and evaluating the mechanism of implementation and execution of various interventions conducted by S&WC and AE Directorates in KP, consisting of data collection and analysis, to accomplish the assignment as follows:

1. Desk review of the PC-1, progress reports of the targets and achievements of both S&WCD and AED in the years 2019-20 and 2023-24.
2. The aim of the field survey is to consult the residents of KPK through individual interviews with pre-structured Questionnaires (Annex-IV), and Focused Group Discussions. The exercise will investigate the viability of the Project in terms of livelihood, the local social system, and the social life of the population.
3. A checklist of issues and a structured questionnaire would be used. The checklist used contains the following aspects.
    a. Gathering information on the existing socio-economic conditions of the residents of the area with a special focus on the beneficiaries of the project, including but not limited to:

i. Demographic composition of the beneficiary families
ii. Agriculture land use, primary agricultural crops, and cropping patterns during the winter and summer seasons.
iii. Average monthly income and expenditure on food and non-food items
iv. Disclosure of information about the project to the people living in the project area

    b. Focus Group Discussions (FGD) with the residents of the villages in the project areas.

2.5. SAMPLING

As mentioned earlier, the sample sizes for BLS-I, BLS-II, and BLS-III were 67, 93, and 118 respectively. Detailed information on these samples is provided in **Table-3** below. Additionally, district-wise and intervention-wise detail of activity units can be found in **Annex I**.

Table-3: Zone wise Activity Units Surveyed during Baseline

Zone	During BLS-I Activity Units	During BLS-II Activity Units	During BLS-III Activity Units	Overall
Zone 1	4	42	51	97
Zone 2	6	7	10	23
Zone 3	32	0	0	32
Zone 4	10	23	30	63
Zone 5	15	21	27	63
Total	**67**	**93**	**118**	**278**

2.5.1. Total interventions and Activity Units

The intervention wise planned project activities as per approved PC-I during the 05 years 2019-2024 include Construction of 5,000 water ponds, Construction of 3,000 Check dams, Construction of 300 Water Reservoirs, Construction of 2,500 Stream bank stabilization, Construction of 1,000 Gated field Inlet Outlet/Spillway, Development of 370 acres land for terracing, Development of 70 numbers of micro-watershed areas, Constructing 370 water Seepage harvesting Galleries, 800 Agronomic low-cost interventions, 230 Acres of Sand Dunes stabilization, Imparting 500 capacity building trainings, Procurement and installation of 700 Solar pumping Systems, Installation of 300 Tube

wells and imparting of 700 on-site trainings to farmers in adaptation of new techniques for pumping sub-surface water. Details may be seen in **Table 4** below.

Table-4: Planned Project Activities as per Approved PC-I

Sr.#	Interventions	Activity Units
Soil and Water Conservation Component		
1	Construction of water ponds	5,000
2	Construction of Check dams	3,000
3	Construction of Water Reservoir	330
4	Construction of Stream bank stabilization.	2,500
5	Construction of Gated field Inlet Outlet/Spillway	1,000
6	Development of acres land for terracing	370
7	Development of micro-watershed areas	70
8	Constructing water Seepage harvesting Galleries	370
9	Agronomic low-cost interventions	800
10	Sand Dunes stabilization (acres)	230
11	Capacity Building Trainings	500
	Sub Total	**14,170**
Agricultural Engineering Component		
12	Procurement and installation of Solar pumping Systems	700
	Installation of Tube wells	300
13	On-site training of farmers in adaptation of new techniques for pumping sub-surface water.	700
	Sub Total	**1700**
	Grand Total	**15,870**

Source: PC-I, WC, Barani KP

2.5.2. Completed Activity Units

Samples for Baseline surveys have been drawn from the activity units completed up to project closing (**Table-5**) out of the total activity units as planned in the PC-I given as above.

Table-5: Completed Activity Units

Interventions	Completed Activity Units
Water Ponds	1,666
Check Dams	816
Water Reservoir	121
Stream-bank stabilization	1,320
Gated field Inlet Outlet/Spillway	403
Terracing	342
Micro-Watershed Development	26
Water Seepage harvesting Galleries	37
Agronomic low-cost interventions	176
Sand Dunes stabilization	43
Installation of Tube Wells	141
Solarization of Tube Wells	366
Overall	**5,457**

2.5.3. Sample Size for Baseline

Out of the 5,457 completed activity units mentioned above, a total of 278 units were selected and surveyed during three phases of the Baseline Survey. A zone-wise and intervention-wise summary of these surveyed activity units is provided in **Table-6.**

Table-6: Project Activities Units Covered Under Baseline

Zone	Intervention	Activity Units	Zone	Intervention	Activity Units
Zone-1	Water Pond	36	Zone-4	Micro-Watershed Development	2
	Check Dam	7		Water Seepage Harvesting Galleries	2
	Stream Bank Stabilization	33		Agronomic Low Cast Intervention	6
	Gated Field Inlet/Outlet/ Spill Way	2		Tube Well	2
	Terracing	13		Solarization of Tubewell	6
	Solarization of Tubewell	6	**Zone-4 Total**		**63**
Zone-1 Total		**97**	Zone-5	Water Pond	21
Zone-2	Water Pond	4		Check Dam	10
	Check Dam	4		Water Reservoir	2
	Water Reservoir	1		Stream Bank Stabilization	8
	Stream Bank Stabilization	4		Gated Field Inlet/Outlet Spillway	12
	Terracing	3		Agronomic Low Cast Intervention	3
	Tube Well	4		Tube Well	2
	Solarization of Tubewell	3		Solarization of Tubewell	5
Zone-2 Total		**23**	**Zone-5 Total**		**63**
Zone-3	Water Pond	4	Overall	Water Pond	78
	Check Dam	5		Check Dams	39
	Water Reservoir	1		Water Reservoir	7
	Stream Bank Stabilization	8		Stream Bank Stabilization	63
	Terracing	1		Gated Field Inlet Outlet/Spillway	20
	Tube Well	4		Terracing	17
	Solarization of Tubewell	9		Micro-Watershed Development	2
Zone-3 Total		**32**		Water Seepage Harvesting Galleries	2
Zone-4	Water Pond	13		Agronomic Low-Cost Intervention	9
	Check Dam	13		Sand Dunes Stabilization	0
	Water Reservoir	3		Installation of Tube Well	12
	Stream Bank Stabilization	10		Solarization of Tube Well	29
	Gated Field Inlet/Outlet Spillway	6	**Grand Total**		**278**

2.6. QUESTIONNAIRES DEVELOPMENT

Monitoring Tools / Questionnaires play vital role for the result findings. To collect the precise data for analysis under both components, a questionnaire was developed for each intervention. While designing the questionnaire, the profile of the respondents and on-ground situation were taken into consideration. Lastly, the terminologies used in the questionnaire were carefully selected, as these should be well understood by the interviewers and able to effectively convey to the respondents, so that accurate reliable data can be collected. A good questionnaire has four qualities: a) it enables a researcher to draw accurate information; ii) questions are arranged in a logical sequence to work smoothly; c) yields minimum variation in qualitative answers and desired variation for quantitative responses; and d) facilitate researcher in data processing.

The following sets of questionnaires **Table-7** were developed for collecting the data on various indicators during Baseline surveys.

Table-7: Questionnaires designed and used for Baseline Surveys

Code	Questionnaire
MT-01	Water Pond (WP) Monitoring Template
MT-02	Check Dam (Cd) Monitoring Template
MT-03	Water Reservoir (WR) Monitoring Template
MT-04	Stream Bank Stabilization (SBS) Monitoring Template
MT-05	Gated Field Inlet Outlets/ Spillways Monitoring Template
MT-06	Terracing Monitoring Template
MT-07	Micro-Watershed Development (MWD) Monitoring Template
MT-08	Water Seepage Harvesting Galleries (WSHG) Monitoring Template
MT-09	i. Agronomic Low-Cost Intervention (ALCI) Monitoring Template
	ii. Low-Cost Brush Wood Check DAM (LCBWCD) Monitoring Template
	iii. Loose Stone Check Dam (LSCD) Monitoring Template
MT-10	Sand Dunes Stabilization (SDS) Monitoring Template
MT-11	Capacity Building (CB) Monitoring Template
MT-12	Installation of Tube Wells (ITW) Monitoring Template
MT-13	Solarization of Tube Wells (STW) Monitoring Template

These questionnaires are attached as **Annex-III** to this report**.**

2.7. PRETESTING & FINALIZATION OF THE QUESTIONNAIRES

Before conducting the Baseline Surveys, the questionnaires were pretested in the field to ensure clarity and relevance. Prior to BLS-I, the tools were field-tested, and complex or overloaded questions were simplified and finalized based on the feedback received. The same finalized questionnaires were then used for BLS-II and BLS-III, as there was no need for further pretesting on the same subject matter.

2.7.1. SELECTION OF SURVEY TEAMS

The field team for the Baseline Surveys consisted of trained enumerators organized into two groups. Each group was responsible for collecting data using a pre-structured questionnaire developed on an Android-based application. A total of 10 team members were deployed across the five project zones.

Data collection was carried out using Android mobile devices, and the completed survey forms were submitted electronically to the central server for further processing and analysis.

2.7.2. TRAINING ON ANDROID BASED data Collection APPLICATION

Data collection for the Baseline Surveys required careful planning and systematic execution. Traditionally, such efforts relied on paper-based methods, which were time-consuming, error-prone, and costly to scale. The integration of Information and Communication Technology (ICT) tools significantly streamlined the process by improving efficiency, reducing errors, and lowering operational costs.

ICT tools used during the Baseline Surveys included Android-based mobile devices, digital survey applications, and cloud-based platforms for real-time data submission. These technologies enabled enumerators to collect and transmit data instantly to a central server, ensuring timely access for review and analysis.

However, technology alone is not enough to ensure success. A skilled and well-trained team is equally critical. To support this, ME&IE Consultants developed comprehensive training modules for field enumerators. These focused on practical exercises, application usage, and field-testing to build familiarity with both the tools and the survey environment.

The use of ICT in the Baseline Surveys has shown how digital innovation can enhance data collection by making it faster, more accurate, and more responsive to project needs. As real-time insights become increasingly important for planning and decision-making, such technology-driven approaches continue to shape the future of effective monitoring and evaluation.

2.7.3. FIELD TEAM MOBILIZATION AND DATA COLLECTION

All field teams worked diligently to collect data using the Android-based application developed for the Baseline Surveys. The Water and Soil Conservation (W&SC) Department provided full support and coordination during field activities. To ensure smooth data transmission, each team was equipped with internet devices, enabling them to submit collected data on a daily basis. This setup also allowed the core team at the central office to monitor team locations and track survey progress in real time.

2.7.4. QUALITY ASSURANCE DURING DATA COLLECTION

The data collection process for the Baseline Surveys was conducted through an Android-based application designed with built-in logical flows and real-time validation checks to enhance data quality. These features ensured completeness, accuracy, and timeliness at every stage of data entry. Continuous feedback, active support, and close monitoring were maintained throughout the exercise.

The application also included mechanisms to monitor both the progress of data collection and the quality of the information being gathered. This enabled the core team to track activities remotely, provide timely feedback, and address any issues as they arose.

Clear guidelines, defined timelines, consistent terminology, and standardized procedures for each activity further contributed to maintaining the quality and reliability of the collected data.

2.7.5. DATA ANALYSIS

The data submitted through the Android application is stored on a centralized server, where it is organized within a central database. This data then undergoes a systematic process that includes data cleaning, validation, and analytical preparation to generate final summary tables. For the Baseline Survey, a range of statistical and analytical techniques were applied. Regression analysis and correlation methods were utilized as needed to explore relationships among independent and dependent variables. Calculations were performed on both primary field data and relevant secondary data to derive results based on key survey indicators.

CHAPTER -3 RESULTS OF THE BASELINE SURVEY

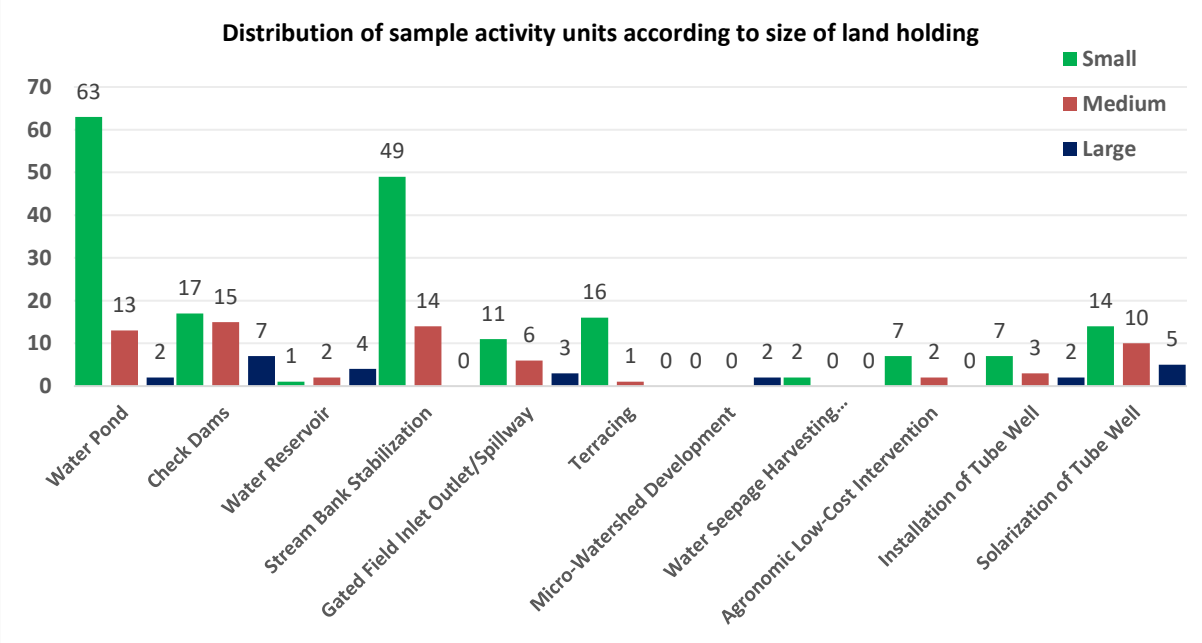
The data collected through the baseline survey has been analyzed, and the status of various indicators has been discussed in this chapter. Before presenting the analysis of these indicators, the farm profile of the surveyed households is outlined to provide contextual understanding.

3.1. Farm Profile

During the Baseline Survey, careful consideration was given to farm size and land tenure during the selection of respondent farmers. Among the 278 farmers surveyed, 187 (67%) operated farms of up to 12.5 acres, 66 farmers (24%) had farm sizes between more than 12.5 and up to 25 acres, and 25 farmers (9%) cultivated land exceeding 25 acres. This distribution ensures a strong representation of small and medium-scale farmers, who constitute the core demographic for water and agricultural development initiatives. The distribution of surveyed farmers by farm size and intervention type is presented in **Table-8.**

Table-8: Distribution of sample activity units according to size of land holding

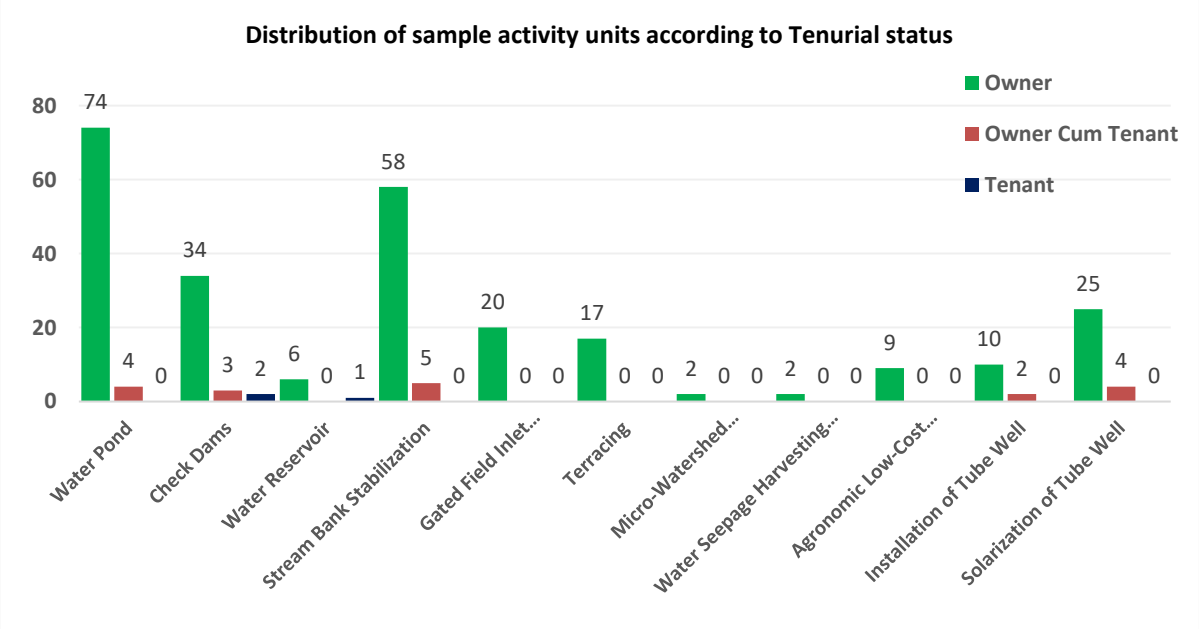
Intervention	Total Respondents	Less than 12.5 acres	Above 12.5 to 25 acres	More than 25 acres
Water Pond	78	63 (81%)	13 (17%)	2 (3%)
Check Dams	39	17 (44%)	15 (38%)	7 (18%)
Water Reservoir	7	1 (14%)	2 (29%)	4 (57%)
Stream Bank Stabilization	63	49 (78%)	14 (22%)	-
Gated Field Inlet Outlet/Spillway	20	11 (55%)	6 (30%)	3 (15%)
Terracing	17	16 (94%)	1 (6%)	-
Micro-Watershed Development	2	-	-	2 (100%)
Water Seepage Harvesting Galleries	2	2 (100%)	-	-
Agronomic Low-Cost Intervention	9	7 (78%)	2 (22%)	-
Installation of Tube Well	12	7 (58%)	3 (25%)	2 (17%)
Solarization of Tube Wells	29	14 (48%)	10 (35%)	5 (17%)
Overall	**278**	**187 (67%)**	**66 (24%)**	**25 (9%)**



Regarding tenurial status, of the **278** farmers surveyed, the majority 93% were full landowners, 6% were identified as owner-cum-tenants, and only 1% were tenants. This ownership structure indicates a predominant presence of land-owning farmers among the respondents, reflecting a relatively secure land tenure environment at the time of the survey. Such distribution is important for understanding land access and management practices across different farming groups. Intervention-wise tenurial classification of respondents is presented in **Table-9**.

Table-9: Distribution of sample activity units according to Tenurial status

Intervention	Total Respondents	Owners	Owner / Tenants	Tenants
Water Pond	78	74 (95%)	4 (5%)	-
Check Dams	39	34 (87%)	3 (8%)	2 (5%)
Water Reservoir	7	6 (86%)	-	1 (14%)
Stream Bank Stabilization	63	58 (92%)	5 (8%)	-
Gated Field Inlet Outlet/Spillway	20	20 (100%)	-	-
Terracing	17	17 (100%)	-	-
Micro-Watershed Development	2	2 (100%)	-	-
Water Seepage Harvesting Galleries	2	2 (100%)	-	-
Agronomic Low-Cost Intervention	9	9 (100%)	-	-
Installation of Tube Well	12	10 (83%)	2 (17%)	-
Solarization of Tube Wells	29	25 (86%)	4 (14%)	-
Overall	**278**	**257 (93%)**	**18 (6%)**	**3 (1%)**



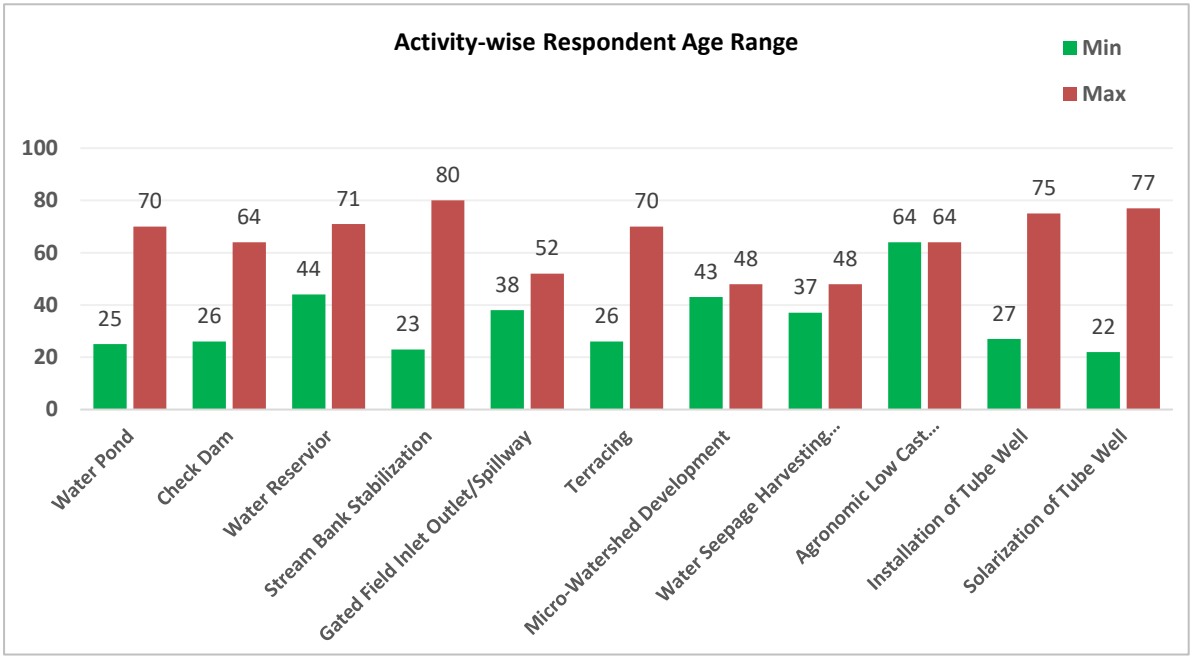
3.2. Respondent Age Range

The baseline survey shows a varied respondent age range across different activities, from 22 to 80 years overall. Labor-intensive activities like Water Pond, Stream Bank Stabilization, and Terracing involve a wider age group (mid-20s to 70s), reflecting broad community participation. Technical interventions like Micro-Watershed Development and Water Seepage Harvesting Galleries are handled by slightly older respondents (mostly 37–48 years), likely due to experience requirements. Water-related technologies such as Tube Well Installation and

Solarization involve the widest age spread, indicating their importance across all age groups. Some activities, like Agronomic Low-Cost Intervention, show limited participation, possibly managed by senior members (age 64). Detail can be found in **Table-10** below.

Table-10: Activity-wise Respondent Age Range

Activity	Min	Max
Water Pond	25	70
Check Dam	26	64
Water Reservoir	44	71
Stream Bank Stabilization	23	80
Gated Field Inlet Outlet/Spillway	38	52
Terracing	26	70
Micro-Watershed Development	43	48
Water Seepage Harvesting Galleries	37	48
Agronomic Low Cast Intervention	64	64
Installation of Tube Well	27	75
Solarization of Tube Well	22	77
Overall	22	80

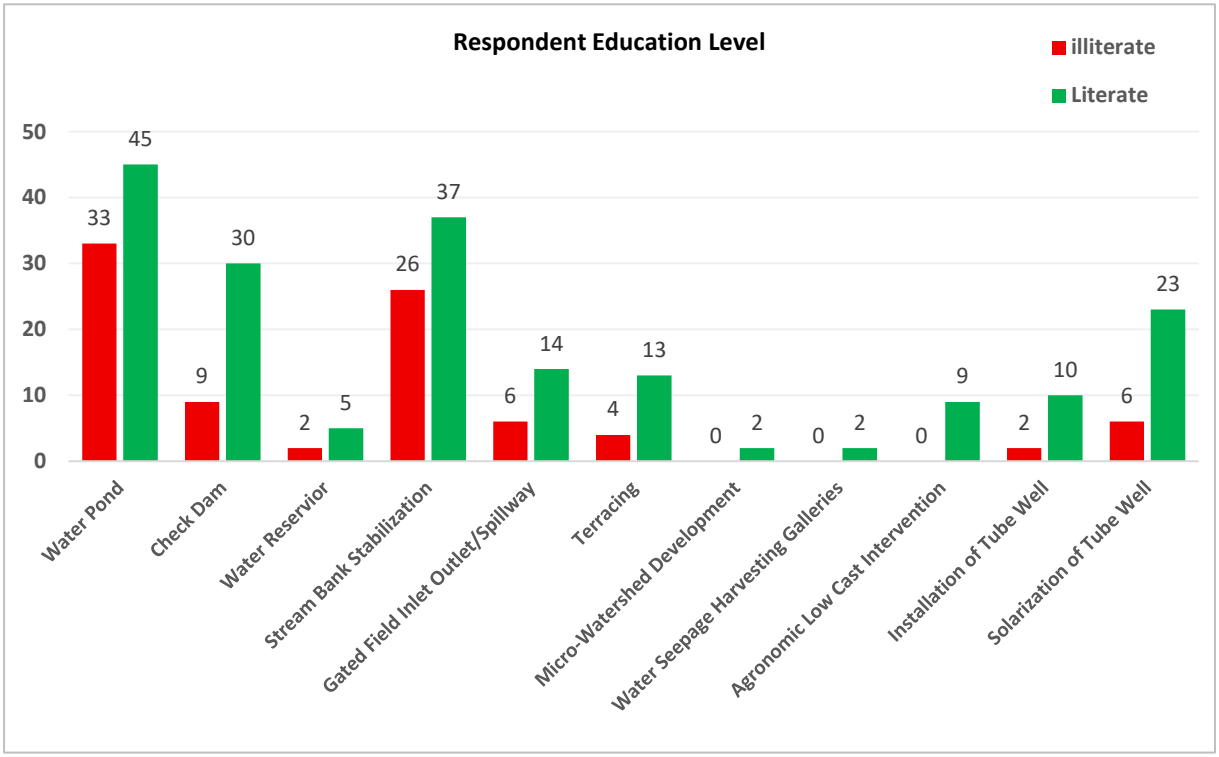


3.3. Respondent Education Level

The baseline survey shows that most respondents are either illiterate (**88**) or literate without formal schooling (**190**). However, a considerable number have higher education, with **56** Matric, **38** Intermediate, and **61** Graduate and above. Labor-based activities like Water Pond, Check Dam, and Stream Bank Stabilization involve more respondents with low or no formal education. In contrast, technical activities like Gated Field Inlet/Outlet, Solarization of Tube Wells, and Agronomic Low-Cost Intervention have a higher proportion of educated respondents. This reflects a mix of educational backgrounds involved across all activities. Details are given in **Table-11** below.

Table-11: Respondent Education Level by Activity

Activity	illiterate	Literate	Primary	Middle	Matric	Intermediate	Graduate and above
Water Pond	33	45	5	7	14	7	12
Check Dam	9	30	3	3	14	5	5
Water Reservior	2	5	1	1	1	2	0
Stream Bank Stabilization	26	37	5	2	18	7	5
Gated Field Inlet Outlet/Spillway	6	14	0	0	0	3	11
Terracing	4	13	0	0	4	5	4
Micro-Watershed Development	0	2	0	0	0	1	1
Water Seepage Harvesting Galleries	0	2	0	0	0	1	1
Agronomic Low Cast Intervention	0	9	0	0	0	0	9
Installation of Tube Well	2	10	1	2	0	2	5
Solarization of Tube Well	6	23	2	3	5	5	8
Overall	**88**	**190**	**17**	**18**	**56**	**38**	**61**



3.4. Livelihood Sources of Respondent

The baseline survey shows that farming is the primary livelihood, with **76%** of respondents overall relying on it. Activities like Micro-Watershed Development and Agronomic Low-Cost Interventions are fully dependent on farming households (**100%**).

Other activities such as Stream Bank Stabilization (**89%**), Terracing (**77%**), and Water Pond (**80%**) also have a high farming share. Some activities show mixed livelihoods for example, Gated Field Inlet Outlet/Spillway has **43%** farmers, **29%** in government service, and **29%** in business, reflecting more diverse participation.

Water Seepage Harvesting Galleries are unique, with no farmers; participants are entirely from government service (**50%**) and business (**50%**). Overall, non-farm livelihoods like government service (**15%**), business (**5%**), and others remain secondary sources. Details can be found in **Table-12** below.

Table-12: Livelihood Sources of Respondents by Activity

Activity	Farming	Govt. Service	Labor	Shop-keeper	Artisan	Business	Household Work	Student
Water Pond	80%	9%	0%	0%	0	9%	3%	0%
Check Dam	76%	4%	4%	8%	0	4%	0%	4%
Water Reservior	71%	14%	0%	0%	0	14%	0%	0%
Stream Bank Stabilization	89%	11%	0%	0%	0	0%	0%	0%
Gated Field Inlet Outlet/Spillway	43%	29%	0%	0%	0	29%	0%	0%
Terracing	77%	23%	0%	0%	0	0%	0%	0%
Micro-Watershed Development	100%	0%	0%	0%	0	0%	0%	0%
Water Seepage Harvesting Galleries	0%	50%	0%	0%	0	50%	0%	0%
Agronomic Low Cast Intervention	100%	0%	0%	0%	0	0%	0%	0%
Installation of Tube Well	50%	42%	0%	0%	0	0%	8%	0%
Solarization of Tube Well	79%	17%	0%	0%	0	0%	3%	0%
Overall	**76%**	**15%**	**1%**	**1%**	**0%**	**5%**	**2%**	**1%**

3.5. Drinkable Water Availability

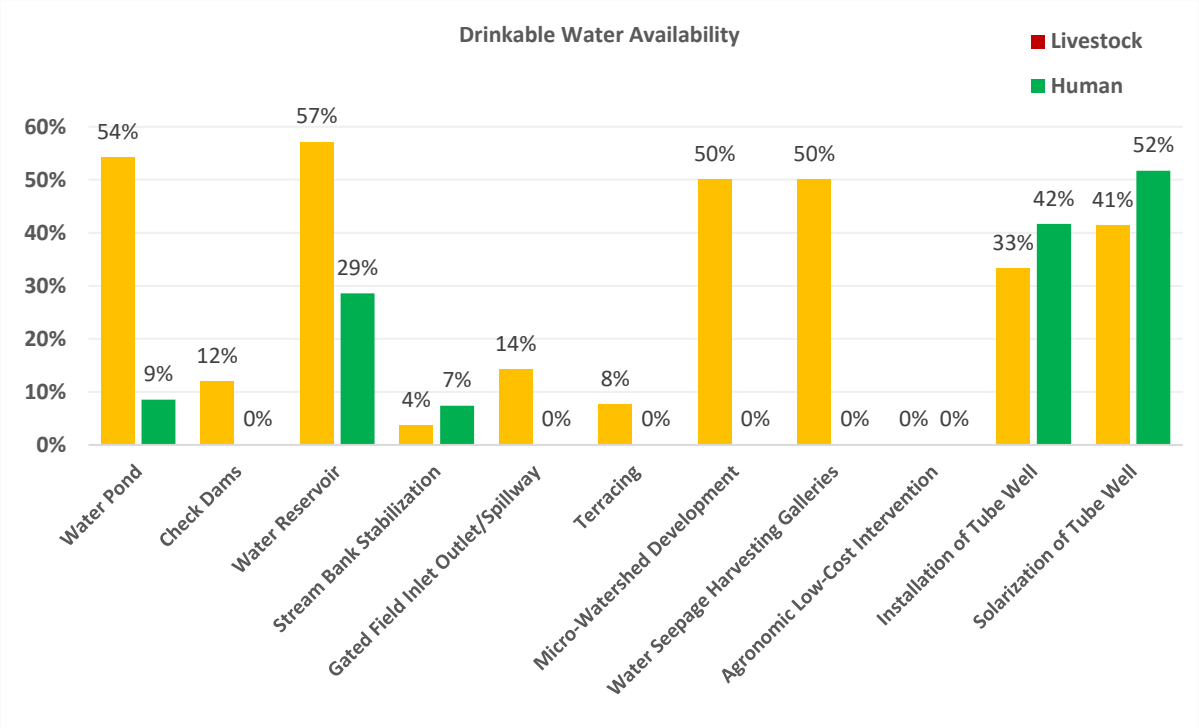
The baseline survey shows that activities like Water Reservoir (**57%**), Water Pond (**54%**), Micro-Watershed Development (**50%**), and Water Seepage Harvesting Galleries (**50%**) mainly support livestock drinking water.

For human/community drinking water, the highest contribution comes from Solarization of Tube Wells (**52%**) and Installation of Tube Wells (**42%**). Other activities show minimal or no contribution towards human drinking water.

This indicates that most watershed activities primarily benefit livestock water needs, while tube well-based interventions significantly support human drinking water. Details are provided in **Table-13** below.

Table-13: Drinkable Water Availability Activity-Wise

Activity	Livestock Drinkable Water	Human / Community Drinkable Water
Water Pond	54%	9%
Check Dams	12%	0%
Water Reservoir	57%	29%
Stream Bank Stabilization	4%	7%
Gated Field Inlet Outlet/Spillway	14%	0%
Terracing	8%	0%
Micro-Watershed Development	50%	0%
Water Seepage Harvesting Galleries	50%	0%
Agronomic Low-Cost Intervention	0%	0%
Installation of Tube Well	33%	42%
Solarization of Tube Well	41%	52%



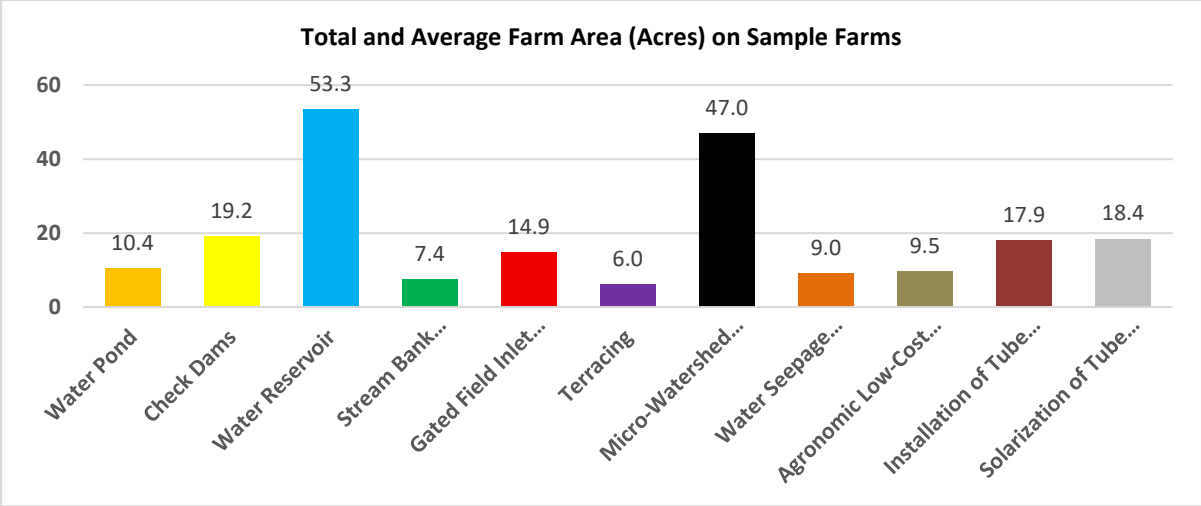
3.6. Average Farm Size

In agricultural terms, farm size or size of holding refers to the total land area operated by a farmer, which includes both owned and rented-in land, excluding any rented-out land. Based on data from the 278 surveyed farms, the total operated area was recorded at **3,746.3 acres**, resulting in an average farm size of **13.5 acres**.

Table-14 presents the distribution of average farm sizes by intervention type. Notable variations are observed across different interventions. The largest average farm size was recorded under Water Reservoirs (**53.3 acres**), followed by Micro-Watershed Development (**47.0 acres**), Check Dams (**19.2 acres**), Solarized Tube Well (**18.4 acres**), Installation of Tube Well (**17.9 acres**), and Gated Field Inlet Outlet/Spillway (**14.9 acres**). Smaller average farm sizes were associated with Water Pond (**10.4 acres**), Agronomic Low-Cost Interventions (**9.5 acres**), Water Seepage Harvesting Galleries (**9.0 acres**), Stream Bank Stabilization (**7.4 acres**), and Terracing (**6.0 acres**). Detailed intervention-wise farm size data is provided in **Table-14**.

Table-14: Total and Average Farm Area or Size of Holding (Acres) on Sample Farms

Interventions	Total Respondents	Total Farm Area	Average Farm Area
Water Pond	78	812.5	10.4
Check Dams	39	748.0	19.2
Water Reservoir	7	373.3	53.3
Stream Bank Stabilization	63	466.2	7.4
Gated Field Inlet Outlet/Spillway	20	297.1	14.9
Terracing	17	102.8	6.0
Micro-Watershed Development	2	94.0	47.0
Water Seepage Harvesting Galleries	2	18.0	9.0
Agronomic Low-Cost Intervention	9	85.5	9.5
Installation of Tube Well	12	215.3	17.9
Solarization of Tube Well	29	533.6	18.4
Overall	**278**	**3746.3**	**13.5**



3.7. Land Use Intensities

Not all agricultural land held by farmers is under cultivation, as certain portions are allocated for housing, livestock, water storage, or consist of non-arable land. As a result, the land use intensity—measured as the proportion of cultivated land to the total farm area cannot exceed 100%.

Findings from the baseline survey reveal that the average land use intensity across all surveyed farms stood at **75.0%,** indicating that a significant share of the land was not actively cultivated at the time of assessment.

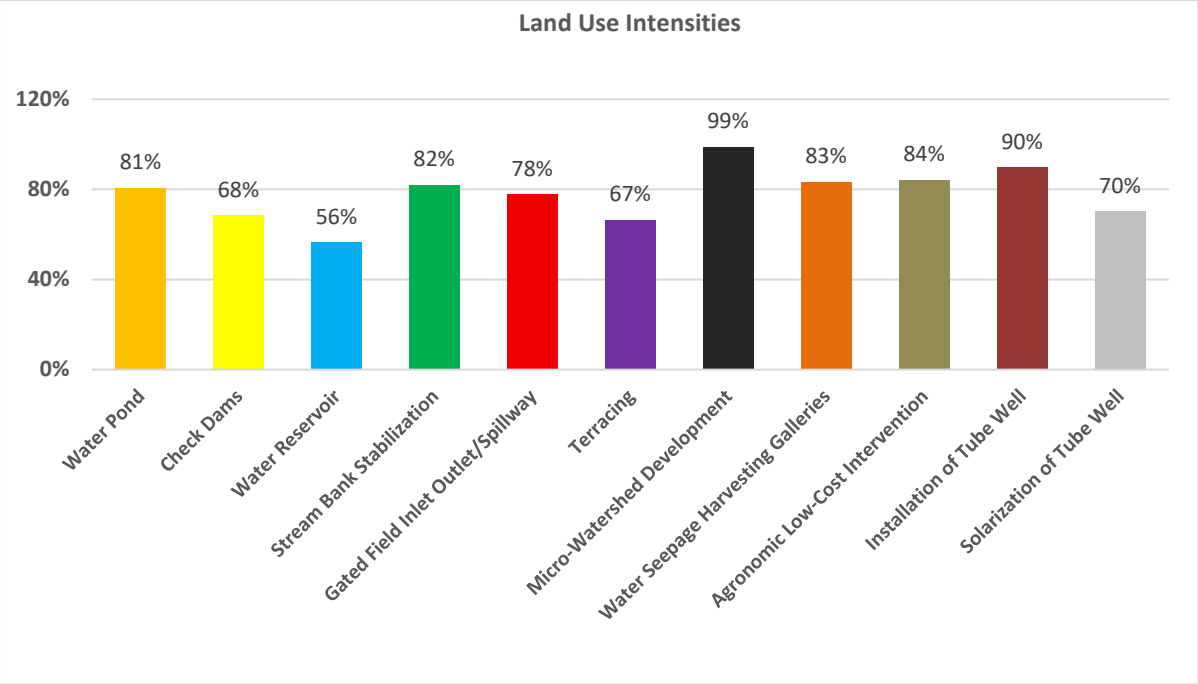
A closer look at land use intensity by type of intervention highlights considerable variation. Micro-Watershed Development demonstrated the highest intensity at **98.9%,** pointing to near-total land utilization. Similarly, Installation of Tube Wells (**89.9%**), Water Seepage Harvesting Galleries (**83.3%**), and Agronomic Low-Cost Interventions (**84.2%**) also showed high utilization of available land.

Moderately high land use intensity was observed for Stream Bank Stabilization (**82.0%**), Water Ponds (**80.6%**), and Gated Field Inlet/Outlet/Spillways (**77.9%**). In contrast, relatively lower intensities were recorded for Check Dams (**68.4%**), Terracing (**66.5%**), and especially Water Reservoirs (**56.5%**), suggesting potential for improved land usage in these areas.

Comprehensive details of land area distribution and corresponding land use intensity for each intervention are provided in **Table-15.**

Table-15: Land Use Intensities on Project Interventions

Intervention	Total Farm Area	Total Cultivated Area	Land Use Intensity (%age points)
Water Pond	812.5	654.9	80.6%
Check Dams	748.0	511.7	68.4%
Water Reservoir	373.3	210.8	56.5%
Stream Bank Stabilization	466.2	382.4	82.0%
Gated Field Inlet Outlet/Spillway	297.1	231.4	77.9%
Terracing	102.8	68.4	66.5%
Micro-Watershed Development	94.0	93.0	98.9%
Water Seepage Harvesting Galleries	18.0	15.0	83.3%
Agronomic Low-Cost Intervention	85.5	72.0	84.2%
Installation of Tube Well	215.3	193.5	89.9%
Solarization of Tube Wells	533.6	375.3	70.3%
Overall	**3746.3**	**2808.4**	**75.0%**



3.8. Cropping Intensities

Another important indicator of agricultural efficiency is cropping intensity, which refers to the number of crops grown on the same piece of cultivated land within a year. In certain cases, land may remain partially unplanted due to water shortages or lack of critical inputs, resulting in cropping intensity below 100%. However, with better access to water and agricultural inputs, farmers can cultivate two or even three crops annually on the same land, increasing cropping intensity above 100%.

According to the baseline data, the overall cropping intensity across all intervention areas was **98.3%,** indicating that on average, nearly one full crop cycle was completed on each unit of cultivated land. However, cropping intensity varied considerably across different types of interventions.

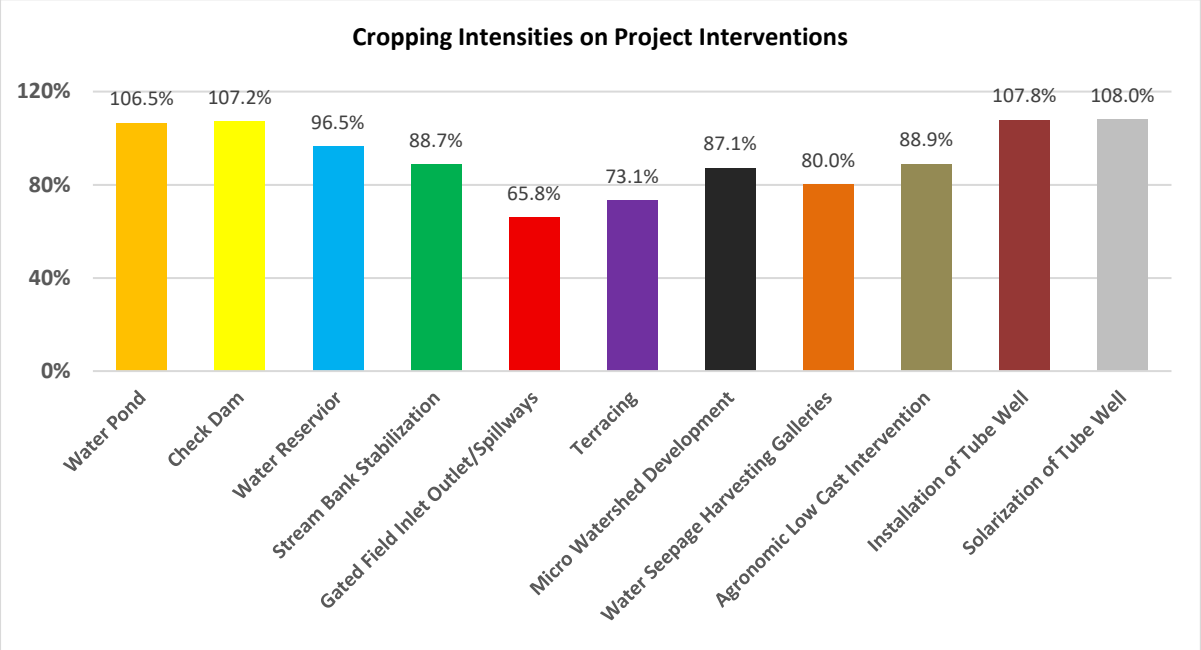
The highest cropping intensity at baseline was recorded under Solarization of Tube Wells, with a cropping intensity of **108.0%**, followed closely by the Installation of Tube Wells at **107.8%,** and Check Dams at **107.2%.** Water Pond also showed relatively high cropping intensity at **106.5%.** These figures suggest that the areas with these interventions were already utilizing their cultivated land quite efficiently even before further development.

On the other hand, certain interventions exhibited much lower baseline cropping intensity, pointing towards underutilization of cultivated land. For example, Gated Field Inlet Outlet/Spillway showed the lowest cropping intensity at **65.8%**, while terracing recorded **73.1%,** Water Seepage Harvesting Galleries **80.0%,** and Micro-Watershed Development **87.1%.** Stream Bank Stabilization and Agronomic Low-Cost Interventions showed cropping intensities of **88.7%** and **88.9%** respectively. These comparatively low figures indicate potential constraints or limited access to necessary inputs at the time of the baseline survey.

A summary of baseline cropping intensity across interventions is presented in **Table-16.**

Table-16: Cropping Intensities on Project Interventions

Intervention	Cultivated Area	Cropped area	Cropping Intensity (%age points)
Water Pond	654.9	697.2	106.5%
Check Dams	511.7	548.7	107.2%
Water Reservoir	210.8	203.4	96.5%
Stream Bank Stabilization	382.4	339.1	88.7%
Gated Field Inlet Outlet/Spillway	231.4	152.3	65.8%
Terracing	68.4	50.0	73.1%
Micro-Watershed Development	93.0	81.0	87.1%
Water Seepage Harvesting Galleries	15.0	12.0	80.0%
Agronomic Low-Cost Intervention	72.0	64.0	88.9%
Installation of Tube Well	193.5	208.5	107.8%
Solarization of Tube Wells	375.3	405.3	108.0%
Overall	**2808.35**	**2761.5**	**98.3%**



3.9. Crop Area /Cropping Patterns (Crop Share)

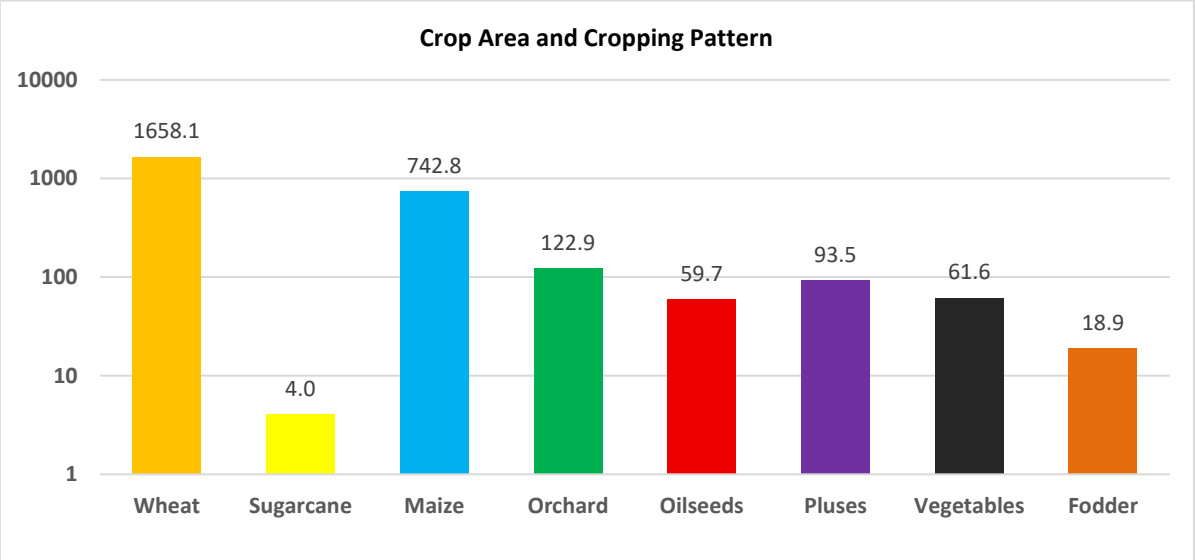
The baseline assessment of water availability and irrigation practices indicates a total cultivated area of **2,761.5** acres across the surveyed farms. Wheat continues to dominate the cropping pattern, with its area recorded at **1,658.1** acres, representing **60.0%** of the total crop acreage. Maize was cultivated on **742.8** acres, maintaining a crop share of **26.9%.**

Orchards accounted for **122.9** acres (**4.5%**), while oilseeds covered **59.7** acres (**2.2%**), showing moderate cultivation levels. Pulses and vegetables occupied **93.5** acres (**3.4%**) and **61.6** acres (**2.2%**) respectively, reflecting a degree of crop diversification. Fodder was grown on **18.9** acres (**0.7%**), and sugarcane, though limited in area, was present on **4.0** acres (**0.15%**).

Overall, the cropping pattern observed at baseline shows a wheat-centric system with maize as a key secondary crop, alongside smaller allocations to orchards, pulses, vegetables, and other crops. Detailed crop-wise figures are presented in **Table-17**.

Table-17: Crop Area and Cropping Pattern (Crop Share)

Crop	Before Improvement	
	Crop (acres)	Crop Share (%)
Wheat	1658.1	60.0%
Sugarcane	4.0	0.15%
Maize	742.8	26.9%
Orchard	122.9	4.5%
Oilseeds	59.7	2.2%
Pluses	93.5	3.4%
Vegetables	61.6	2.2%
Fodder	18.9	0.7%
Overall	**2761.5**	**100%**



3.10. Crop Yields

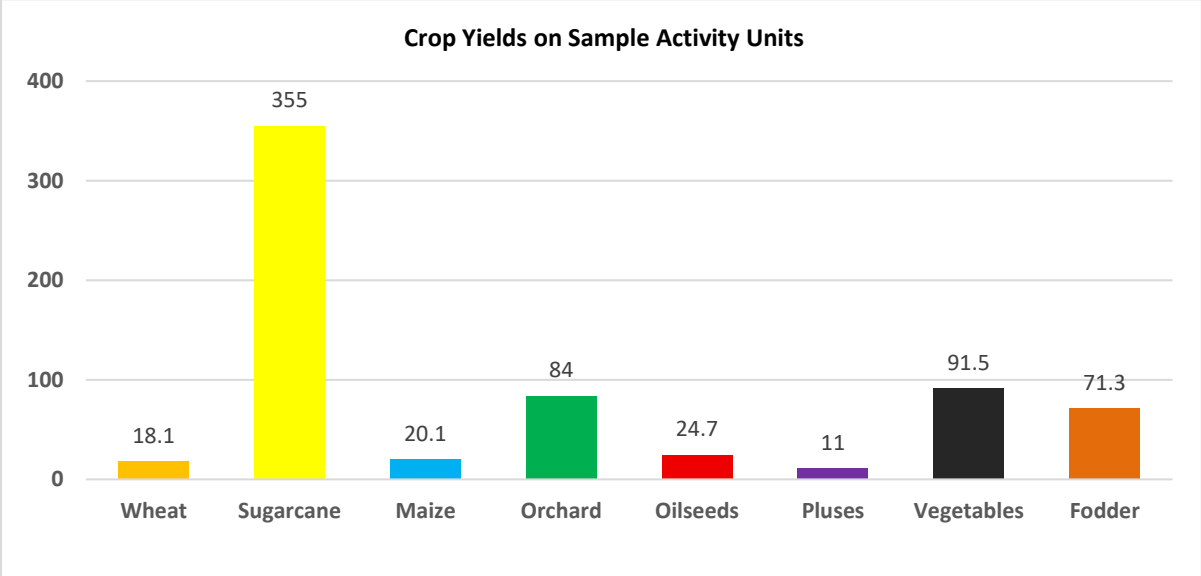
The baseline data presented in **Table-18** outlines the average crop yields recorded on the sample activity units before the implementation of project interventions. These values serve as a benchmark for assessing subsequent improvements in agricultural productivity.

Among key crops, Wheat exhibited an average yield of **18.1** maunds (40 kgs) per acre over a cultivated area of 1**,658.1** acres, highlighting its dominance in the cropping pattern. Maize, grown on **742.8** acres, showed an average yield of **20.1** maunds per acre, whereas Sugarcane, though cultivated on a relatively smaller area of **4.0** acres, achieved a yield of **355** maunds per acre.

Orchards, covering **122.9** acres, yielded **84** maunds per acre, while Vegetables, planted on **61.6** acres, recorded an average yield of **91.5** maunds per acre. Oilseeds and Pulses, grown on **59.7** acres and **93.5** acres respectively, showed average yields of **24.7** and **11.0** maunds per acre. Fodder, cultivated over **18.9** acres, yielded **71.3** maunds per acre.

Table-18: Crop Yields on Sample Activity Units

Crops	Crop Area	Average Crop Yield
	Maunds (40 Kgs) per Acre	
Wheat	1658.1	18.1
Sugarcane	4.0	355
Maize	742.8	20.1
Orchard	122.9	84
Oilseeds	59.7	24.7
Pluses	93.5	11
Vegetables	61.6	91.5
Fodder	18.9	71.3

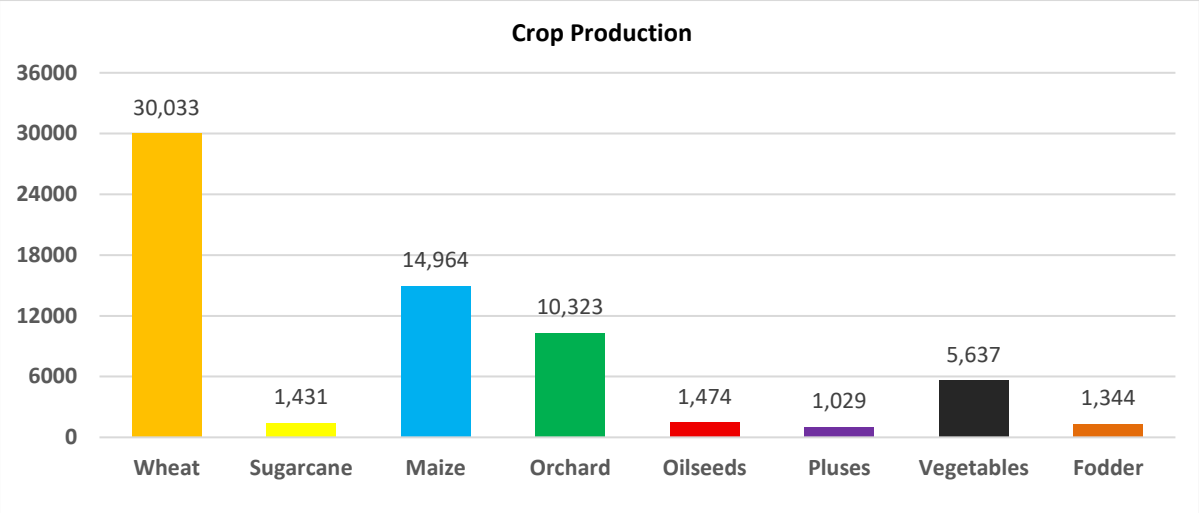


3.11. Crop Production

The baseline data presents the total crop production across various categories, expressed in maunds (1 maund = 40 kg). Wheat constitutes the largest share of total crop output, accounting for ***30,033*** maunds. Maize follows with a production volume of ***14,964*** maunds, while Orchard crops contribute ***10,323*** maunds. Vegetables and Fodder also represent significant portions of the total with ***5,637*** and ***1,344*** maunds, respectively. Among the lower-volume categories are Oilseeds (***1,474*** maunds), Pulses (***1,029*** maunds), and Sugarcane (***1,431*** maunds). These figures reflect the baseline status of crop production prior to the implementation of interventions (**Table-19**).

Table-19: Crop Production

Crops	Production in Maunds (40 Kgs)
Wheat	30,033
Sugarcane	1,431
Maize	14,964
Orchard	10,323
Oilseeds	1,474
Pluses	1,029
Vegetables	5,637
Fodder	1,344



3.12. Agriculture Employment

The baseline data on agricultural employment indicates a significant reliance on manual labor across various cropping systems, with a total of **82,342** man-days recorded. Labor requirements vary by crop type, reflecting differences in cultivation practices, crop duration, and intensity.

Wheat accounts for the largest share of agricultural labor, utilizing ***40,956*** man-days, which constitutes nearly half of the total labor demand. Maize follows with ***29,934*** man-days, indicating its role as the second most labor-intensive crop in the area. Despite being cultivated on a smaller scale, Orchards and Vegetables also contribute meaningfully to employment, requiring ***7,128*** and ***2,328*** man-days, respectively.

Pulses and Oilseeds, though less extensive in terms of area, demand ***804*** and ***627*** man-days, pointing to their moderately labor-intensive nature. Fodder crops, which often play a secondary role in reporting, still require **338** man-days, underscoring their contribution to overall agricultural labor. Sugarcane, while limited in cultivated area, recorded **227** man-days, reflecting its specific management requirements (**Table-20**).

Table-20: Agriculture Employment

Crops	Agricultural Employment in Man Days
Wheat	40,956
Sugarcane	227
Maize	29,934
Orchard	7,128
Oilseeds	627
Pluses	804
Vegetables	2,328
Fodder	338

3.13. Agriculture Household Income

The baseline data on farm income across major crop categories provides insights into the economic returns from agricultural activities. Net income per acre varies considerably by crop type, reflecting differences in production costs, yields, and market values.

Vegetables show the highest net income among all crop categories, averaging ***Rs. 81,200*** per acre. This is followed by orchards, with a net income of ***Rs. 101,200*** per acre, indicating the high-value nature of perennial crops and efficient resource utilization in horticulture-based farming.

Among field crops, maize and wheat generate net incomes of ***Rs. 35,320*** and ***Rs. 33,000*** per acre, respectively, while sugarcane yields ***Rs. 69,220*** per acre. These figures suggest relatively strong economic returns from staple and cash crops when managed effectively.

Oilseeds and pulses, although grown on a smaller scale, contribute to farm income with net returns of ***Rs. 15,300*** and Rs. ***21,700*** per acre, respectively. Fodder crops, critical for livestock-based livelihoods, generate a substantial net income of ***Rs. 64,400*** per acre, driven by low production costs and consistent demand.

On average, the net income per acre across all sample farms is ***Rs. 52,790***, based on a gross income of ***Rs. 94,281*** and an average cost of production of ***Rs. 41,491***. These baseline figures offer a comprehensive understanding of crop-wise profitability and form the foundation for future comparative assessments.

Table-21: Agriculture Household Income

Crops	Gross Income	Cost of Production	Net Income
	Rupees per Acre		
Wheat	62,300	29,300	33,000
Sugarcane	132,200	62,980	69,220
Maize	82,700	47,380	35,320
Orchard	217,400	116,200	101,200
Oil Seeds	28,600	13,300	15,300
Pulses	41,650	19,950	21,700
Vegetables	116,500	35,300	81,200
Fodder	74,900	10,500	64,400
Average	**94,281**	**41,491**	**52,790**

ANNEXURES

ANNEX - I: DISTRICT-WISE/INTERVENTION-WISE DETAIL OF ACTIVITY UNITS

Zone	District	WP	CD	WR	SBS	GFIOS	Terracing	MWD	WSHG	ALCI	TW	STW	Overall
Zone-1	Bajaur	1	1	-	-	-	-	-	-	-	-	-	2
Zone-1	Buner	1	1	-	-	-	-	-	-	-	-	-	2
Zone-1	Chitral	1	1	-	2	-	2	-	-	-	-	-	6
Zone-1	Lower Dir	3	1	-	1	-	1	-	-	-	-	-	6
Zone-1	Malakand	2	1	-	1	1	-	-	-	-	-	2	7
Zone-1	Shangla	1	-	-	1	-	1	-	-	-	-	-	3
Zone-1	Swat	22	2	-	26	1	6	-	-	-	-	4	61
Zone-1	Upper Dir	5	-	-	2	-	3	-	-	-	-	-	10
Zone-2	Abbottabad	1	1	-	1	-	-	-	-	-	-	-	3
Zone-2	Battagram	1	1	-	1	-	1	-	-	-	-	-	4
Zone-2	Haripur	1	1	-	1	-	1	-	-	-	2	2	8
Zone-2	Mansehra	1	1	1	1	-	1	-	-	-	2	1	8
Zone-2	Torghar	-	-	-	-	-	-	-	-	-	-	-	0
Zone-3	Charsadda	-	1	-	2	-	-	-	-	-	-	3	6
Zone-3	Khyber	1	-	-	-	-	-	-	-	-	-	-	1
Zone-3	Lower Mohmand	-	1	-	1	-	-	-	-	-	-	-	2
Zone-3	Mardan	-	1	-	1	-	-	-	-	-	2	-	4
Zone-3	Nowshera	1	1	1	2	-	-	-	-	-	1	1	7
Zone-3	Peshawar	1	-	-	1	-	-	-	-	-	-	4	6
Zone-3	Swabi	1	1	-	1	-	1	-	-	-	1	1	6
Zone-4	Bannu	3	8	-	5	4	-	-	-	2	-	3	25
Zone-4	Hangu	2	2	-	1	-	-	-	1	1	-	-	7
Zone-4	Karak	4	2	2	3	2	-	1	1	2	-	2	19
Zone-4	Kohat	3	1	1	-	-	-	1	-	-	2	1	9
Zone-4	Kurram	1	-	-	1	-	-	-	-	1	-	-	3
Zone-4	Orakzai	-	-	-	-	-	-	-	-	-	-	-	0
Zone-5	Dera Ismail Khan	2	1	-	1	5	-	-	-	1	2	4	16
Zone-5	Lakki Marwat	12	7	1	5	5	-	-	-	2	-	1	33
Zone-5	North Waziristan	3	-	-	-	-	-	-	-	-	-	-	3
Zone-5	South Waziristan	2	1	1	1	-	-	-	-	-	-	-	5
Zone-5	Tank	2	1	-	1	2	-	-	-	-	-	-	6
Overall		**78**	**39**	**7**	**63**	**20**	**17**	**2**	**2**	**9**	**12**	**29**	**278**

WP	Water Pond
CD	Check Dams
WR	Water Reservoir
SPS	Stream Bank Stabilization
GFIOS	Gated Field Inlet Outlet/Spillway
MWD	Micro-Watershed Development
WSHG	Water Seepage Harvesting Galleries
ALCI	Agronomic Low-Cost Intervention
TW	Installation of Tube Well
STW	Solarization of Tube Well

ANNEX - II: ZONE WISE BASELINE FIELD SURVEY SCHEDULE

Phase.#	Survey Date	District	Team.#
Baseline-Phase-I	28-Jan-2022	Bannu	Team-3
Baseline-Phase-I	03-Feb-2022	Bannu	Team-3
Baseline-Phase-I	04-Feb-2022	Bannu	Team-3
Baseline-Phase-I	07-Feb-2022	Bannu	Team-3
Baseline-Phase-I	25-Nov-2021	Charsadda	Team-2
Baseline-Phase-I	26-Nov-2021	Charsadda	Team-2
Baseline-Phase-I	29-Nov-2021	Charsadda	Team-2
Baseline-Phase-I	30-Nov-2021	Charsadda	Team-2
Baseline-Phase-I	23-Dec-2021	Dera Ismail Khan	Team-3
Baseline-Phase-I	27-Dec-2021	Dera Ismail Khan	Team-3
Baseline-Phase-I	29-Dec-2021	Dera Ismail Khan	Team-3
Baseline-Phase-I	31-Dec-2021	Dera Ismail Khan	Team-3
Baseline-Phase-I	04-Jan-2022	Dera Ismail Khan	Team-3
Baseline-Phase-I	23-Dec-2021	Haripur	Team-1
Baseline-Phase-I	26-Dec-2021	Haripur	Team-1
Baseline-Phase-I	08-Feb-2022	Karak	Team-3
Baseline-Phase-I	09-Feb-2022	Karak	Team-3
Baseline-Phase-I	22-Dec-2021	Kohat	Team-2
Baseline-Phase-I	23-Dec-2021	Kohat	Team-2
Baseline-Phase-I	27-Dec-2021	Kohat	Team-2
Baseline-Phase-I	28-Dec-2021	Kohat	Team-2
Baseline-Phase-I	18-Jan-2022	Lakki Marwat	Team-3
Baseline-Phase-I	20-Jan-2022	Lakki Marwat	Team-3
Baseline-Phase-I	24-Jan-2022	Lakki Marwat	Team-3
Baseline-Phase-I	26-Jan-2022	Lakki Marwat	Team-3
Baseline-Phase-I	01-Feb-2022	Lakki Marwat	Team-3
Baseline-Phase-I	13-Dec-2021	Malakand	Team-1
Baseline-Phase-I	14-Dec-2021	Malakand	Team-1
Baseline-Phase-I	16-Dec-2021	Malakand	Team-1
Baseline-Phase-I	20-Dec-2021	Malakand	Team-1
Baseline-Phase-I	28-Dec-2021	Mansehra	Team-1
Baseline-Phase-I	31-Dec-2021	Mansehra	Team-1
Baseline-Phase-I	03-Jan-2022	Mansehra	Team-1
Baseline-Phase-I	06-Jan-2022	Mansehra	Team-1
Baseline-Phase-I	17-Nov-2021	Mardan	Team-2
Baseline-Phase-I	18-Nov-2021	Mardan	Team-2
Baseline-Phase-I	22-Nov-2021	Mardan	Team-2
Baseline-Phase-I	23-Nov-2021	Mardan	Team-2
Baseline-Phase-I	24-Nov-2021	Mardan	Team-2
Baseline-Phase-I	07-Dec-2021	Mardan	Team-2
Baseline-Phase-I	09-Dec-2021	Mardan	Team-2
Baseline-Phase-I	20-Dec-2021	Mardan	Team-2
Baseline-Phase-I	21-Dec-2021	Mardan	Team-2
Baseline-Phase-I	03-Dec-2021	Nowshera	Team-2
Baseline-Phase-I	08-Dec-2021	Nowshera	Team-2
Baseline-Phase-I	15-Dec-2021	Nowshera	Team-2
Baseline-Phase-I	16-Nov-2021	Peshawar	Team-2
Baseline-Phase-I	01-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	02-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	06-Dec-2021	Peshawar	Team-2

Phase.#	Survey Date	District	Team.#
Baseline-Phase-I	10-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	13-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	14-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	16-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	17-Dec-2021	Peshawar	Team-2
Baseline-Phase-I	22-Nov-2021	Swabi	Team-1
Baseline-Phase-I	24-Nov-2021	Swabi	Team-1
Baseline-Phase-I	26-Nov-2021	Swabi	Team-1
Baseline-Phase-I	29-Nov-2021	Swabi	Team-1
Baseline-Phase-I	02-Dec-2021	Swabi	Team-1
Baseline-Phase-I	06-Dec-2021	Swabi	Team-1
Baseline-Phase-I	07-Dec-2021	Swabi	Team-1
Baseline-Phase-I	09-Dec-2021	Swabi	Team-1
Baseline-Phase-I	06-Jan-2022	Tank	Team-3
Baseline-Phase-I	10-Jan-2022	Tank	Team-3
Baseline-Phase-I	12-Jan-2022	Tank	Team-3
Baseline-Phase-I	14-Jan-2022	Tank	Team-3
Baseline-Phase-II	09-May-2022	Abbottabad	Team-1
Baseline-Phase-II	11-May-2022	Abbottabad	Team-1
Baseline-Phase-II	20-Jul-2022	Abbottabad	Team-1
Baseline-Phase-II	21-Jul-2022	Abbottabad	Team-1
Baseline-Phase-II	01-Aug-2022	Abbottabad	Team-1
Baseline-Phase-II	04-Aug-2022	Abbottabad	Team-1
Baseline-Phase-II	10-Aug-2022	Abbottabad	Team-1
Baseline-Phase-II	31-Aug-2022	Abbottabad	Team-1
Baseline-Phase-II	05-Sept-2022	Abbottabad	Team-1
Baseline-Phase-II	06-Sept-2022	Abbottabad	Team-1
Baseline-Phase-II	24-May-2022	Bannu	Team-3
Baseline-Phase-II	25-May-2022	Bannu	Team-3
Baseline-Phase-II	26-May-2022	Bannu	Team-3
Baseline-Phase-II	31-May-2022	Bannu	Team-3
Baseline-Phase-II	01-Jun-2022	Bannu	Team-3
Baseline-Phase-II	02-Jun-2022	Bannu	Team-3
Baseline-Phase-II	09-May-2022	Charsadda	Team-2
Baseline-Phase-II	10-May-2022	Charsadda	Team-2
Baseline-Phase-II	11-May-2022	Charsadda	Team-2
Baseline-Phase-II	29-Aug-2022	Chitral	Team-1
Baseline-Phase-II	12-May-2022	Dera Ismail Khan	Team-3
Baseline-Phase-II	16-May-2022	Dera Ismail Khan	Team-3
Baseline-Phase-II	18-May-2022	Dera Ismail Khan	Team-3
Baseline-Phase-II	20-May-2022	Dera Ismail Khan	Team-3
Baseline-Phase-II	07-Jun-2022	Dera Ismail Khan	Team-3
Baseline-Phase-II	13-Jun-2022	Haripur	Team-1
Baseline-Phase-II	14-Jun-2022	Haripur	Team-1
Baseline-Phase-II	15-Jun-2022	Haripur	Team-1
Baseline-Phase-II	16-Jun-2022	Haripur	Team-1
Baseline-Phase-II	11-Aug-2022	Haripur	Team-1
Baseline-Phase-II	27-May-2022	Karak	Team-3
Baseline-Phase-II	30-May-2022	Karak	Team-3
Baseline-Phase-II	03-Jun-2022	Karak	Team-3
Baseline-Phase-II	06-Jun-2022	Karak	Team-3
Baseline-Phase-II	12-May-2022	Kohat	Team-2

Phase.#	Survey Date	District	Team.#
Baseline-Phase-II	13-May-2022	Kohat	Team-2
Baseline-Phase-II	16-May-2022	Kohat	Team-2
Baseline-Phase-II	17-May-2022	Kohat	Team-2
Baseline-Phase-II	09-Jun-2022	Lower Dir	Team-3
Baseline-Phase-II	10-Jun-2022	Lower Dir	Team-3
Baseline-Phase-II	13-Jun-2022	Lower Dir	Team-3
Baseline-Phase-II	14-Jun-2022	Lower Dir	Team-3
Baseline-Phase-II	15-Jun-2022	Lower Dir	Team-3
Baseline-Phase-II	30-May-2022	Malakand	Team-2
Baseline-Phase-II	31-May-2022	Malakand	Team-2
Baseline-Phase-II	01-Jun-2022	Malakand	Team-2
Baseline-Phase-II	02-Jun-2022	Malakand	Team-2
Baseline-Phase-II	03-Jun-2022	Malakand	Team-2
Baseline-Phase-II	06-Jun-2022	Malakand	Team-2
Baseline-Phase-II	07-Jun-2022	Malakand	Team-2
Baseline-Phase-II	20-May-2022	Mansehra	Team-1
Baseline-Phase-II	23-May-2022	Mansehra	Team-1
Baseline-Phase-II	26-May-2022	Mansehra	Team-1
Baseline-Phase-II	30-May-2022	Mansehra	Team-1
Baseline-Phase-II	02-Jun-2022	Mansehra	Team-1
Baseline-Phase-II	24-May-2022	Nowshera	Team-2
Baseline-Phase-II	25-May-2022	Nowshera	Team-2
Baseline-Phase-II	26-May-2022	Nowshera	Team-2
Baseline-Phase-II	27-May-2022	Nowshera	Team-2
Baseline-Phase-II	18-May-2022	Peshawar	Team-2
Baseline-Phase-II	19-May-2022	Peshawar	Team-2
Baseline-Phase-II	20-May-2022	Peshawar	Team-2
Baseline-Phase-II	23-May-2022	Peshawar	Team-2
Baseline-Phase-II	12-May-2022	Swat	Team-1
Baseline-Phase-II	16-May-2022	Swat	Team-1
Baseline-Phase-II	19-May-2022	Swat	Team-1
Baseline-Phase-II	06-Jun-2022	Swat	Team-1
Baseline-Phase-II	07-Jun-2022	Swat	Team-1
Baseline-Phase-II	09-Jun-2022	Swat	Team-1
Baseline-Phase-II	17-Jun-2022	Swat	Team-1
Baseline-Phase-II	20-Jun-2022	Swat	Team-1
Baseline-Phase-II	23-Jun-2022	Swat	Team-1
Baseline-Phase-II	27-Jun-2022	Swat	Team-1
Baseline-Phase-II	29-Jun-2022	Swat	Team-1
Baseline-Phase-II	01-Jul-2022	Swat	Team-1
Baseline-Phase-II	04-Jul-2022	Swat	Team-1
Baseline-Phase-II	05-Jul-2022	Swat	Team-1
Baseline-Phase-II	07-Jul-2022	Swat	Team-1
Baseline-Phase-II	13-Jul-2022	Swat	Team-1
Baseline-Phase-II	15-Jul-2022	Swat	Team-1
Baseline-Phase-II	18-Jul-2022	Swat	Team-1
Baseline-Phase-II	22-Jul-2022	Swat	Team-1
Baseline-Phase-II	25-Jul-2022	Swat	Team-1
Baseline-Phase-II	27-Jul-2022	Swat	Team-1
Baseline-Phase-II	29-Jul-2022	Swat	Team-1
Baseline-Phase-II	02-Aug-2022	Swat	Team-1
Baseline-Phase-II	05-Aug-2022	Swat	Team-1

Phase.#	Survey Date	District	Team.#
Baseline-Phase-II	12-Aug-2022	Swat	Team-1
Baseline-Phase-II	15-Aug-2022	Swat	Team-1
Baseline-Phase-II	18-Aug-2022	Swat	Team-1
Baseline-Phase-II	22-Aug-2022	Swat	Team-1
Baseline-Phase-II	25-Aug-2022	Swat	Team-1
Baseline-Phase-II	01-Sept-2022	Swat	Team-1
Baseline-Phase-III	23-Jun-2023	Bajaur	Team-3
Baseline-Phase-III	26-Jun-2023	Bajaur	Team-3
Baseline-Phase-III	19-Jun-2023	Bannu	Team-1
Baseline-Phase-III	20-Jun-2023	Bannu	Team-1
Baseline-Phase-III	21-Jun-2023	Bannu	Team-1
Baseline-Phase-III	22-Jun-2023	Bannu	Team-1
Baseline-Phase-III	23-Jun-2023	Bannu	Team-1
Baseline-Phase-III	26-Jun-2023	Bannu	Team-1
Baseline-Phase-III	27-Jun-2023	Bannu	Team-1
Baseline-Phase-III	03-Jul-2023	Bannu	Team-1
Baseline-Phase-III	04-Jul-2023	Bannu	Team-1
Baseline-Phase-III	05-Jul-2023	Bannu	Team-1
Baseline-Phase-III	06-Jul-2023	Bannu	Team-1
Baseline-Phase-III	07-Jul-2023	Bannu	Team-1
Baseline-Phase-III	08-Aug-2023	Battagram	Team-2
Baseline-Phase-III	09-Aug-2023	Battagram	Team-2
Baseline-Phase-III	10-Aug-2023	Battagram	Team-2
Baseline-Phase-III	15-Aug-2023	Buner	Team-2
Baseline-Phase-III	16-Aug-2023	Buner	Team-2
Baseline-Phase-III	19-Jun-2023	Chitral	Team-3
Baseline-Phase-III	20-Jun-2023	Chitral	Team-3
Baseline-Phase-III	21-Jun-2023	Chitral	Team-3
Baseline-Phase-III	22-Jun-2023	Chitral	Team-3
Baseline-Phase-III	10-Jul-2023	Dera Ismail Khan	Team-1
Baseline-Phase-III	11-Jul-2023	Dera Ismail Khan	Team-1
Baseline-Phase-III	12-Jul-2023	Dera Ismail Khan	Team-1
Baseline-Phase-III	13-Jul-2023	Dera Ismail Khan	Team-1
Baseline-Phase-III	14-Jul-2023	Dera Ismail Khan	Team-1
Baseline-Phase-III	10-Jul-2023	Hangu	Team-3
Baseline-Phase-III	11-Jul-2023	Hangu	Team-3
Baseline-Phase-III	12-Jul-2023	Hangu	Team-3
Baseline-Phase-III	13-Jul-2023	Hangu	Team-3
Baseline-Phase-III	14-Jul-2023	Hangu	Team-3
Baseline-Phase-III	17-Jul-2023	Hangu	Team-3
Baseline-Phase-III	18-Jul-2023	Haripur	Team-3
Baseline-Phase-III	17-Jul-2023	Karak	Team-1
Baseline-Phase-III	18-Jul-2023	Karak	Team-1
Baseline-Phase-III	19-Jul-2023	Karak	Team-1
Baseline-Phase-III	20-Jul-2023	Karak	Team-1
Baseline-Phase-III	21-Jul-2023	Karak	Team-1
Baseline-Phase-III	24-Jul-2023	Karak	Team-1
Baseline-Phase-III	25-Jul-2023	Karak	Team-1
Baseline-Phase-III	26-Jul-2023	Karak	Team-1
Baseline-Phase-III	27-Jul-2023	Karak	Team-1
Baseline-Phase-III	28-Jul-2023	Karak	Team-1
Baseline-Phase-III	31-Jul-2023	Karak	Team-1

Phase.#	Survey Date	District	Team.#
Baseline-Phase-III	19-Jul-2023	Khyber	Team-3
Baseline-Phase-III	20-Jul-2023	Kohat	Team-3
Baseline-Phase-III	21-Jul-2023	Kurram	Team-3
Baseline-Phase-III	24-Jul-2023	Kurram	Team-3
Baseline-Phase-III	01-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	02-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	03-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	04-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	07-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	08-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	09-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	10-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	11-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	14-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	15-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	16-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	17-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	18-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	21-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	22-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	23-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	24-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	25-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	28-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	29-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	30-Aug-2023	Lakki Marwat	Team-1
Baseline-Phase-III	25-Jul-2023	Lower Dir	Team-3
Baseline-Phase-III	26-Jul-2023	Lower Mohmand	Team-3
Baseline-Phase-III	27-Jul-2023	Lower Mohmand	Team-3
Baseline-Phase-III	06-Jul-2023	North Waziristan	Team-3
Baseline-Phase-III	07-Jul-2023	North Waziristan	Team-3
Baseline-Phase-III	11-Aug-2023	Shangla	Team-2
Baseline-Phase-III	14-Aug-2023	Shangla	Team-2
Baseline-Phase-III	27-Jun-2023	South Waziristan	Team-3
Baseline-Phase-III	03-Jul-2023	South Waziristan	Team-3
Baseline-Phase-III	04-Jul-2023	South Waziristan	Team-3
Baseline-Phase-III	05-Jul-2023	South Waziristan	Team-3
Baseline-Phase-III	19-Jun-2023	Swat	Team-2
Baseline-Phase-III	20-Jun-2023	Swat	Team-2
Baseline-Phase-III	21-Jun-2023	Swat	Team-2
Baseline-Phase-III	22-Jun-2023	Swat	Team-2
Baseline-Phase-III	23-Jun-2023	Swat	Team-2
Baseline-Phase-III	26-Jun-2023	Swat	Team-2
Baseline-Phase-III	27-Jun-2023	Swat	Team-2
Baseline-Phase-III	03-Jul-2023	Swat	Team-2
Baseline-Phase-III	04-Jul-2023	Swat	Team-2
Baseline-Phase-III	05-Jul-2023	Swat	Team-2
Baseline-Phase-III	06-Jul-2023	Swat	Team-2
Baseline-Phase-III	07-Jul-2023	Swat	Team-2
Baseline-Phase-III	10-Jul-2023	Swat	Team-2
Baseline-Phase-III	11-Jul-2023	Swat	Team-2
Baseline-Phase-III	12-Jul-2023	Swat	Team-2

Phase.#	Survey Date	District	Team.#
Baseline-Phase-III	13-Jul-2023	Swat	Team-2
Baseline-Phase-III	14-Jul-2023	Swat	Team-2
Baseline-Phase-III	17-Jul-2023	Swat	Team-2
Baseline-Phase-III	18-Jul-2023	Swat	Team-2
Baseline-Phase-III	19-Jul-2023	Swat	Team-2
Baseline-Phase-III	20-Jul-2023	Swat	Team-2
Baseline-Phase-III	21-Jul-2023	Swat	Team-2
Baseline-Phase-III	24-Jul-2023	Swat	Team-2
Baseline-Phase-III	25-Jul-2023	Swat	Team-2
Baseline-Phase-III	26-Jul-2023	Swat	Team-2
Baseline-Phase-III	31-Aug-2023	Tank	Team-1
Baseline-Phase-III	31-Aug-2023	Tank	Team-1
Baseline-Phase-III	27-Jul-2023	Upper Dir	Team-2
Baseline-Phase-III	28-Jul-2023	Upper Dir	Team-2
Baseline-Phase-III	31-Jul-2023	Upper Dir	Team-2
Baseline-Phase-III	01-Aug-2023	Upper Dir	Team-2
Baseline-Phase-III	02-Aug-2023	Upper Dir	Team-2
Baseline-Phase-III	03-Aug-2023	Upper Dir	Team-2
Baseline-Phase-III	04-Aug-2023	Upper Dir	Team-2
Baseline-Phase-III	07-Aug-2023	Upper Dir	Team-2

ANNEX - III: MONITORING TOOLS FOR BASELINE SURVEY

WATER CONSERVATION IN BARANI AREAS OF KHYBER PAKHTUNKHWA (WC-KP)

QUESTIONNARE

A) Baseline Survey ---------- B) Monitoring Survey---------- C) Impact Survey----------

SR. #	DESCRIPTION	
IDENTIFICATION:		
1.	Questionnaire Unique ID	
2.	Division	
3.	District	
4.	Tehsil	
5.	Union Council	
6.	Village	
RESPONDENT INFORMATION:		
7.	Name of Respondent	
8.	Age (Years) (In Completed Years)	
9.	Level of Education (Completed Years)	
10.	Occupation	
11.	Tribe / cast	
12.	Family Members? (Adult equivalent)	
13.	Male-Member full time available for farming (adult equivalent)	
14.	Female-Member full time available for farming (adult equivalent)	
15.	Male-Member part time available for farming (adult equivalent)	

SR. #	DESCRIPTION				
16.	Female-Member part time available for farming (adult equivalent)				
17.	Male-Permanent hired labor (PHL) (adult equivalent)				
18.	Female-Permanent hired labor (PHL) (adult equivalent)				
WATER USED FOR					
19.	Crop production/irrigation		Yes	No	
20.	Livestock drinking		Yes	No	
21.	Human / community consumption		Yes	No	
22.	If Yes in Q 21 - distance & time for fetching water	Before		After	
		Distance (km)	Time (hrs)	Distance (km)	Time (hrs)
LAND UTILIZATION:					
23.	Total gross area (acres) a) Owned b) Shared Cropped c) Rented in d) Rented out	Before Intervention ---------- ---------- ---------- ----------		After Intervention ---------- ---------- ---------- ----------	
24.	Total culturable area (acres)				
25.	Total Cultivated area (acres) a) Irrigated (Source of irrigation): Tube well = 1, Tank = 2, Pond = 3, Other = 4 b) Non-irrigated	Before Intervention ---------- ----------		After Intervention ---------- ----------	
26.	Tenure Status and area (acres): a) Own (O) b) Tenant (T) c) Owner Cum Tenant (OCT)	Before Intervention ----------		After Intervention ----------	

SR. #	DESCRIPTION		
		----------	----------
		----------	----------

27.	Cropped area (acres)	Before Intervention	After Intervention
	a) Irrigated	----------	----------
	b) Non-irrigated	----------	----------
	c) Rabi area	----------	----------
	Wheat (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Barley (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Fodder (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Oilseeds (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Pulses (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Other (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	d) Kharif area	----------	----------
	Maize (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Rice (Area and yield)	-----(Acre)------(Mds	-----(Acre)------(Mds)
	Fodder (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Oilseeds (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Pulses (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Other (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	e) Vegetable area	----------	----------
	i. Rabi	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	ii. Kharif	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	f) Sugarcane area	----------	----------
	i. Fresh	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	ii. Ratoon	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	g) Orchard area	----------	----------
	h) Intercrop/mix crop	-----(Acre)------(Mds)	-----(Acre)------(Mds)
		-----(Acre)------(Mds)	-----(Acre)------(Mds)
		-----(Acre)------(Mds)	-----(Acre)------(Mds)

		-----(Acre)------(Mds)	-----(Acre)------(Mds)
FARM INPUTS & YIELD			
28.	Tractor use for ploughing a) Deep ploughing b) Seed bed preparation ploughing	Hours/acre ---------- ----------	Rate (Rs. /hrs) ---------- ----------
29.	Harvesting & threshing a) Reaper uses for harvesting b) Thresher uses for harvesting c) Combine use for harvesting	Hours/acre ---------- ---------- ----------	Rate (Rs. /hrs) ---------- ---------- ----------
30.	Labour wages a) Male b) Female	Hours/acre ---------- ----------	Rate (Rs. /hrs) ---------- ----------

Name of crop	Area (Acres)	31. Land preparation		32. Seedbed preparation		33. Seed sowing / nursery transplanting															34. Seed treatment cost				35. Farm yard manure (FYM)		
		Hr/ acre	Rate/ hr	Hr/ acre	Rate/ hr	Use of seed		Seedling cost/acre		Sowing Broad cast		Sowing Drill			Transplantation (nursery)			Plantation (orchard)			Costacre	Labour Cost		No. of trollies/ acre)	Cost per trolley (Rs / trolley)	Labour (No.) (Man days)	Labour cost (Rs / acre)
						Kg/ acre	Rs./ kg	Home Grown	Bought (Rs/ac)	Male (MD)	Female (MD)	Cost Rs/acre	Male (MD)	Female (MD)	Cost Rs/acre	Male (MD)	Female (MD)	Cost Rs/acre	Male (MD)	Female (MD)		Male (MD)	Female (MD)				
Rabi wheat																											
Rabi barley																											
Rabi Fodder																											
Rabi Oilseeds																											
Rabi Pulses																											
Rabi Vegetables																											
Other																											
Kharif Maize																											
Kharif Rice																											
Kharif Fodder																											
Kharif Oilseeds																											
Kharif Pulses																											
Kharif Vegetables																											
Sugarcane																											
Orchard																											
Intermix cropping																											
Other																											

Name of crop	36. Use of Fertilizers (No. of bags/acre & price per bag)												37. Number of hoeing/ thinning			38. Mulching / pruning / stalking			39. taxes per crop	40. Tube well irrigation		
	Urea		DAP		Potash (SOP)		NP (23-23)		Other Name		Cost of hired labour		No.	CHL Rs.		No.	CHL Rs.			Hour/acre	Cost/hour	Area irrigated
	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Male (MD)	Female (MD)		Male (MD)	Female (MD)		Male (MD)	Female (MD)				
Rabi wheat																						
Rabi barley																						
Rabi Fodder																						
Rabi Oilseeds																						
Rabi Pulses																						
Rabi Vegetables																						
Other																						
Kharif Maize																						
Kharif Rice																						
Kharif Fodder																						
Kharif Oilseeds																						
Kharif Pulses																						
Kharif Vegetables																						
Sugarcane																						
Orchard																						
Intermix cropping																						
Other																						

Name of crop	41. Spray to control weeds (weedicide)			42. Spray to control diseases (fungicide etc.)			43. Spray to control insects (insecticide)			44. Picking of Orchard / Vegetables			45. Harvesting/ picking							46. Crop yield & prices					
											CHL Rs.			CHL Rs.				CHL Rs.			Yield		Prices		
	No. of spray (per acre)	Cost of sprays	Cost of hired labour	No. of spray (per acre)	Cost of sprays	Cost of hired labour	No. of spray (per acre)	Cost of sprays	Cost of hired labour	No. of picking	Male (MD)	Female (MD)	Harvest material Cost (Rs)	Male (MD)	Female (MD)	Cost of Reaper (Rs)	Cost of Threshing or Combine harvesting	Male (MD)	Female (MD)	Area (acre)	Product (40 Kgs)	By-product (40 Kgs)	Product price (Rs./ 40 Kg)	By-Product (Rs. /40 Kg)	In case sold as such Rs. /acre for fruit plants only
Rabi wheat																								
Rabi barley																								
Rabi Fodder																								
Rabi Oilseeds																								
Rabi Pulses																								
Rabi Vegetables																								
Other																								
Kharif Maize																								
Kharif Rice																								
Kharif Fodder																								
Kharif Oilseeds																								
Kharif Pulses																								
Kharif Vegetables																								
Sugarcane																								
Orchard																								
Intermix cropping																								
Other																								

SOCIAL MOBILIZATION THROUGH CAPACITY BUILDING OF REDUCTION IN WATER DISPUTES, MOTIVATION / PARTICIPATION OF FARMERS:				
47.	Is WCA formed at your Water Sources (WS)? Yes / No. If No move to Q 73.	[ ]		
48.	Name of Farmer			
49.	Contact # of Farmer			
50.	Who contributed for improvement of intervention	Govt.	Farmer	Both
51.	Has the WS been useful to you, a) Yes, b) No.			[ ]
52.	If no, what in your view is lacking in WS? a) Personal property, b) Far away, c) Not available/ accessible) Any other pl. specified			[ ]
53.				[ ]
54.	Are female members involved in decision making? a) Yes, b) No.			[ ]
55.	Was your participation voluntary? a) Yes, b) No.			[ ]
56.	Did you pay any membership contribution to become member of WCA? Yes / No.			[ ]
57.	Do all the WCA members are water users? a) Yes, b) No.			[ ]
58.	How many water disputes solved by WCA till to-date? (numbers)			[ ]
59.	Is there any grievances re-dressal committee regarding water disputes? a) Yes, b) No.			[ ]
60.	Are you willing to contribute your labor or in case affordable money towards the work to be carried out by the organization for the development of your area? a) Yes, b) No., c) Don't Know			[ ]
61.	Does WCA hold regular meetings of the association? a) Yes, b) No.			[ ]
62.	Do you participate in the WCA meetings? a) Yes, b) No.			[ ]
63.	Do you know that the minutes are recorded and got approved in the next meeting? a) Yes, b) No.			[ ]

64.	To what extent are you satisfied with the maintenance of the irrigation system?	Not at all	To some extent	To large extent	
65.	Do decisions make democratically? a) Yes, b) No.			[ ]	
66.	Do majority of the members participate in the meetings? a) Yes, b) No.			[ ]	
67.	What is the frequency of WCA meetings?	Every month	Quarterly	Once a year	As per need arises
68.	Do you aware about functions and responsibilities of the Association? a) Yes, b) No.			[ ]	
69.	Do you think WCA helps in solving your farming problems? a) Yes, b) No.			[ ]	
70.	Do you Know that your water conservation structure is going to be newly constructed/additionally constructed/ reconstructed? a) Yes, b) No.			[ ]	

SOCIAL INFORMATION AND WOMEN PARTICIPATION:				
71.	Do women participate in farming activities? a) Yes, b) No.			[ ]
72.	Have you (female) heard about WC-KP Project? a) Yes, b) No.			[ ]
73.	Do you (female) know about WC-KP. a) Yes, b) No.			[ ]
ENVIRONMENTAL ISSUES:				
74.	Total number of trees on the Water Conservation Structure (WCS) before activity?	(Start) [ ]	(Middle) [ ]	(End) [ ]
75.	Will any tree be cut down on this WCS? a) Yes, b) No.			[ ]
76.	No. of trees to be cut down on this WCS?	(Start) [ ]	(Middle) [ ]	(End) [ ]
77.	No. of trees planted on this WCS after the activity	(Start) [ ]	(Middle) [ ]	(End) [ ]
REDUCTION IN WATER LOGGING AND SALINITY;				
78.	Do you know the depth of Water table of your land? a) Yes, b) No.			[ ]
79.	How much depth of water table was 01 year ago			[ ]

LIVESTOCK/ ANIMALS:			
	Entity*	**Number**	**Value (Rs)**
80.	Buffaloes		
81.	Cows		
82.	Bullocks		
83.	Sheep		
84.	Goats		
85.	Camels		
86.	Poultry		
87.	Horses		
88.	Donkeys		
* Two small animal count one			

INCOME & EXPENSES (Rs in thousands)						
89.	Income from crops from whole year					
90.	Income from livestock from whole year					
91.	Income from labor (from outside farm) per annum					
92.	Any other source----------					
93.	Total income (Per year)					
94.	Total family expenditure (Per Year)					
95.	If expenditure more than income how you manage?		Yes		No	
96.	If Yes Q 99 please respond accordingly	Loan (relative)	Loan (friend)	Loan (banks)	Sale of assets	Any other

HOW MANY TIMES HAVE THE FOLLOWING AGENTS OR REPRESENTATIVES OF THE AGENCIES VISITED YOUR FARM OR YOU VISITED THEM DURING THE LAST TWO SEASONS?			
97.	a) S&WC Directorate representative	No of times [ ]	Benefit achieved Yes [ ], No [ ]
98.	b) Agri. Engineering representative	No of times [ ]	Yes [ ], No [ ]
99.	c) AGES Consultants representative	No of times [ ]	Yes [ ], No [ ]
100.	d) Agriculture extension agent	No of times [ ]	Yes [ ], No [ ]
101.	e) Pesticides company agent	No of times [ ]	Yes [ ], No [ ]
102.	f) Fertilizer company representative	No of times [ ]	Yes [ ], No [ ]
103.	g) Agriculture credit officer	No of times [ ]	Yes [ ], No [ ]

AGRICULTURE EQUIPMENTS:			
104.	Do you own a Tractor? a) Yes, b) No.	[ ]	If Yes value Rs----------
105.	Do you own Thresher? a) Yes, b) No.	[ ]	If Yes value Rs----------
106.	Do you own Seed drill? a) Yes, b) No.	[ ]	If Yes value Rs----------
107.	Do you own Rotavator? a) Yes, b) No.	[ ]	If Yes value Rs----------
108.	Do you own Reaper? a) Yes, b) No.	[ ]	If Yes value Rs----------

WATER CONSERVATION & AGRI ENGINEERING ACTIVITIES			
1.	Water Pond	Yes	No, go to next activity
2.	Check Dam	Yes	No, go to next activity
3.	Water Reservoir	Yes	No, go to next activity
4.	Stream Bank Stabilization (SBS)	Yes	No, go to next activity
5.	Gated Field Inlet Outlets / Spillways (GFIO&S)	Yes	No, go to next activity
6.	Terracing	Yes	No, go to next activity
7.	Micro-Watershed Development (MWD)	Yes	No, go to next activity
8.	Water Seepage Harvesting Galleries (WSHG)	Yes	No, go to next activity
9.	i. Agronomic Low-Cost Interventions	Yes	No, go to next activity
	ii. Low-Cost Brush Wood Check Dam	Yes	No, go to next activity
	iii. Loose Stone Check Dam	Yes	No, go to next activity
10.	Sand Dunes Stabilization	Yes	No, go to next activity
11.	Capacity Building	Yes	No, go to next activity
12.	Installation of Tube Wells	Yes	No, go to next activity
13.	Solarization of Tube Wells	Yes	No, go to next activity

Interviewed By: ----------

Checked By: ----------

ACTIVITY 1. WATER POND

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Water Pond Location	Address ----------	Northing ----------	Easting ----------	
2	Water Pond Number				
3	Source of Water & harvested from	Runoff		Perennial springs	
4	Water Pond Size (feet)	Length----	Width ---	Depth ------	
5	Water Pond Shape	Rectangular	Square	---- ----	-------
6.	Water Storage capacity				
7	Water Pond Structure	Cemented	Earthen	---- ---- -	-------
8	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No		
Water Used For					
9	Crop production / irrigation	Yes	No		
10	Command area of pond (acre)				
11	Community & Livestock Drinking	Yes	No		
12	If Yes in Q 10 (distance & time) for fetching water	Before	Distance Decrease	Time Reduced (hours)	
13.	Ground Water Recharge	Yes	No		
Fish Rearing					
14.	Fish Rearing	Yes	No, go to Q 22		
15	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia etc.)				
16	Total cost	----------Rs per year			
17	Production	----------kg per year			
18	Price	----------Rs per Kg			
19	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home(kg) After-----	
20	Problems/issues in fish farming: Plz rank i. Availability of fingerlings, seedlings etc. ii. Diseases	Yes ----------	Rank ----------	No ----------	

	iii. Manuring / feeds iv. Marketing v. Any other	---------- ---------- ---------- ----------	---------- ---------- ---------- ----------	---------- ---------- ---------- ----------
EMPLOYMENT ENGAGED IN FISH FARMING				
21	Employment i. Permanent ii. Casual iii. Daily wages	Before ---------- ---------- ----------	After ---------- ---------- ----------	
BENEFICIARY FEED BACK				
22	After submission of application, how much period took to complete the water pond?	Months	Days	
23	The Water Pond was completed as per approved standards and specifications	Yes	No	
24	If No in Q 23 than any variations in specifications and	Yes	No	
25	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No comment
27	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
28	The Project Share	Within reasonable time	Required lot of efforts	No comment
29	How you feel maintenance of Water Pond	Easy	Difficult	No comment
30	Do you think Water Pond encourages mosquito population	Yes	No	No comment
31	If yes what measures you take to control it	Sprays	None	No comment
32	Any comment/observation you want to share?	_____ _____		

MT-01: WATER POND (WP) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Water Pond (WP) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Water Pond (WP)**
3.1	**Shape of Water Pond (WP)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the WP using his/her own funds before Government share?**
1	Yes
2	No
4.2	**What benefits you can expect from WP Irrigation (How Mach area)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Reduce soil erosion
6	Better control on water supply

7	Any other, Specify
4.3	**The WP was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the WP, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.6 then continue with Q# 4.6.1	**Otherwise go to Q# 4.7**
4.6.1	**Government share was paid as per cost estimates?**
1	Yes
2	No
4.7	**Does the water depth in WP exceed 5 feet?**
1	Yes
2	No

ACTIVITY 2. CHECK DAM

DEMOGRAPHIC, DIMENSIONS & STRUCTURE										
1	Check Dam Location									
2	Check Dam Number									
3	Source of Water & harvested from					Ditches	Stream	Channels	Gullies	Other
4	Check Dam Type					Land filled		Stone Masonry		
5	Check Dam Purpose	Productive - farming	Flood control – flood water	Intercepting sediments-	Water storage- irrigation	Rock check- stabilizing vegetation or reducing bed gradient		Gully check- control gully development		Others
6	Check Dam Structure					Cemented	Gravel bags	Sand bags	Stone Masonry	-------
7	Soil Reclamation (acres)									
8	a. Approval by S&WC Directorate b. Validated by Consultant (AGES)					Yes Yes		No No		
	BENEFICIARY FEED BACK									
9	After submission of application, how much period took to complete the check dam?					Months		Days		
10	The Check dam was completed as per approved standards and specifications					Yes		No		
11	If No in Q 23 than any variations in specifications					Yes		No		
12	How your application was attended by S&WC staff				Promptly	Took lot of time		No Comment		
13	How you assess survey and design process				Fast Track	Lengthy		No comment		
14	Quality of S&WC staff behavior				Friendly / supportive	Indifferent		No comment		
15	The government Share was paid				Within reasonable time	Required lot of efforts		No comment		
16	How do you matins Check Dam				Easy	Difficult		No comment		
17	Do you think Check Dam encourages mosquito population				Yes	No		No comment		

18	If yes what measures you take to control it	Sprays	None	No comment
19	Any comment/observation you want to share?			

MT-02: CHECK DAM (CD) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Check Dam (CD) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Check Dam (CD)**
3.1	**Shape of Check Dam (CD)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Check Dam (CD) using his/her own funds before Government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Check Dam (CD)**
1	Enhanced ground water recharge siltation or plugging of the gullies reduce velocity of flood water
2	Reduce water bills
3	Extend water supply
4	Reduce soil erosion
5	Better control on water supply
6	Any other, Specify

4.3	**The Check Dam (CD) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**As above the AGES Consultants inspected the excavation?**
1	Yes
2	No
4.6	**Before filling the Check Dam (CD), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Government share was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Check Dam (CD) exceed Veins? /**
1	Yes
2	No
4.9	**Based in the need on cost?**
1	Yes
2	No
4.10	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
If yes in Q# 4.10 then continue with Q# 4.10.1	**Otherwise go to End**

4.10.1	**Is the testing of Joints welded parts done before filling the Check Dam (CD)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 3. WATER RESERVOIR

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Water Reservoir Location	Address ----------	GPS ----------	Coordinate ----------	
2	Water Reservoir Number				
3	Source of Water & harvested from	Rainfall /runoff	Flowing water /perennial springs		
4	Water Reservoir Type	Cemented	Earthen		
5	Water Reservoir Shape	Rectangular	Square	Irregular	-------
6	Water Reservoir Structure	Stone	Masonry		
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No		
Water Used For					
8	Crop production / irrigation	Yes	No		
9	Command area of pond (acre)				
10	Community & Livestock Drinking	Yes	No		
11	If Yes in Q 10 (distance & time) for fetching for water	Before	Distance Decrease	Time Reduced (hours)	
12.	Water table (feet)	Before (-------)	After (-------)		
Fish Rearing					
13.	Fish Rearing	Yes	No, go to Q 22		
14	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia etc.)				
15	Total cost	----------Rs per year			
16	Production	----------kg per year			
17	Price	----------Rs per Kg			
18	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home(kg) After-----	
19	Problems/issues in fish farming: Please rank Availability of fingerlings, seedlings etc. Diseases Manuring / feeds Marketing Any other	Yes	Rank	No	
EMPLOYMENT ENGAGED IN FISH FARMING					

20	Employment Permanent Casual Daily wages	Before	After
BENEFICIARY FEED BACK			
21	After submission of application, how much period took to complete the water reservoir?	Months	Days
22	The Water Pond was completed as per approved standards and specifications	Yes	No
23	If No in Q 23 than any variations in specifications and	Yes	No

24	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
25	How you assess survey and design process	Fast Track	Lengthy	No comment
26	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
27	The government share was paid	Within reasonable time	Required lot of efforts	No comment
28	How you feel maintenance of Water Reservoir	Easy	Difficult	No comment

29	Any comment/observation you want to share?	_____ _____

MT-03: WATER RESERVOIR (WR) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Water Reservoir (CD) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Water Reservoir (CD)**
3.1	**Shape of Water Reservoir (CD)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Water Reservoir (CD) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Water Reservoir (CD)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Reduce soil erosion

6	Better control on water supply
7	Any other, Specify
4.3	**The Water Reservoir (CD) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the Water Reservoir (CD), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No

If yes in Q# 4.7 then continue with Q# 4.10.1	**Otherwise go to End**
4.8.1	**Is the testing of Joints?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 4. STREAM BANK STABILIZATION (SBS)*

DEMOGRAPHIC, DIMENSIONS & STRUCTURE						
1	Stream Bank Stabilization (SBS) Location	Address ----------	GPS ----------	Coordinate ----------		
2	SBS Number					
3	Source of Water & harvested from	Rainfall /runoff	Flood water			
4	SBS Type	a. Vegetative	b. Structural i. Protection bunds ii. Spurs etc.	Combination a & b		
5	SBS Structure	Stone	Gravel bags	Sandbags	Masonry	Any other --------
6	SBS Purpose	To reduce erosion especially in rainy season				
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No			
Water Used For						
8	Erosion control	Yes	No			
9	How much land is protected (Acres)					
BENEFICIARY FEED BACK						
10	After submission of application, how much period took to complete the SBS?	Months	Days			
11	The SBS was completed as per approved standards and specifications	Yes	No			
12	If No in Q 11 than any variations in specifications and	Yes	No			
13	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment		
14	How you assess survey and design process	Fast Track	Lengthy	No comment		
15	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment		
16	The government share was paid	Within reasonable time	Required lot of efforts	No comment		
17	How you feel maintenance of SBS	Easy	Difficult	No comment		
18	Any comment/observation you want to share?	_____ _____				

* Protection wall for erosion control

MT-04: STREAM BANK STABILIZATION (SBS) MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Stream Bank Stabilization (SBS) Construction?**
1	Technical Sanction (SBS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Stream Bank Stabilization (SBS)
3.1	Multiple interventions shape of Stream Bank Stabilization (SBS)?
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Stream Bank Stabilization (SBS) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Stream Bank Stabilization (SBS)**
1	Stop soil erosion
2	Reduce pollution
3	Maintaining the flow or storage capacity of the channel or impoundment.
4	Improving or enhancing the stream corridor for fish and wildlife habitat, aesthetics, and recreation.
5	Reducing the downstream effects of sediment resulting from bank erosion.

6	Better control on water supply
7	Any other, Specify
4.3	**The SBS was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the SBS, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.6 then continue with Q# 4.7.1	**Otherwise go to Q# 4.7**
4.7.1	**Government share was paid as per cost estimates?**
1	Yes
2	No
4.8	**Does the water depth in Stream Bank Stabilization (SBS) exceed 5 feet?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 5. GATED FIELD INLET OUTLETS/ SPILLWAYS

DEMOGRAPHIC, DIMENSIONS & STRUCTURE				
1	Gated field inlet outlets (GFIO) & Field Spillways Location	Address ----------	GPS ----------	Coordinate ----------
2	GFIO & Field Spillways Number			
3	Source of water & harvested from	Rainfall/ Rod-Kohi		Mountains/ Sailaba
4	GFIO & Field Spillways Structure	Cemented		Masonry
5	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes		No No
Water Used For				
6	Crop production / irrigation	Yes		No
7	Command area of GFIO (acre)			
8.	Ground Water Recharge due to GFIO	Yes		No
BENEFICIARY FEED BACK				
9	After submission of application, how much period took to complete the GFIO?	Months		Days
10	The GFIO was completed as per approved standards and specifications	Yes		No
11	If No in Q 10 than any variations in specifications and material used	Yes		No
12	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
13	How you assess survey and design process	Fast Track	Lengthy	No comment
14	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
15	The government share was paid	Within reasonable time	Required lot of efforts	No comment
16	How you feel maintenance of GFIO	Easy	Difficult	No comment
17	Any comment/ observation you want to share?	_____ _____		

MT-05: GATED FIELD INLET OUTLETS/ SPILLWAYS MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Gated Field Inlet Outlets/ Spillways (GFIO) Construction?**
1	Technical Sanction (GFIO) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Gated Field Inlet Outlets/ Spillways (GFIO)
3.1	Shape of Gated Field Inlet Outlets/ Spillways (GFIO)?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Depth
4.1	**The farmer completed the GFIO using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Gated Field Inlet Outlets/ Spillways (GFIO)**
1	Stop soil erosion
2	Harvest runoff water
3	Reduced the velocity of runoff water
4	Improving or enhancing the stream corridor for fish and wildlife habitat, aesthetics, and recreation.
5	Reducing the downstream effects of sediment resulting from bank erosion.
6	Better control on water supply
7	Any other, Specify
4.3	**The GFIO was completed as per approved standards and specifications?**

1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the GFIO, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Government share was paid as per cost estimates depend on the different activities?**
1	Yes
2	No
4.8	**Does the water depth in Gated Field Inlet Outlets/ Spillways (GFIO) exceed 5 feet?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 6. TERRACING

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Terracing Location	Address ----------	GPS ----------	Coordinate ----------	
2	Terracing Activity Field Number				
3	Terracing Type	Contour	Bench	Broad	Etc. .....
4	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes		No No	
Land Used For					
5	Crop production	Yes	No		
6	How much area brought under terracing (acre)				
BENEFICIARY FEED BACK					
7	After submission of application, how much period took to complete the terracing?	Months	Days		
8	The terracing was completed as per approved standards and specifications	Yes	No		
9	If No in Q 8 than any variations in specifications and material used	Yes	No		
10	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment	
11	How you assess survey and design process	Fast Track	Lengthy	No comment	
12	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment	
13	The government share was paid	Within reasonable time	Required lot of efforts	No comment	
14	How you feel maintenance of terracing	Easy	Difficult	No comment	
15	Any comment/observation you want to share?	_____ _____			

MT-06: TERRACING MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Terracing Construction?**
1	Technical Sanction Terracing Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Terracing
3.1	Shape of Terracing?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Depth
4.1	**The farmer completed the Terracing using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Terracing?**
1	Stop land sliding
2	Harvest runoff water
3	Retained the nutrients in the soil otherwise washed away with runoff water
4	Reducing the downstream effects of sediment resulting from bank erosion.
5	Better control on water supply
6	Any other, Specify
4.3	**The Terracing was completed as per approved standards and specifications?**
1	Yes
2	No

4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation?**
1	Yes
2	No
4.6	**Before filling the terracing, the WC-KP staff prepared terracing industry?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Government share was paid as per cost estimates?**
1	Yes
2	No
4.8	**Financial Year**
5.1	**Supervisor Confirmation?**
5.2	**Select Submission Status**
5.3	**Comments of interviewer? (if any) (optional)**

ACTIVITY 7. MICRO-WATERSHED DEVELOPMENT (MWD)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE								
1	Micro-Watershed Development (MWD) Location	Address ----------		GPS ----------		Coordinate ----------		
2	MWD Number							
3	Source of Water & Harvested from	Rainfall/runoff			Flowing water /perennial springs			
4	MWD Type	Small (< 1 acre)		Medium (> 1 acres)		Large (1000 Sq Km)		
5	MWD Purpose	Soil Conservation		Water Conservation		Both		
6	Micro-Watershed Consist of	Water ponds	Mini dams	Check dams	Protection bunds	Spurs	Contour ploughing	Etc.
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes		No No				
MWD Used For								
8	Land /crop production	Yes		No				
9	How much area converted to agriculture land (acres)							
BENEFICIARY FEED BACK								
10	After submission of application, how much period took to complete the MWD?	Months		Days				
11	The MWD was completed as per approved standards and specifications	Yes		No				
12	If No in Q 11 than any variations in specifications and material used	Yes		No				
13	How your application was attended by S&WC staff	Promptly		Took lot of time		No Comment		
14	How you assess survey and design process	Fast Track		Lengthy		No comment		
15	Quality of S&WC staff behavior	Friendly / supportive		Indifferent		No comment		
16	The government share was paid	Within reasonable time		Required lot of efforts		No comment		
17	How you feel maintenance of MWD	Easy		Difficult		No comment		
18	Any comment/observation you want to share?	_____ _____						

MT-07: MICRO-WATERSHED DEVELOPMENT (MWD) MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Micro-Watershed Development (MWD)?**
1	Technical Sanction of Micro-Watershed Development (MWD) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of **Micro-Watershed Development (MWD), if available – Aerial**
3.1	Relevant shape of **Micro-Watershed Development (MWD)**?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Hight
4.1	**The farmer/association completed the Micro-Watershed Development (MWD) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Micro-Watershed Development (MWD)?**
1	Water conservation
2	Soil conservation
3	Better control on water supply
4	Any other, Specify
4.3	**The Terracing was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**

1	Yes
2	No
If yes in Q# 4.4 then continue with Q# 4.5.1	**Otherwise go to Q# 4.6**
4.5	**What Watershed Development activities?**
1	Terracing
2	Water pond
3	Mini dam
4	Check dam
5	Any other
4.6	**Financial Year**
5.1	**Supervisor Confirmation?**
5.2	**Select Submission Status**
5.3	**Comments of interviewer? (if any) (optional)**

ACTIVITY 8. WATER SEEPAGE HARVESTING GALLERIES

DEMOGRAPHIC, DIMENSIONS & STRUCTURE				
1	Water Seepage Harvesting Galleries (WSHG) Location	Address ----------	GPS ----------	Coordinate ----------
2	WSHG Number			
3	Source of Water & harvested from	Sub-surface ground water collection system (tank) with perforated pipes		
4	WSHG Type	Shallow in depth	Constructed in a sloppy area	
5	WSHG Purpose	Irrigation	Drinking	
6	.Approval by S &WC Directorate Validated by Consultant (AGES)	Yes Yes	No No	

WSHG Used For			
7	Land /crop production	Yes	No
8	How much area converted to agriculture land (acres)		

BENEFICIARY FEED BACK				
9	After submission of application, how much period took to complete the WSHG?	Months	Days	
10	The WSHG was completed as per approved standards and specifications	Yes	No	
11	If No in Q 10 than any variations in specifications and material used	Yes	No	
12	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
13	How you assess survey and design process	Fast Track	Lengthy	No comment
14	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
15	The government share was paid	Within reasonable time	Required lot of efforts	No comment
16	How you feel maintenance of WSHG	Easy	Difficult	No comment
17	Any comment/observation you want to share?	_____ _____		

MT-08: WATER SEEPAGE HARVESTING GALLERIES (WSHG) MONITORING TEMPLATE

IDENTIFICATION

Q#	Field Name
1.1	**Status of Water Seepage Harvesting Galleries (WSHG)?**
1	Technical Sanction of Water Seepage Harvesting Galleries (WSHG) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
	2.SPOT CHECK
2.1	**Collect the coordinates**
2.2	Take Picture of Water Seepage Harvesting Galleries (WSHG)
3.1	Shape of Water Seepage Harvesting Galleries (WSHG)?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Hight
4.1	**The farmer/association completed the Water Seepage Harvesting Galleries (WSHG) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Water Seepage Harvesting Galleries (WSHG)?**
1	Water conservation
2	Soil conservation
3	Better control on water supply
4	Any other, Specify
4.3	**The Water Seepage Harvesting Galleries (WSHG) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**

1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation satisfactory?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.6 then continue with Q# 4.6.1	**Otherwise go to Q# 4.7**
4.6.1	**Government share was paid as per cost estimates?**
1	Yes
2	No
4.7	**Financial Year**
4.8	**Supervisor Confirmation?**
5.1	**Select Submission Status**
5.2	**Comments of interviewer? (if any) (optional)**

ACTIVITY 9 i. AGRONOMIC LOW-COST INTERVENTION (ALCI)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Agronomic Low-cost Intervention (ALCI) Location	Address ----------	GPS ---------- ----	Coordinate ----------	
2	ALCI Number				
3	Cover Crops	Legume cover crops (peas, peanut, gram, beans etc.)	Non-legume cover crops (wheat, barley, rye etc.)	Mustard, radish, turnip etc.	Etc.
4	Cover Crops Availability			Yes	No
5	ALCI Improve	Livelihood	Conserve soil	Conserve water	All
6	ALCI Purpose	Cover soil surface & control soil erosion			
7	a. Approval by S&WC Directorate b. Validated by Consultant (AGES)			Yes Yes	No No

Cover Crops to			
8	Conserve soil & water	Yes	No
9	Control soil erosion	Yes	No
10	Increased yield	Yes	No
11	Improve livelihood	Yes	No

BENEFICIARY FEED BACK				
12	After submission of application, how much period took to complete the Agronomic Low-Cost Intervention?	Months	Days	
13	The Agronomic Low-Cost Intervention was completed as per approved standards and specifications	Yes	No	
14	If No in Q 13 than any variations in specifications and material used	Yes	No	
15	The duration of government share paid	Within reasonable time	Required lot of efforts	No comment
16	How you assess survey and design process	Fast Track	Lengthy	No comment
17	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
18	How you feel adoption of Agronomic Low-Cost Intervention	Easy	Difficult	No comment

19	Do you think Agronomic Low-Cost Intervention encourages insect/disease spread	Yes	No	No comment
20	If yes what measures, you take to control it	Sprays	None	No comment
21	Any comment/ observation you want to share?			

MT-09i: AGRONOMIC LOW-COST INTERVENTION (ALCI)

MONITORING TEMPLATE

IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Agronomic Low-Cost Intervention (ALCI)?**
1	Technical Sanction of **Agronomic Low-Cost Intervention (ALCI)** Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of **Agronomic Low-Cost Intervention (ALCI)**
3.1	Shape of **Agronomic Low-Cost Intervention (ALCI)?**
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Height
4.1	**The farmer/association completed the Agronomic Low-Cost Intervention (ALCI) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Agronomic Low-Cost Intervention (ALCI)?**
1	Water conservation
2	Soil conservation
3	Better control on water supply
4	Any other, Specify
4.3	**The Agronomic Low-Cost Intervention (ALCI) was completed as per approved standards and specifications?**
1	Yes
2	No

4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the ALCI, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.6then continue with Q# 4.6.1	**Otherwise go to Q# 4.7**
4.6.1	**Government share was paid as per cost estimates based?**
1	Yes
2	No
4.7	**Financial Year**
4.8	**Supervisor Confirmation?**
5.1	**Select Submission Status**
5.2	**Comments of interviewer? (if any) (optional)**

ACTIVITY 9 ii. LOW-COST BRUSH WOOD CHECK DAM (LCBWCD)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Low-cost Brush Wood Check Dam (LCBWC) Location	Address ----------	GPS ----------	Coordinate ----------	
2	LCBWC Dam Number				
3	Material Used	Bushes	trees	--------	
4	LCBWC Structure	Posts		Brush	
5	LCBWC Dam Improve	Livelihood	Conserve soil	Conserve water	All
6	LCBWC Dam Purpose	Hold fine material carried by flowing water in the gully			
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No		
Low-cost Brush Wood Check Dam to					
8	Conserve soil & water	Soil	Water	Both	
9	Control soil erosion	Yes	No		
10	Increased yield	Yes	No		
11	Improve livelihood	Yes	No		
BENEFICIARY FEED BACK					
12	After submission of application, how much period took to complete the Agronomic Intervention?		Months	Days	
13	The Agronomic Intervention was completed as per approved standards and specifications		Yes	No	
14	If No in Q 13 than any variations in specifications and material used		Yes	No	
15	The duration of government share paid	Within reasonable time	Required lot of efforts	No comment	
16	How you assess survey and design process	Fast Track	Lengthy	No comment	
17	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment	
18	How you feel maintenance of Low-Cost Brush Wood Check Dam	Easy	Difficult	No comment	
19	Any comment/ Observation you want to share?				

MT-09ii: LOWCOST BRUSH WOOD CHECK DAM (LCBWCD) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of** Low-cost Brush Wood Check Dam (LCBWC) **Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of** Low-cost Brush Wood Check Dam (LCBWC)
3.1	**Shape of** Low-cost Brush Wood Check Dam (LCBWC)**?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Low-cost Brush Wood Check Dam (LCBWC) using his/her own government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Low-cost Brush Wood Check Dam (LCBWC)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water

5	Reduce soil erosion
6	Better control on water supply
7	Any other, Specify
4.3	**The Low-cost Brush Wood Check Dam (LCBWC) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the Low-cost Brush Wood Check Dam (LCBWC), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 9 iii. LOOSE STONE CHECK DAM (LSCD)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE						
1	Loose Stone Check Dam Location	Address ----------		GPS ----------	Coordinate ----------	
2	Loose Stone Check Dam Number					
3	Material Used	Stones		----------		
4	Loose Stone Check Dam Area Catchment	100m		<2 ha	--------	
5	Large Stone Check Dam Working / used for	Initial	Small gullies	Gully network	------	
6	Loose Stone Check Dam Purpose	Control channel erosion along gully bed		Stop water fall erosion by stabilizing gully heads	Both	
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)			Yes Yes	No No	

Loose Stone Check Dam to Control			
8	Channel erosion	Yes	No
9	Waterfall erosion	Yes	No
10	Increased yield	Yes	No
11	Improve livelihood	Yes	No

BENEFICIARY FEED BACK				
12	After submission of application, how much period took to complete Loose Stone Check Dam?	Months		Days
13	The Loose Stone Check Dam was completed as per approved standards and specifications	Yes		No
14	If No in Q 13 than any variations in specifications	Yes		No
15	The duration of government share paid	Within reasonable time	Required lot of efforts	No comment
16	How you assess survey and design process	Fast Track	Lengthy	No comment
17	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
18	How you feel maintenance of Loose Stone Check Dam	Easy	Difficult	No comment
19	Do you think Loose Stone Check Dam encourages insect/disease spread	Yes	No	No comment
20	If yes what measures, you take to control it	Sprays	None	No comment

21	Any comment/ Observation you want to share?	

MT-09iii: LOOSE STONE CHECK DAM (LSCD) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Loose Stone Check Dam (LSCD) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Loose Stone Check Dam (LSCD)**
3.1	**Shape of Loose Stone Check Dam (LSCD)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Loose Stone Check Dam (LSCD) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Loose Stone Check Dam (LSCD)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Reduce soil erosion

6	Better control on water supply
7	Any other, Specify
4.3	**The Loose Stone Check Dam (LSCD) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the Loose Stone Check Dam (LSCD), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.6 then continue with Q# 4.6.1	**Otherwise go to Q# 4.7**
4.6.1	**Government share was paid as per cost estimates?**
1	Yes
2	No
4.7	**Does the water depth in Loose Stone Check Dam (LSCD) exceed 5 feet?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 10. SAND DUNES STABILIZATION (SDS)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE				
1	Sand Dunes Stabilization Location	Address ----------	GPS ----------	Coordinate ----------
2	Sand Dunes Stabilization Number			
3	Stabilization of sand dunes methods	Herbaceous plantation	Kana (Saccharum mujga L.)	----------
4	Stabilization of sand dunes purpose	Controlling of sand dunes through plantation		
5	Stabilization of sand dunes increased	Crop Yield	Value addition (homemade items)	----------
6	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)		Yes Yes	No No
Land Used For				
7	Crop production		Yes	No
8	Fruit / Forest		Yes	No
9	Livestock		Yes	No
10	Community		Yes	No
BENEFICIARY FEED BACK				
11	After submission of application, how much period took to complete Sand Dunes Stabilization?		Months	Days
12	The Sand Dunes Stabilization was completed as per approved standards and specifications		Yes	No
13	If No in Q 12 than any variations in specifications and material used		Yes	No
13	The duration of government share paid	Within reasonable time	Required lot of efforts	No comment
14	How you assess survey and design process	Fast Track	Lengthy	No comment
15	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
16	How you feel maintenance of Stabilization of sand dunes	Easy	Difficult	No comment
17	Do you think Stabilization of sand dunes encourages insect / disease spread	Yes	No	No comment

18	If yes what measures you take to control it	Sprays	None	No comment
19	Any comment/ Observation you want to share?			

MT-10: SAND DUNES STABILIZATION (SDS) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Sand Dunes Stabilization (SDS) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Sand Dunes Stabilization (SDS)**
3.1	**Material/species used for Sand Dunes Stabilization (SDS)?**
1	Kana plant
2	Herbaceous plant
3	Marram grass
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Sand Dunes Stabilization (SDS) using his/her own funds before** government share**?**
1	Yes
2	No
4.2	**What benefits you can expect from Sand Dunes Stabilization (SDS)**
1	Natural coastal protection against storm surge and high waves
2	Reduce sand erosion
3	Any other, Specify.
4.3	**The Sand Dunes Stabilization (SDS) was completed as per approved standards and specifications?**

1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**Before filling the Sand Dunes Stabilization (SDS), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.6	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.6 then continue with Q# 4.6.1	**Otherwise go to End**
4.6.1	**Government share was paid as per cost estimates?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (If any) (optional)**

ACTIVITY 11. CAPACITY BUILDING (CB)

1	Capacity Building Location					
2	Capacity Building Number					
3	Number of Participants					
4	Trainee	Farmers	Field staff	Officer/Official	Mixed	
5	Resource Person (RP)	Local/district	Provincial	National		
6	Quality of Delivery of RP	Excellent	Good	Average	Poor	Very Poor
7	Capacity Building Type	Training	Exposure visit	----------		
8	Capacity Building in Soil & Water Conservation Techniques	Highway water harvesting	Ground water recharging wells	Sub-surface check dams	Mini dams	----------
9	Capacity Building to Solar Pump/TW	a. Solar Pump	b. Tube Well	Both: a+b		
10	How would you rate the trainings?	Excellent	Good	Average	Poor	Very Poor
11	Do you find contents/brochures of the training relevant to your farming and use of technology(s) demonstrated?	Yes	No			
12	Has training enhanced your technical capacity for service provision?	Yes	No			
13	Do you think the training influence adoption of demonstrated technology(s) in this area?	Yes	No			
14	What is the potential within the community for income generating activities using demonstrated technology(s)?	V. High	High	Average	Poor	V. Poor
15	Would this technology resolve Farmers' problems if adopted?	Yes	No			
16	Do you think that demonstrated technology(s) is feasible for your area?	Yes	No			
17	Do you think the technology(s) demonstrated could increase crop productivity and farm income?	Yes	No			
18	Would you invest on your own to adopt the demonstrated technology(s) at your own	Yes	No			

19	What is role of women in using this demonstrated technology(s)?				
20	Do you think that technology is feasible for your area?				
21	Do you think the technology demonstrated could increase crop productivity and farm income?			Yes	No
22	What type of facilitation is available for adoption?				
23	If facilitation is not available, then what type of facilitation is required for adoption	Technical	Loan	government share	Other
24	After attending this training/workshop are you able to install technology by yourself		Yes	No	
25	What are the constraints for adoption?				
26	Are the materials required for installation of ----------available in your area?			Yes	No
27	Do you face any problem regarding your technology?			Yes	No
28	Please explain your problem				

MT-11: CAPACITY BUILDING (CB) MONITORING TEMPLATE

1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Capacity Building (CB)?**
1	Approval Issued
2	Final Training Report (FTR) prepared
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the list of all participants and resource person with mobile number**
2.2	**Take Picture of Capacity Building (CB) group or activity**
3.1	**Type of Capacity Building (CB)?**
1	Personal
2	Baseline survey
3	Sampling
4	Management
5	Project formulation
6	Any other
3.1.1	Duration?
3.1.2	Place/location?
4.1	**The farmer completed the training used his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from training**
1	Increase in knowledge
2	Skill
3	Performance/efficiency
4	Interaction
5	Linkages with line department
6	Any other, Specify
4.3	**The training was completed as per approved standards and specifications?**

1	Yes
2	No
4.4	**Training evaluation was done as per standard practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the evaluated and find it as satisfactory?**
1	Yes
2	No
4.6	**Before the training), the WC-KP staff conducted training need assessment?**
1	Yes
2	No
4.7	**Any variations in the training objectives?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Government share was paid as per cost estimates before training?**
1	Yes
2	No
4.8	**Financial Year**
4.9	**Supervisor Confirmation?**
5.1	**Select Submission Status**
5.2	**Comments of interviewer? (if any) (optional)**

ACTIVITY 12. INSTALLATION OF TUBE WELLS (ITW)

DIMENSIONS & STRUCTURE							
1	Tube Well Location	Address ----------	GPS ----------	Coordinate ----------			
2	Tube Well Number						
3	Source of Power	Diesel	Peter pump	Tractor	Electric	Solar	--------
4	Suction pipe diameter (inch)	----------					
5	Depth of water level (boring)	----------					
6	Water discharge	Normal	Below normal	Above normal	-----		
7	Water Re-charge	Sufficient	Insufficient	Delay			
8	a. Approval by Directorate of Agriculture Engineering b. Validated by Consultant (AGES)	Yes Yes	No No				

Water Used For				
9	Crop Production	Yes	No	
10.	Orchard / Forest			
11.	Community & Livestock Drinking	Yes	No	
12.	If Yes (distance & time)	Before	Distance	Time Reduced (hours)
13	Fish Rearing	Yes	No, go to Q 22	

Fish Rearing					
14	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crab, Trout, Tilapia, etc.)				
15	Fish Feed	Roughage	Cow dung	Poultry waste	Other
16	Total cost	----------Rs per year			
17	Production	----------kg per year			
18	Price	----------Rs per Kg			
19	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home(kg) After-----	
20	Problems/issues in fish farming: Plz rank f) Availability of fingerlings, seedlings etc. g) Diseases h) Manuring/ feeds i) Marketing j) Any other		Yes	Rank	No
EMPLOYMENT ENGAGED IN FISH FARMING					

21	Employment iv. Permanent v. Casual vi. Daily wages	Before (No.)	After (No.)

BENEFICIARY FEED BACK

22	After submission of application, how much period took to complete the Tube Well installation?		Months	Days
23	The Tube Well installation was completed as per approved standards and specifications		Yes	No
24	If No in Q 23 than any variations in specifications and material used		Yes	No
25	How Agriculture Engineering staff attended your application	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No comment
27	Quality of Directorate of Agriculture Engineering staff behavior	Friendly / supportive	Indifferent	No comment
28	The government share was paid	Within reasonable time	Required lot of efforts	No comment
29	How you feel maintenance of Tube Well	Easy	Difficult	No comment
30	Do you think cropping intensity increased on your farm after Tube Well	Yes	No	No comment
31	Do you think your crops / orchards yield increased after Tube Well	Yes	No	No comment
32	Any comment/ Observation you want to share?			

MT-12: INSTALLATION OF TUBE WELLS (ITW) MONITORING TEMPLATE	
1.IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Installation of Tube Wells (ITW) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Installation of Tube Wells (ITW)**
1	Depth
2	Diameter
3	Any other
3.1	Depth
4.1	**The farmer completed the Tube Wells (ITW) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Tube Wells (ITW)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Better control on water supply
6	Any other, Specify
4.3	**The Tube Wells (ITW) was completed as per approved standards and specifications?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 13. SOLARIZATION OF TUBE WELLS (STW)

DIMENSIONS & STRUCTURE					
1	Solar Pumping System (SPS) Location	Address ----------	GPS ----------	Coordinate ----------	
2	SPS Number				
3	Source of Power (Solar)	Existing/upgraded	New	Combine	
4	Optimum discharge depends on	Panel type ----------	Panel size ----------	Motor type ----------	Motor size ----------
5	Suction pipe diameter (inch)	----------			
6	Depth of water level (boring)	----------			
7	Water discharge	Normal	Below normal	Above normal	----------
8	Water Re-charge	Sufficient	Insufficient	Delay	
9	a. Approval by Directorate of Agriculture Engineering b. Validated by Consultant (AGES)	Yes Yes	No No		
Water Used For					
10	Cropping	Yes	No		
11....	Orchard / Forest				
12.	Community & Livestock Drinking	Yes	No		
13.	If Yes (distance & time)	Before	Distance Decrease (km)	Time Reduced (hours)	
14	Fish Rearing	Yes	No, go to Q 22		
Fish Rearing					
15	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia, etc.)				
16	Fish Feed	Roughage	Cow dung	Poultry waste	Other
17	Total cost	----------Rs per year			
18	Production	----------kg per year			
19	Price	----------Rs per Kg			
20	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home (kg) After-----	
21	Problems/issues in fish farming: Plz rank k) Availability of fingerlings, seedlings etc. l) Diseases m) Manuring / feeds n) Marketing	Yes	Rank	No	

	o) Any other			
EMPLOYMENT ENGAGED IN FISH FARMING				
22	Employment vii. Permanent viii. Casual ix. Daily wages		Before	After
BENEFICIARY FEED BACK				
23	The Tube Well installation was completed as per approved standards and specifications	Yes	No	
24	If No in Q 23 than any variations in specifications and material used	Yes	No	
25	How your application was attended by Agriculture Engineering staff	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No Comment
27	Quality of Directorate of Agriculture Engineering staff behavior	Friendly / supportive	Indifferent	No Comment
28	The government share was paid	Within reasonable time	Required lot of efforts	No Comment
29	How you feel maintenance of Tube Well	Easy	Difficult	No Comment
30	Do you think cropping intensity increased on your farm after Tube Well		Yes	No
31	Do you think your crops / orchards yield increased after Tube Well		Yes	No
32	Any comment/observation you want to share?	_____ _____		

MT-13: SOLARIZATION OF TUBE WELLS (STW)MONITORING TEMPLATE

1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Installation of Solarization of Tube Wells (ITW) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2. SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Solarization of Tube Wells (ITW)**
3.1	**Shape of Installation of Solarization of Tube Wells (ITW)?**
1	Depth
2	Diameter
3	Any other
4.1	**The farmer completed the Tube Wells (ITW) using his/her own funds before government share?**
1	Yes
2	No
4.2	**What benefits you can expect from Solarization of Tube Wells (ITW)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Better control on water supply
6	Any other, Specify
4.3	**The Solarization of Tube Wells (ITW) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes

2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No