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

QUARTERLY MONITORING AND EVALUATION REPORT

JULY-SEPTEMBER 2021

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.

In Association with S&S Associates

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

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

QUARTERLY MONITORING AND EVALUATION REPORT FOR 3RD QUARTER
(1st July 2021 to 30th September 2021)

CONTENTS

LIST OF TABLES

LIST OF ANNEXURES

ACRONYMS

ADA	Assistant Director Agriculture
AF	Acre-Feet
AJK	Azad Jammu & Kashmir
ALCI	Agronomic Low-Cost Interventions
AWPB	Annual Work Plan and Budget
AWPs	Annual Work Plans
BCR	Benefit Cost Ratio
CB	Capacity Building
CMS	Content Management System
CSRD	Center for Social Research and Development
DDA	Deputy Director Agriculture
DGW&SC	Directorate General of Water & Soil Conservations
EAs	Executing Agencies
EIRR	Economic Internal Rate of Return
ES-QPR	Environmental and Social Quarterly Progress Reports
FCR	Financial Completion Report
FCRs	Final Completion Reports
FMFSR	Framework for Federal Financial Management System
FOs	Farmers Organizations
FPMU	Federal Project Management Unit
FWMC	Federal Water Management Cell
GAP	Gender Action Plan
GB	Gilgit Baltistan
GIS	Geographic Information System
GoP	Government of Pakistan
GoKP	Government of Khyber Pakhtunkhwa
HEIS	High Efficiency Irrigation System
IAs	Implementing Agencies
ICR	Intermediate Completion Report
ICT	Islamabad Capital Territory
ICT	Information & Communication Technology
IRR	Internal Rate of Return
KP	Khyber Pakhtunkhwa
LFT	land for Terracing
LPS	Liter per Second
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
MT	Monitoring Template
MTE	Mid-Term Evaluation
MWA	Micro-Watershed Areas
NPC	National Project Coordinator
NPV	Net Present Value
OFWM	On Farm Water Management

PC	Project Consultants
PC-1	Planning Commission-(Form-One)
PDO	Project Development Objectives
PIC	Project Implementation Committee
PIES	Project Impact Evaluation Study
PPRF	Project Progress Reporting Framework (PPRF)
PQC	Pre-Qualification Committee
QM&ER	Quarterly Monitoring and Evaluation Report
RBM	Results-Based Management
RWD	Responsive Web Design
SBS	Stream Bank Stabilization
SDS	Sand Dunes Stabilization
SOPs	Standardized Operating Procedures
SPS&TW	Solar, Pumping System and Tube Wells
SPSS	Statistical Package for Social Sciences (Software)
SSCs	Supply and Service Companies
TABs	Tablets
TOR	Terms of Reference
TPV	Third Party Validation
TWRD	Tail-Water Recovery Ditch
WCA	Water Conservation Activity
WCBAKP	Water Conservation in Barani Areas of Khyber Pakhtunkhwa
WG	Women Group
WR	Water Reservoir
WSHG	Water Seepage Harvesting Galleries
WSP	Water Storage Pound
WST	Water Storage Tank
WUAs	Water Users Associations

EXECUTIVE SUMMARY

The current Quarterly Monitoring and Evaluation Report (QM&ER) for the period 1st July 2021 to 30th September 2021 comprises of 5 Chapters.

Chapter-1 describes the Objectives and background of Water Conversation in Barani Areas of Khyber Pakhtunkhwa.

The proposed project is in line with both, the mandate of the government and objectives of National Water Policy. The Prime Minister's 100 days agenda stresses on massively expanding water conservation efforts through smart interventions to reduce water losses. Similarly, National Water Policy of the country aims at: (i) reduction of 33% in 46 MAF river flows that are lost during conveyance – watercourses lining especially in saline and semi-saline areas; and (ii) increase at least 30% in efficiency of water use by producing "more crop per drop of water".

Water is getting scared and scarred day by day. There is a serious need to conserve this vital resource to ensure sustainable high level crop production for food security and safeguarding the socio-economic status of the farming community of KP Province.

To mitigate this problem Executive Committee of National Economic Council (ECNEC) approved this project "Water Conservation in Barani Areas of KP" on August 29, 2019 at a cost of Rs. 14.177 billion at 80:20 costs sharing between Government and the beneficiaries/ farmers. The implementation period of the project is 60 months. The aim of the project is to conserve water in Barani Areas of KP through listed below interventions.

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

Chapter-2 gives detail of ME&IE Consultants of the WCBAKP Project. To evaluate the impact of this project Government has engaged Consultants "Monitoring, Evaluation and Impact Evaluation (ME&IE) Consultants" through Federal Project Management Unit (FPMU) Federal Water Management Cell, Ministry of National Food Security & Research, Islamabad.

The project has been awarded to the Joint Venture of M/s G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering services (Pvt.) Ltd., Centre for Social Research and Development (CSRD) and ADA Consultants Inc. Canada. Consultants signed contract agreement with the Government of Pakistan on December 24, 2020 and mobilized its staff to start the assignment.

Chapter-2 also describes the objectives of Consultancy Services of ME&IE Consultants. The ME&IE Consultants of WCBA KP have to carry out, but not limited to the following activities:

i) Undertake baseline, midline and end line surveys of the project activities/interventions in all the project areas.
ii) Develop monitoring strategy, framework and

Result Based Monitoring (RBM) indicators.

iii) Preparation of Monthly, Quarterly and Annual Monitoring and Evaluation of the project activities.
iv) Assessing the improvement in water availability and soil losses due to project interventions.
v) Assessing the water saving per annum due to the project interventions.
vi) Assessing the economic benefits to the agriculture in terms of changes in irrigated area, area under cultivation, crop yields, cropping pattern, cropping intensity, farm income and employment.
vii) Assessing the extent of community mobilization, financial and administrative sustainability of Soil & Water Conservation Associations (SWCAs) and ensuring the maintenance of project interventions.
viii) Carryout impact evaluation of the project investment on the economy and stakeholders.

Chapter-3 Describes Consultants' Approach and Methodology to conducted the ME&IE activities for WCBAKP Project which also explains the development of ICT system for the project.

Chapter-4 Describes about the purpose of preparation and submission of Quarterly Monitoring and Evaluation Report (QM&ER). It also explains the procedure of conducted during the reporting period

Chapter-5 The current QM&ER explains the updated status of consultants' activities during the reporting. This chapter also includes details of coordination meetings held by the ME&IE consultants with client and other stakeholders of the project.

CHAPTER-1: INTRODUCTION TO WATER CONSERVATION IN BARANI AREA

This section of the Quarterly Monitoring Report includes profile and brief introduction of Water Conservation in Barani Area (WCBA) and background of Water Conservation in Barani Area of Khyber Pakhtunkhwa (WCB AKP).

1.1 PROJECT PROFILE

Project Name	Water Conservation in Barani Areas of Khyber Pakhtunkhwa
Project Areas	Project covers 35 Districts of Khyber Pakhtunkhwa falling under Malakand, Hazara, Peshawar & Mardan, Kohat & Bannu, and Dera Ismail Khan Divisions.
Sponsoring Agency	Ministry of National Food Security & Research
Executing Agencies (EAs)	Federal Project Management Unit (FPMU), Federal Project Management Unit (FPMU) Federal Water Management Cell
Project Period	5 Year (2019-2024)
ME&IE Consultancy Period	4 year
ME&IE Consultant:	JV of G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering services (Pvt.) Ltd., Centre for Social Research and Development (CSRD) and ADA Consultants Inc. Canada
ME&IE Consultant Mobilized	December 24, 2020

1.2 INTRODUCTION

The common features of Barani and Arid lands are; low precipitation, high temperature, high evaporation, low humidity, poor rain water efficiency, water percolation and low productivity. These lands can be made more productive for cultivation and crop production through soil and water conservation activities, as this is need of the hour to overcome scarcity of water and food for the human as well as for livestock. Barani areas are facing huge shortage of water. Therefore to overcome this shortage Govt. of Pakistan has established Provincial Soil & Water Conversation Departments. These Departments are providing services to the farmers for agricultural purpose through district governments. Main tasks of Soil & Water Conservation which are considered important are following:

- To contain soil erosion process in the cultivable area and the adjoining uncultivated lands and to save these areas from further degradation.
- To make maximum use of run-off water by conserving it into the field by various moisture conservation measures.
- To bring more area under cultivation through reclamation and gully control techniques.
- Exploitation of water resource through various means of providing assured water supply for irrigation purposes (mini dams and ponds)

Some of the works being undertaken for soil and water conservation are:

- Construction of Mini Dams
- Water Storage Tanks
- Construction of Water Outlet Structures
- Retaining Walls
- Land Reclamation through Gully Plugging
- Stream Bank Training
- Moisture Conservation Practices such as Terrace Forming & Deep Ploughing.

1.3 BACKGROUND OF WCBAKP

Khyber Pakhtunkhwa (KP) borders the mountainous regions except to the South-East portion of the province. Therefore geographically the province is intertwined with various rivers, floods waterways and hill torrent runoff water resources. Water is the limiting factor in the rain- fed Districts of KP that hinder the production of crops and adversely affects human and animal life. Precipitation received through these mountains of the region drains out of the watershed quickly because of the undulating topography; the uneven terrain of the foothills which drain the areas quickly. Hence enormous amounts of water are being lost through runoff without being utilized, carrying with it fertile top-soil. These waters induce flash floods on one hand and decrease the storage capacity of the dams due to siltation, on the other. The runoff water, if harvested and stored in

small units at local level, can be used to supplement irrigation for increase in agriculture production, stabilize the ground water table by inducing ground water recharge, can be used for human and animal use and improve climatic conditions of the rain- fed areas.

While the plains of Peshawar valley (comprising of district Peshawar, Charsadda, Mardan, Swabi and Nowshera) is irrigated by the river Kabul and its tributaries, D.I. Khan which are being irrigated through the CRBC canal from the Indus and steps being taken for Gomal Zam dam, majority of the agriculture lands of the province need to be supplemented through local water harvesting because of the uneven terrain.

In relation to the scope of the problem and the opportunity at hand, previously the idea of conversion of rain fed agriculture to irrigated agriculture have not been taken as it should have been. The conservation of these vital resources is a need of the hour to ensure sustainable high level crop production for food security and safeguarding the socio-economic status of the farming community of KP.

The runoff water, if harvested and stored in small units at local level, can be used to supplement irrigation for increase in agriculture production, stabilize the ground water table by inducting ground water recharge, can be used for human and animal use and improve climatic conditions of the rain-fed areas.

The Directorate General Soil & Water Conservation Khyber Pakhtunkhwa is functional in 24 Districts of the province and is striving for the protection and conservation of agricultural lands and rain water through conservation structures like Inlet and outlet structures, field spillways, cemented water storage ponds, Spurs and protection bunds/walls cemented, G.I. wire spurs and protection bunds, runoff diversion structures and source development, rain fed water retention reservoirs, earthen ponds and earthen embankments, contours and terraces. In addition water harvesting interventions such as check dams, water reservoirs etc.

1.3.1 Project Objectives

The main objective of agriculture sector is to make the country self-sufficient in food grains and make raw' material available for agro based industries. The project will be encouraging the farming community through financial assistance for water conservation for ensuring timely irrigation. The project has designed to achieve the following long-run objectives:

- *To conserve land and water resources through various interventions for supplemental irrigation, livestock, farm forestry and fish farming*
- *To increase cropping intensity and per unit of land and water productivity*
- *To improve livelihood standards of poor fanners*
- *To improve socio-economic stability*

The project objectives in quantifiable terms are as follows:

i) To induce aquifer/ground water recharge by pounding water in> 300 water storage reservoirs.
ii) To convert 15,032 acres of culturable wastelands into productive agriculture lands through development of 70 micro-watersheds.
iii) To reduce soil erosion by containing flash floods through provision of soil & water conservation structures and check gulley erosion by plugging gullies through 3,000 check dams.
iv) Minimize the adverse effects of drought by maximizing the irrigation water supplies through exploitation of sub-surface water from tube wells.
v) Conversion of around 43,225 acres of rain fed land into irrigated land through installation of 300 agricultural tube wells and solarization of 700 existing/new tube wells.
vi) To enhance the capacity of the stakeholders in water harvesting and for sustainable use of land and soil resources for increased agriculture production.
vii) To improve the socio-economic status of the farmer community.

The project is in line with specific objectives of National Water Policy and Provincial Implementation Plan of the agriculture sector for enhancing water productivity, efficient and harvesting runoff water to ensure farm productivity, economic uplift of small farmers and improving economy of the country as a whole. The proposed project is closely related to the recently completed water conservation schemes, which form an important element of the integrated rural development program within the agriculture sector.

1.3.2 Description of Sub-Components

The project will have two components; Component - A & B.

Component-A

Component-A is being executed by the Directorate General Soil & Water Conservation KP through its provincial setup. It comprises the following activities **(Table 1.1)**.

Table 1.1: Activities under Component A OF WCBAKP Project

Sr. No.	Name of Activity	Sr. No.	Name of Activity
1.	Water Ponds	2.	Check Dams
3.	Water Reservoir	4.	Stream-bank stabilization
5.	Gated field Inlet Outlet/ Spillway	6.	Terracing
7.	Micro-Watershed Development	8.	Water Seepage harvesting Galleries
9.	Agronomic low-cost interventions	10.	Sand Dunes stabilization
11.	Capacity Building		

Component-B

The Component-B is being implemented by the Directorate of Agricultural Engineering, KP. It comprises of the following activities:

i) Installation of Tube wells.
ii) Solarization of Agricultural Tube Wells.

1.4 PROJECT TARGETS AND OUTPUTS

Project targets and outputs of both components are presented at in **Table 1.2** below.

Table 1.2: Project Targets and Outputs

S.#	Input	Output
1.	Construction of 5,000 water ponds	Approximately 12,500 acres of agriculture land will be irrigated from these interventions.
2.	Construction of 3,000 Check dams	Approximately 7,500 acres of the land will be reclaimed.
3.	Construction of 330 Water Reservoir	Approximately 9,900 acres of land will be irrigated from this intervention.
4.	Construction of 2,500 Stream bank stabilization.	Protecting/ reclaiming about 6,250 acres of agricultural land from erosion with floods water.
5.	Construction of 1,000 Gated field Inlet Outlet/Spillway	Sufficient amount of water will be provided to about 2,500 acres of land for irrigation in rod kohi areas of the province.
6.	Development of 370 acres land for terracing	Farmer's income will be increased by increasing agricultural land due to terraces development.
7.	Development of 70 numbers of micro-watershed areas	Approx. 7,000 acres of the area will be converted into agriculture/ forest land which will improve the aesthetic value of the area.

8.	Constructing 370 numbers of water Seepage harvesting Galleries	Approx. 925 acres of land will be irrigated from this intervention.
9.	800 numbers of Agronomic low-cost interventions	Approx. 2000 acres of land will be protected from erosion by these interventions.
10.	230 acres of Sand Dunes stabilization	Approx. 230 acres land of sand dunes will be stabilized by growing kana plants.
11.	500 Nos Capacity Building	An estimated 500 trainings will be conducted for stakeholders including farmers and departmental staff.
Agricultural Engineering Component		
12.	Procurement and installation of 700 Solar, pumping System and 300 Tube Wells.	Irrigation of 17,500 hectares (43,225 acres) of land.
13.	700 on-site training of farmers in adaptation of new techniques for pumping sub-surface water.	Irrigation water Pumping cost will be reduced by adopting solar technology.

CHAPTER-2: SCOPE OF SERVICES OF ME&IE CONSULTANTS

This Chapter explains the selection of ME&IE consultants for WCBAKP and scope of consultants' services.

2.1 THE ME&IE CONSULTANTS

Client carried out a competitive bidding process for selection of ME&IE consultants for Water Conservation of Barani Areas in Khyber Pakhtunkhwa (WCBA-KP). A Joint Venture of companies M/s G3 Engineering Consultants (Pvt.) Ltd., Ease-Pak Engineering Services (Pvt.) Ltd., Centre for Social Research and Development (CSRD) and ADA Consultants Inc. Canada has been selected as ME&IE Consultants of the project. After signing the contract agreement with client, consultants mobilized its staff on November 20, 2020 to start project activities.

2.2 SCOPE OF ME&IE CONSULTANTS' SERVICES

The scope of the ME&IE Consultants is as follow:

The ME&IE Consultants for Water Conservation in Barani Areas of Khyber Pakhtunkhwa (WCBA-KP) will be responsible for monitoring, evaluation and Impact Evaluation (ME&IE) of the project interventions carried out by implementation Consultants and in this context will carry out, but not limited to the following activities:

i) Undertake baseline, midline and end line surveys of the project activities/interventions in all the project areas.
ii) Develop monitoring strategy, framework and Result Based Monitoring (RBM) indicators.
iii) Preparation of Monthly, Quarterly and Annual Monitoring and Evaluation of the project activities.
iv) Assessing the improvement in water availability and soil losses due to project interventions.
v) Assessing the water saving per annum due to the project interventions.
vi) Assessing the economic benefits to the agriculture in terms of changes in irrigated area, area under cultivation, crop yields, cropping pattern, cropping intensity, farm income and employment.
vii) Assessing the extent of community mobilization, financial and administrative sustainability of Soil & Water Conservation Associations (SWCAs) and ensuring the maintenance of project interventions.
viii) Carryout impact evaluation of the project investment on the economy and stakeholders.

CHAPTER-3: CONSULTANTS' APPROACH AND METHODOLOGY FOR ME&IE

The chapter briefly discusses the basics of ME&IE system being developed by consultants for WCBA-KP Project.

3.1 BASICS OF ME&IE SYSTEM

The ME&IE at WCBAKP Project is grounded in Results-Based Management (RBM), which is a management strategy focusing on the performance and achievement of results in terms of outputs, outcomes and impacts. It is a tool used for strategic control. It uses feedback loops to help managers monitor and then (hopefully) achieve strategic goals. These goals may take the form of physical outputs, organizational or behavioral changes, workflow changes, or form contribution to some other higher level goal. A key function of ME&IE is therefore, to test and determine whether or not the project's objectives and causal analysis (i.e. the sequence of expected results based on certain inputs and activities) articulated in the project design holds true; and if not, why not, and what should be done to address this and learn lessons.

The ME&IE systems at WCBA-KP are formulated based upon the project's logical framework (log-frame), which is one type of program logic model. A log-frame is an important tool in project design and management, mapping the multiple levels of objectives and associated results (measured through indicators) in the short, medium, and long term. Indicators are units of measurement in the form of qualitative and quantitative that determines whether the objectives formulated in the log-frame have been achieved or not. Log-frame developed for WCBAKP is placed at **Annex-A**.

The matrix in **Table 3.1** summarizes standard log-frame objectives and results, and the types of indicators used to measure them, which form the basis of a project ME&IE system and plan.

Table 3.1: Matrix for Levels of Log-frame Objectives and Indicators

Log-frame objectives definitions		Objectively verifiable indicators that measure objectives	
Impact (Goal/Overall Objective)	Higher level project objectives in terms of long-term benefits to beneficiaries and the wider benefits to society. The goal will not be achieved by the project alone. The project aims to contribute to its goal.	**Project impact indicators**	Impact indicators measure this long-term change in conditions of the community (e.g., % change in household income, reduction in poverty, etc.)
Outcome (Purpose Specific Objective)	The short term and medium-term objectives in terms of benefits to the project beneficiaries due to the intervention's outputs; the project can only indirectly control achievement of outcomes; behavior change is often a key component.	**Outcome indicators**	Outcome indicators describe the medium-term effects of an intervention's outputs (e.g., % change in cropping pattern and intensities, crop yields etc.)
Output (Results)	The output produced by undertaking a series of activities. This is what will be achieved to the intended beneficiaries or target group, and it should be possible for project management to be held accountable for this delivery	**Output (indicators)**	Output indicators describe the immediate effects of an activity, tangible products, goods and services, and other immediate changes that lead to the achievement of outcomes (e.g., number of WSPs, Check dams, WR, SBS, Solar TW, etc.).
Activities	The tangible goods and services delivered by the project (e.g., provision of material inputs, staff, etc.)	**Process indicators**	Process indicators describe the activities undertaken (e.g., process of WSPs, Check dams, WR, SBS,

Log-frame objectives definitions		Objectively verifiable indicators that measure objectives	
			Solar TW, etc.)., process of delivering these activities.
Inputs	The financial, human, and material resources used for the development intervention	**Input indicators**	Indicators used to measure the utilization of inputs (e.g., utilization of budget, and services of project staff, labour by the communities)

3.2 MIS / GIS FOR ME&IE SYSTEM

For optimal results of ME&IE of the WCBAKP project consultants are developing MIS /GIS for the project. To minimize the complexities and make the MIS/GIS Database a useful tool for Input-output, process and result monitoring, the consultants adopted the following key principles and guidelines during the development and implementation of WCBA-KP MIS/GIS Database:

i) Information needs and indicators to capture such information are identified in a participatory manner involving all key stakeholders of the project at all levels;
ii) The potential users of MIS/GIS Database are convinced and understand the usefulness of the MIS/GIS Database and their role in data collection, recording, transmission and use of information;
iii) The system provides a two-way flow of information, such that those who collect and transmit the information receive the feedback;
iv) The MIS/GIS Database does not impose a high work load at any level in PIU and other Implementing Agencies (IAs);
v) There is no information/data 'overload' at any level;
vi) The system is flexible enough to accommodate internal learning changes in future.
vii) The system provides user friendly interfaces to interact with.

The system's outputs are presented in formats that can be easily converted to other formats and data types without human intervention.

3.3 PARTICIPATORY DESIGN OF THE MIS/GIS ACTIVITIES

The proposed approach to design the MIS/GIS is fully participative. Consultants have made utmost efforts to ensure that all key stakeholders are fully involved throughout the ME&IE MIS/GIS design and implementation process.

Before launching the MIS/GIS database system, multiple feedback and validation sessions are in progress with client and all the stakeholders of the project. Finally, a restitution/validation workshop will be conducted to which the key partners would be invited to get the real feedback on the proposals and achievements.

3.4 MONITORING, EVALUATION AND IMPACT EVALUATION PLAN

This section presents brief introduction about the ME&IE and Impact evaluation plan.

3.4.1 Introduction

The monitoring and evaluation functions are related but distinct. Monitoring is the provision of information, and the use of that information, to enable management to assess progress of implementation and take timely decisions to ensure that progress is maintained according to schedule. Monitoring assesses whether project inputs are being delivered, are being used as intended, and are having the initial effects as planned. It is an internal project activity, an essential part of good management practice and therefore an integral part of day-to-day management. While evaluation assesses both intentional and unintentional, overall project effects, and their impacts. It involves comparisons requiring information from outside the project either in time, area, or population. The relative role of monitoring and evaluation varies with the type of project.

3.4.2 Framework for ME&IE System

The initial steps for designing monitoring and evaluation system are:

i) A review of the project objectives in order to systematize them in sequence.
ii) Identification of the users of both the monitoring

and evaluation information. For monitoring, the users will be the hierarchy of project management. The type of information transmittal will be geared to the needs of each level of project management. The users of evaluation analysis range from project management through the responsible directorate/ ministry, to the national planners.

Evaluation will be drawn on the data generated by the monitoring system to help explain the trends in effects and impact of the project. Monitoring data may reveal significant departure from expectations which may warrant the undertaking of an on-going evaluation exercise to examine the assumptions and premises on which the project design was based. Such a review, as also in the case of ex-post evaluation, can be of great value to sectoral management in its policy formulation role.

Monitoring has to be integrated within the project management structure but evaluation, with its wider horizons requiring comparative information, is not necessarily such an integral component. A central evaluation facility may be justified on the grounds that:

i) The demanding professional skills required to interpret evaluation data are either unavailable or uneconomic for each project individually;
ii) The data needed extend from before a project is initiated to a period long past its completion.

Although the design and analytical facility for evaluation may be centralized, the data collection resources within a project will be used to provide much of the required data. If the same unit is collecting data both for eventual evaluation and for quick, timely monitoring, the latter must not suffer due to the greater demands of the former.

3.4.3 Monitoring and Managing of Project Progress

The primary goal is to monitor project progress, given that the project has been carefully appraised; i.e., that there is a strong assumption towards certain stimuli and inputs will achieve specific outputs, effects and its impact. The role of management in the initial implementation phase is to create the conditions that allow this chain of events to be occurred.

In the early years of project implementation, the emphasis will be on monitoring of project progress and the delivery of the inputs to the intended recipients. The main source for this aspect of monitoring is properly organized in project records. The other concerns of management at this stage are to use these inputs and reaction of the recipients.

Adoption rates give management a strong inference whether the project is succeeding or not. Information on the recipients' attitudes and perception is important in order to explain any departure in response behavior to that postulated in the project design. Such unpredicted behavior may determine the success or failure of the project.

The information required for monitoring of project implementation does not require complex data systems. A monitoring system exists even if it is merely a subjective accumulation of impressions by project staff. If common sense rules of good standard management practices are adhered to, the monitoring system can be limited to the minimum of parameters to be recorded regularly over time. The goal is to make the data collection as objective as possible, and to ensure, above all, that the means exist for fast collation, summarization and presentation of the information to the decision makers.

Once management has satisfied itself that the delivery system is working, its attention should shift to the outputs generated; i.e., are they materializing according to expectation. Focus on output measurements must not, however, be at the expense of monitoring the input delivery system. The measurement of outputs is more properly a function of evaluation, for identifying trends is not an easy task in view of the exogenous influences at work, and is often impossible without an extended time series.

The key to successful monitoring is the provision of regular, timely, decision-oriented information to the project management. This can be achieved if the necessary staff is in place early, are seen to be part of the management team, and are given guidance on the priority information needs of the management.

3.4.4 Project Progress Reporting Framework (PPRF)

The Project Progress Reporting Framework (PPRF) placed at **Annex-B**, is a format for reporting summary of physical and financial progress achieved during the period for various interventions. A regular flow of this data is expected from Clients' Field Teams/ Project Consultants. However, detailed data on the processes and beneficiaries' feedback will be gathered / transmitted through Android based application using smart phones.

3.4.5 Evaluation: An Assessment of Results

Evaluation aims to determine whether the project objectives set in the ME&IE of expected outputs, effects and impact are being, or will be, met. This leads to an assessment of the results achieved, and the lessons to be drawn for future improvements in a later phase or in similar projects elsewhere.

Output levels are a measure of the result of the input utilization by the beneficiaries. If the changes in outputs are considerable, they may be detected even during the implementation phase of a project. An evaluation system requires the development of a series of data commencing before the project is implemented and continuing well past the completion of the implementation period. Unlike a monitoring system with its emphasis on rapid assessment, an evaluation system requires a longer time span before even tentative conclusions can be drawn.

3.4.6 Impact: Quantification of Tangible Benefits and Assessment on Intangible Benefits of Project Interventions/Investment

In the ME&IE process, tangible benefits of agricultural projects can arise either from an increased value of production or from reduced costs. The specific forms, in which tangible benefits appear, however, are not always obvious, and valuing them may be quite difficult.

Increased physical production is the most common benefit of the agricultural sector. To maintain better water control so that farmers can obtain higher yields. The project makes resources available for farmers to increase both their operating expenditures for current production-for fertilizers, seeds, or pesticides-and their investment-for water conservations techniques and solar water tube wells. The benefit is the increased production from the farm. In a large proportion of agricultural projects, the increased production will be marketed through commercial channels. In many agricultural projects, however, the benefits may well include increased production consumed by the farm family itself. The home-consumed production from the projects increased the farm families' net benefit and the national income just as much as if it had been sold in the market. Indeed, we could think of the hypothetical case of a farmer selling his output and then buying it back. Since home-consumed production contributes to project objectives in the same way as marketed production, it is clearly part of the project benefits in both financial and economic analysis.

3.4.7 Design and Development of ME&IE GIS Based Information System

Management Information System (MIS) is the tools and techniques used in project management to deliver information. Project managers use the techniques and tools to collect, combine and distribute information through electronic and manual means. It is used by upper and lower management to communicate with each other.

The monitoring and evaluation functions are related but distinct. Monitoring is the provision of information, and the use of that information, to enable management to assess progress of implementation and take timely decisions to ensure that progress is maintained according to schedule. Monitoring assesses whether project inputs are being delivered, are being used as intended, and are having the initial effects as planned. It is an internal project activity, an essential part of good management practice and therefore an integral part of day-to-day management. Whereas evaluation assesses both intentional and unintentional as well as overall project effects and their impacts. It involves comparisons requiring information from outside the project either in time, area, or population. The relative role of monitoring and evaluation varies with the type of project.

Based on the participatory approach, the Information System proposed is being designed and developed as a permanent instrument for the planning, monitoring, evaluation, and adjustment of project management, based on common information tools made available to all stakeholders concerned by the implementation of

the project. This approach aims at strengthening the overall results of the project, increasing the sustainability of activities, and improving resource utilization and management of risks and difficulties of the project implementation.

Design & development of ME&IE GIS based Information Management System is based on Agile Methodology as Software Development Process. Under which requirements and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and end user / field experiences. The adaptation of agile development methodology ensured the early completion of task and keeps evaluating it for better results as per the project requirement. It would be helpful to strategize the design and development phase, successful implementation, on-going maintenance, and up-gradation of the GIS based Information System.

Our experience shows that data generated in the field by client, field staff and project consultant is not timely communicated to PMUs. As a result, the dashboard/ Information System remain behind the actual progress on the ground. Therefore, prompt and real time data communication are essential to the Information System. For this purpose, one focal person in each province/ area is required.

3.4.8 Regular Routine Monitoring

We understand that the regular routine monitoring activities started with the ME&IE Consultants on board. This phase of the assignment includes (i) the monitoring of input-output and process as defined in the Annual Work Plan and Budget (AWPB) and (ii) the tracking of the outcome indicators. Regular routine monitoring will look at the extent to which the proposed project activities are being implemented as planned. We also understand that the consultants are responsible for the regular routine monitoring and should work in close collaboration with FPMU-FWMC, PC, and respective KP Departments, Directorate General Soil & Water Conservation & Directorate of Agricultural Engineering KP through their district/ sub-offices & farmers / SWCA etc.

In order to track the indicators' values and measure the project performance, the ME&IE Consultancy have to analyze the relevant ME&IE data and report every quarter, applying the agreed methodology, reporting format and content.

Periodic reports on routine monitoring shall contain, at least: (i) a brief analysis of the results; calculating achievement rates and establishing trends, (ii) a summary with any relevant findings that may help or constraint the future data collection activities in the established periods and, if appropriate (iv) propose specific solutions assessing the advantages and disadvantages of each.

As stated in the TOR, additional special reports are to be produced "as and when required." We propose that some of these special reports ought to be thematic studies and case studies that can be punctually required at different times of the project implementation as to create knowledge on the implementation and its results, to be shared and further implemented.

CHAPTER-4: QUARTERLY MONITORING AND EVALUATION REPORT (QM&ER)

The following section deals with the introduction and activities of the Quarterly Monitoring & Evaluation Report:

4.1 INTRODUCTION

Quarterly Monitoring Report (QM&ER) explains the understanding towards the all activities carried out as per TORs of ME&IE assignment and their completion within stipulated time frame of the reporting quarter.

4.2 OBJECTIVE OF QUARTERLY MONITORING AND EVALUATION REPORT

Reporting is an integral part of monitoring and evaluation framework. The main objective of Quarterly Monitoring Reports is to update the Client about the activities carried out by the ME&IE Consultants during the reporting period along with its procedures.

Consultants Procedure for ME&IE Assignment

The consultants will carry out ME&IE assignments in two parts:

The First Part of monitoring will be carried out through field visits and surveys of water storage reservoirs, micro-watersheds, check dams, tube-wells and agriculture tube-wells. The processes, timelines and physical progress against targets set in the Annual Work Plans (AWPs) are marked. The monitoring activities include baseline, midline and end-line surveys. The water saving assessment will be simultaneously carried out with the improvement activities of construction of water storage tanks and installation of tube-wells. The economic benefits to the agriculture sector will also be estimated in addition to the impact evaluation on the stakeholders and economy as a whole. For each monitoring activity one or more checklist(s) will be developed based on planned SOPs (Modus Operandi) and timelines. The activities will be monitored according to the checklists.

All the checklists will get approved from the client before executing in the field. Additional checklists will be devised if required. The outcome of the monitoring activities is expected in three states, i.e., the progress is on track, lagging behind or faster than planned. Reasons for lagging progress will be identified with possible solutions. In case of faster progress, good practices will be identified to replicate in the project. All the physical progress will be monitored for quality as well.

The Second Part of the ME&IE assignment will be the development, operation, maintenance and handing-over the Management Information System (MIS) to the client at the end of the project.

Main features of the MIS are briefly presented as under:

Planning and input-output process monitoring, as well as the tracking of results indicators, assume a critical role in the management of development projects. We propose to develop, set up and implement a Web Based Monitoring Information System (MIS) useful for:

- Monitor the progress of project implementation and provide timely feedback to all project stakeholders,
- Monitor, assess, and summarize achievements (outputs and outcomes),
- Analyze factors affecting the project's implementation and achievements.

a) The basic functions of the MIS are to:

- Enable the FPMU-FWMC and PC to track the outcome indicators and assess progress in implementation against timescales and targets, and resources used against budgets, based on agreed annual work plans.
- Describe the factors and reasons triggering variations,
- Record and reflect new targets, whenever it is required,
- Draw important lessons to guide the decision-making,
- Enable forecasting for project accomplishment in comparison to the currently reported progress,
- Enable the project management to generate reports to funding partners, project beneficiaries and other stakeholders on the status and progress of the project implementation,

- Integrate GIS components to the MIS to complement field-level surveys and measurements.

b) Potential users' profiles could be the following:

- Federal Ministries
- NPC FPMU-FWMC
- NWMC (NESPAK)
- ME&IE Consultants
- Provincial concerned departments / maintaining system administrators.

c) The MIS will allow the project to enter the Annual Work Plan and Budget (AWPB) to enable process monitoring. This interface should facilitate the user to create activities for the current year and go back in previous years.

d) The following project information will be accessible at all times:

- Project description
- Project's objectives
- Implementation partners
- Locations of implementation
- Timelines
- Project activities (and % of accomplishments)
- Budgets (% of spending)
- The dashboard is a "real-time" user interface showing graphical and tabular information of multiple data sets. Dashboards allow users to appreciate a situation at a glance and aids in making informed decisions. The way in which data are presented directly affects how they are understood and interpreted/ consequently the decisions that are made because of the data.

e) The kind of data that can be represented in the dashboard includes:

- Activity/indicator completion rates
- Budget expenditures
- Information disaggregated by localities (map views)
- Timelines, etc.

f) Notifications/Alerts
For each type of events (e.g., incoming deadlines, new data input, requests, etc.) the user will receive notifications/alerts of said events within the MIS and via e-mail either:

- As the event is created
- Daily / Weekly/ Monthly/Quarterly updates.

When an alert generated and in what form and frequency will be decided in consultation with users/clients.

g) Change Tracking
The system records actions of users such as creating data, removing data, data entry, data validation, etc. (e.g., latest update to an open quarterly report). The system records the name of the user, the date and time of change, actions made, code of items altered. This function is crucial to monitor the ME&IE processes.

h) Key Principles

- The system provides Excel-like functionality including filtering/sorting columns (reducing data-entry and increasing ease-of-use).
- The data entry and validation of plans and different reports are linked to user profiles
- The system displays an error message when not able to save the data.
- For all operations, the system keeps an audit trail with the user, date and time of the operation.

CHAPTER-5: CONSULTANTS ACTIVITIES DURING THE REPORTING PERIOD

This 3rd Quarterly Monitoring & Evaluation Report (QM&ER) covers the reporting period from 1st July 2021 to 30th September 2021.

The ME&IE Consultants WCBA-KP remained engaged in several activities related to ME&IE WCBA-KP project. Consultants conducted/ attended several meetings with client, line departments and other stakeholders of the project. Consultants also developed Monitoring Tools (MTs) for field survey and data collection and got these MTs approved from Client. During the reporting selection of field team and its training has been conducted.

Detail of consultants' activities carried out during the reporting period is given below.

5.1 COORDINATION VISITS / MEETINGS OF ME&IE CONSULTANTS

Consultants conducted / performed various meetings / activities during the reporting period. The basic objective of these meeting is development of continuous linkages, coordination, and cooperation in order to run project activities smoothly and efficiently. Details of these meetings / activities are given below.

5.1.1 Meeting with Mr. Khalid Gohar, Deputy Director Soil and Water Conversation KP

Meetings of M&E Expert Mr. Muhammad Afzal Hayat Khan Social & Gender Specialist WABA KP were held between Mr. Mr. Khalid Gohar Deputy Director, Soil & Water Conservation KP on 10th July 2021 and with Mr. Irfan Marwat Deputy Director (Planning) Soil & Water Conservation KP on 13th July 2021 **(Figure 5.1 & 5.2)**.

Purpose of these meeting was to collect baseline/ benchmark information, Impact assessment/ outcomes of the project intervention.

In this connection two days meeting were held. During first day the WC – KP activities detail list was received on July 10, 2021 **(Figure 5.1 & 5.2)**. Whereas, detailed initial arrangements of undertaking a "Case Study/ In-Depth Analysis of the S&WC selected activities in the project area were discussed on July 13, 2021. It was decided that DG S&WC may be approached for finalization of the selected site, as soon as he returns from a field visit to Swat. A completed file of one of their project namely, "Cemented Concrete Water Pond" in Tehsil Kabal, district Swat has been received for undertaking the proposed Case Study.

Figure-5.1: Mr. Afzal Hayat Khan, ME&IE Consultant Social & Gender Specialist in meeting with Mr. Khalid Gohar, Dy. Director, S&WC-KP

Figure-5.2: ME&IE Consultant Social & Gender Specialist in meeting with Mr. Irfan Marwat, Dy. Director (Planning), S&WC-KP

5.1.2 Meeting with Dr. Nadeem Akmal PSO/PD SSRI NARC

Dr. Usman Mustafa, TL and Dr. Mansab Ali Irrigation Agronomist ME&IE Consultants conducted a meeting with Dr. Nadeem Akmal PSO, and Mr. Waqar Ahmad SSRI-NARC, Islamabad on 30 July 2021 **(Figure 5.3)**. Meeting was held in Social Sciences Research Institute NARC, Islamabad. ME&IE consultants requested Dr. Nadeem Akmal to cooperate with ME&IE consultants during execution of ME&IE WCBA-KP Project.

Dr. Nadeem Akmal, PSO, SSRI-NARC explains manpower and research activities under non-

development and development schemes. Although they have limited manpower and agreed to help in baseline survey of Water Conservation in Barani areas of KP.

Figure-5.3: ME&IE Consultants TL and Agronomist in meeting with PSO SSRI-NARC, Islamabad

5.1.3 Meeting with Engr. Khalid Ahmed SO/In charge Solar System CEWRI, NARC

Dr. Usman Mustafa Team Leader and Dr. Mansab Ali Irrigation Agronomist conducted a meeting with Engineer Khalid Ahmad SO/In-charge Solar System, CEWRI-NARC Islamabad on 30th July 2021 **(Figure 5.4)**. Meeting was held in Climate, Energy & Water Research Institute (CEWRI), NARC, Islamabad. ME&IW consultants asked Mr. Khalid to provide information about working of solar system, its pumping and effects on water charge. Engineer Khalid Ahmad well explained about the working of solar system, its benefits and drawback any. The staff of CEWRI promised to help ME&IE Consultants for any other information.

Figure-5.4: ME&IE Consultants, TL and Agronomist in meeting with SO/Incharge Solar System, CEWRI-NARC, Islamabad

5.1.4 NPC Visit to WCBA-KP

Mr. Muhammad Tahir Anwar, National Project Coordinator (NPC), WCBA-KP paid visit to Peshawar and held long discussion with Dr. Usman Mustafa, TL and Mr. Muhammad Afzal Khan, Social & Gender Specialist to increase efficiency and effectiveness of the project activities in the months to come **(Figure 5.5)**.

Figure-5.5: Dr. Usman Mustafa, TL & Mr. Afzal Hayat Khan, Social & Gender Specialist in meeting with Mr. Muhammad Tahir Anwar, National Project Coordinator at Peshawar during his surprise visit on 12 August 2021.

5.1.5 Combine Meeting of TL-WCBA-KP and TL & DTL of NPIWC-II of KP

A meeting was held amongst Dr. Usman Mustafa, TL, WCBA-KP with Dr. Muhammad Abdul Qudus TL and Dr. Hamyun Khan DTL of NPIWC-II for smooth functioning of the project activities in the barani areas of KP (**Figure 5.6**). It was decided that field team members must be trained on all aspects of baseline survey and monitoring tools and teams will be employed for both project activities.

Figure-5.6: Dr. Usman Mustafa, TL in meeting with Dr. Abdul Qudus TL and Dr. Hamyun Khan, Deputy Team Leader, NPIWC-II on 12 August 2021.

5.1.6 Three Days' Workshop of ME&IE Consultants at National Office Islamabad (NPIWC-II)

In order to filling the gaps of baseline survey of NPIWC-II, three days' workshop was held. The workshop was started on 30th of August, 2021 at Consultants' National Office, Islamabad. Team Leader WCBA-KP also participated in the workshop to share his experience and pay a role in "Baseline Survey of the NPIWC-II.

Methodology, different variables were identified and finalized in the workshop. Besides, these some administrative and logistic measured were decided.

5.1.7 National Project Coordinator (NPC) Visit to WCBA-KP

Engr. Muhammad Tahir Anwar, National Project Coordinator (NPC), Federal Project Management Units (Water Projects). Ministry of National Food Security and Research, paid visit to National Office G3 (JV), Islamabad 1 Sept. 2021 and held very fruitful discussion with Dr. Usman Mustafa, TL WCBA-KP & TL, NPIWC-II and other team members to increase efficiency and effectiveness of the project activities **(Figure 5.7 and 5.8)**. The minutes of the meetings are attached as **Annexure-C**.

Figure-5.7: Engr. Muhammad Tahir Anwar, National Project Coordinator in meeting with Engr. Hafiz Abdul Rauf, CEO Ease-Pak, Dr. Usman Mustafa, TL and Dr. Muhammad Abdul Qudus, TL, NPIWC II & Team at National Office G3 (JV), Islamabad on 01 Sept. 2021

Figure-5.8: Engr. Muhammad Tahir Anwar, National Project Coordinator in meeting with Dr. Usman Mustafa, TL and Dr. Muhammad Abdul Qudus, TL, NPIWC II & Team at National Office G3 (JV), Islamabad on 01 September, 2021

5.1.8 Combine Meeting of TL-WCBA-KP and TL & DTL of NPIWC-II of KP

A meeting was held amongst Dr. Usman Mustafa, TL, WCBA-KP with Dr. Muhammad Abdul Qudus TL, NPIWC II and Dr. Hamyun Khan, DTL of NPIWC II at Peshawar, KP. The objective of the meeting was to develop coordination and cooperation, amongst WCBA-BA and NPIWC II – KP projects (**Figure 5.9**). It was decided that field team members must be trained on all aspects of baseline survey and monitoring tools and teams will be employed for both project activities. Furthermore as there is only one field team that will be utilized judicially for the activities of both projects.

Figure-5.9: Dr. Usman Mustafa, TL, WCBA KP in meeting with Dr. Abdul Qudus, TL and Dr. Hamyun Khan, Deputy Team Leader, NPIWC-II on 12 September 2021

5.1.9 1st Meeting of Project Implementation Inspection Committee (PIIC)

The 1st meeting of Projects Implementation Inspection Committee (PIIC) of Federal Project

Management Unit under Prime Minister Agriculture Emergency Program Project was held on 17 September 2021. Meeting was held in the Committee Room of Federal Project Management Unit, G-7 Markaz Islamabad. The meeting was held to discuss and finalize the Physical Inspection Plan of the completed interventions under three water sector projects namely (i) national Program for Improvement of Water Courses in Pakistan Phase-II (NPIWC-II); (ii) National Program for Enhancing the Command Area Development in Barani Areas of Khyber Pkhtunkhwa (NPECA); and (iii) Water Conservation in Barani Areas of Pakistan (WC-KP). Minutes of meeting are attached as **Annex-D** to this report.

5.1.10 Meeting with Engr. M Shahid Jan, Construction Engineer of AGES Peshawar Office

On the desire of Dr. Usman Mustafa, TL, WCBA KP to have a meeting with TL of AGES, a meeting was arranged with Engr. M Shahid Jan, Construction Engineer of AGES Peshawar Office on 23 September, 2021 **(Figure-5.10)**. Dr. Mansab Ali, Irrigation Agronomist and Muhammad Afzal Khan, Social & Gender Specialist, WCBA KP were also present in the meeting (Figure 5.4). Dr. Mustafa, briefed that we all stakeholders are working for the conservation of water in KP, every stakeholder's job is crucial for the smooth running of the project. The ME&IE Consultants role is not only monitoring and evaluation of the project is also to boost its activities. In this connection we need your full cooperation and support.

ME&IE Consultants are planning to have successful "Case Studies" of the project which will boost up our project performance. This will not be achieved without your information. He appreciated the effort but informed that as instructed by their Team Leader information will not be directly provided to ME&IE Consultants only through NPC office, Islamabad.

Figure-5.10: Dr. Usman Mustafa, TL, Dr Mansab Ali, Irrigation Agronomist, Muhammad Afzal Khan, Social & Gender Specialist in meeting with Engr. M Shahid Jan, Construction Engineer of AGES Peshawar Office on 23 September, 2021.

5.2 PREPARATION OF MONITORING TOOLS (FIELD SURVEY QUESTIONNAIRES)

Consultants prepared and shared with client First Version of Monitoring Tools (MTs) for Baseline and Monitoring Surveys. The MTs were prepared and finalized in close liaison with client.

For preparation of MTs, Consultants have inducted maximum indicators for optimal ME&IE of the Project. These baseline and monitoring tools were shared with different stakeholders for comments to make the questionnaire more useful. Most of the suggestions received from various stakeholders have been incorporated.

Work on overall field survey questionnaire on macro and micro activities has been finalized. Draft Final MTs are attached as **Annex-E** to this report.

5.3 BASELINE SURVEY TRAINING

Training is vital because it represents a good opportunity for employees to grow their knowledge base and improve their job skills to become more effective in the workplace. In this connection five days training was arranged for field enumerators at WCBA- KP, Peshawar office. The objectives were to equip enumerators with basic monitoring and evaluation tools and baseline questionnaires.

The training was divided into two parts; the first two days training (27 & 28 August 2021) which was mainly consists of theoretical part i.e. Introduction, basic terminology, sampling and its procedure and followed by three days session (8 to 10 September 2021. In order to assess

participants improvement in knowledge a post assessment after a pre-test assessment questionnaire were filled **(Annexure-F).** This helps us in identifying the gaps and success of the training program. The average pre-assessment score was 4.5 while post training assessment score was 8.5. Therefore, the gain in overall knowledge due to training was four points out of 10 or 40 percent.

In the introduction remarks and brief about WCBA- KP, Baseline Survey, Dr. Usman Mustafa, TL informed workshop participants. Dr. Mansab Ali, Irrigation Agronomist enriched participants with "Land Utilization and Agriculture terminology" whereas Mr. Muhammad Afzal Hayat, Social and Gender Specialist, enriched participant Gender Role in WCBA – KP. The second session of these three days' training cum workshop schedule is attached at **Annexure G**. Similarly, second review of questionnaire has been completed as well. A mock exercise for all trainees was arranged prior to sending them in the field for Baseline Survey and Monitoring Evaluation. The pictures of the activities are placed at **Figures 5.11 to 5.15**.

At the end of the training program an "Training Evaluation Performa" was also completed by the trainees **(Annex-H).** In the Performa the conduct, place, logistic, food, venue, major learning, future direction, etc. questions were asked. Overall participants were very much satisfied from the training and developed lot of learning and field confidence.

After the successful completion of the training, certificates will be awarded through a certificate distribution ceremony where client department DG will be invited. Anyhow, Dr. Usman Mustafa, TL, Dr. Mansab Ali, IA, and Mr Afzal Hayat, G&S consultants distribute field bag to all the participants **(Figure 5.16 to 5.17).**

Figure-5.11: Field Team (Enumerators) in Baseline Survey Training at WCBA project Peshawar Office from 27-28 August 2021.

The pre training assessment results showed that the knowledge related to the subject is poor. Overall, the participants obtained 4.5 marks out of 10.

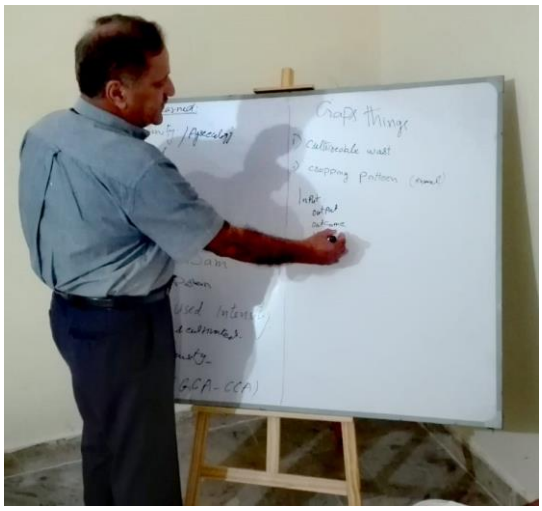

Figure-5.12: Dr. Mansab Ali, Irrigation Agronomist training enumerators in Baseline Survey Training at WCBA project Peshawar Office from 27-28 August 2021.

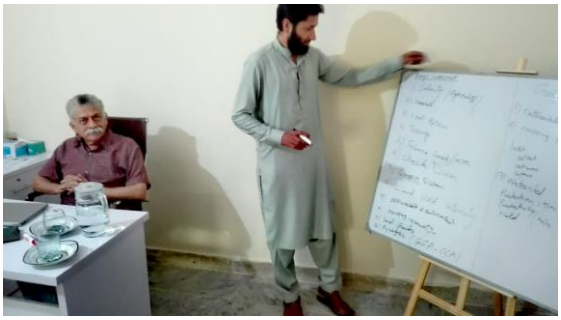

Figure-5.13: Mr. Mumtaz Ullah, a participant is elaborating few points to fellow trainees in Baseline Survey Training at WCBA project Peshawar Office from 27-28 August 2021.

Figure-5.14: Field Team (Enumerators) in second session of Baseline Survey Training at WCBA project Peshawar Office from 8-10 September 2021.

Figure-5.15: Dr. Mansab Ali, Irrigation Agronomist training enumerators in second session of Baseline Survey Training at WCBA project Peshawar Office from 8-10 September 2021.

Figure-5.16: Dr. Usman Mustafa, TL handing over the carry on field bags to the team members, 24 September, 2021

Figure-5.17: A group photo of one week field training of the enumerators along with Team Leader, Irrigation Agronomist and Social & Gender Specialist of ME&IE Consultants on 24 September, 2021

5.4 MOBILIZATION OF FIELD TEAM

Field Team of WC-KP has been mobilized and members of these team visited client office and activity areas to collect basic info regarding baseline survey and monitoring evaluation data in Peshawar area in the Central Zone. Pictures in the field area of field team movement and water conservation activities are presented at **Figure 5.18 to 5.29.**

Figure-5.18: Members of field team in meeting with Mr. Yaseen Wazir DG, Soil & Water Conservation, KP prior to moving in the field on 14 September 2021.

Figure-5.19: Members of field team in meeting with District Director Mr. Jaffar Shah, Soil & Water Conservation, KP on 14 September 2021.

Figure-5.20: All three team members are discussing the questionnaire prior to field visit.

Figure-5.21: Field Team visited a concrete Water Pond of Mr. Hamid Rehman & Jahan Zaib at Ghari Chandan, Peshawar on 17 September. 2021.

Figure-5.22: Field Team visited Adam Khan s/o Mula Khan, village Adezai, Peshawar, 17 September,2021.

Figure-5.23: Field Team # 1 & 2 visited Aqal Muhammad Protection Band Garhi Faizullah, Chowk Shams Kheil Kas Peshawar, 16 September, 2021.

Figure-5.24: Field Team # 1 & 2 visited Imran and Noor Zaman Water Ponds, Shamshato Peshawar, 16 September, 2021.

Figure-5.25: Field Team Shamin khan s/o Zar khan, village Behram khail Adizai dist. Peshawarr, 17 September, 2021.

Figure-5.26: Field Team visited Izzat Rehman S/O Rehman khan Village Abbas Khel, Peshawar, 16 September, 2021.

Figure-5.27: Field Team visited Haji Wazir Muhammad s/o Niaz Muhammad Mohallah Mandai P/O Shamshatoo, Peshawar, 16 September 2021.

Figure-5.28: Field Team visited Raham Sher s/o Mughal Sher, Garhi chandan Faizullah Urmar Payan, Peshawar, 16 September 2021.

Figure-5.29: Field Team visited Iqbal Hussain, Churakh Garhi chandan , Peshawar, 16 September 2021.

5.5 SUCCESS STORY / CASE STUDY IN MINGORA SWAT AREA

A farmer gathering at village Barrawal, Tehsil Matta, District Swat was organized by the Directorate of Soil & Water Conservation, Swat-KP on 23 September 2021. A very good interaction among major stakeholders i.e. S&WC, farmers and ME&IE Consultants were noticed where beneficiary farmers explained to other fellow farmers with merits and demerits of this project. The difference between, with and without interventions were very clearly observed with these farmers. The pictorial activities of the successful case study are depicted in **Figures**

5.30 to 5. 35. The brochure of the "Successful Story" is under preparation.

Figure-5.30: Growth and fruiting of Persimmon tree before Water Pond.

Figure-5.31: Growth and improved quantity & quality fruiting of Persimmon tree after Water Pond.

Figure-5.32: A happy farmer with home grown vegetables in his backyard after Water Pond.

Figure-5.33: A low cost protection bund to control soil erosion and conserve water on stream.

Figure-5.34: A general view of farmer's gathering where S&WC staff, farmers and ME&IE consultants interacting

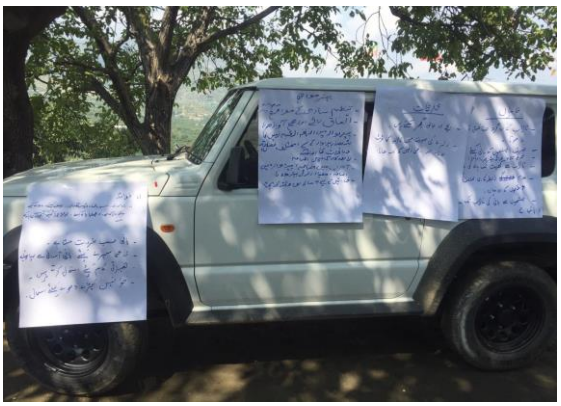

Figure-5.35: An exercise of SWOT analysis was performed with participating farmers and come up with Strength, Weakness, Opportunity and Threat (SWOT).

5.6 DEVELOPMENT OF ANDROID BASED APPLICATION FOR FIELD SURVEY

Development of Android Based application for field survey is in progress. About 60% work has been completed on this task.

Android is a mobile operating system based on a modified version of the Linux kernel and other

open source software, designed primarily for touch screen mobile devices such as smart phones and tablets.

Data collection android application would have following features:

i) Well optimized application for better work in online/offline environment User friendly interface
ii) Consume less internet bandwidth for better connectivity at low internet/remote areas
iii) Data is automatically uploaded when a connection is detected
iv) Data immediately available right after it's collected
v) signatures, photos and much more
vi) Strong safeguards against data loss
vii) Synchronize data via SSL, ensures data can't be read by a third party
viii) Encrypted data will be saved at device and server

Preparation and testing of android based application for field survey is in progress.

5.7 DEVELOPMENT OF MIS/GIS SYSTEM

Geographic Information System (GIS) is computer based system. An established Management Information System will enable Federal and Provincial PMUs to demonstrate to key stakeholders whether the project is achieving the stated goals, outcomes, and outputs in accordance with targeted time frame.

The GIS based MIS will provide the means of:

i) Comprehensively tracking the project inputs and outputs, using mainly the set of key performance indicators outlined under each component at frequent intervals;

ii) Monitoring of project outcome indicators;
iii) Robustly analyzing the relevant ME&IE data;

iv) Reporting progress on an open-access and regular basis, to support knowledge sharing, greater transparency, and improved project governance.

5.8 DEVELOPMENT OF WEBSITE FOR THE PROJECT

Development of Project Website is completed and is under process if refinement. A prototype version of this assignment will be shared with client and will be launched soon after approval of Client.

A website is a collection of web pages and related content that is identified by a common domain name and published on at least one web server. All publicly accessible websites collectively constitute the World Wide Web. Nowadays, the website is the primary communication tool as well as the front face of organization. In development projects, the prime purpose of the website is to communicate the project activities, outcome, impact reports and the publication of the notices like; tenders and bid evaluation reports for the transparent procurement processes. To develop the project website, Content Management System (CMS) will be used. By the implementation of CMS based website it will ensure the interactivity at website and easy update page content, images, documents, and integration with analytical systems to track pages and site performance.
Website structure is the main content planning phase. To finalize the structure of website a close consultation with key stakeholders is required. A preliminary structure of the website will have the following pages:

i) Homepage (Landing page)
ii) Project Introduction
iii) Project Components
iv) Project activities
v) Progress Reports
vi) Monitoring Reports
vii) Impact Reports
viii) Project Progress
ix) Procurement
x) Procurement of Goods, Services & works
xi) Evaluations and Results
xii) Career
xiii) Media Gallery
xiv) Contact
xv) FAQs (Frequently Asked Questions)

5.9 WORK SCHEDULE AND PLANNING FOR DELIVERABLE

The project Work Schedule and planning matrix for deliverables is attached to the report as **Annex-I** which shows the progress till the reporting month.

5.10 WORK SCHEDULE / ACTIVITIES FOR THIRD QUARTER (JULY TO SEPTEMBER 2021)

Work Plan / activities planned for the 3rd & 4th Quarter (July 2021 to December 2021) are attached as **Annex-J** to this report.

ANNEXES A TO J

ANNEX - A: MONITORING LOG-FRAME

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
Component A. Soil & Water Conservation Component							
1.	- Construction of 5,000 water ponds (WSPs)	a) 5,000 small farmers mobilized to construct water ponds b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Approximately 12,500 acres of agriculture land will be irrigated from these interventions.	2,000 water ponds	Crop production per unit area will increase by conserving runoff water/ water from perennial springs. Livestock will be increased; ultimately farmer's living standards will improve.	Approximately 12,500 acres of the land will be changed into crop fields and fruits orchids, which will increase farmer's income. More than 25,000 farmers will permanently engage in agriculture sector. These will provide short term employment to approximately 40,000 labors during the construction period of the interventions.	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to WSPs c) The survey will determine: • Cropping pattern before and after the improvement; • Cropping intensities before and after improvement; • Before and after crop yields; • Before and after employment; d) The difference between before and after will be considered the result of the intervention after netting out the contribution of the growth pattern of the crop sector otherwise.

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
2.	Construction of 3,000 Check dams (CD)	a) In each Check dam village, (small farmers mobilized will be to construct check dams b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Approximately 7,500 acres of the land will be reclaimed.	2,500 check dams	Approximately 7500 acres of the land will conserve; ground water table of the nearby wells will rise.	Land value of the project area will increase; more than 7,500 acres of the land will bring under cultivation. Climatic condition of the area will improve and livestock will be benefited. More than 15,000 people will permanently engage in agriculture activities in the project area. More than 24,000 labors will be provided with short term employment during the construction period of the intervention.	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to check dams c) The forms used for baseline and impact surveys in case of WSP will also be used for Check dams d) Same data analysis will be carried out here as in WSPs (1)
3.	Construction of 330 Water Reservoir (WR)	a) In each Water Reservoir village, (small farmers will be mobilized will be to construct It. b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of	Approximately 9,900 acres of land will be irrigated from this intervention.	250 mini dams	Ground water table will be improved; farmer's income will be increased. Livestock will be benefited.	Culturable wasteland will be developed by supplying stored water. Ground water table will rise up. Fish farming, livestock and forestry will be improved. Over all livelihood of the farmer community will improve. Approximately 19,800 people will permanently engage in agriculture, livestock and fish raring etc. More than 2,640 labors will	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to WRs c) The forms used for baseline and impact surveys in case of WSP will also be used for WRs d) Same data analysis will be carried out here as in WSPs (1)

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
		FCR				be benefited from the scheme.	
4.	Construction of 2,500 Stream bank stabilization (SBS)	a) In each SBS village, small farmers will be mobilized b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Protecting/ reclaiming about 6,250 acres of agricultural land from erosion with floods water.	15,000 stream bank stabilization structures.	Per unit area of crop production will be saved.	Approximately 6,250 acres of agriculture land will be saved directly from floods water. This will further enhance the life of precious dams and reservoirs. This may engage approximately 12,500 farmers for long time in agriculture sector.20,000 labors will work during construction period of these intervention	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to SBSs c) The forms used for baseline and impact surveys in case of WSPs will also be used for SBSs d) Same data analysis will be carried out here as in WSPs (1)
5.	Construction of 1,000 Gated field Inlet Outlet/Spillway (GFIO/S)	a) In each GFIO/Spillway village, small farmers will be mobilized b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of	Sufficient amount of water will be provided to about 2,500 acres of land for irrigation in rod kohi areas of the province.	1,500 field inlets and spillways.	Farmer's income will increase; fertile land degradation will be minimized.	Approximately 2,500 acres of agriculture land will be benefited directly from this intervention. Approximately 5,000 farmers will permanently engage in agriculture sector for long period of time. These interventions will provide short term employment to about 5,000 labors.	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to GFIO/S c) The forms used for baseline and impact surveys in case of WSP will also be used for GFIO/s d) Same data analysis will be carried out here as in WSPs (1)

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
		FCR*					
6.	Development of 370 acres land for terracing (LFT)	a) In each LT village, small farmers will be mobilized b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Farmer's income will be increased by increasing agricultural land due to terraces development.	500 acres	Per unit production of farmers will increase by converting approximately 370 acres of non-culturable waste land into culturable.	Crop production will increase; land sliding will reduce due to terraces formation; rainwater infiltration will increase. Approximately 740 farmers will permanently engage in agriculture. Approximately 1,850 labors will be benefited from these interventions.	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to WSPs c) The forms used for baseline and impact surveys in case of WSP will also be used for LFTs d) Same data analysis will be carried out here as in WSPs (1).
7.	Development of 70 numbers of micro-watershed areas (MWA)	a) In each MWA small farmers mobilized to construct MWA b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Approx. 7,000 acres of the area will be converted into agriculture/ forest land which will improve the aesthetic value of the area.	02 micro watershed developed	Culturable wasteland will be converted into an agricultural productive land. Farmer's income will be increased through agriculture, livestock, fisheries and forestry etc.	Developing micro-watersheds will improve climatic condition of the area; floods chances will be minimize by harvesting rainwater in water harvesting interventions; land sliding and soil erosion will be minimized. Moreover, aesthetic value of the land will be improved. Approximately 14,000 people will engage in	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to MWA s c) The forms used for baseline and impact surveys in case of WSP will also be used for WRs d) Same data analysis will be carried out here as in WSPs (1).

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
						agriculture sector permanently. Approximately 14,000 labors will be directly benefited during the process of micro-watersheds development.	
8.	Constructing 370 numbers of water Seepage harvesting Galleries (WSHG)	a) In each WSHG farmers will be mobilized to construct water ponds b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Approx. 925 acres of land will be irrigated from this intervention.	15 water seepage galleries	More area will bring under cultivation by establishing crop fields and fruits gardens in the project area. Livestock will increase and more people will engage in agriculture sector.	Continuous supply of clean water for agriculture, livestock and human beings will be ensured. Water crises will be minimized in the project area. More than 1,850 number of people will engage in agriculture activities for long period of time. About 1,850 labors will be directly benefited during the construction process.	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to WSHG s c) The forms used for baseline and impact surveys in case of WSP will also be used for WRs d) Same data analysis will be carried out here as in WSPs (1)
9.	800 numbers of Agronomic low-cost interventions (ALCI)	a) In each ALCI village small farmers mobilized to ALCI b) They agree to contribute 20% of the cost c) Agree to first	Approx. 2000 acres of land will be protected from erosion by these interventions.	2000 various low cost small interventions	More area will bring under cultivation; economic condition of the local community will be	Land will be protected from erosion; infiltration will be improved during rainfall; livestock will be benefited. Approximately 2400 farmers will permanently engage in agriculture. These will also	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to ALCI s c) The forms used for baseline and

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
		construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*			improved.	provide short term employment to about 2400 labors.	impact surveys in case of WSP will also be used for ALCIs d) Same data analysis will be carried out here as in WSPs (1
10.	230 acres of Sand Dunes Stabilization (SDS)	a) In each SDS locality small farmers mobilized to construct water ponds b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Approx. 230 acres land of sand dunes will be stabilized by growing kana plants.	200 acres Sand dunes effects stabilized.	Non-culturable sand dunes will be converted into an economically productive piece of land.	Sand dunes stabilization through plantation will be a direct source of income generation for the local community by making homemade items from the stems of the kana plants. These will also help in improving climatic condition of the project area. Meanwhile about 460 numbers of labor will be benefited.	a) Adopting the Sampling formula/ sample of water ponds farmer will be surveyed b) A data collection form will be designed to measure water saving due to SDS s c) The forms used for baseline and impact surveys in case of WSP will also be used for SDSs d) Same data analysis will be carried out here as in WSPs (1

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
11.	500 Nos Capacity Building (CB)	500 small farmers capacity will be built on different traits.	An estimated 500 trainings will be conducted for stakeholders including farmers and departmental staff.	2000 Capacity building trainings conducted.	Enhanced capacity for better management of soil and water resources.	Soil and water resources of the province will better be managed with better management practices. The capacity of the stake holder will be enhanced in better management of soil and water resources of the country in general and Khyber Pakhtunkhwa in particular.	a) Pre training and post training evaluation will be conducted from all farmers to estimate the enhancement in their knowledge and skill. b) In this connection same Performa will be used before the conduct of the training after the completion of the training.
Component B Agricultural Engineering Component							
12	Procurement and installation of 700 Solar, pumping System and 300 Tube Wells (SPS&TW).	a) Solar Pumping small farmers mobilized to install SPS&TW b) They agree to contribute 20% of the cost c) Agree to first construct SPS&TW with his/her own funds and then received subsidy at 80% on issuance of FCR*	Irrigation of 17,500 hectares (43,225 acres) of land.	> 650 SPS&TW installed.	Conversion of rain fed land into irrigated land will add more value to the land and the enhance production from crops/Orchard will help in improving the socio-economic condition of the farming community.	Provision of irrigation water will lead to increase Agriculture production and self-sufficiency in food grain.	a) Adopting the Sampling formula/ sample of SPS&TW farmers will be surveyed b) A data collection form will be designed to measure water saving due to SPS&TW s c) The forms used for baseline and impact surveys in case of WSP will also be used for SPS&TW s Same data analysis will be carried out here as in WSPs (1

Project Sub-component	Target	Activities	Outputs	Outcome		Goal/ impact	Methodology for Measuring Results
				Baseline indicator	Target after completion of Project		
13	700 on-site training of farmers in adaptation of new techniques for pumping sub-surface water.	a) 5,000 small farmers mobilized to construct water ponds b) They agree to contribute 20% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 80% on issuance of FCR*	Irrigation water Pumping cost will be reduced by adopting solar technology.	> 2,000 trainings conducted.	The cropping intensity will be enhanced.	Farmers of the project area will be educated in the modern techniques being adopted in Agriculture and therefore, pay more attention to increase crop yield and Farm income.	d) Adopting the Sampling formula/ sample of trained farmer will be surveyed e) A data collection form will be designed to measure water saving due to trainings f) The forms used for baseline and impact surveys in case of WSP will also be used for trainees Same data analysis will be carried out here as in WSPs (1

ANNEX - B: PROJECT PROGRESS REPORTING FRAMEWORK (PPRF)

Project Title……

Report Name and Period…….

Area Name ……..

Sr. No.	STRATEGY /ACTIVITIES	Reporting Quarter								Year to Quarter(Cumulative)							
		Physical Progress				Financial Progress				Physical Progress				Financial Progress			
		Unit of Measure	Target/Planned	Actual/Achievement	Variance%	Committed Liability of Previous Year	Budget Allotted(PC-1)	Actual Expenditure	Variance%	Unit of Measure	Target/Planned	Actual/Achievement	Variance%	Committed Liability of Previous Year	Budget Allotted(PC-1)	Actual Expenditure	Variance%
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Area details……..?																	
1	Activity details ……?																
Sub Totals																	
Area details……..?																	
2	Activity details ……?																
Sub Totals																	
Total(s)																	

Note:1-Report Summary will be Prepared Separately from the data consolidated Area wise and Components Wise…..?

2- More columns will be added as per requirements….?

ANNEX - C: MINUTES OF NPC VISIT MEETING

MINUTES OF MEETING

Meeting Date & Time	September 01, 2021	**Meeting Venue**	ME&IE Consultant's National Office Islamabad
Meeting Title	NPC meeting with participants of 3-day workshop of ME&IE Consultants at National Office Islamabad (NPIWC-II)		
Meeting Chair	Muhammad Tahir Anwar (NPsC) FPMU-NPIWC-II		

ATTENDEES OF MEETING:

Sr. No.	Name	Designation
1	Mr. Saif Ul Islam	Deputy NPC NPIWC-II
2	Eng. Hafiz Abdul Rauf	Chief Executive EASE PAK Pvt. Ltd.
3	Prof. Dr. Muhammad Abdul Quddus	Team Leader / M&E Specialist NPIWC-II
4	Dr. Usman Mustafa	Team Leader / M&E Specialist WCBAKP
5	Mr. Muhammad Yousaf Bhatti	Deputy Team Leader, Punjab Office Lahore (NPIWC-II)
6	Mr. Rizwan Ahmed	Deputy Team Leader, Balochistan Office, Quetta (NPIWC-II)
7	Mr. Rizwan Saleem	ICT / Technology Specialist NPIWC-II
8	Dr. Mansab Ali Khokhar	Irrigation Agronomist WCBAKP
9	Mr. Imran Zafar	Supporting Technical and Non-Technical Staff

Agenda of the Meeting/Points Discussed

The meeting was started under the Chair of NPsC, FPMU-NPIWC-II. The Chair asked the meeting participants about the outcome of the 3-days workshop conducted at National Office Islamabad. The participants expressed their satisfaction that a fruitful discussion was made, and the participants are now in the process of preparing a detailed Bi-annual work plan of ME&IE project activities. Following are the key points which came under discussion:

- The Chair asked TL and all DTLs individually, about the resources provided by the management to them. TL and DTL, Lahore showed their satisfaction and admitted that the company has provided them all resources and they are fully functional and well equipped. The DTL, Quetta was also asked by the NPC the same question and DTL, Quetta informed him that the Zonal Office, Quetta has been established and all field staff including support staff has been mobilized. On these statements the chair commented that he will make a surprise visit to all provincial project offices at any time to check the facilities/vehicles etc.
- The NPC asked about bottlenecks the DTLs are facing in their zones. A few of the bottlenecks indicated by that DTLs were as follows:
    - The beneficiary data / inventory of F.Y. 2019-20 and 2020-21 yet to be provided by the Project Consultants, Quetta.
    - The beneficiary data / inventory provided by the OFWM, Balochistan and Project Consultants till to date is incomplete.
    - The DTL, Quetta of Project Consultants is reluctant to provide the beneficiary data of FY 2019-20 and 2020-21 at provincial level. He asked DTL (ME&IE Consultants), Quetta to get such data at National Level.
    - Non availability of NWMC Annual, Monthly Quarterly Reports to have an insight of the working/progress of NWMC which is required in finalization of Annual Report of ME&IE Consultants.
- The NPC shared reservations raised by Project Consultants regarding measurement / digging the interventions by ME&IE Consultants. The CEO, Ease Pak briefed NPC regarding the importance of measurement of all intervention whether it is as per design and specification or not. This is the mandate of ME&IE Consultants as per the TORs. Furthermore, DTL, Quetta also briefed him that the digging is necessary in some cases during monitoring of PVC Pipe to check their quality and approved brand.

- The Chair responded to the above issues that NWMC also faced issues in Balochistan regarding data from the department. Therefore, it was decided that a combined meeting of ME&IE Consultants and NWMC Consultants will be called in his office to discuss this issue and ensure that both the consultants share their reports with each other as well. He advised Dy. NPC to provide / lend a hard copy of the NWMC Annual Report to ME&IE consultants.
- The NPC advised TL ME&IE Consultants to make a comprehensive list of required data from NESPAK on priority basis and shall be shared with the DPC, NPIWC-II by Friday (3rd Sept., 2021). The same will be shared and discussed with the Project Consultants during the forthcoming joint meeting.
- The Chair categorically cleared that ME&IE consultants may coordinate with the provincial departments. However, as per contract provisions, they cannot correspond directly with them. As all the correspondence shall invariably be addressed to the NPC.
- The Chair stated that the request received from ME&IE consultant for replacement of the DTL is being sent referred back to the Consultants with remarks that for replacement of key, a comparative statement should be shared under a cover letter in which required staff qualification, previous approved staff qualification and proposed replacement staff qualification must be given along with CV. However, for non-key and support staff the intimation letter with names is enough, but FTIs should also with comparative statement.
- As per Contractual obligations, the ME&IE consultants must take prior approvals for any activity regarding non-key staff mobilization or replacement of key/non-key staff as well as all direct cost activities. Any such pending cases shall be submitted for approval without further delays.

The meeting ended with a vote of thanks to the chair.

ANNEX - D: MINUTES OF MEETING OF PROJECTS IMPLEMENTATION INSPECTION COMMITTEE

Government of Pakistan
Ministry of National Food Security & Research
(Federal Project Management Unit)
<><><><>

MINUTES OF THE MEETING

Subject: **1st MEETING OF PROJECTS IMPLEMENTATION INSPECTION COMMITTEE (PIIC) OF FEDERAL PROJECTS MANAGEMENT UNIT UNDER PRIME MINISTER AGRICULTURE EMERGENCY PROGRAM PROJECTS**

The 1st meeting of Projects Implementation Inspection Committee (PIIC) of Federal Projects Management Unit (FPMU) was held on 17-09-2021 at 10:00 AM in the Committee Room of the Federal Project Management Unit, G-7 Markaz, Islamabad to discuss and finalize the physical inspection plan of the completed interventions under three water sector projects namely: (i) National Program for Improvement of Water Courses in Pakistan Phase-II (NPIWC-II); (ii) National Program for Enhancing the Command Area in Barani Areas of Pakistan (NPECA); and (iii) Water Conservation in Barani Areas of Khyber Pakhtunkhwa (WC-KP). The meeting was chaired by the Director General, FWMC (the Co-Chair) as the National Projects Coordinator was on an official visit with the Secretary, NFS&R. List of the participants is annexed at "A".

2. The meeting commenced with recitation from the verses of the Holy Quran. The Chair welcomed the participants and after brief introduction of the participants briefed about the purpose of the meeting. The Chair said that as per approved PC-I provisions of the NPECA project, a PIIC was constituted in FPIU under the Co- chairmanship of National Projects Coordinator (NPsC) and Director General (FWMC) with representation from all executing agencies and consultants. The committee is responsible to physically inspect the interventions of the three water projects wherever and whenever needed. The committee members with consultation of executing agencies have recommended the following:

- The team consisting of officers from FWMC, as nominated by DG (FWMC), and FPMUs, as nominated by the NPsC from respective three projects, will visit the project's on-going and completed interventions in multiple visits to each selected zone/component/agency during the month.
- DG (FWMC) or his nominated officer may visit the project sites as per proposed plan and share the visit schedule with FPMU for facilitation. The FPMU representatives will accompany with the FWMC team during the visit.
- NPsC or his nominated officers in respective of three water projects may visit project sites according to proposed plan and shared the visit schedule with DG (FWMC) for information.

Lehmy 24/9/21

- The representatives from concerned executing agency and consultants will accompany the visiting teams during each visit.
- The executing agencies will share list of all completed and on-going schemes to DG (FWMC) and NPC prior to the visit.
- The Project Consultants and ME&IE Consultant will provide detail of information and data regarding verification of design, cost estimates and status of monitoring and evaluation of on-going & completed schemes to the visiting teams if desired, so.

3. The tentative proposed plan to visit completed/ongoing interventions under aforementioned three water projects were discussed in detail and tabulated below:

Executing Agency	2nd Quarter Plan of Tentative Field Visits					
Province	October, 2021		November, 2021		December,2021	
Punjab	-	-	-	-	2nd Week	-
KP	-	4th Week	-	-		-
Balochistan	-	-	-	-		-
Gilgit Baltistan	1st Week		-	-	-	-
AJ&K	-	-	2nd Week	4th Week	-	-
ICT	-	-	-	-	-	-
PARC Research Component	-	-	-	-	-	-

The meeting was ended with vote of thanks to and from the Chair.

****

Lehmy 24/9/21

ANNEX - E: DRAFT FINAL QUESTIONNAIRES

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

QUESTIONNAIRE

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)			
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 FROM WC ACTIVITY 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 Improvement ---------- ---------- ---------- ----------		After Improvement ---------- ---------- ---------- ----------	
24.	Total culturable area (acres)	Before Improvement		After Improvement	

SR. #	DESCRIPTION		
25.	Total Cultivated area (acres) a) Irrigated (Source of irrigation): Tube well = 1, Tank = 2, Pond = 3, Other = 4 b) Non-irrigated	 ---------- ----------	 ---------- ----------
26.	Tenure Status and area (acres): a) Own (O) b) Tenant (T) c) Owner Cum Tenant (OCT)	Before Improvement ---------- ---------- ----------	After Improvement ---------- ---------- ----------

27.	Cropped area (acres)	Before Improvement	After Improvement
	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	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	h) Intercrop/mix crop	-----(Acre)------(Mds)	-----(Acre)------(Mds)

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

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)			Cost acre	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.					
	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)		Hour/acre	Cost/hour	Area irrigated
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 Cotton / Orchard / Vegetables		45. Harvesting/ picking										46. Crop 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	CHL Rs.		Harvest material Cost (Rs)	CHL Rs.		Cost of Reaper (Rs)	Cost of Threshing or Combine harvesting	CHL Rs.		Area (acre)	Yield		Prices		In case sold as such Rs. /acre for fruit plants only
											Male (MD)	Female (MD)		Male (MD)	Female (MD)			Male (MD)	Female (MD)		Product (40 Kgs)	By-product (40 Kgs)	Product price (Rs./ 40 Kg)	By-Product	
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 WATER CONSERVATION ASSICIATION (WCA), 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 Chairman				
49.	Contact # of Chairman				
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.	Are you a member of (WCA)? a) Yes, b) No.	[ ]			
54.	Is there any female member in WCA? a) Yes, b) No.	[ ]			
55.	Are female members involved in decision making? a) Yes, b) No.	[ ]			
56.	Was your participation voluntary? a) Yes, b) No.	[ ]			
57.	Who motivated you to be a member?	WCA Member	S&W Ag Engineering	Neighbor Farmer	
58.	Did you pay any membership contribution to become member of WCA? Yes / No.	[ ]			
59.	Do all the WCA members are water users? a) Yes, b) No.	[ ]			
60.	How many water disputes solved by WCA till to-date? (numbers)	[ ]			
61.	Is there any grievances re-dressal committee regarding water disputes? a) Yes, b) No.	[ ]			
62.	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	[ ]			
63.	Does WCA hold regular meetings of the association? a) Yes, b) No.	[ ]			
64.	Do you participate in the WCA meetings? a) Yes, b) No.	[ ]			
65.	Do you know that the minutes are recorded and got approved in the next meeting? a) Yes, b) No.	[ ]			
66.	To what extent are you satisfied with the maintenance of the irrigation system?	Not at all	To some extent	To large extent	
67.	Do decisions make democratically? a) Yes, b) No.	[ ]			
68.	Do majority of the members participate in the meetings? a) Yes, b) No.	[ ]			
69.	What is the frequency of WCA meetings?	Every month	Quarterly	Once a year	As per need arises
70.	Do you aware about functions and responsibilities of the Association? a) Yes, b) No.	[ ]			
71.	Do you think WCA helps in solving your farming problems? a) Yes, b) No.	[ ]			
72.	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:				
73.	Do women participate in farming activities? a) Yes, b) No.			[ ]
74.	Have you (female) heard about WC-KP Project? a) Yes, b) No.			[ ]
75.	Do you (female) know about WC-KP. a) Yes, b) No.			[ ]
76.	Are you (female) member of WCA a) Yes, b) No.			[ ]
77.	Do (female) participate in WCA meetings? a) Yes, b) No.			[ ]
ENVIRONMENTAL ISSUES:				
78.	Total number of trees on the Water Conservation Structure (WCS) before activity?	(Start) [ ]	(Middle) [ ]	(End) [ ]
79.	Will any tree be cut down on this WCS? a) Yes, b) No.			[ ]
80.	No. of trees to be cut down on this WCS?	(Start) [ ]	(Middle) [ ]	(End) [ ]
81.	No. of trees planted on this WCS after the activity	(Start) [ ]	(Middle) [ ]	(End) [ ]
REDUCTION IN WATER LOGGING AND SALINITY, MINIMIZATION OF CONVEYANCE LOSSES, EQUITY IN WATER DISTRIBUTION:				
82.	Do you know the depth of Water table of your land? a) Yes, b) No.			[ ]
83.	How much depth of water table was 01 year ago			[ ]
LIVESTOCK/ ANIMALS:				
	Entity*	**Number**	**Value (Rs)**	
84.	Buffaloes			
85.	Cows			
86.	Bullocks			
87.	Sheep			
88.	Goats			
89.	Camels			
90.	Poultry			
91.	Horses			
92.	Donkeys			
* Two small animal count one				

INCOME & EXPENSES (Rs in thousands)						
93.	Income from crops from whole year					
94.	Income from livestock from whole year					
95.	Income from labor (from outside farm) per annum					
96.	Any other source----------					
97.	Total income (Per year)					
98.	Total family expenditure (Per Year)					
99.	If expenditure more than income how you manage?		Yes	No		
100.	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?			
101.	a) S&WC Directorate representative	No of times [ ]	Benefit achieved Yes [ ], No [ ]
102.	b) Agri. Engineering representative	No of times [ ]	Yes [ ], No [ ]
103.	c) AGES Consultants representative	No of times [ ]	Yes [ ], No [ ]
104.	d) Agriculture extension agent	No of times [ ]	Yes [ ], No [ ]
105.	e) Pesticides company agent	No of times [ ]	Yes [ ], No [ ]
106.	f) Fertilizer company representative	No of times [ ]	Yes [ ], No [ ]
107.	g) Agriculture credit officer	No of times [ ]	Yes [ ], No [ ]

AGRICULTURE EQUIPMENTS:			
108.	Do you own a Tractor? a) Yes, b) No.	[ ]	If Yes value Rs----------
109.	Do you own Thresher? a) Yes, b) No.	[ ]	If Yes value Rs----------
110.	Do you own Seed drill? a) Yes, b) No.	[ ]	If Yes value Rs----------
111.	Do you own Rotavator? a) Yes, b) No.	[ ]	If Yes value Rs----------
112.	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 ----------	GPS ----------	Coordinate ----------	
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 Pond Structure	Cemented	Earthen	---------	-------
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 (km)	Time Reduced (hours)	
12.	Ground Water Recharge	Yes	No		
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	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 i. Availability of fingerlings, seedlings etc. ii. Diseases iii. Manuring / feeds iv. Marketing v. Any other	Yes ---------- ---------- ---------- ---------- ----------	Rank ---------- ---------- ---------- ---------- ----------	No ---------- ---------- ---------- ---------- ----------	
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	Promptly	Took lot of	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 subsidy was paid	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	Geo-membrane
5	PCC
6	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 WST using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from WST**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the WP, 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in WP exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 Water Pond (WP)?**
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 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 and		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 subsidy was paid	Within reasonable time	Required lot of efforts	No comment
16	How you feel maintenance of 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	Geo-membrane
5	PCC
6	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 subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Check Dam (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 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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
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	**Subsidy 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 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 (km)	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	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: Please rank Availability of fingerlings, seedlings etc. Diseases Manuring / feeds Marketing Any other	Yes	Rank	No	
EMPLOYMENT ENGAGED IN FISH FARMING					
21	Employment Permanent Casual Daily wages	Before	After		
BENEFICIARY FEED BACK					
22	After submission of application, how much period took to complete the water reservoir?	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 material	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 subsidy was paid	Within reasonable time	Required lot of efforts	No comment
29	How you feel maintenance of Water Reservoir	Easy	Difficult	No comment
30	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	Geo-membrane
5	PCC
6	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 subsidy?**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Water Reservoir (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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes

2	No
4.8	**Does the water depth in Water Reservoir (CD) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 Water Reservoir (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 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	Sand bags	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 4	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 subsidy 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	Shape of Stream Bank Stabilization (SBS)?
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	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 subsidy?**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the SBS, 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Stream Bank Stabilization (SBS) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 subsidy 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 subsidy?**
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 of geo-membrane 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Gated Field Inlet Outlets/ Spillways (GFIO) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 subsidy 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 subsidy?**
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 and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the terracing, 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No
4.9	**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 subsidy 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	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 subsidy?**
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
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the terracing, 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**What Watershed Development activities?**
1	Terracing
2	Water pond
3	Mini dam
4	Check dam
5	Any other
4.9	**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 subsidy 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 subsidy?**
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 and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the terracing, 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
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 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 subsidy 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 subsidy?**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the ALCI, 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
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 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 subsidy 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	Geo-membrane
5	PCC
6	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 funds before subsidy?**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Low-cost Brush Wood Check Dam (LCBWC), 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Low-cost Brush Wood Check Dam (LCBWC) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 Low-cost Brush Wood Check Dam (LCBWC)?**
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 subsidy 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	Geo-membrane
5	PCC
6	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 subsidy?**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Loose Stone Check Dam (LSCD), 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Loose Stone Check Dam (LSCD) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
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 Loose Stone Check Dam (LSCD)?**
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 (home made 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 subsidy 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 subsidy?**
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	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Sand Dunes Stabilization (SDS), 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8.1	**Is the testing of Joints welded parts done before filling the Sand Dunes Stabilization (SDS)?**
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	Subsidy	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 subsidy?**
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	**Subsidy 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 Crap, 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 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 subsidy 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)**
3.1	**Shape of Installation of Tube Wells (ITW)?**
1	Depth
2	Diameter
3	Any other
3.2	Depth
4.1	**The farmer completed the Tube Wells (ITW) using his/her own funds before subsidy?**
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
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
4.6	**Before filling the Tube Wells (ITW), the AGES 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Tube Wells (ITW) exceed standared feet?**
1	Yes
2	No
4.9	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
4.10.1	**Is the testing of Joints welded parts done before filling the Tube Wells (ITW)?**
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 o) Any other	Yes	Rank	No	
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 subsidy 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 subsidy?**
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
4.6	**Before filling the Solarization of Tube Wells (ITW), the AGES 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	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Solarization of Tube Wells (ITW) exceed standard feet?**
1	Yes
2	No
4.9	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
4.10.1	**Is the testing of Joints welded parts done before filling the Solarization of Tube Wells (ITW)?**

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)**

ANNEX - F: PRE-TESTING ASSESSMENT
Water Conservation in Barani Area, KP
"Four Days Training Workshop of Field Staff"
September – September, 2021

1. Pre-Training Assessment

We welcome you to the ***"Training Workshop"*** course at WC- KP, ME&IE Consultants. We will try our best to make this training useful, productive and interactive. We would like to conduct a pre-training assessment of the knowledge of the participants on the subject matter. Please, remember this is not a test or examination of individual but a reflection of participation about to the subject. This will help us deliver lectures according the level of participants and will enable us in assessing the effectiveness of the training course.

Q1. Geographical area is calculated by:
a) Pakistan Agricultural Research Council
b) Survey of Pakistan
c) Agriculture Department, KP
d) None of the above

Q2. Cultivated area is:
a) The cropped area
b) Net area sown + current fallow
c) Area sown once in the year
d) All of above

Q3. One hectare is equal to:
a) 1.561 acres
b) 16.231 kanals
c) 2.471 acres
d) 20.471 marlas

Q4. Crops sown in October / November are:
a) Perennial crops
b) Kharif crops
c) Rabi crops
d) None of the above

Q5. Cropping intensity is:
a) Net sown area + current fallow
b) Net sown area/total cropped area *100
c) Area sown in kharif and Rabi season
d) All of the above

Q6. Pakistan is a water stressed country and ranks:
a) 1st
b) 2nd
c) 3rd
d) 4th

Q7. Bringing more area under high value crops using innovative technologies / interventions we may be able to achieve four pillars of food security:
a) Accountability, accessibility, utilization and success-ability
b) Productivity, accountability, utilization and stability
c) Availability, accessibility, utilization and stability
d) None of above

Q8. A Check Dam is:

a) Productive dams
b) Flood control dams
c) Water-storage dams
d) All of above

Q9. Field spillways/ Gated Filled Inlet Outlets (GFIO/Spillway) are:

a) Area provides the controlled release of excess flow of water.
b) Channel provides the controlled release of excess flow of water
c) Mini dam provides the controlled release of excess flow of water
d) Structure provides the controlled release of excess flow of water from field to a downstream area.

Q10. What is Terracing?

a) Bunds
b) Small reservoirs
c) Water storage tanks in a hill
d) Field steps in a slope

ANNEX - G: TWO DAYS' TRAINING WORKSHOP OF FIELD STAFF

Five Days Training Workshop of Field Staff
Water Conservation in Barani Area, KP
Activity Schedule

First Day

No.	Activity	Resource Person	Timing
A	**Inauguration Session**		
1	Registration		9:00 to 10:00 am
2	Recitation from Holly Quran		10:01 to 10:05 am
3	Pre - Training Assessment		10:6 to 10:20 am
4	Introduction WC- KP, Baseline Survey, and about the training workshop	UM*, MA, and AHK*	10:20 to 11:00 am
Tea Break			11:00 to 11:30 pm
B	**First Technical Session**		
1	Land Utilization and Agriculture terminology	MA	11:30 to 12:15 am
2	Gender Role in WCBA - KP	AHK*	11:30 to 13: 00 am
Lunch and Jumma Prayer Break			13:00 to 14:15 pm
D	**Second Technical Session**		
1	Farmer General Questionnaire	UM, MA, and AHK	14:15 to 15:00pm
Tea Break			15:00 to 15:30
E	**Third Technical Session**		
1	Water pond, water reservoirs, Stream bank stabilizer (SBS), Field-spillways/ Gated Filled Inlet Outlets (GFIO/Spillway)	UM, MA, and AHK	15:30 to 16:30
2	Tube Wells, Solar Pumping System	UM, MA, and AHK	16:30 to 17:00 pm

Second Day: Tools in House Exercise

1	Briefing about exercise	UM	9:00 to 10:00 am
2	Exercise	Field Enumerators	10:00 to 11:00 am
Tea Break			11:00 to 11:30 am
3	Continue of Exercise	UM, MA, and AHK	11:30 to 13:00 pm
Lunch and Prayer Break			13:00 to 14:00 pm
4	Discussion of Exercise	UM, MA, and AHK	14:00 to 17:00 pm

Third Day: Tools in House Exercise

1	Review of Previous Day Activity	UM, MA, and AHK	9:00 to 10:00 am
2	Mock Exercise	Field Enumerators	10:00 to 11:00 am
Tea Break			11:00 to 11:30 am
3	Discussion on Mock Exercise	UM, MA, and AHK	11:30 to 13:00 pm
Lunch and Prayer Break			13:00 to 14:00 pm
4	Discussion on Mock Exercise	UM, MA, and AHK	14:00 to 16:00 pm
5	Briefing about field – do and don't do	UM	16:00 to 17:00 pm

Fourth Day: Field Exercise

1	Review of Previous Day Activity	UM, MA, and AHK	9:00 to 10:00 am
2	Field Visit	Field Enumerators	10:00 am to 17:00 pm

Fifth Day: Field Experience, Training Evaluation and Distribution of Field Bags

1	Review of Previous Day Activity	UM, MA, and AHK	9:00 to 10:00 am
2	Sharing of Field Experience	Field Enumerators	10:00 to 11:00 am
Tea Break			11:00 to 11:30 am
3	Discussion on Field Learning and Improvement in Baseline Questionnaire and Monitoring tools	UM, MA, and AHK	11:30 to 13:00 pm
Lunch and Prayer Break			13:00 to 14:00 pm
4	Continuing of Section 3	UM, MA, and AHK	14:00 to 15:00 pm
5	Training Evaluation and Distribution of Training Bags	UM, MA, and AHK	16:00 to 17:00 pm

* UM = Dr. Usman Mustafa, MA = Dr. Mansab Ali, and AHK, Mr. Afzal Hayat Khan

ANNEX - H: EVALUATION PERFORMA

Water Conservation in Barani Areas of KP (WC-KP)
ME&IE Consultants
Training Course on
"Baseline and M&E Tools"

We have just completed the training. Now we would like you to indicate us about your feelings on what has been presented. This information is valuable in helping us to assess the degree of success of the training and making it more objective and effective in future. The questions can be answered by circling a number on the scale to the right of each question. Where you intend giving additional information, please write your reply/response clearly and precisely in the space provided for the purpose.

I. STRUCTURE AND ORGANIZATION:

Duration of the training	*Too short*		*Fair*		*Too long*
	1	*2*	*3*	*4*	*5*
Schedule of the training	*Too tight*				*Too relax*
	1	*2*	*3*	*4*	*5*
Amount of discussions held	*Too much*				*Too little*
	1	*2*	*3*	*4*	*5*
The quality of training	*Poor*				*Excellent*
	1	*2*	*3*	*4*	*5*

II. PHYSICAL RESOURCES AND FACILITIES

		Very Poor		*Fair*	*Good*	*Very Good*
1	Training venue	1	2	3	4	5
2	Setting of the training room	1	2	3	4	5
3	Light arrangements	1	2	3	4	5
4	Suitability of training room	1	2	3	4	5
5	Teaching aid facilities	1	2	3	4	5
6	Computer lab. facilities	1	2	3	4	5
7	Air conditioning	1	2	3	4	5
8	Quality of meals	1	2	3	4	5
10	Others (please specify)	1	2	3	4	5

III. OBJECTIVES OF THE TRAINING:

After completing this training course, the participants would be able to:

- *Understand & appreciate "Baseline Survey and M&E Tools" and practices for the management of project effective and efficiently, and*
- *Use of various theories, tools, techniques and approaches in Baseline Survey and M&E.*

To indicate your opinion about importance, circle:	*To indicate your opinion about achievement, circle:*
1 = Not important 2 = Least important 3 = Somewhat important 4 = Important 5 = Very important	1 = Not achieved 2 = Achieved a little 3 = Somewhat achieved 4 = Mostly achieved 5 = Fully achieved

IV. RESOURCE PERSONS:

In general, how do you evaluate resource *persons in this training program.*

Name	***Excellent***	***Good***	***Average***	***Poor***	***Very Poor***
Dr. Usman Mustafa					
Dr. Mansab Ali					
Mr. Afzal Hayat Khan					

V. KNOWLEDGE & SKILLS:

Name three new concepts that you have learned from this course

_____
_____
_____

Name three new skills that you have learned from this course.

_____
_____
_____

Any other suggestion/recommendation do you think can make this course more useful and attractive

_____
_____
_____

ANNEX - I: WORK SCHEDULE AND PLANNING FOR DELIVERABLES

WORK SCHEDULE AND PLANNING FOR DELIVERABLES

NO.	DELIVERABLE/ ACTIVITY	Years 1												Years 2												Years 3												Years 4											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	DELIVERABLES																																															
1	Draft Inception Report		↓																																													
2	Final Inception Report			↓																																												
3	Monthly Monitoring Report	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
4	Baseline Survey Report [1]					↓													↓												↓																			
5	Midline Survey Report																								↓																								
6	End Line Survey Report																																													↓			
7	Quarterly Monitoring and Evaluation Report			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓			↓
8	Annual Monitoring and Evaluation Report												↓												↓												↓												↓
9	Draft Assignment Completion Report																																														↓		
10	Final Assignment Completion Report																																															↓
11	Special Reports (As and when required)																																															

(1) The baseline report will be submitted at the end of 4th month provided sites for all interventions are pre-determined and sites are available at the outset. However, if the sites are identified during project implementation then the baseline will be done in phases.

ANNEX - J: *BI ANNUALLY ACTIVITY PLAN (01 JULY TO 31 DECEMBER, 2021)-ME&IE CONSULTANTS FOR SOIL & WATER CONSERVATION IN THE BARANI AREAS OF KP*

S#	Deliverable / Activities	Jul 21				Aug 21				Sep 21				Oct 21				Nov 21				Dec 21			
1	Undertake the baseline/midline surveys of the project activities / interventions in all the project areas.																								
	a. Draft Questionnaire distributed among stake holders for comments																								
	b. Incorporation of comments																								
	c. Questionnaires programming in Android																								
	d. Training of enumerators/field team																								
	e. Field data collection																								
	f. Data cleaning, processing and analysis																								
	g. Draft report preparation																								
	h. Final report																								
2	Develop monitoring strategy, framework and results-based monitoring (RBM) indicators. Monitoring tools for ongoing monitoring of soil and water conservation (S&WC) activities:																								
	a. Draft monitoring tools for each activity distributed among stake holders for comments																								
	b. Incorporation of comments																								
	c. Monitoring tools s programming in Android																								
	d. Training of enumerators/field team																								
	e. Field data collection																								
	f. Data cleaning, processing and analysis																								
	g. Draft report preparation																								
	h. Final report																								

3	Meetings with stake holders & coordination	
4	Economic impact of project interventions. Preparation of success story of one of the S&WC activities*: a. Listing of S&WC activities b. Selection of activity/s c. Data collection/FGD/analysis d. Documentation/script writing e. Draft preparation of booklet and video f. Final preparation of booklet and video	
5	Preparation of monthly, quarterly, annual monitoring evaluation and validation reports of the project activities.	
6	Develop a website containing information of facilities, services and application, procedures, for WC-KP activities database. (Maintaining website should be the responsibility of project staff). a. Development of website of WC-KP b. Designing of dashboard of Project Interventions c. Monitoring online data collection and Data entry d. Data collection of interventions in MIS/GIS database.	
7	Provide technical support for the development of custom-designed mobile application (Android) to capture on site progress, geo tagged photos, should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the client:	

* In each quarter the ME&IE consultants will prepare success story of one of the S&WC activities which cover socio-economic aspect of the project