



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

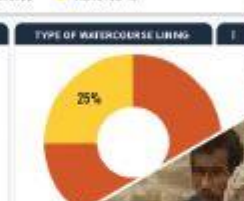
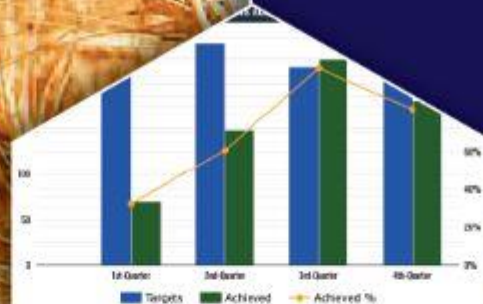
NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN PHASE-II: (NPIWC-II)

MONITORING, EVALUATION
AND IMPACT EVALUATION
CONSULTANTS



MONTHLY MONITORING REPORT

AUGUST 2022





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

Monitoring, Evaluation and Impact Evaluation (ME&IE) Consultants
For

National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)

MONTHLY MONITORING REPORT
AUGUST 2022

CONTENTS

EXECUTIVE SUMMARY	1
CHAPTER-1: PROJECT INTRODUCTION.....	3
1.1 PROJECT PROFILE	3
1.2 PROJECT DESCRIPTION	3
1.2.1 Project Development Objectives	3
1.2.2 Project Objectives – General & Quantitative	3
1.2.3 Project Beneficiaries	4
1.2.4 Project Components.....	4
1.2.5 Project Targets	5
CHAPTER 2: SCOPE AND SERVICES OF ME&IE CONSULTANTS	7
2.1 OBJECTIVES OF CONSULTING SERVICES.....	7
2.2 SCOPE OF CONSULTING SERVICES.....	7
2.3 MONITORING STRATEGY OF CONSULTANTS.....	8
2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS.....	11
CHAPTER 3: CONSULTANTS' ACTIVITIES DURING THE REPORTING MONTH	12
3.1 SUBMISSION OF MONTHLY MONITORING REPORT (MMR).....	12
3.2 SUBMISSION OF REPORT OF BASELINE SURVEY PHASE-II.....	12
3.3 REGULAR MONITORING / FIELD VISITS BY ME&IE CONSULTANTS.....	12
3.3.1 Regular Monitoring / Field Visits by Zonal Office Islamabad Capital Territory (ICT)	12
3.3.2 Regular Monitoring / Field Visits by Zonal Office Punjab.....	18
3.3.3 Regular Monitoring / Field Visits by Zonal Office KP	19
3.3.4 Regular Monitoring / Field Visits by Zonal Office Balochistan.....	34
3.3.4.1 Updated Progress – Balochistan Zone	34
3.4 COORDINATION MEETINGS OF ME&IE CONSULTANTS.....	36
3.4.1 Meetings of ME&IE Consultants Punjab Zone with Stakeholders	36
3.4.2 Meetings of ME&IE Consultants KP Zone with Stakeholders	37
3.4.3 Meetings of ME&IE Consultants Balochistan Zone with Stakeholders	37

3.5	INTERNAL MEETINGS OF ME&IE CONSULTANTS.....	38
3.6	ICT ASSIGNMENT	38
3.6.1	Development of Customized Android Based Applications.....	38
3.6.2	Data collection of interventions in MIS/GIS database.....	38
3.6.3	Implementation of MIS Dashboard	38
3.6.4	Refresher Training Workshop in KP Zone.....	40
3.7	MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT	40
CHAPTER 4: QUARTERLY WORK PLAN-ACTIVITIES (JULY 2022 TO SEPTEMBER 2022)		47
CHAPTER 5: ISSUES / BOTTLENECKS.....		49

LIST OF TABLES

Table: -ES-1: Compliance Status of Tentative Work Plan during Reporting Period	2
Table 2.1: Monitoring Strategy for ME&IE Activities	8
Table 3.1: Midline Survey Field Plan of ICT and Punjab Barani Areas	12
Table 3.2: Farmers, their locations on WC & tenure status on WC 63100-L, village Pagalla, Dist. Gujranwala.....	19
Table 3.3: Updated Status of field Visit	35

LIST OF FIGURES

Figure 1.1: NPIWC-II Project WCs Improvement, WSTs, and LLL Targets in Pakistan.	5
Figure 1.2: Zone-Wise WCs Improvement, WSTs, and LLL Target.....	6

LIST OF ANNEXURES

ANNEX - A: TENTATIVE QUARTERLY WORK PLAN (JULY TO SEPTEMBER 2022)	52
ANNEX - B: MATRIX OF RESPONSIBILITIES.....	53
ANNEX - C: MONITORING LOG-FRAME	55
ANNEX - D: DELIVERABLES/REPORTING REQUIREMENTS	61
ANNEX - E: WATERCOURSE DATA SUBMISSION SUMMARY OF AJK ZONE.....	62
ANNEX - F: WATER STORAGE TANK DATA SUBMISSION SUMMARY OF AJK ZONE	63
ANNEX - G: WATERCOURSE DATA SUBMISSION SUMMARY OF KP ZONE.....	64
ANNEX - H: WATER STORAGE TANK DATA SUBMISSION SUMMARY OF KP ZONE	66
ANNEX - I: REFERESHER TRAINING WORKSHOP FOR KPK OFWM STAFF.....	68

ACRONYMS

ADA	Assistant Director Agriculture
AES	Agriculture Extension Services
AF	Acre-Feet
AJK	Azad Jammu & Kashmir
AOSM	Adjustable Orifice Semi-Module
AWPB	Annual Work Plan and Budget
AWPs	Annual Work Plans
BCR	Benefit Cost Ratio
CFT	Cubic Feet
CMS	Content Management System
CSRD	Center for Social Research and Development
DAES	Director Agriculture Extension Services
DDA	Deputy Director Agriculture
DGA	Director General Agriculture
DTL	Deputy Team Leader
EAs	Executing Agencies
EIRR	Economic Internal Rate of Return
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
G3EC	G3 Engineering Consultants
GIS	Geographic Information System
HEIS	High Efficiency Irrigation System
IAS	Implementing Agencies
ICR	Interim Completion Report
ICT	Islamabad Capital Territory
IRR	Internal Rate of Return
ICT	Information & Communication Technology
JV	Joint Venture
KP	Khyber Pakhtunkhwa
LLL	Laser Land Leveler
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
MMR	Monthly Monitoring Report
MT	Monitoring Template
MTE	Mid-Term Evaluation

A Joint Venture of



In Association with S&S Associates



NESPAK	National Engineering Services Pakistan
NPC	National Project Coordinator
NPIWC	National Program for Improvement of Watercourses
NPV	Net Present Value
NWMC	National Water Management Consultants
ODK	Open Data Kit
OFWM	On Farm Water Management
PC-1	Planning Commission-(Form-One)
PDO	Project Development Objectives
PIC	Project Implementation Committee
PIES	Project Impact Evaluation Study
PQC	Pre-Qualification Committee
QM&ER	Quarterly Monitoring and Evaluation Report
RBM	Results-Based Management
RFT	Running Feet
RWD	Responsive Web Design
SFT	Square Feet
SOPs	Standardized Operating Procedures
SPSS	Statistical Package for Social Sciences (Software)
SSCs	Supply and Service Companies
TABs	Tablets
TL	Team Leader
TOR	Terms of Reference
TPV	Third Party Validation
TWRD	Tail-Water Recovery Ditch
WG	Women Group
WST	Water Storage Tank
WUAs	Water Users Associations

EXECUTIVE SUMMARY

The “Monitoring Report for the month of August 2022” comprises five chapters:

Chapter-1 describes the detailed introduction and description of the project. The Government of Pakistan is implementing a project entitled “National Program for Improvement of Watercourses in Pakistan Phase-II” (NPIWC-II) at a total cost of PKR 154,542.355 million (Umbrella PC-I including Sindh) over a period of 05 years. This project will cover Punjab, Khyber Pakhtunkhwa (KP), Balochistan and Gilgit Baltistan (GB), Azad Jammu & Kashmir (AJ&K) as well as Islamabad Capital Territory (ICT). The present project is beneficial for the country.

The NPIWC-II comprises four components to be implemented in Punjab, KP, Balochistan, GB, AJ&K, and ICT:

- i) C1: Organization of Water Users Associations
- ii) C2: Watercourse Improvements: 47,278 Nos.
- iii) C3: Construction of Water Storage Tanks: 14,932 Nos.
- iv) C4: Provision of Laser Land Leveling Units: 11,610 Nos.

Chapter-2 elaborates the objectives and scope of work of the ME&IE Consultants for the project. Since the ME&IE Consultants are going to monitor implementation of all criteria set, procedures defined and timeline agreed for implementation of various components. All these are reproduced in this report as ready reference to devise / design M&E strategy, methodology, procedures for monitoring and impact assessments of the project interventions.

The monitoring strategy followed by ME&IE Consultants is briefly described in Table-2.1. The strategy has been finalized and implemented in close coordination with the client and active participation of the beneficiaries as well as the project stakeholders.

Chapter-3 explains purpose of Monthly Monitoring Report (MMR). This current MMR covers the period from 1st August 2022 to 31st August 2022.

This chapter also covers the activities of ME&IE Consultants, carried out during the reporting period which are summarized below:

- Submission of MMR for the previous Month (July 2022)
- Data Analysis and Submission of Baseline Survey Report Phase-II
- Regular Monitoring of Interventions in the Field
- Data acquisition from Client, Data entry, Data cleaning, Data processing and analysis
- Meetings of ME&IE Consultants with Stakeholders about Project Progress / Issues
- Data collection of interventions for MIS/GIS database
- Dashboard data collection and data entry

Chapter-4 highlights the quarterly work plan for the period of 1st July 2022, to 30th September 2022. The work plan is consisting of following activities:

- Pre-field Activities
- Field Activities
- ICT Assignment
- Coordination Meetings
- Deliverables

The detail time span for 3rd Quarter of year 2022 is provided in the Tentative Work Plan **Annex-A**.

Chapter-5: Issues / problems faced by the consultants during the reporting period of the assignment are described in this Chapter.

Table: -ES-1: Compliance Status of Tentative Work Plan during Reporting Period

No.	Activities Planned for the Reporting Quarter		Status	
1	Pre-Field Activities			
	1.1	Preparation for 2 nd Phase Baseline Survey	Complied	
	1.2	Internal Meetings of ME&IE Consultants	Complied	
	1.3	Training of Field Staff for 2 nd Baseline Survey	Complied	
2	Field Activities:			
	2.1	Regular Monitoring of Interventions in the Field	Complied	
	2.2	Data collection of the interventions in the field	Complied	
	2.3	Baseline Survey Phase-II	Complied	
	2.4	Online data entry in android-based application	Complied	
3	ICT Assignment:			
	3.1	Development / Improvement of website of NPIWC-II	Complied	
	3.2	Monitoring online data collection and Data entry	Complied	
	3.3	Monitoring Android based Mobile Application under implementation by field staff.	Complied	
	3.4	Data collection of interventions in MIS/GIS database	Complied	
	3.5	Data cleaning for Dashboard for Project Interventions	Complied	
4	Coordination			
	4.1	Meetings of TL ME&IE Consultants with NPC regarding Project Progress / Issues	Meetings conducted on regular basis	
	4.2	Meeting of DTLs with respective DTL of NWMC	Meetings conducted on regular basis	
	4.3	Internal Meetings of ME&IE Consultants	Weekly meetings conducted on regular basis	
5	Deliverables:			
	5.1	Monthly Monitoring Reports (MMRs)	18 th MMR (Jun. 2022)	Submitted
			19 th MMR (Jul. 2022)	Submitted
			20 th MMR (Aug. 2022)	Report in hand, to be submitted in stipulated time
	5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER Apr-June 2022	Submitted
			QM&ER Jul-Sept 2022	To be submitted in stipulated time
	5.3	2 nd Annual Monitoring & Evaluation Report	(July 2021 – June 2022)	Submitted
	5.4	Baseline Survey Report Phase-II (Draft)	Submitted	

CHAPTER-1: PROJECT INTRODUCTION

1.1 PROJECT PROFILE

This section covers the following detail of the project:

Project Name:	National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)
Project Areas:	Punjab, Khyber Pakhtunkhwa, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir, and Islamabad Capital Territory (ICT)
Sponsoring Agency	Ministry of National Food Security & Research
Executing Agencies (EAs):	Following are different EAs: Federal Project Management Unit (FPMU), <ul style="list-style-type: none"> i. DGA OFWM Punjab ii. DG OFWM KP iii. DGA OFWM Balochistan iv. Director Irrigation and Small Dams, AJ&K v. Director WM, GB vi. Director Agriculture Extension Services (AES) ICT
Project Period:	5 Year (2019-2024)
Total Project Cost:	Rs. 154,542.355 million (Umbrella PC-1, including Sindh)
ME&IE Consultancy Period:	4 years
ME&IE Consultant:	JV of G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering services (Pvt.) Ltd., Centre for Social Research and Development (CSR), ADA Consultants Inc. Canada, and S&S Associates.
ME&IE Consultant Mobilized:	November 20, 2020

1.2 PROJECT DESCRIPTION

Project description includes followings i.e., the project development objectives, project objectives, project benefits, and project components, etc.

1.2.1 Project Development Objectives

The Project Development Objectives (PDOs) are to improve irrigation water management at tertiary and field levels in Pakistan.

1.2.2 Project Objectives – General & Quantitative

Following are the project general and quantitative:

1) General Objectives:

The Project aims to replicate the success achieved during the NPIWC Phase-I and further improve the findings of the Project Impact Evaluation Study (PIES). The broad objectives of the project are as under:

- i) Social mobilization through capacity building of WUAs/ FOs,
- ii) Minimization of conveyance and field application losses,
- iii) Reduction in Water Logging and salinity,
- iv) Equity in water distribution,
- v) Reduction in water disputes/thefts/litigation,
- vi) Motivation/participation of farmers,
- vii) Poverty reduction through employment generation,
- viii) Increase in crops yield/sufficiency in food.

2) Quantitative Objectives' Outputs and Impacts:

The quantitative objectives' outputs and impacts of the Project are as under:

Project outputs

- i) Mobilization through capacity building of Water Users Associations/Farmers Organizations in improved water management techniques and their registration under On-Farm Water Management and Water User Associations Ordinance [Act] 1981 and organization of 47,278 WUAs.
- ii) Reconstruction/renovation and remodeling of 47,278 watercourses, involving complete earthen renovation, partial lining of critical reaches (50% of the total watercourse length

as decided in the high-level meeting), and installation of water control structures. It is expected to save around 5.82 MAF per annum (approx. saving of 123 acre-feet (AF) per watercourse per annum).

- iii) Construction of 14,932 water storage tanks with 60% subsidy.
- iv) , cost sharing, with the expectation to save about 50% irrigation water for wheat and about 68% of irrigation water for paddy.

Project impacts

- v) Reduction in Water Logging and salinity in project areas to the extent of 10%.
- vi) Cropping intensity is expected to increase by 5-20%.
- vii) Crop's yield is estimated to increase by 10-15%.
- viii) Equity in water distribution increased by about 30%.
- ix) Reduction in water disputes/thefts and litigation amongst the Farmers over water distribution by about 80%.
- x) Help poverty reduction through generation of employment.
- xi) Self-sufficiency in food through utilization of water saved for edible oil seed production.

Project indirect benefits to industry/economic activities

- xii) Cement industry, bricks Killen, Precast Structures Industry and other related industries' production will pick up.

Awareness support to farmers

- xiii) Motivating farmers through an awareness campaign for watercourse improvement.
- xiv) Providing technical material to farmers for optimal utilization of water resources in the shape of technical manual and operational guidelines.

1.2.3 Project Beneficiaries

Majority of the direct beneficiaries of the project constitute the number of farmers (owners as well as tenants) growing crops and orchards on the watercourses improved under NPIWC-II. Assuming 35 farmers on each watercourse, the total number of the farmers benefiting from the activity comes to 1.655 million. The same number will be benefitted due to Water Users' Associations (WUAs) in terms of cooperative management of irrigation water. Moreover, 14,932 farmers will be directly benefitted from Water Storage Tanks and 11,620 as recipients of

Laser Land Leveling Units. Thus, total gross direct beneficiaries are expected to be around 3.336 million households. However, net beneficiaries are expected to be 1.668 million.

Taking family size at five, total net population benefitting is expected to be 8.34 million people.

1.2.4 Project Components

The NPIWC-II project comprises four components.

C1: ORGANIZATION OF WATER USERS ASSOCIATIONS:

Establishment/ reactivation of Water Users Associations (WUAs) through community driven implementation approach. Following are the scope of WUAs:

- i) Provide right of way for constructing watercourse,
- ii) Arrange skilled and unskilled labour required for reconstruction / maintenance of earthen water channel, installation of water control structures, and lining of critical reaches,
- iii) Procure construction materials for carrying out civil works,
- iv) Settle matters of disputes amongst the water users in respect of channel alignment, fixation of Naccas, distribution of work, etc.
- v) Make alternate arrangements for conveyance of water during execution of improvement works,
- vi) Carry out civil works in accordance with standards and specifications under the supervision of OFWM field staff,
- vii) Regularly undertake O&M of improved watercourses after its construction.

C2: WATERCOURSE IMPROVEMENTS:

47,278 Watercourses are planned to be improved /reconstructed and lined adopting the following criteria:

- i) New watercourses that are not yet improved under earlier programs / projects,
- ii) Reconstruction of more than 20 years old watercourses that outlived their economic / useful life,
- iii) Additional lining up to 50% of already improved watercourses.

C3: CONSTRUCTION OF WATER STORAGE TANKS:

The project will construct 14,932 Water Storage Tanks (WSTs). Following will be the benefits of WSTs:

- i) Store water during the rainy season and times of no use in the commands of perennial / non-perennial canals for subsequent irrigations at the critical crop growth stages,
- ii) Provide flexibility for storage of plentiful canal and rainfall runoff water for its more expedient use subsequently,
- iii) Collect, store and filter water from:
 - Small Dams, Springs, Streams, Nallahs etc.
 - Rainfall runoff over agricultural catchment during rainy season
 - Tube-wells and dug wells of low flows
 - Tail-waters from agricultural fields
- iv) Regulate the flows so that it can be used efficiently when needed at large flow rates.

1.2.5 Project Targets

Project aims at achieving the targets for 5 years starting from the year 2019-20 to 2023-24, presented in **Figure-1.1**. Whereas, the targets for each Province/Zone (excluding Sindh) are presented in **Figure-1.2**.

C4: PROVISION OF LASER LAND LEVELING UNITS:

Provision of 11,610 Laser Land Leveling (LLL) units to the farmers; the component is strengthening LLL services in the country through provision of LLL Units to farmers / service providers on 50% subsidized rates.

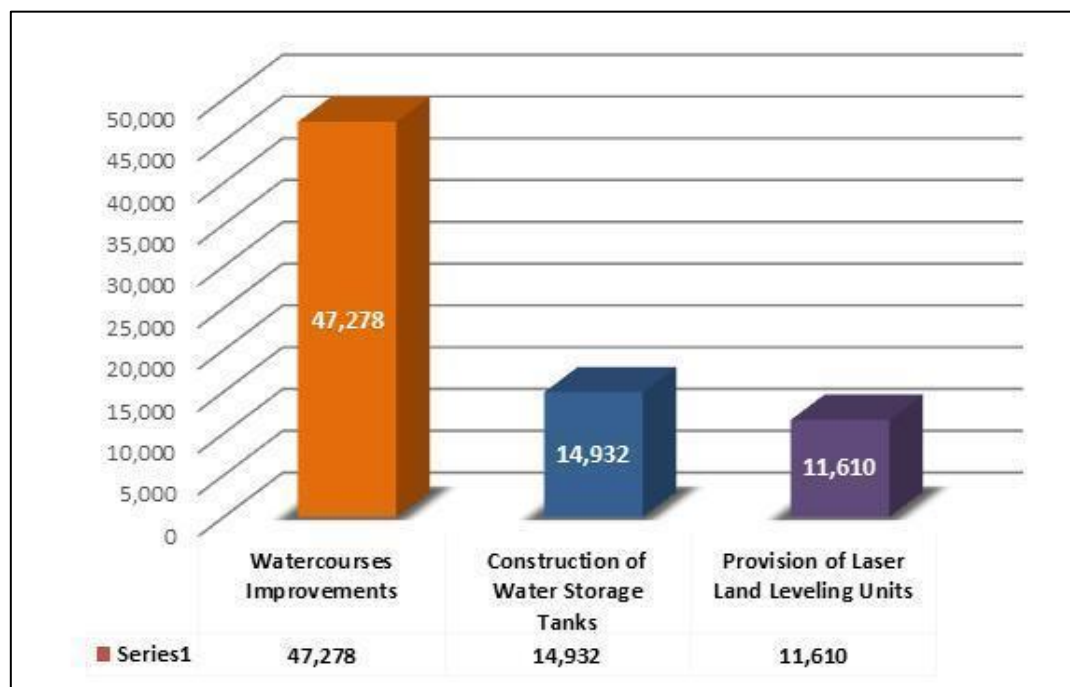


Figure 1.1: NPIWC-II Project WCs Improvement, WSTs, and LLL Targets in Pakistan.

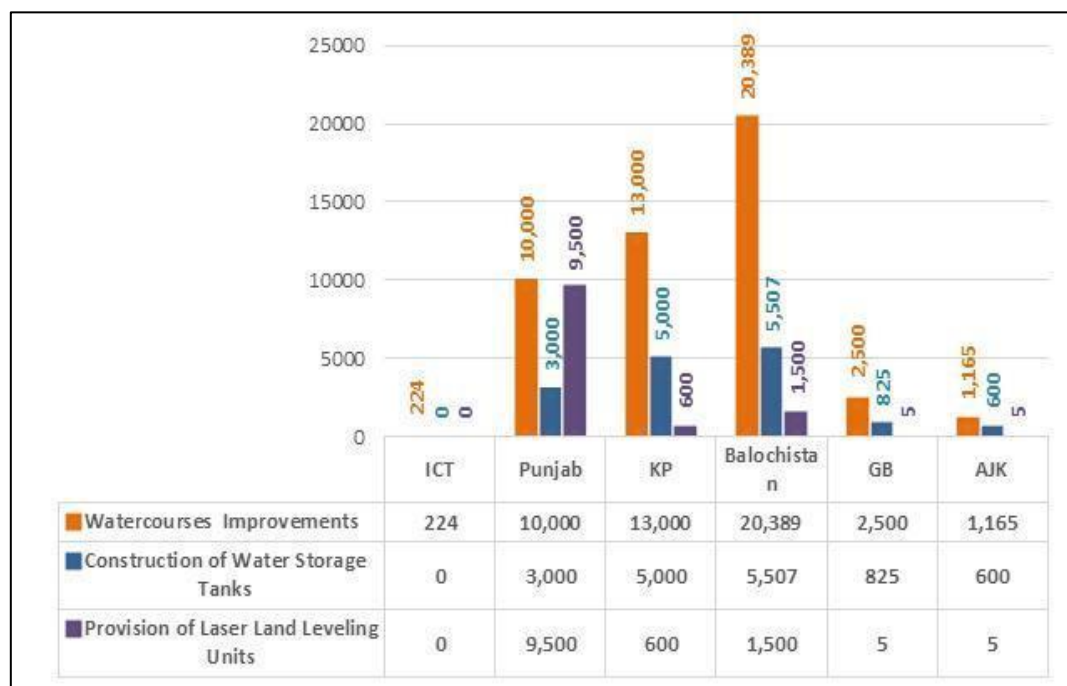


Figure 1.2: Zone-Wise WCs Improvement, WSTs, and LLL Target

CHAPTER 2: SCOPE AND SERVICES OF ME&IE CONSULTANTS

The ME&IE Consultants' services are designed to be provided through a multi-disciplinary team of qualified professionals. All the firms in the joint venture have rich experience in the field of monitoring and evaluations (M&E). The team deputed for this task in the project, comprises highly qualified professionals having long practical experience of such projects earlier launched in Pakistan. The consultants are developing a "State-of-the-Art Management Information System" (MIS) with "Geographical Information System" (GIS) focused for NPIWC-II to monitor progress on project interventions and to carry out an effective monitoring process. The MIS is helping decision makers to make informed decisions.

2.1 OBJECTIVES OF CONSULTING SERVICES

The objective of ME&IE Consultant's services is to carry out M&E of project impacts to ensure achievement of project development objectives.

2.2 SCOPE OF CONSULTING SERVICES

The ME&IE Consultants are responsible for monitoring, evaluation and impact evaluation (ME&IE), and in this context are carrying out the following activities:

- i) Undertake baseline, midline and endline surveys for 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, evaluation and validation reports of the project activities,
- iv) Assessing the water saving per annum on watercourses, water storage tanks and field levels as well as aggregate due to the project interventions,
- v) Assessing the improvement in water availability due to the provision of conveyance system,
- vi) Assessing the economic benefits to the agriculture in terms of changes in yields, irrigated area, cropping pattern, cropping intensity, farm income and employment in command area of watercourses and water storage tanks,
- vii) Assessing the extent of community

- viii) mobilization, financial and administrative sustainability of water users' associations and ensuring the maintenance of watercourses, water storage tanks and laser land Levelers,
- ix) Economic impact of project interventions,
- x) Carry out the impact evaluation of the project intervention on the economy and stakeholders,
- xi) Develop a website containing information on facilities and services, applications, procedures, watercourses, water storage tanks and laser Levelers database, etc. (while the project staff will maintain the website),
- xii) Provide technical support for the development of a custom-designed mobile application (Android Based) to capture on-site project progress and geo-tagged photos. It should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the management.

The said requirement is based on the following functional features:

- Development of a GIS database with all spatial layers related to activities being undertaken under the project
- Give technical assistance for up-dation/up-gradation of water management GIS database.
- Development of web-based GIS application as a dashboard interface for comprehensive representation of all spatial and tabular information: custom designed web GIS application be developed for large LED screens, should be self-operative and represent project data on multiple layouts of application interface.
- Development of a MIS application as an integral part of web GIS to maintain information on facilities and services, applications, procedures, watercourses database, etc.
- Development of a custom designed mobile application (Android) to capture on-site project progress, geo-tagged photos; should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the management.
- Application should generate custom designed reports and analysis as per user-defined requirements.
- Application should generate alerts (SMS,

email, web-notifications) to the user on the non-conformance of project's key indicators; the application should have the provision to custom define alerts levels and desired notifications.

2.3 MONITORING STRATEGY OF CONSULTANTS

The monitoring strategy planned to be followed by ME&IE Consultants is briefly described in **Table-2.1**. However, detailed methodology and procedures to carry out the ME&IE of the project interventions were explained in Chapter 6 of Inception Report.

Table 2.1: Monitoring Strategy for ME&IE Activities

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
1	Baseline, midline and endline surveys	Team Leader, Socio-Economic Expert, Agricultural Economist and Deputy Team Leader of the respective Province/Unit.	<ul style="list-style-type: none"> Baseline and impact surveys will be carried out on sample basis. Data will be collected by field teams on pre-designed data collection tools through an android application on TABs. Baseline and impact surveys will be carried out in phases as target watercourses are not preselected. Baseline will be carried out before the intervention and the impact one year (two crop seasons) after the completion of the intervention. The midterm study will review the project progress at middle of the project implementation The endline study will assess the impact of the project interventions.
2	Reporting	All core team members	<p>Following periodic reports will be prepared and submitted:</p> <ul style="list-style-type: none"> Draft Inception Report 45 days after the agreement, Final Inception Report one week after the issuance of comments by the client on the draft, Monthly Monitoring Report on 10th of following month, Quarterly Monitoring Report on 10th of the first month of the following quarter, Annual Monitoring and Evaluation Report during first month of the following year, Baseline Survey Reports (in three phases), First Phase Baseline Survey report will be submitted within the four months after the start of the assignment i.e., Submission of final inception report/Beginning of field activities. Impact Survey Reports (in phases) – two months after the data collection completion for the impact phase, Midline report in the middle of the assignment, Endline Report at the end of endline Survey, Draft Assignment Completion Report at completion of the physical works, Final Assignment Completion Report at completion of works and financial transactions. It will also include the full economic benefit of the project (NPIWC-II) on agriculture sector as well as on the GDP of Pakistan, Special Reports, as and when asked by the client.
3	Water saving assessment	Irrigation Agronomist, Field Team/ Engineers	<p>Water Saving on Watercourses:</p> <ul style="list-style-type: none"> Water flow will be measured on sample watercourses selected for the baseline and impact surveys The flow will be measured at four points of the selected watercourses: close to water outlet, head reach, middle

			<p>reach and tail reach.</p> <ul style="list-style-type: none"> • The measurements will be done through current meters. • Based on water savings on sample watercourses, total water savings will be estimated for all project watercourses. The savings will be reported per watercourse, per annum and aggregate for the project in LPS and Acre feet.
			<p>Water Savings on WSTs</p> <ul style="list-style-type: none"> • Since WSTs will be filled and emptied on a continuous basis, the water savings will be assessed on the basis of water pumped from the tank to irrigate the fields. • The assessment will be done either by readings on the pump gauge or periodically interviewing the farmer. • Based on water savings on sample WSTs, total water savings will be estimated for all project WSTs. The savings will be reported per WST, per annum and aggregate for the project in LPS and in Acre feet. <p>Water savings due to Laser Land Leveling</p> <ul style="list-style-type: none"> • Water savings at field level will be assessed through farmers' interviews. • The impact survey form will include questions to be asked from the farmers who got their land leveled: <ul style="list-style-type: none"> - In how much time an acre was irrigated before watercourse improvement and land leveling - In how much time an acre is irrigated after watercourse improvement with land leveling <p>The difference will be water saving due to laser land leveling</p>
			Based on water savings on sample LLL units, total water savings will be estimated for all project LLL units. The savings will be reported per LLL unit, per annum and aggregate for the project in LPS and in Acre feet.
4	Community mobilization	Social and Gender Specialist and Socio-Economic Expert	<p>The extent of community mobilization will be assessed by investigating whether:</p> <ul style="list-style-type: none"> • WUAs is functional • Holds regular meetings and keep record of them • Makes decisions democratically • The participation in the organization is voluntary • It is financially and administratively sustainable • Takes steps and ensures maintenance of watercourses, WSTs and laser land leveler
5	Economic benefits assessment for agriculture	Team Leader, Socio- Economist and Agricultural Economist	<ul style="list-style-type: none"> • As indicated at serial No. 1, Agriculture data will be collected before (baseline) and after (impact) the watercourse improvement and WSTs construction. • In both the surveys same forms will be used and same sampled farmers will be interviewed • Data on variables such as crop yields, irrigated area, cropping pattern, cropping intensity, farm income and employment will be collected and analyzed • The difference between before and after situations minus natural growth will be assumed as economic benefits to the agriculture
6	Impact evaluation-on the economy	Team Leader, Agricultural Economist and	<ul style="list-style-type: none"> • The results of the baseline and impact surveys will be used to quantify impact on the economy • Additional food produced due to the project will be

		Socio-Economic Expert	<p>estimated. It is benefitted towards food security</p> <ul style="list-style-type: none"> Project costs and benefits will be compared in economic and financial terms to carry out economic and financial analysis. Parameters like IRR, NPV and BCR will be estimated.
7	Impact evaluation-on the stakeholders	Team Leader, Agricultural Economist and Socio-Economic Expert	<ul style="list-style-type: none"> Analysis as in serial 6 will be carried out with reference to various stakeholders, like community, government, farmers, etc.
8	Spot checking	Team Leader, Deputy Team Leaders & Field teams/Engineers.	During the field visits for WUAs baselines impacts of Watercourses, WSTs and laser land leveling units, the interventions will be spot checked for quality of construction, material, functioning and beneficiaries' satisfaction etc.
9	Process monitoring	Field Teams of Agriculture Deptt., Project Consultants, ME&IE Consultants & ICT/Technology Specialist	<ul style="list-style-type: none"> The processed data for all the interventions will be fed to the MIS/GIS database. Client's field staff and field teams of consultants will furnish data of their activities. The ME&IE will assist in developing mobile application for this purpose From this data reports will be generated for process monitoring All interventions will be fully (100%) covered.
10	Project website and MIS/GIS dashboard development	ICT / Technology Specialist (Including all other core team staff will also coordinate in completing data for the MIS/GIS	<ul style="list-style-type: none"> The State-of-the-art MIS / Progress Monitoring Model will be developed for NPIWC-II. Customized forms will be developed to collect data from the implementing teams on-site for progress monitoring These forms will be made available to the teams on smart phones through an android application The teams will be adequately trained to use the application Data on physical and financial stages with dates will be fed to the system for process monitoring GIS coordinates for watercourses, WSTs, laser units (if available) and WUAs offices will be uploaded to the system and could be viewed / reached by the management online The system will be maintained on GOOGLE server so that it is accessible by the management from anywhere in Pakistan and abroad Custom reports will be possible as the user demands / desires The results could be displayed on small as well as large screens.
11	Development of Android based application	ICT / Technology Specialist	All the data collection forms / tools will be executed through customized developed Android based applications accessible with smart phones / TABs.

2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS

The framework and Results-Based Monitoring (RBM) Indicators are identified in Table-2.2 of Inception Report. The indicators are further being enhanced and refined in consultation with the client as well as the stakeholders.

The improvement of indicators is a continuous process throughout the project implementation in the light of real and on ground situations.

CHAPTER 3: CONSULTANTS' ACTIVITIES DURING THE REPORTING MONTH

As a regular part of the ME&IE assignment, routine field visits & monitoring of project interventions in the field remained continued by ME&IE consultants, during the reporting month. Consultants also carried out different in-house activities related to ME&IE assignment:

3.1 SUBMISSION OF MONTHLY MONITORING REPORT (MMR)

As per contractual obligation, consultants submitted eighteenth MMR for the month of July 2022 (1st July 2022 to 31st July 2022) in 1st week of current month.

Monthly Monitoring Report (MMR) explains the understanding towards all activities to be carried out as per TORs of ME&IE assignment and their completion within stipulated time frame. The activities include but are not limited to pre-field/ in-house activities, field monitoring activities i.e., monitoring of project interventions, ICT assignments including monitoring of online data collection in the field, and development/ improvement of project dashboard and website etc. Consultants ICT Team, also remained in contact Clients' officials for entering data in Dashboard and provided assistance when and where was required by client. All the activities of the current month were in compliance with the quarterly work plan of the consultants. Hence, the main objective of the Monthly Monitoring Report is to update the Client about the activities carried out by the ME&IE

Consultants during the reporting month. Reporting is an integral part of the monitoring and evaluation framework.

3.2 SUBMISSION OF REPORT OF BASELINE SURVEY PHASE-II

The ME&IE field teams collected data from the field as well as from the client offices for Baseline Survey-II. The data was collected through android based application and transferred to project MIS system. Experts carried out the analysis of the collected data and prepare draft report. The Draft Report of Baseline Survey Phase-II is submitted to NPC on 26th August 2022 for review and comments if any. Final Report will be submitted after receiving comments from NPC office.

3.3 REGULAR MONITORING / FIELD VISITS BY ME&IE CONSULTANTS

Routine/regular monitoring of the interventions remained in progress during the reporting month. However, due to heavy rains and devastating floods in most of the regions of the Punjab, Balochistan and KP, the field activities were affected. Detail of data collection and regular field monitoring by field teams of Zonal Offices is given below:

3.3.1 Regular Monitoring / Field Visits by Zonal Office Islamabad Capital Territory (ICT)

During the current reporting month, August 2022, Islamabad Capital Territory (ICT) Zone team planned to carry out field visits of ICT and Punjab Barani areas. The tentative field visit plan is shown below in **Table 3.1**:

Table 3.1: Midline Survey Field Plan of ICT and Punjab Barani Areas

Visit Date	Division	District	Village	Component	Name of the scheme
18-Aug-22	ICT	Islamabad	Tarlai Kalan	WC +WST	Tarlai Kalan-2
18-Aug-22	ICT	Islamabad	Pind Baigwal	WC	Pind Baigwal
19-Aug-22	ICT	Islamabad	Thanda Pani	WC	Thanda pani
19-Aug-22	ICT	Islamabad	Moza Arrah	WC	Moza Arrah
23-Aug-22	Rwp	Kallar Saidan	Mouza Maira Sangal	WST	Mouza Maira Sangal
23-Aug-22	Rwp	Kallar Saidan	Mouza Shah Bagh	WST	Mouza Shah Bagh
24-Aug-22	Rwp	Attock	Bafahad	WST	Bafahad
24-Aug-22	Rwp	Attock	Bafahad	WST	Bafahad

ME&IE team Planned to visit Islamabad capital territory on 18th of August 2022. The aim of the visit was to conduct Midline survey of targeted interventions under the project NPIWC-II. The team coordinates with the beneficiaries and managed the visit locations and time.

Detail of field visits of ICT Zone as per work plan is given below:

i) Visit of Water Storage Tank+Watercourse (Pipeline) of Mr. Omar Ali Khan, in Tarlai Kalan on 18th August 2022

Scheme	Water storage Tank + pipe line
Farmer Name	Omer Ali Khan
Name of village:	Tarlai Kalan
Chairman WUA:	Omer Ali Khan
District:	ICT
Province	ZICT
Source of irrigation:	Tubewell
Type of Watercourse	PVC 3"
Shape of WST	Square
Command area :	2.5 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.1: ME&IE Team with beneficiary of Water Storage Tank in Tarlai Kalan



Picture 3.2: Field area of Tarlai Kalan

Detail of Field Visit: ME&IE team reached Tarlai Kalan at 12:00 pm, the beneficiary Omer Ali was Already there. Omer Ali is the only beneficiary of

this watercourse and WST. Last year when the team has visited for baseline survey he was growing wheat but now the land was not prepared for any crop.

Water storage tank was filled with water but there was no usage of WST nor pipeline. The land was un levelled and was not well drained, due to heavy rainfall. The beneficiary was not getting any benefit for the pipeline and WST but he was planning for some citrus orchards in future.

He was also building his house on the land that was about 0.125 Acre.

ii) Visit of Water Storage Tank+Watercourse (Pipeline) of Chaudhry Khanzada in Pind Baigwal on 18th August 2022

Scheme	Water storage Tank + pipe line
Farmer Name	Chaudhary Khanzada
Name of village:	Pindbaigwal
Chairman WUA:	Chaudhary Khanzada
District:	ICT
Province	ICT
Source of irrigation:	Tubewell
Type of Watercourse	PVC 3"
Shape of WST	Square
Command area :	5 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.3: ME&IE Team with beneficiary of Water Storage Tank Pindbaigwal

Detail of Field Visit: The team left the Islamabad national office early morning at 7:30 am and reached the village pind baigwal at 8:30 am. The team had a meeting with beneficiary named Chaudary Khanzada who is an advocate of high court. The beneficiary availed the subsidy for intervention including PVC 3" pipeline and a water storage tank in the year 2020-21. In the meeting

they discussed about the cost and effects before and after the intervention.

It was observed that the farmer was benefited after this intervention, as his cropping intensity has been increased, he was cultivating wheat and maize before this intervention but now after this intervention the cropping pattern changed. He showed the team his land and different vegetables grown on the land.

Some kharif vegetables were grown there on the land including Okra, gourd, zucchini. In one half part of the land maize were grown. According to the beneficiary in last season he had harvested wheat and the yield produced was about 35 Maund this year while before this intervention the yield produced was only 32 maund.

iii) Visit of Water Storage Tank+Watercourse (Pipeline) of Mr. Amjad Ali, in Mouza Ara on 19th August 2022

Scheme	Water storage Tank + pipe line
Farmer Name	Amjad Ali
Name of village:	Mouza Ara
Chairman WUA:	Amjad Ali
District:	ICT
Province	ICT
Source of irrigation:	Tubewell
Type of Watercourse	PVC 3"
Shape of WST	Square
Command area :	3.75 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.4: ME&IE Team in Discussion with Beneficiary Water Storage Tank in Mauza Arrah



Picture 3.5: Livestock at Mauza Arrah

Detail of Field Visit:

On 18th August the team visited water storage tank of Mr. Amjad Ali in areas of ICT, for midline survey. The beneficiary Amjad Ali is well aware of agriculture practices. He has 35 years of farming experience. He suggested that the availability of seeds is needed by the farmers. He further added that the productions can be more than 35 maund if the quality of seed improves.

The quality of seeds needs to be improve. HE was using organic fertilizer Farm yard manure as well as Urea and DAP. He had his own livestock including cows. Amjad Ali was also in practice of dairy farming.

In baseline survey when the team visited a year ago Amjad Ali was getting 30-32 Maund of wheat per acre and this year the land produced 35 maund of wheat per acre. Maize was at its growing stage and was not yet harvested.

The source of water is tube well. The team observed that the water using for irrigation was clean. The water reserved in WST was also uncontaminated.

iv) Visit of Water Storage Tank+Watercourse (Pipeline) of Syed Zubair Hussain in Village Thanda Pani on 19th August 2022

Scheme	Water storage Tank + pipe line
Farmer Name	Syed Zubair Hussain
Name of village:	Thanda pani
Chairman WUA:	Syed Zubair Hussain
District:	ICT
Province	ICT
Source of irrigation:	Tubewell
Type of Watercourse	PVC 3"
Shape of WST	Square

Command area :	1.75 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.6: ME&IE Team in Discussion with beneficiary of Water Storage Tank in Thanda Pani



Picture 3.7: Field area of Water Storage Tank in Thanda Pani

Detail of Field Visit: ME&IE team move further towards the area Thanda Pani after visiting the village Mauza Arrah. The beneficiary was already there at the field area.

Syed Zubair Hussain is the single beneficiary of this intervention. He was well educated and also an advocate. He had hired two labors for agricultural activities.

The female participation in agricultural activities is observed as nil. Female in this village were only consulted for household activities.

He told the team that before the intervention he was facing difficulty regarding the irrigation of water but now the issue has been resolved. The source of water is tube well.

Lemon and peach orchards were grown on the land. At one parcel of the land some Kharif vegetables were also grown for home use only.

Detail of field visits of Barani Areas, District Rawalpindi is given below:

v) Visit of Water Storage Tank Raja Zulfiqar Ali in Village Maria Singal on 23rd August 2022

Date of Visit	23-08-2022
Scheme	Water storage Tank
Farmer Name	Raja Zulfiqar Ali
Name of village:	Maira Sangal
Tehsil	Hassan Abdal
Province	Punjab
Source of irrigation:	Bore-Tube well (TW)
Shape of WST	Square
Length/ width	25x25 Sq. feet
Command area of WST :	3.5 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problem related to water theft reported



Picture 3.8: ME&IE Field Team on Visit of Water Storage Tank in Marial Singal



Picture 3.9: Tunnel Vegetables at Water Storage Tank in Marial Singal

Detail of Field Visit: ME&IE ICT-team reached at Maira Sangal village accompanied with Deputy Director of OFWM, Rawalpindi. The aim of this visit was to conduct midline survey and the impact of the above mentioned WST. The beneficiary of Maira Sangal Water Storage Tank was already there.

During introduction, the farmer told about his family, the land occupied by him, and some information about his vegetables cultivation. He was well educated and was quite aware of all the agricultural practices.

He was growing some Kharif vegetables, namely, cauliflower, Okra, Bitter guard, etc. Although, the production of vegetables was badly affected due to heavy rainfalls in resultant to overall climate changes.

He also owns livestock including some cows and goats. The farmer was not using chemical fertilizer, since he used FYM gathered from his own animals. The land is fertile and suitable for different crops.

The farmer has also rainfed agriculture land. The shape of the constructed water storage tank was square with measurement of 25X25 sq. feet shape along with the depth of 5ft. Source of water being used by the beneficiary to fed the WST is tube well through subsoil bore. The social & gender specialist accompanied the ME&IE team to get interviewed female folks of Maira sangal village. They were well educated and were quite aware of agriculture and crops production. It was noticed that they were happy with the crop production. They were getting fresh vegetables at home grown farm and enjoying the benefits of kitchen gardening.

vi) Visit of Water Storage Tank of Mr. Zameer Hussain in Village Shah Bagh, District Rawalpindi on 23rd August 2022

Date	23-08-2022
Scheme	Water Storage Tank
Farmer Name	Zameer Hussain
Name of village:	Mouza Shah Bagh
District:	Rawalpindi
Province	Punjab
Source of irrigation:	Bore-TW
Type of WST:	Square
Length and width of the WST:	25X25 Sq. Feet
Command area of WST:	3 Acres
No of beneficiaries:	1
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.10: Field Team engaged in gathering information from female farm workers



Picture 3.11: Okra crop grown by owner of Water Storage Tank



Picture 3.12: ME&IE Field Team with Owner of Water Storage Tank during Field Visit


Detail of Field Visit: On the same day, the team moved towards another village “Mouza Shah Bagh” to assess the impact of the targeted intervention pertaining to use this information for midline survey. Since, the same area was already visited by the field team to conduct baseline-2 survey information. The depth of WST is 5ft. The beneficiary of this WST used different types of chemical fertilizers including DAP, urea, Zinc, SOP and Nitrates as well as organic, FYM.

Farmer was happy with the targeted intervention but due to climate change, torrential rainfalls severely damaged the production of tomatoes and bitter guard, but still some pickings of these vegetables along with lady finger was being harvested every after second day.

Females were well aware of the crops and about the land holding by them, they were active in decision making related to the land sale and crops selection as well as active in making household decision but they didn't own any piece of land.

vii) Visit of Water Storage of Mr. Saqib Javed in Village Bafad, Hasanabdal, District Attock on 24th August 2022

Date of Visit	24-08-2022
Scheme	Water storage Tank
Farmer Name	Saqib Javed
Name of village:	Bafahad
Tehsil	Hassan Abdal
Province	Punjab
Source of irrigation:	Bore-TW
Shape of WST	Square
Length, width	25X25 Sq. feet
Command area of WSP :	6 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.13: Field team's Visit of Water storage Tank in Hasanabdal with Beneficiary

ME&IE ICT-Zone team reached the village, Bafahad in Hasan Abad Tehsil of Rawalpindi District along with deputy director of OFWM. The beneficiary of WST was already present on the site.

The owner farmer of the WST told about his family, profile of farming and the crops grown on the farm, especially, fruits and vegetables. Farmer is well versed with the crop cultivation along with good agricultural practices. At the time of baseline survey phase –II, the team noticed that the target farmer used to grow only citrus orchards, but currently during the midline survey, it was observed that he started growing peach orchard as well. The trees were still young but not yet bearing fruits until the maturity of trees i.e., 2 years.

The land holding by the farmer was now more than before as he has included the peach orchard. He also has livestock including some cows and buffaloes. The farmer used Urea and DAP as a chemical fertilizer, and also used FYM as an organic fertilizer. The land is fertile and also suitable for different crops.

The farmer has also owning agricultural land in rainfed areas. The shape of the constructed water storage tank was square with measuring 25X25 sq. feet and depth 5ft. The Source of water supply to the WST is bore-TW and installed in the nearby vicinity.

viii) Visit of Water Storage of Mr. Asad Ali Khan in Bafad, Hasanabdal, District Attock on 24th August 2022

Date of Visit	24-08-2022
Scheme	Water storage Tank
Farmer Name	Asad Ali Khan
Name of village:	Bafahad
Tehsil	Hassan Abdal
Province	Punjab
Source of irrigation:	Bore-TW
Shape of WST	Square
Length, width	25X25 Sq. feet
Command area of WST :	12 Acres
No of beneficiaries:	1
Reduction in water disputes/thefts	No problems related to water theft



Picture 3.14: ME&IE team at WST at Bafahad



Picture 3.15: ME&IE Team in Discussion with DD OFWM

Detail of Field Visit: ME&IE team reached Hassan Abdal and then along with Assistant director OFWM Mrs. Ambreen, the team visited the beneficiary of WST at his farm. The beneficiary, owner of farm is out of country and the farm is being managed by his nephew.

During the introduction of the farm family, the land occupied by them is a clayey type soil. He was well educated and was quite aware of all the agricultural practices. Before this intervention, he used to grow maize and wheat, but after this intervention he shifted to orchard cultivation, especially planted Plum, Oranges and Fig trees.

The farm was operated with the assistance of two permanently hired labor force. They are getting remuneration on monthly basis. It was observed that Female participation in farming activities was at the level of decision making where they were involved regarding crop selection etc. However, they were not involved in any labor activities. Females were well aware of the crops and the land holding by them, they were active in decision making related to the land sale, purchase and tenancy related arrangements.

3.3.2 Regular Monitoring / Field Visits by Zonal Office Punjab

The monitoring / Baseline pertains to the intervention of the project i.e. improvement of watercourses, water user associations, construction of water storage tanks and laser land levelers. Such surveys are carried out from time to time as a part of regular activity of ME&IE Consultants. The data from the field about any intervention collected by field teams of ME&IE Consultants on android-based system. Such data are directly submitted to MIS/GIS system for further processing by ICT department.

The brief picture of an intervention is given in this report as under:

- i. Field visits of target intervention.
 - a. Improvement of watercourses
 - b. Construction of water storage tank

- c. Provision of laser land leveler
- ii. Meetings with field officers and staff of OFWM.
- iii. ME&IE Consultant observation.

The Midline Survey was started in the month of July which continued till the start of August 2022. The intervention consisted of improvement of water courses which were visited in BLS-I. In the month of August, the remaining watercourses were left in the month of June were visited which have been mentioned as under:

Brief profile of the watercourses visited for monitoring purposes and particulars of beneficiaries interviewed at the spot for determining (Respondents) baseline on key performance indicators of project are given as under:

Summary of Interventions, visited by Punjab Zonal Field Teams during the Month of July is given below:

Intervention	Units Visited	District
Water Course	11	Rahim Yar Khan
Water Storage Tank	2	Rahim Yar Khan
Laser Land Leveler	2	Rahim Yar Khan

i) Field Visits of Watercourse No. 63100-L, Village Pagalla, District Gujranwala, Punjab On 3rd August 2022

Water course No	63100-L	
Type of Watercourse	Additional	
Chak No/Village	Pagalla	
District and Tehsil	Gujranwala & Noshera Virkan	
Name of Distributary	Noshera	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	50 LPS
	Middle	43 LPS
	Tail	37 LPS
Sanctioned Discharge	50 LPS	
Designed Discharge	60 LPS	
Culturable Command area	404 Acres	
Total No of water users	37	
Estimated lining Length	2342	

Pictorial view of visit is given in picture 3.1.



Picture 3.16: Joint Inspection of Watercourse by ME&IE Field Team, OFWM Staff and Farmers

Table 3.2: Farmers, their locations on WC & tenure status on WC 63100-L, village Pagalla, Dist. Gujranwala

Name of Farmer	Location of WC	Area (Acres)			
		Owned	Rented	Rented Out	Operated Area
Muhammad Ismail	Head	4	4	-	8
Muhammad Sajjad	Head	4	-	-	4
Muhammad Ramzan	Mid	22	-	-	22
Muhammad Saleem	Mid	7.5	-	-	7.5
Muhammad Masroof	Tail	2	-	-	2
Jabar Ali	Tail	1	-	-	1



Picture 3.17: General Discussion with Farmers about Benefits of a watercourse by Field Team members

ME&IE Consultants' Observation / Remarks

As a result of water supply increase the quantum per cropped area has increased. This has increased the yield per acre and hence increase in income.

The value of land as well as land rent particularly at the tail has significantly increased.

NPIWC-II, and other District Directors of OFWM department KP for acquiring the required data.

National Project Coordinator (NPC) visited Zonal Office Peshawar, KP, on 26th August 2022 along with the Dy. NPC

3.3.3 Regular Monitoring / Field Visits by Zonal Office KP

KP zone deputed two field teams for two zones of the Province to conduct Baseline Survey-II. One field team was deputed to the Southern zone covering the districts of D. I. Khan, Karak, Kohat, and Hangu while second team worked in the Northern Zone covering the Hilly districts of the Province for monitoring and baseline survey of the water courses and water storage tanks from the sample districts. Third team remained engaged in office for data entry in the computers.

Summary of Watercourses and Water Storage Tanks covered in KP for Baseline Survey-II during August, 2022 are given in table below:

District	Type of Nature of Scheme	
	Water course	Water Storage Tank
Dera Ismail Khan	04	03
Haripur	05	04
Total	09	07

Scheme-wise Basic Information of Some of the Schemes Surveyed by KP Field Teams is given below:

As a routine activity, digitally close coordination remained continued with the Project coordinator of

i. **Field Visit of Water Course Ahsan Raza in Village Mirpur, Haripur, KPK, on 2nd August 2022**

Name of Watercourse	Ahsan Raza TWWC
Type of watercourse	PVC"4
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	4
Coordinates	
Sanctioned Length of Watercourse	1086
Measured Length of Watercourse	Nil
No. of beneficiaries	11
District	Haripur
Tehsil	Haripur
Village	Mirpur
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetable Kharif: Maize Vegetables
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 15
Main Source of water	Solar Tube well
Additional Source of water	Nil
Date of Technical Sanction	10/02/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 1794000/-
Status	Completed



Picture 3.18: ME&IE Team taking Coordinates of Ahsan Raza Tubewell WC in District Haripur



Picture 3.19: ME&IE Team Interviewing the beneficiary on Ahsan Raza TWWC

Observations and Findings:

- WUA was not functional it was an individual based scheme, the formation of WUA is a formality to fulfill the requirement of the file.
- Before the scheme he cultivated Wheat and sometimes peas. After the completion of the scheme he told me that I will try to cultivate maize, pulses, and sunflowers.
- Before the scheme he obtained about 30000/- rupees per acre per year, but now he said I will obtain about 300000/- rupees Per acre per year.
- The farmer has no cost for irrigation because it was solar tube well, the farmer told that I have a lot of water for irrigation, now I will irrigate of others crops who need and obtained 300/- rupees per hour.
- The farmer complained that the subsidy money had not been paid yet.

ii. **Field visit of Water Course Muhammad Zaman Khan, Village Ganja Kamala, District Haripur, KPK, on 2nd August 2022**

Name of Watercourse	Muhammad Zaman Khan TWWC
Type of watercourse	PVC"4
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	12
Coordinates	
Sanctioned Length of Watercourse	582
Measured Length of Watercourse	Nil
No. of beneficiaries	1
District	Haripur
Tehsil	Haripur
Village	Ganja Kamala
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 4
Main Source of water	Tubewell
Additional Source of water	Nil

Date of Technical Sanction	10/02/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 1419000/-
Status	Completed



Picture 3.20: ME&IE Team taking Coordinates of Muhammad Zaman Khan TWWC in District Haripur



Picture 3.21: ME&IE Team Interviewing the beneficiary on Muhammad Zaman Khan TWWC

The team visited Muhammad Zaman Khan TWWC in Tehsil & District Haripur. Team members FTI Mahmood Ul Hassan and Arslan Bashir along with WMO Muhammad Qasim and Sub Engineer Mr. Safeer OFWM District Office Haripur and meet there with owner of the WC at Muhammad Zaman Khan TWWC.

Observations and Findings during Monitoring & Base Line:

- Individual scheme, WUA was made but it is not functional, because the formation of WUA is a formality to fulfill the file requirements.
- The beneficiary has 10 Acres land for farming but Before the scheme 2.5 acres was irrigated by lifting irrigation from a seasonal stream or Khwar. He used plastic foldable pipe for irrigation and 2.5 acres were rainfed or barani and the rest of the land was barren. After the lining of the WC the beneficiary is developing the land for farming and half of the land will be shared out to the other person for farming.
- The farmer told me that now I will cultivate vegetables along with the crops which I have already cultivated.

- The farmer complained that the subsidy money had not been paid yet.

iii. Field Visit of Watercourse of Mr. Shabbir Muhammad Abbasi, in Village Mumrial, District Haripur, KPK on 3rd August 2022

Name of Watercourse	Shabbir Muhammad Abbasi TWWC
Type of watercourse	PVC"3
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	6
Coordinates	
Sanctioned Length of Watercourse	300
Measured Length of Watercourse	Nil
No. of beneficiaries	1
District	Haripur
Tehsil	Khanpur
Village	Mumrial
Cropping pattern Rabi and Kharif	Rabi: Wheat, Orchard Kharif: Orchard
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 4
Main Source of water	Tubewell
Additional Source of water	Nil
Date of Technical Sanction	22/10/2021
Financial Year	2021-22
Sanctioned Cost	Rs. 695000/-
Status	Completed



Picture 3.22: ME&IE Team taking Interviewing Beneficiary of Shabbir Muhammad Abbasi TWWC Tehsil Khanpur & District Haripur



Picture 3.23: Current condition of the Farm

The team visited Shabbir Muhammad Abbasi TWWC in Tehsil Khanpur & District Haripur. Team members FTI Mahmood Ul Hassan and Arslan Bashir along with Sub Engineer Mr. Khalid Awan and field Officer OFWM District Office Haripur and meet there with owner of the WC at Muhammad Shabbir Abbasi TWWC.

Observations and Findings during Monitoring & Base Line:

- Individual base scheme, the WUA was not functional and the formation is the requirement of the file.
- The beneficiary cultivating only wheat and fodder for animals but he newly planted orchard plants such as Peach, Loquat, Plum and Lychee trees but very less in number. Now he is planning to cultivate vegetables.
- The source of water is WST which is filled by an electric boring water pump with 1.5 inches' diameter of the pipe.
- The farmer complained that the subsidy money had not been paid yet

iv. Visit of Watercourse of Mr. Akhtar Zaman in Village Mumrial, District Haripur, KPK, on 4th August 2022

Name of Watercourse	Akhtar Zaman WST WC
Type of watercourse	PVC"3
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	8
Coordinates	
Sanctioned Length of Watercourse	504
Measured Length of Watercourse	Nil
No. of beneficiaries	8
District	Haripur
Tehsil	Khanpur

Village	Mumrial
Cropping pattern Rabi and Kharif	Rabi: Wheat, Orchard Kharif: Maize, Orchard
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 11
Main Source of water	WST
Additional Source of water	Nil
Date of Technical Sanction	22/10/2021
Financial Year	2021-22
Sanctioned Cost	Rs. 798000/-
Status	Completed



Picture 3.24: ME&IE Team Interviewing Beneficiary of Akhtar Zaman WST WC in Tehsil Khanpur, District Haripur



Picture 3.25: Start point of Akhtar Zaman WST WC

The team visited Akhtar Zaman TWWC in Tehsil Khanpur & District Haripur. Team members FTI Mahmood Ul Hassan and Arslan Bashir along with Sub Engineer Mr. Khalid Awan and field Officer OFWM District Office Haripur and meet there with the owner of the WC at Akhtar Zaman TWWC.

Observations and Findings during Monitoring & Baseline:

- The WUA member was their own family members, it was not functional the formation of WUA was the requirement of the department to fulfill the need of the file.
- The beneficiary has 7.5 Acre land for cultivation of wheat, maize and Orchard (Citrus), but the wheat and maize are the mix crop or enter crops.

- Before the intervention 4 acres were irrigated land and the rest of the land was rainfed or Barani.
- The source of water is WST, which is filled by a boring water pump.
- The area was a little bit hilly, according to the farmer the Pigs in the area destroying the crop which heavily affected the production.

v. Field Visit of Watercourse of Mr. Ghulam Asghar in Village Pind Khakra, District Haripur, KPK on 4th August 2022

Name of Watercourse	Ghulam Asghar TWWC
Type of watercourse	PVC"3
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	4
Coordinates	
Sanctioned Length of Watercourse	300
Measured Length of Watercourse	Nil
No. of beneficiaries	1
District	Haripur
Tehsil	Khanpur
Village	Pind Khakra
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 7
Main Source of water	Tubewell
Additional Source of water	Nil
Date of Technical Sanction	22/10/2021
Financial Year	2021-22
Sanctioned Cost	Rs. 634000/-
Status	Completed



Picture 3.26: View of Ghulam Asghar TWWC Tehsil Khanpur & District Haripur. Head and Tail of the WC.



Picture 3.27: ME&IE Team Interviewing the beneficiary of Ghulam Asghar TWWC.

The team visited Ghulam Asghar TWWC in Tehsil Khanpur & District Haripur. Team members FTI Mahmood Ul Hassan and Arslan Bashir along with Sub Engineer Mr. Khalid Awan and field Officer OFWM District Office Haripur and meet there with the owner of the WC at Ghulam Asghar TWWC.

Observations and Findings during Monitoring & Baseline:

- WUA was not functional it was an individual based scheme, the formation of WUA is a formality to fulfill the requirement of the file.
- The farmer cultivating intercrops wheat and maize the main crop is Orchard (Citrus). The orchard trees were planted about 35 years ago and the yield was not as much as it was. Now he is planning to plant fresh trees.
- The yield of the wheat is not as much as it could be, but it hardly fulfills our needs (intercrop).

- The farmer made a water tank by himself and the source of water is a boring water pump.

vi. **Field Visit of Water Storage Tank of Mr. Ahsan Raza, in Village Mirpur, District Haripur, KPK, on 2nd August 2022**

Name of Water Storage Tank	Ahsan Raza WST
Type of Water Storage Tank	Square
Category of Water Storage Tank	Regular (New)
Culturable Command Area (CCA) Acres	4
Coordinates	
Size of Water Storage Tank	Length 1: 27.2 Length 2: 27.2 Width 1: 27.2 Width 2: 27.2 Depth: 4.52
No. of beneficiaries	1
District	Haripur
Tehsil	Haripur
Village	Mir pur
Cropping pattern Rabi and Kharif	Rabi: Wheat & Vegetable Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps:9.00
Main Source of water	Solar Tube well
Additional Source of water	Nil
Date of Technical Sanction	26/01/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 420000/-
Status	Completed



Picture 3.28: ME&IE Team taking Measurement of Ahsan Raza WST Tehsil & District Haripur



Picture 3.29: ME&IE Team Interviewing the farmer on Ahsan Raza WST

The team visited Ahsan Raza WST in Tehsil & District Haripur. Team members FTI Mahmood UI Hassan and Arslan Bashir along with WMO Muhammad Qasim and Sub Engineer Mr. Safeer OFWM District Office Haripur and meet there with owner of the WST at Ahsan Raza WST.

Observations and Findings:

- The WUA member was their own family members, it was not functional the formation of WUA was the requirement of the department to fulfill the need of the file.
- The farmer told that WST benefits me especially in cloudy weather, because I have a solar tube which needs shiny weather. I can irrigate my land any time if needed.
- The farmer can fulfill the irrigation needs of the others also, but he will charge 300/- rupees per hour.
- The source of water is solar tube well there is no cost on irrigation. now he trying to extend the cropping intensity such as, if he grown two crops in a year (two seasons) now he will produce four or maximum crops, wheat, maize, vegetables

vii. Field Visit of Water Storage Tank of Mr. Muhammad Zaman Khan in Village Ganja Kamala, District Haripur, KPK, on 2nd August 2022

Name of Water Storage Tank	Muhammad Zaman Khan WST
Type of Water Storage Tank	Square
Category of Water Storage Tank	Regular (New)
Culturable Command Area (CCA) Acres	9
Coordinates	
Size of Water Storage Tank	Length 1: 28 Length 2: 28 Width 1: 28 Width 2: 28 Depth: 4.4
No. of beneficiaries	1
District	Haripur
Tehsil	Haripur
Village	Ganja Kamala
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 4.00
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	22/10/2021
Financial Year	2021-22
Sanctioned Cost	Rs.420000/-
Status	Completed



Picture 3.30: ME&IE Team Taking Coordinates and measurements of Muhammad Zaman Khan WST in Tehsil & District Haripur



Picture 3.31: ME&IE Team Interviewing the farmer on Muhammad Zaman Khan WST.

The team visited Muhammad Zaman Khan WST in Tehsil & District Haripur. Team members FTI Mahmood Ul Hassan and Arslan Bashir along with WMO Muhammad Qasim and Sub Engineer Mr. Safeer OFWM District Office Haripur and meet there with owner of the WST at Muhammad Zaman Khan WST.

Observations and Findings:

- WUA was not functional it was an individual based scheme, the formation of WUA is a formality to fulfill the requirement of the file.
- The source of water is an Electric tube well which is very costly, he paid a heavy electric bill.
- One fourth of the land was irrigated by lifting machine and on third was rainfed and the rest of the land was not cultivable due to the non-availability of water, but now he is developing the land to produce more crops.
- The beneficiary is now sharing out half of the land on a 50-50 share basis.

viii. Field Visit of Water Storage Tank of Mr. Khani Zaman, Pind Kamal, District Haripur, KPK, on 3rd August 2022

Name of Water Storage Tank	Khani Zaman WST
Type of Water Storage Tank	Square

Category of Water Storage Tank	Regular (New)
Culturable Command Area (CCA) Acres	8
Coordinates	
Size of Water Storage Tank	Length 1: 28.2 Length 2: 28.2 Width 1: 28.2 Width 2: 28.2 Depth: 4.4
No. of beneficiaries	1
District	Haripur
Tehsil	Haripur
Village	Pind Kamal
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 3.5
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	22/10/2021
Financial Year	2021-22
Sanctioned Cost	Rs. 420000/-
Status	Completed
	

Picture 3.32: Interviewing the farmer at Khani Zaman WST in Tehsil & District Haripur

The team visited Khani Zaman WST in Tehsil & District Haripur. Team members FTI Mahmood Ul Hassan and Arslan Bashir along with Sub Engineer Mr. Khalid Awan and field Officer OFWM District Office Haripur and meet there with the owner of the WST at Khani Zaman WST.

Observations and Findings:

- The scheme is on an individual basis, the formation of WUA is a formality, which is the requirements of the department and of the file.
- The cropping pattern is wheat and maize
- The source of water is an electric water pump, due to heavy load shedding it was not possible to irrigate the whole of the farm but after the WST, it became possible to irrigate the farm in one go.

ix. Field Visit of Watercourse Mr. Abdul Majeed, in Village Paniyala, District D. I. Khan, KPK, on 4th August 2022

Name of Watercourse/WST	Abdul Majeed
Type of watercourse/WST	Square 9*9*1.36
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	34.5 Acer
Coordinates	32.272676, 70.884618
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	14
District	D.I.Khan
Tehsil	Paharpur
Village	paniyala
Cropping pattern Rabi and Kharif	Kharif:Maize Rabi: Wheat
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	10LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 420000
Demographic information	
Name	AbidUllah
Age	30

Family size	22
Education	Primary
Tenurial status	Tenant
Area owned	34.5
Cultivable land	34
Fallow land	0
Beneficiary Farmers' Name	Abid Ullah



Picture 3.33: ME&IE Team Taking Coordinates of Water Storage



Picture 3.34: ME&IE Team Interviewing the Beneficiary of Water Storage Tank

Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Storage Tank:

The WST scheme was physically completed and on FCR. The cost of WST was Project share 75% material cost was Rs 420000

Water Table:

Underground water was available on 80 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Abid Ullah was the tenant of the land Abdul Majeed. The major crop he was grown last years was Wheat and Maize. Wheat was grown by the former on 33 acres. Total production of the wheat was 575mond and cost of production at farm level was Rs 696/40kg mound. Average yield of wheat production was 17.42mond/acer.

Khari fodder Maize was grown on 5 acers among which 2 acers was used by the former for domestic purpose of animal while remaining 3 acers was sold out by the former on Rs 48000 per acre while totally on Rs 144000.

Social and Gender Information:


The land was attached to the home of the main farmer and their females are doing activities like harvesting, cutting of fodders for animals, keeping animals for milking and livestock.

Picture Information:

Abid Ullah was the tenant of the land of Abdul Majeed and was forming on his 34 acres of land. The land was arid (?) before the installation of the Solar Tube well. When he installed his solar tube well 20 acres of land was irrigated while the remaining 14 acres was arid. Then he requested OFWM D. I. Khan for a Water Storage Tank. When department provided him WST now all 34 acres of land was irrigated and he was sown Wheat in Rabi Season while Maize in Kharif Season. Now his land was irrigated properly as during day time he irrigated his land on Solar Tube Well while at Night Time he used the stored water of the Water Storage Tank. Farmer requested for a pipeline to be provided as in Kacha watercourse water was reached to the end of land.

x. Field Visit of Watercourse of Mr. Ameer Asfandiyar, in Village Paniyala, Paharpur, District D. I. Khan, KPK, on 4th August 2022

Name of Watercourse/WST	Ameer Asfandiyar
Type of watercourse/WST	Square 9*9*1.36
Category of water course	Tube Well

Culturable Command Area (CCA) Acres	11.87Acer
Coordinates	32.225716, 70.8794442
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	10
District	D.I.Khan
Tehsil	Paharpur
Village	Panyala
Cropping pattern Rabi and Kharif	Kharif:MaizeFooder Rabi: Wheat
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	6LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 420000
Demographic information	
Name	Ameer TaimoorYar Khan
Age	34
Family size	9
Education	Bachelor
Tenurial status	Owner
Area owned	11.87
Cultivable land	10
Fallow land	
Beneficiary Farmers' Name	Ameer Taimoor Yar Khan
	

Picture 3.35:ME&IE Team Taking Measurements of Water Storage Tank

Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Storage Tank:

The WST scheme was physically completed and on FCR. The cost of WST was Project share 75% material cost was Rs 420000

Water Table:

Underground water was available on 230 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Ameer Taimoor Yar Khan was the owner of land. The major crops he grew last year were Wheat and Maize. Wheat was grown on 10 acres. Total production of wheat was 190mond and cost of production at farm level was Rs 654 /40 kg / maund. Average yield of wheat production was 19mond/acer.

Maize fodder was grown on 2 acres among which half acer was used for domestic purpose of feeding animals while remaining 1.5 was sold by the former on Rs 72000.

Social and Gender Information:

The land was attached to the home of the main farmers and their females are doing activities like harvesting, cutting of fodders for animals, keeping animals for milking and livestock.

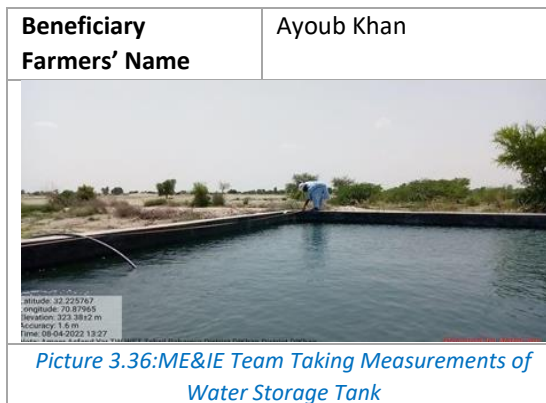
Picture Information:

Ameer Taimoor Khan was farming on his 11.87 acres of land among which 10 acres was cultivated. The land was arid before the installation of the Solar Tube well. When he installed his solar tube well his land was not irrigated properly as the water was un sufficient. Then he requested OFWM D. I. Khan for a Water Storage Tank. When department provided him WST now his land was irrigated properly as during day time he irrigated his land on Solar Tube Well while at Night Time he used the stored water

of the Water Storage Tank. Farmer requesting for a pipeline to be provided as in Kacha watercourse water was reached to the end of land.

xi. Field Visit of Watercourse of Mr. Javeed Anwar, in Village Wanda Kikri, Tehsil Hathala, District D. I. Khan KPK on 3rd August 2022

Name of Watercourse/WST	Javeed Anwar
Type of watercourse/WST	Square 9*9*1.36
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	5 acres & 56.25 Barani
Coordinates	32.24928, 70.87515
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	14
District	D.I.Khan
Tehsil	Hathala
Village	Wanda Kikri
Cropping pattern Rabi and Kharif	Kharif:MaizeFooder Rabi: Wheat
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	10LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 420000
Demographic information	
Name	Ayub Khan
Age	57
Family size	14
Education	Middle
Tenurial status	Tenant
Area owned	5
Cultivable land	5
Fallow land	



Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The farmer was not aware of the actual cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Storage Tank:

The WST scheme was physically completed and on FCR. The cost of WST was Project share 75% material cost was Rs 420000

Water Table:

Underground water was available on 250 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Ayoub Khan was the Tenant of land. The major crops grown last year were wheat and maize. Wheat was grown by the farmer on 5 acres. Total production of guar cluster beans was 100 maund and cost of production at farm level was Rs 771/40 kgs. maund. Average yield of wheat production was 20mond/acer.

Kharif fodder was grown on 1 acre and was sold by the farmer for Rs 48000.

Social and Gender Information:

The land was attached to the home of the main farmers and their females are doing activities like harvesting, cutting of fodders for animals, keeping animals for milking and livestock.

Picture Information:

Ayoub Khan was doing forming on his 61 acer land among which 5 acer land was irrigated from Solar System while the remaining was Barani. The land was arid before the installation of the Solar Tube well. When he installed his solar tube well his land was not irrigated properly as the water was un sufficient. Then he requested OFWM D. I. Khan for Water Storage Tank. When department provided him WST now his land was irrigated properly as during day time he irrigated his land on Solar Tube Well while at Night Time he used the stored water of the Water Storage Tank. Former requesting for pipe line to provide as in Kacha watercourse water was reached to the end of land.

xii. Field Visit of Watercourse of Mr. Mumtaz, in Village Giloti, Paharpur, District D. I. Khan, KPK on 3rd August 2022

Name of Watercourse/WST	Mumtaz
Type of watercourse/WST	Square 9*9*1.36
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	6 Acer
Coordinates	32.187362, 70.782321
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	14
District	D.I.Khan
Tehsil	Paharpur
Village	Giloti
Cropping pattern Rabi and Kharif	Kharif: Millet Fodder Rabi: Wheat
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	10LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021

Sanctioned Cost	Rs: 420000
Demographic information	
Name	Hazrat Bilal
Age	37
Family size	14
Education	Primary
Tenurial status	Owner / Land on his father name
Area owned	6
Cultivable land	5
Fallow land	1
Beneficiary Farmers' Name	Hazrat Bilal



Picture 3.37: ME&IE Team with Farmers at Watercourse/ Storage Tank in D.I.Khan

Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Storage Tank:

The WST scheme was physically completed and on FCR. The cost of WST was Project share 75% material cost was Rs 420000

Water Table:

Underground water was available on 120 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Hazrat Bilal was the owner of land and the land was on his father name Mumtaz. The major crops he grew last year were Wheat and Millet. Wheat was grown on 5 acres. Total production of guar cluster bean was 87.5mond and cost of production at farm level was Rs 911/40 kgs maund. Average yield of wheat production was 17.5mond/acer.

Kharif fodder was grown Millet (Bajra) on 2 acers among which half acer was used by the former for domestic purpose of animal while remaining 1.5 acer was sold by the former on Rs 40000 per acer while totally on Rs 60000.

Social and Gender Information:

The land was attached to the home of the main farmers and their females are doing activities like harvesting, cutting of fodders for animals, keeping animals for milking and livestock.

Picture Information:

Hazrat Bilal was doing forming on his 5 acer land. The land was arid before the installation of the Solar Tube well. When he installed his solar tube well his land was not irrigated properly. Then he requested OFWM D. I. Khan for Water Storage Tank. When department provided him WST now his land was irrigated properly as during day time he irrigated his land on Solar Tube Well while at Night Time he used the stored water of Water Storage Tank. Farmer now satisfied from forming activities as his water problem was solved for irrigation.

xiii. Field Visit of Watercourse of Mr. Qayum Nawaz, in Village Malana, District D. I. Khan, KPK on 2nd August 2022

Name of Watercourse/WST	Qayum Nawaz TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	18.25Acer
Coordinates	31.712577, 70.899349
Sanctioned Length of Watercourse	390
Measured Length of Watercourse	390

No. of beneficiaries	11
District	D.I.Khan
Tehsil	Parova
Village	Malana
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Sugarcane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	30LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,305
Demographic information	
Name	Qayum Nawaz
Age	53
Family size	11
Education	0
Tenurial status	Owner
Area owned	18.25
Cultivable land	15
Fallow land	2
Beneficiary Farmers' Name	Qayum Nawaz



Picture 3.38:View of Watercourse

Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual

cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Course:

The scheme was under progress on ICR1. First installment of Rs 328916 was released, remaining still pending. The land was arid before the installation of tube well and after that the farmer faced problems regarding irrigation of his land due to the Kacha Water course. After the completion of the watercourse, water consumption should be controlled and land was irrigated properly for growing crops.

Water Table:

Underground water was available on 45 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Qayum Nawaz was the owner of the land and was doing forming. The major crops he grew last year were Wheat and Maize.

Wheat was grown on 10 acres. Total production of wheat was 300mond and cost of production at form level was Rs 802/40 kg maund. Average yield of wheat production was 30mond/acer.

Maize was grown on 5 acres. 1 Acre was used by the former for domestic purpose of feeding animals while 4 acres was sold by the former on Rs 48000 per acre while total sold on Rs 192000.

Social and Gender Information:

Female was part of the water user association and was not actively involved in forming activities. The land was not attached to the home of the main formers and their females are not doing activities like cutting of fodders for animals, keeping animals for milking and livestock.

Picture Information:

Qayum Nawaz was forming on his 15 acres of land. The land was Arid (?) and Kacha unable to cultivate before the installation of Solar Tube well. When he installed his solar tube well his land was not irrigated properly as the water was un sufficient. Then he requested ONFM D. I. Khan for watercourse. When department provided him with a watercourse, now his land was irrigated properly.

xiv. Field Visit of Watercourse of Mr. Saifullah, in Village Wanda Karim Khan, Paharpur, District D. I. Khan, KPK on 4th August 2022

Name of Watercourse / WST	Saifullah
Type of Watercourse/WST	Square9*9*1.36
Category Watercourse	Tube Well
Culturable Command Area (CCA) Acres	5.87Acer
Coordinates	32.183537,70.856333
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	14
District	D.I.Khan
Tehsil	Paharpur
Village	Wanda Kikri
Cropping pattern Rabi and Kharif	Kharif:BarseemFooderRabi:Wheat
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	6LPS
Main source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs:420000
Demographic Information	
Name	Saifullah Khan
Age	48
Family size	14
Education	Middle
Tenurial Status	Owner
Area Owned	5.87
Cultivable land	5
Fallow land	
Beneficiary Farmers' Name	Saifullah Khan



Picture 3.39: ME&IE Team Interviewing the Farmer

Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Storage Tank:

The WST scheme was physically completed and on FCR. The cost of WST was Project share 75% material cost was Rs 420000

Water Table:

Underground water was available on 230 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Saif Ullah Khan was the owner of land. The major crops he grew last year were Wheat and Maize. Wheat was grown on 2 acres. Total production of wheat was 55 maund and cost of production at farm level was Rs 594/40kg maund. Average yield of wheat production was 27.5 maund/acre. Berseem fodder was grown Maize on 2 acres among which half acer was used for domestic purpose of feeding animals while remaining 1.5 was sold by the former on Rs 72,000.(?)

Social and Gender Information:


The land was attached to the home of the main farmer and their females are doing activities like harvesting, cutting of fodders for animals, keeping animals for milking and livestock.

Picture Information:

Saif Ullah Khan was forming on his 5 acres of land. The land was arid before the installation of Solar Tube well. When he installed his solar tube well his land was not irrigated properly as the water was insufficient. Then he requested ONFM D. I. Khan for Water Storage Tank. When department provided him WST now his land was irrigated properly as during day time he irrigated his land on Solar Tube Well while at Night Time he used the stored water of the Water Storage Tank. Former requesting for pipe line to provide as in Kacha water source water was reached to the end of land

xv. Field Visit of Watercourse of Mr. Zameer Hussain, in Village Fateh Mando, District D. I. Khan, KPK on 2nd August 2022

Name of Watercourse/WST	Zameer Hussain TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	13.75 Acer
Coordinates	31.623081, 70.821804
Sanctioned Length of Watercourse	407
Measured Length of Watercourse	387
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Parova
Village	Fateh Mando
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	35LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	28/03/2022
Sanctioned Cost	Rs: 849,258

Demographic information	
Name	Zameer Hussain
Age	47
Family size	12
Education	Primary
Tenurial status	Owner
Area owned	13.75
Cultivable land	12
Fallow land	0
Beneficiary Farmers' Name	Zameer Hussain
	
<p>Picture 3.40: ME&IE Team Taking with Farmers at Water Storage Tank</p>	

Observations and Findings:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual cost of the scheme. Record of the water user association of meeting and problem solving was not found.

Status of Water Course:

The scheme was under progress on ICR1. First installment of Rs 313514 was released, remaining still pending. The land was arid before the installation of tube well and after that the farmer faced problems regarding irrigation of his land due to Kacha Water course. After the completion of the water course, water consumption should be controlled and land was irrigated properly for growing crops.

Water Table:

Underground water was available on 45 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Zameer Hussain was the owner of the land and was doing forming. The major crops he grew last year were Wheat and Maize.

Wheat was grown on 10 acres. Total production of wheat was 240 maund and cost of production at form level was Rs 1404 /40 kgs maund. Average yield of wheat production was 24mond/acer.

Maize was grown on 2 acres. Maize was used by the former for domestic purposes.

Social and Gender Information:

Female was part of the water user association and was not actively involved in forming activities. The land was not attached to the home of the main formers and their females are not doing activities like cutting of fodders for animals, keeping animals for milking and livestock.

Picture Information:

Zameer Hussain was forming on his 12 acres of land. The land was arid and Kacha unable to cultivate before the installation of Tube well. When he installed his tube well his land was not irrigated properly as the water was un sufficient for irrigation. Then he requested ONFM D. I. Khan for a watercourse. When the department provided him with a watercourse now the construction works were in progress and the scheme was on ICR 1. The former was satisfied with his watercourse as his water problem will be solved after Watercourse completion.

3.3.4 Regular Monitoring / Field Visits by Zonal Office Balochistan

The activities done by the Balochistan zone in the reporting month are listed below:

- Updated Progress of ME&IE Consultants, Balochistan Zone.
- Field activities regarding data collection of Midline Survey
- Data entry on Dashboard Balochistan Zone

3.3.4.1 Updated Progress – Balochistan Zone

i. Overall Progress:

The ME&IE Consultants (ME&IEC), Balochistan has monitored 17 Watercourses and 51 Water Storage Tanks in “First Baseline Survey” activities. Total benchmarked sites in First Baseline Survey were 68.

The midline survey activities are continued in Balochistan zone. The ME&IEC has monitored a total of 22 sites (08 Watercourses and 14 Water Storage Tanks) till date.

The Balochistan field teams are also conducting regular monitoring of ongoing / completed sites covering all financial years i.e., 2019-20, 2020-21, and 2021-22 every month. The Balochistan field teams have so far monitored 83 watercourses and 79 Water Storage Tanks. A total of 162 sites have been monitored to date.

Updated status of field visits is given in below Table 3.3.

Table 3.3: Updated Status of field Visit

S. #	District	Baseline / Bench Marked		Midline Survey		Regular Monitoring / Spot Checking		Total
		W C	W S T	W C	W S T	W C	W S T	
1	Quetta	-	6	-	4	10	15	35
2	Pishin	-	8	-	-	4	13	25
3	Killa Abdullah	1	1	-	-	3	2	7
4	Ziarat	-	3	-	-	2	4	9
5	Mastung	1	5	1	2	7	9	25
6	Nushki	-	-	-	-	2	1	3
7	Sibi	-	-	-	-	1	3	4
8	Jhal Magsi	1	4	-	-	1	2	8
9	Kachhi	-	8	-	-	1	2	11
10	Naseerabad	2	4	2	1	14	6	29
11	Jaffarabad	-	-	-	-	4	1	5
12	Sohbatpur	7	-	3	-	14	-	24
13	Loralai	1	2	1	4	2	6	16
14	Duki	-	-	-	-	2	1	3
15	Zhob	-	-	-	-	3	2	5
16	Kila-Saifullah	2	1	1	3	5	4	16
17	Musa khel	-	-	-	-	1	1	2
18	Sherani	-	-	-	-	2	2	4

19	Khuzdar	1	6	-	-	1	1	9
20	Kalat	1	3	-	-	4	4	12
Sub-Total		17	51	8	14	83	79	252

The beneficiaries’ list of F.Y. 2022-23 is under progress by the OFWM. As soon as OFWM initiates the works on F.Y. 2022-23 and finalizes the beneficiaries’ lists, the ME&IEC, Balochistan will start the Second Baseline “2022-2023” accordingly.

ii. Data Feeding on ODK Dashboard Balochistan Component

The ME&IEC needs the beneficiary data to complete the vital task of the Dashboard. This will give lot of facilitation to OFWM Department to check the status of all project intervention at all times. The FPMU and OFWM, Balochistan both are facilitating the ME&IEC in this regard. The DG, OFWM, Balochistan already gave necessary directions to all DDs in this regard, however, due to the flood, most of DDs are involved with farmers for their support.

During the reporting month, data, F.Y. 2019-20, received from Water Management Consultants has been uploaded in ODK by Balochistan field teams. Data acquisition and uploading to Dashboard is in progress.



Picture 3.41: ME&IE field staff uploading data on ODK for Dashboard, Balochistan Component

Field activities were affected during the reporting period due to heavy rains and floods in Balochistan. However, ME&IE Field teams remained busy in their activities in the accessible areas of the project. A number of interventions are affected due to these rains and floods.



Picture 3.42: Watercourse Damaged due to Heavy Rains and Floods in Pishin



Picture 3.43: Vegetable Farm Destroyed during current Rains and Floods in District Killa Saifullah

3.4 COORDINATION MEETINGS OF ME&IE CONSULTANTS

ME&IE consultants remained in regular contact with OFWM department regarding data collection and gathering information required for Midline Survey / Regular Monitoring. Consultants conducted meetings with relevant offices of the OFWM and other stakeholders.

National Project Coordinator (NPC) visited ME&IE Consultants' Zonal Office KP on 26th August 2022. Detail of meetings are given in given below.

3.4.1 Meetings of ME&IE Consultants Punjab Zone with Stakeholders

i) Meetings with Assistant Director Agriculture (OFWM), District Gujranwala on 3rd August 2022

Date	August 03 ,2022
Venue	Village Pagalla Virkan, Tehsil Noshera Virkan, District Gujranwala
Participants	
i.	Tariq Mehmood Assistant Director Agriculture (OFWM), Tehsil Noshera Virkan, District Gujranwala
ii.	Mr. Muhammad Rizwan Suleman, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii.	Sohail Ahmad Field Team Engineer ME&IE Consultants Lahore.
iv.	Nauman Rasheed Field Team Engineer ME&IE Consultants Lahore.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Briefing on ME & IE Consultants activities regarding Mid-Line Survey /Monitoring by Field Team In-charge. Discussed Targets / Achievements of various intervention under NPIWC-II Discussed future activities of the department and other relevant issues 	

Picture 3.44: ME&IE Team in Meeting with AD OFWM Noshera Virkan, during data collection for Mid-Line Survey / Monitoring

ii) Meetings of ME&IE Consultants with Director (H.Q) Directorate General of Agriculture (OFWM) Lahore on 25th August 2022

Date	August 25 ,2022
Venue	Director General OFWM Office Davis Road, Lahore
Participants	
i.	Hafiza Yasin Qaiser Director (H.Q) D.G Office Lahore.

- ii. Mr. Tariq Mehmood Agronomist D.G Office Lahore.
- iii. Mr. Matloob Elahi Deputy Project Director Watercourses D.G Office Lahore.
- iv. Mr. Muhammad Yousaf Bhatti Deputy Team Leader, ME&IE Consultants Lahore.
- v. Mr. Muhammad Rizwan Suleman, Field Team In-charge (Subzone-2) ME&IE Consultants Lahore

Meeting Agenda/Points discussed:

- Briefing on ME & IE Consultants Annual Report 2021-22.
- Discussion on targets / achievements of various interventions in Punjab during 2021-22
- Review of field activates under recent change in climate in the field during 2022-23.



Picture 3.45: ME&IE Team in meeting held in the office of D.G. OFWM, Lahore

3.4.2 Meetings of ME&IE Consultants KP Zone with Stakeholders

i) Meeting with the National Project Coordinator (NPC), and Deputy NPC during their Visit to ME&IE Consultants' Zonal Office Peshawar KP:

On August 26, 2022 the NPC along with the Dy. NPC paid a visit to the zonal office Peshawar KP of the ME&IE Consultants, NPIWC-II. Team Leader ME&IE Consultants NPIWC-II also participated in the meeting. Following were the participates.

- i) Mr. Muhammad Asif Kakar, NPC
- ii) Mr. Saiful Islam, Deputy NPC
- iii) Dr. Usman Mustaf, Team Leader ME&IE Consultants, NPIWC-II
- iv) Dr. Humayoun Khan, Deputy Team Leader ME&IE Consultants NPIWC-II KP Zone
- v) Other ME&IE staff of KP Zone

Meeting was held in the office of ME&IE Consultants' Peshawar Office of KP Zone. Agenda of the meeting was to review the Progress of the ME/IE Consultants, NPIWC-II. KP Zonal office Peshawar.

The DTL Zonal office Peshawar made a presentation of the progress made so far and the on-going activities of the project. After the presentation of the DTL, NPC and Dy. NPC discussed in detail different items related to project which were clarified by the DTL. The NPC also met the Field Team In-charges (FTIs) and discussed the personal and field related problems. The NPC assured them that due consideration will be given to these problems.



Picture 3.46: Meeting with the NPC, Dy. NPC and Team Leader of the ME/IE Consultants NPIWC-II at KP Zonal Office

3.4.3 Meetings of ME&IE Consultants Balochistan Zone with Stakeholders

Date	18 th August, 2022
Venue	Office of the Director General, OFWM, Balochistan
Participants	
i.	Mr. Abdul Wahab, DG OFWM, Balochistan
ii.	Mr. Manzoor Ahmed Kasi, FTI/M&EE/Focal Person
iii.	Mr. Basit Khan Kakar, M&EO
iv.	Mr. Hamza H. Qureshi, M&EO

Meeting Agenda/Points discussed:

Provision of Beneficiaries' data of F.Y 2019-20, 2020-21 and 2021-2022, for the purpose of Dashboard.



Picture 3.47: Meeting with Mr. Abdul Wahab, DG OFWM, Balochistan

3.5 INTERNAL MEETINGS OF ME&IE CONSULTANTS

Date	Every Monday
Venue	Routine Weekly Zoom Meeting
Participants	
i. Dr. Usman Mustafa, Team Leader, ME&IE Consultants, National Office, Islamabad. ii. Dr. Muhammad Abdul Quddus, Agricultural Economist, Lahore Office. iii. Ms. Muniza Bashir Tarar, Social & Gender Specialist, NPIWC-II, National Office, Islamabad iv. Dr. Humayun, Deputy Team Leader, ME&IE Consultants, KPK. v. Mr. Yousaf Bhatti, Deputy Team Leader, ME&IE Consultants, Punjab. vi. Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan.	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Follow-up of previous meeting. Discussion of Baseline Phase-II Report Data collection for Midline Survey DTLs shared plan for Midline Survey and remaining works of Baseline Status of available funds and further requirements. Provision of Android System and Field Vehicles. Meeting will be wrapped-up by the Team Leader with concluding remarks 	

3.6 ICT ASSIGNMENT

The ICT Team remained engaged in different activities related to the ME&IE assignment including development of Android based application, data collection for Dashboard and training of client staff on Dashboard / MIS for the project. During the Month of July 2022 activities completed by ICT Team are summarized below.

3.6.1 Development of Customized Android Based Applications

The ICT Technology Team of ME&IE Consultants NPIWC-II has developed Customized Android Based Applications for data collection. Data entry in this application is done directly by the field monitoring teams of all the zonal offices and is uploaded in the MIS system. The data is being observed and monitored by the ICT team of ME&IE Consultants.

In this regard, customized Android Based Applications have been developed, tested, and installed to Small Dams and Irrigation staff of AJK, Water Management Staff of ICT zone and OFWM staff KP zone.

3.6.2 Data collection of interventions in MIS/GIS database

The activity regarding data collection of Interventions in MIS/GIS database was completed in KP Zone in December 2021.

- Data cleaning and validation has been completed in KP Zone.
- The data collection for the dashboard is in progress in Balochistan. The ICT team is facing problems in data collection because a lot of data is missing which was required by the ICT team for Implementation of MIS Dashboard.

3.6.3 Implementation of MIS Dashboard

The Dashboard has been implemented in AJK, and the progress of Interventions is live on the Dashboard since the 4th of November 2021.

AJK Zone - Watercourses Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
MZD	32	96	73	2	203
Poonch	37	38	78	1	154

Mirpur	38	107	88	26	259
Overall	107	241	239	29	616

So far, Total 616 Watercourses data from AJK zone has been received and available live on Dashboard by which 372 Watercourse has been completed & 166 watercourses are under progress. Due to farmers' un-willingness 84 Work Orders have been cancelled till now. Detailed summary attached as **Annex-E**.

AJK Zone - Water Storage Tank Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
MZD	35	61	73	2	171
Poonch	15	46	140	9	210
Mirpur	2	16	64	9	91
Overall	52	123	277	20	472

472 Water Storage Tank data received from AJK zone and is available live on Dashboard by which 278 Water Storage Tank has been completed and 124 WSTs are under progress. Due to un-willingness of farmers there 59 WST work orders have been cancelled till now. Detailed summary attached as **Annex-F**.

The Dashboard has also been implemented in KP Zone and progress of completed schemes is live on the Dashboard since 11th March 2022.

Division	2019-20	2020-21	2021-22	2022-23	Overall
Bajaur	3	19	40	0	62
Bannu	75	35	94	0	204
D.I. Khan	431	13	57	0	501
Hazara	84	58	157	15	314
Khyber Agency	6	13	7	0	26
Kohat	98	41	57	0	196
Kurram Agency	1	5	2	0	8
Malakand	178	182	364	1	725
Mardan	105	66	95	0	266
M. Agency	4	26	13	0	43
Orakzai Agency	0	1	0	0	1
Peshawar	141	90	72	5	308
S.W. Agency	3	12	6	0	21

N. W Agency	2	3	0	1	6
Overall	1131	564	964	22	2681

KP zone currently 2356 total watercourses data live on Dashboard and by which 1798 schemes have been completed and 325 schemes are under progress. Due to un-willingness of farmers 05 schemes' work orders have been cancelled till-date. Detailed Summary attached as **Annex-G**.

KP Zone - Water Storage Tank Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
Bajaur	1	9	7	0	17
Bannu	13	18	23	0	54
Dera Ismail Khan	81	6	5	0	92
Hazara	28	43	86	3	160
Khyber Agency	1	9	11	0	21
Kohat	29	17	32	0	78
Kurram Agency	1	1	0	0	2
Malakand	75	94	141	0	310
Mardan	16	9	26	0	51
M. Agency	1	36	4	0	41
Orakzai Agency	0	2	0	0	2
Peshawar	36	25	25	2	88
S.W Agency	0	15	0	0	15
N.W Agency	0	0	0	1	1
Overall	282	284	360	6	932

KP zone currently 932 total watercourses data live on Dashboard and by which 811 schemes have been completed and 121 WSTs are under progress. Detailed Summary attached as **Annex-H**.

ICT Watercourse Data Summary			
Division	2020-21	2021-22	Overall
ICT	20	14	34
Overall	20	14	34

ICT zone so far 34 watercourse schemes have been initiated in this zone by which 31 have been completed and 3 watercourses are under progress.

The ICT team is continuously in process of cleaning and validating the received data and communicating mistakes to the concerned ADs for correction.

3.6.4 Refresher Training Workshop in KP Zone

The ICT Team conducted one Day Refresh Training Workshop at KP Zone OFWM staff to enhance their capability of data collection through the Android Based Application for rapid and validated data transmission. 44 staff members from various districts participated in this training. Training details given as **Annex-I**.

3.7 MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT

Field visit 18th to 19th August 2022

On August 18th and 19th 2022, team Social and Gender Specialist planned and organized the visit to the ICT. The aim of the visit was to observe the impact of Midline survey of targeted interventions under the project NPIWC II. The team was present at the decided location and time that was coordinated with the beneficiaries.

Detail of Field and Gender team visited the watercourses of ICT

Field team visit the following interventions;

WC/WST ID	Village	Survey Date
Pindbaigwal	Pindbaigwal	18-08-22
Tarlai Kalan	Tarlai Kalan	18-08-22
Mauza Arrah	Mauza Arrah	19-08-22
Thanda Pani	Thanda pani	19-08-22

Purpose of visit:

- To conduct interview for the Midline of female beneficiary
- To pre-test the format of social and gender check
- k list
- To collect the required data
- To observe the impact of the intervention on the livelihood.

The team reached the village Pindbaigwal where had a meeting with a beneficiary named Chaudhry Khanzada who is an advocate of the High Court. Chaudhry Khanzada appreciated the intervention. Moreover, the Social and gender team requested Mr. Chaudhry Khanzada to allow her wife Mrs. Shazia to answer the questionnaire which he allowed.

Mrs. Shazia is a 40-year-old educated woman. Mrs Shazia is an educated house who did MA, B.Ed. and now looking after her family and 4 kids (2 girls and 2 boys). Mr Khanzada is a practicing Lawyer in Islamabad high court. Mr Khanzada is very sensible and humble person

Who keep her wife involve in all decisions? She explained that she was overburdened due to household activities and hired a maid who assists her in routine house chores. Her husband owned land in Pind Baigwal where he availed the subsidy for intervention including a PVC 3" pipeline and a water storage tank in the year 2020-21. She explained that there was no loss and no benefits received during the cultivation period. She explained the problem she faced that during the month of July 2022, they received an electricity bill of PKR 77,000 for the water storage facility.

She further added that she enjoyed getting pure milk, desi ghee, yogurt, butter, fresh vegetables, wheat, and maize from the land.

She has good knowledge of agriculture and crops but not active practically not participating in agricultural activities. She was not aware of NPIWC projects being not involved personally. She told the team that in her farm female farmers were involved in picking the vegetables whereas all the other activities are handled by male farmers.

She stated that the daily wages of female farmers are less compared to male farmers which needs to be increased. She added that before intervention they were spending a lot of money on purchasing vegetables and wheat from the market, but now they are using their crops, vegetables, and dairy products which are more fresh and healthy for them. It saves a lot of their money. Their workload

has decreased in terms of visiting markets for food items and is much time-saving.



Picture 3.48: Ms. Abida Munir Social & Gender Specialist with Mrs Shazia at her home.

Mrs. Shazia have a cow from which they are getting fresh milk yogurt, butter, and dairy items which are to be consumed by their own and share with the labors.

Waheeda Bibi

Team meet Mr. Ali who is farmer at Khandaza farm. Mr. Ali has given permission for taking interview of her wife (Waheeda Bibi). Waheeda Bibi belongs to the Pashtoon family. She is 40 years old lady. Her family lives in a rented house. Her education level is primary. She has 4 children. All children are going to educational institutes. Both husband and wife are working as permanent hired labor on Khanzada's farm.

Waheeda Bibi is also working as a maid and getting 20,000/- per month. She assisted her husband in farming activities. Moreover, she is also bathing livestock and making milk products like Desi ghee, butter and yogurt. They are getting fresh milk butter, fresh vegetables, wheat, and maize from the owner farm. The money spending on such items were saved. Waheeda Bibi is very thankful to Mr. Khandaza because they are giving vegetables and milk products free of cost. Her workload has also decreased in terms of visiting markets for food items which also saved her much time and money so, their monthly expenditure became less, and also

their time were saved. She enjoys fresh eatables and is now concentrating more on her and family's health.

Waheeda Bibi told that her husband is very cooperative and she can go outside without her husband's permission, there is no such restriction from her husband's side. She has no knowledge of the NPIWC-II Project, but she was well aware of the crops and she knows the names of crops and currently which crops are cultivated on the farm. Waheeda Bibi hasn't owned a piece of land. She shared that she belongs to a poor family and her husband is also landless. Waheeda Bibi told that with mutual understanding both husband and wife were taking decisions on the education and marriage matters of their children and other household matters. She hasn't a personal cell number because she can't buy a mobile phone and both husband and wife use the same cell.



Picture 3.49: ME&IE Social & Gender Specialist with Mr. Ali Khan (Waheeda Bibi husband)

On August 19th 2022, team Social and Gender Specialist planned and organized the visit to the ICT. The aim of the visit was to observe the impact of Midline survey of targeted interventions under the project NPIWC II. The team was present at the decided location and time that was coordinated with the beneficiaries.

ME&IE team reached at Mauza Arrah beneficiary Muhammad Amjad was already there. Muhammad Amjad is the only beneficiary of this watercourse. , the Social and gender team requested Muhammad Amjad to allow her wife Zar Bibi to answer the questionnaire.

Muhammad Amjad was reluctant and didn't want to give permission us to take interview of her wife

Zar Bibi. Field team motivated him and then he gave permission for interview.

Zar Bibi is a 52-year-old woman. She is educated till primary. Zar Bibi is a housewife. She has three children including 02 boys & a girl all are going to local educational institutes. During interview Zar Bibi shared that her husband Muhammad Amjad didn't involve her in any decision-making matters. This is due to cultural and strict family customs. She said that she is totally dependent on her husband and can't go anywhere without her husband's permission.

She explained that due to the overburden of household activities she hired a maid who assists her in house chores. Zar Bibi hasn't owned a piece of land.

She told us that they faced a big challenge of an electricity bill of the water storage tank that is about 25000/- PKR which lead to no benefit out of their efforts.

She is not participating in agriculture activities and has no knowledge about NPIWC-II Project. Before intervention they were spending a lot of money on purchasing vegetables, wheat and dairy products from the market. According to her they were getting fresh vegetables, wheat and dairy products after the interventions. Her workload has decreased in terms of visiting markets for food items which also saved her much time and money. She added that her husband is not helping her in any household activities because in his family males were not allowed to help female member's in house chores. Zar Bibi has no knowledge of WUAs.



Picture 3.50: ME&IE & Social & Gender team interview with farmer Muhammad Amjad at Mauza Arrah

After visiting Mauza Arrah the team move further towards Thanda Pani. ME&IE team reached beneficiary. Mr. Zubair Hussain was already there. Mr. Zubair Hussain is the only beneficiary of this water course. The Social and Gender specialist requested Zubair Hussain permit to meet her wife Ms. Sobia for the Gender questionnaire.

SOBIA

Mrs. **Sobia** is a 45-year-old and educated woman. Mrs. Sobia is a housewife and her husband is an advocate who also runs a travel agency for Holy pilgrimage i.e Umra and Hajj.

She has 02 children includes a boy & a girl. All two are going to nearest educational institutes. According to Mrs. Sobia her husband Mr. Ali is a very cooperative and always involved her in most of the decisions. She explained that due to the overburden of household activities she hired a maid who assist in household activities. She said that she is independent in her matter and can go anywhere there is no restriction from her husband.

She told that after intervention they were getting wheat and Maize. Mrs. Sobia doesn't own a piece of land. She has knowledge about recently cultivated crops but she is not participating in agriculture activities as in her family females are not involved in any labor activities.

Mrs. Sobia have no knowledge about NPIWC-II Project and has no idea regarding WUAs.

Overall Finding/Observations

- i. There are no WUAs because there was single beneficiary of all the intervention in ICT.
- ii. Most of the females were un aware about the project NPIWC-II.
- iii. Household activities are mostly done by women.
- iv. Women didn't own a piece of land.
- v. Females have no knowledge of the WUAs
- vi. Mostly women are doing household activities, due to cultural constrains male members didn't assist females in household activities.
- vii. Females were well aware of the crops but no participate in farming activities.

- viii. According to the culture women didn't own any land legally.
- ix. Female family member education level is primary.
- x. Most of the females were not involved in decision-making activities.
- xi. Females were not involved in any labor activities.
- xii. It was observed that due to exceeding in electricity bills they were not gaining the profit.
- xiii. Most of the male refuses the team to take the interview from the females. There was a long distance between cultivated land and their home. Females rarely visited their farms.
- xiv. Male were uncomfortable to allow their females to meet with the survey team, but the social and gender team managed to take interviews.

Field visit from 23rd to 24th August 2022

On August 23th and 24th 2022, team Social and Gender Specialist planned and organized the visit to the Punjab. The aim of the visit was to observe the impact of Midline survey of targeted interventions under the project NPIWC II.

Detail of Field and Gender team visited the watercourses of Punjab

WC/WST ID	Village	Survey Date
Mouza Shah Baghl	Mouza Shah Baghl	23-08-22
Maira Sangal	Maira Sangal	23-08-22
Hassan Abdal	Bafahad	24-08-22

Purpose of visit:

- To conduct interview for the Midline of female beneficiary
- To pre-test the format of social and gender check list
- To collect the required data
- To observe the impact of the intervention on the livelihood.

ME&IE ICT-team reached at Maira Sangal village accompanied with Deputy Director of OFWM, Rawalpindi. The aim of this visit was to conduct

midline survey and the impact of the WST. The beneficiary of Maira Sangal water storage tank was already there.

Mr. Zameer Hussain is owner of water storage tank and also teacher in school and was physically disable, but he was very active and handworker man. Team requested Mr. Zameer Ahmed to meet her wife Jameela Bibi.

Jameela Bibi is 70 years old. She is housewife She has 04 children includes 03 boy & a girl. According to Jameela Bibi her husband Mr. Zameer Hussain is a very cooperative and always involved her in most of the decisions. She explained that due to the overburden of

Household activities she hired a maid who assist in household activities. She said that she is independent in her matters and can go anywhere there is no restriction from her husband.

Mrs. Jameela doesn't own a piece of land. She told that in their culture women were not given any piece of land. She has knowledge about recently cultivated crops but she is not participating in agriculture activities as in her family females are not involved in any labor activities, due to cultural restriction. Jameela Bibi have no knowledge about project.



Picture 3.51: Mr. Zameer Hussain (Farm owner) with ME&IE team (Ms. Maryam, Ms. Sana) and Social & Gender Specialist (Ms. Abida Munir) at Mouza Shah Bagh Rawalpindi



Picture 3.52: ME&IE ICT & Social & Gender-team at Miara Sangal Rawalpindi Punjab

After visiting Maira Sangal team moved towards another intervention Mouza Shahbagh. The beneficiary was already present there. Raja Zulfiqar Ali is the only beneficiary of this water storage tank. Mr. Raja Zulfiqar Ali stated that female farmer is also working in his farm. Team meet the female farmer and her family.

Ms. Nasreen is labor farmer belongs from a Punjabi family. She's thirty-five years old. It was observed that Mrs. Nasreen was working on the farm as a labor. She told the team that her children including her four daughters and a son all were working together in the farm. She lives with her family in a home given by the landlord. She was migrated from Chicha Watani town to earn some money for her daily livings, two months ago, as they were not getting the amount of money needed by their family in their native village. Mrs. Nasreen stated that her whole family is working on a farm.

Mrs. Nasreen and her whole family member are illiterate. They never went to school. Although She was happy with the intervention but due to climate change, torrential rainfalls severely damaged the production of tomatoes and bitter guard, but still Some pickings of these vegetables along with lady finger was being harvested every after second day. The owner was also giving them other benefits apart from their basic salaries. They were getting vegetables for their own use due to which their monthly expenditure became reduced, and their time was also saving. Her monthly expenditure is less than before. She enjoys fresh vegetables and is now concentrating more on her and her family's health. They are getting, fresh vegetables, wheat, and maize from the farm owners. The money spent

on such items is saved as is very thankful to Raja Zulfiqar Ali.

Nasreen told that her husband is very cooperative and she can go outside without her husband's permission there is no such restriction from her husband's side. She has no knowledge of the NPIWC-II Project, but she was well aware of the crops.

Mrs. Nasreen hasn't owned a piece of land, but she knows the names of crops and currently which crops are cultivated on the farm. Mrs. Nasreen told that with mutual understanding both husband and wife were taking decisions on the education and marriage matters of their children and other household matters. She hasn't a personal cell number because she can't buy a mobile phone and both husband and wife use the same cell. Mrs. Nasreen further elaborate that they are getting paid PKR 20/ bag of 5kg by the owner.



Picture 3.53: Ms. Nasreen female farmer labour and Ms. Abida Munir (Social & Gender Specialist) at Mouza Shah Bagh Rawalpindi



Picture 3.54: Ms. Abida Munir Social & Gender Specialist, gathering information from with female labor Ms. Nasreen female farmer labour

Every day, they packed more than ten bags of Ladyfingers. She said that by this way they are earning 400-500 PKR per day. She also told us that her children cleaned the land with their hands. Husband's selling the bags at the market. Her husband did not engage her in any marketing activity she told after that the water storage tank is very useful intervention because the crops can be irrigated by sufficient water.

On 24th August 2022, ME&IE team and Assistant director OFWM Mrs. Ambreen, reached Hassan Abdal the team visited the beneficiary of WST at his farm at Bafahad in Hasan Abadal Mr. Sadiq owner of WST were already present on the site. He told about his family, profile of farming and the crops grown on the farm, especially, fruits and vegetables. After that we interviewed beneficiary wife Mrs Sania.

Sania

Mrs. Sania is a 38-year-old educated woman who has done master's. Mrs. Sania Khan belongs to a Pashtoon family. She is a housewife and her husband is a businessman. She has 3 children (02 boys & 01 girls) and all are going to educational institutes. According to Mrs. Sania, her husband is a very strict man and didn't involve her in any kind of business and household matters. She added that her husband is not helping her in any household activities because in his family males were not allowed to help female member's in house chores. She explained that she was overburdened due to household activities and hired a maid who assists her in some of the crucial house chores. She explained that they were not getting any financial benefits until yet because they had cultivated peaches orchards for the last one and half years. The orchard will take two more years to be fruitful. They have to wait for profit and fruit. Her husband didn't cultivate any kind of crops and vegetables on his farm. It was observed during visit that Water storage tank was empty. Mrs. Sania khan told that they have kept the chicken, buffaloes and cow in their farm. The eggs and hen was not for sale purpose but they are using the organic eggs and desi chicken for their own use. She further described that she can't go anywhere without her husband's permission. She told that after 04 years they will get the fruit as well as the profit. She told that after construction of water storage tank their

there is change in household expenditure now they are not buying eggs and dairy products from



Picture 3.55: Team with Mr. Sadiq (beneficiary) and Mrs. Ambreen, (Assistant director OFWM) at Bafahand Hassan Abdal

market. She further emphasis that pure milk products and organic eggs and chicken are very healthy.

Mrs, Sania told without her husband permission she cannot go outside.

She has no knowledge of the NPIWC-II Project, but she was well aware of the crops.

Overall Finding/Observations

- i. There are no WUAs because only one member was holding the land.
- ii. Most females have no knowledge about NPIWC-II Project.
- iii. Household activities are mostly done by women.
- iv. Women didn't own a piece of land.
- v. Females have no knowledge of the WUAs
- vi. Mostly women are doing household activities, due to cultural constrains male members didn't assist females in household activities.
- vii. Mostly Females were well aware of the crops but no participate in farming activities.
- viii. According to the culture women didn't own any land legally.
- ix. Female family member's education level is primary.
- x. Most of the females were not involved in decision-making activities.
- xi. Females were not involved in any labor activities.

- xii. It was observed that due to exceeding in electricity bills they were not gaining the profit.
- xiii. Most of the male refuses the team to take the interview from the female. There was a long distance between cultivated land and their home. Females rarely visited their farms.
- xiv. Male were uncomfortable to allow their females to meet with the survey team, but the social and gender team managed to take
- xv. Interviews

CHAPTER 4: QUARTERLY WORK PLAN- ACTIVITIES (JULY 2022 TO SEPTEMBER 2022)

The ME&IE Consultants' activities initiating during the 3rd Quarter of year 2022 (July 1, 2022 to September 30, 2022) are listed below. A tentative Work Plan for 3rd Quarter of the year 2022 (1st July, 2022 to 30th September 2022) showing time span detail is given as **Annex-A**.

Pre Field Activities

- i) Internal Meetings of ME&IE Consultants' Zonal Offices for development of Methodology for 2nd Phase Baseline Survey
- ii) Training of Field Teams for 2nd Phase of Baseline Survey

Field Activities

- iii) Regular monitoring of Interventions in the field
- iv) Data collection of the intervention in the field
- v) Baseline Survey Stage-II
- vi) Online data entry I android based application

ICT Assignment

- i) Development/improvement of website of NPIWC-II
- ii) Monitoring Android based Mobile Application under implementation by field staff
- iii) Data collection of interventions in MIS/GIS database
- iv) Data Cleaning, Development & Launching of Dashboard for Client Offices

Coordination

- i) Meeting of TL with NPC and OFWM Department regarding Progress / Issues
- ii) Meetings of DTLs with respective DTL of PC & concerned OFWM Department
- iii) ME&IE Consultants' Internal Meeting

Deliverables

The detail of deliverables of ME&IE Consultants with the timelines is as under:

Document	Status
Draft Inception Report	Submitted
Final Inception Report	Submitted

Monthly Monitoring Report-First (DEC 2020-JAN 2021)	Submitted
Monthly Monitoring Report-Second (FEB 2021)	Submitted
Monthly Monitoring Report-Third (MAR 2021)	Submitted
Quarterly Monitoring & Evaluation Report-First (JAN-MAR 2021)	Submitted
Monthly Monitoring Report-Fourth (APR 2021)	Submitted
Monthly Monitoring Report-Fifth (MAY 2021)	Submitted
Monthly Monitoring Report-Sixth (JUNE 2021)	Submitted
Quarterly Monitoring & Evaluation Report-Second (APR-JUN 2021)	Submitted
Monthly Monitoring Report-Seventh (JULY)	Submitted
Monthly Monitoring Report-Eighth (AUGUST 2021)	Submitted
Annual Monitoring & Evaluation Report (1 st)	Submitted
Baseline Survey Report (Final Draft)	Submitted
Monthly Monitoring Report-Ninth (SEPTEMBER 2021)	Submitted
Quarterly Monitoring & Evaluation Report-Third (JULY - SEPTEMBER 2021)	Submitted
Special Reports submitted: 1) Monitoring Tools 2) Survey Manual 3) PAM 4) Working Paper on Technology and Methodology for Implementation of Android Based Field Progress Data Collection and GIS Based Progress Monitoring Analytical Dashboard.	Submitted
Monthly Monitoring Report-Tenth (OCTOBER 2021)	Submitted
Monthly Monitoring Report-Eleventh (NOVEMBER 2021)	Submitted
Monthly Monitoring Report-Twelfth (DECEMBER 2021)	Submitted
Quarterly Monitoring & Evaluation Report-Fourth Quarter year 2021 (OCTOBER – DECEMBER 2021)	Submitted

Monthly Monitoring Report- Thirteenth (JANUARY 2022)	submitted within stipulated time
Monthly Monitoring Report- Fourteenth (FEBRUARY 2022)	submitted within stipulated time
Monthly Monitoring Report- Fifteen (MARCH 2022)	submitted within stipulated time
Quarterly Monitoring & Evaluation Report-First Quarter year 2022 (JANUARY – MARCH 2022)	submitted within stipulated time
Monthly Monitoring Report- Sixteen (APRIL 2022)	submitted within stipulated time
Monthly Monitoring Report- Seventeenth (May 2022)	submitted within stipulated time
Monthly Monitoring Report- Eighteenth (June 2022)	Submitted within stipulated time
Quarterly Monitoring & Evaluation Report-2 nd Quarter year 2022 (APRIL – JUNE 2022)	submitted within stipulated time
Annual Monitoring & Evaluation Report (2 nd) Jul 2021-June 2022	Submitted within stipulated time
Monthly Monitoring Report- Nineteenth (July 2022)	Submitted within stipulated time
Baseline Survey Report Phase-II	Submitted
MMR for the Month of August 2022	Report in hand to be submitted within stipulated time

Deliverables/Reporting Requirements are placed at **Annex-D**.

Matrix of Responsibilities

The Matrix of Responsibilities is placed at **Annex-B**.

CHAPTER 5: ISSUES / BOTTLENECKS



















The ME&IE Consultants are continuously following constraints for timely initiating the activities:

- Due to non-availability of NWMC (NESPAK) deliverables/reports, ME&IE Consultants are facing hurdles to evaluate working of NWMC. In this regard the cooperation of NWMC and respective Directorates is required.
- Non availability of Technical Sanctions of the watercourses required for baseline survey
- Non-availability of complete up-to-date inventory / data of all interventions from the Client, Provincial Agricultural Departments & NWMC (NESPAK) till to date.

ANNEXES A to I

ANNEX-A: TENTATIVE WORK PLAN

ANNEX - A: TENTATIVE QUARTERLY WORK PLAN (JULY TO SEPTEMBER 2022)

TENTATIVE WORK PLANNED FOR THE QUARTER (JULY TO SEPTEMBER 2022)													Legend				
														Activity starts			
														Activity Ends			
														Activity Span			
No.	ACTIVITIES		3 Months-Year 2022 (Weeks)														
			July				August				September						
			WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4			
1	Field Activities																
	1.1	Regular Monitoring of Interventions in the Field															
	1.2	Data collection of the interventions in the field for Baseline-II															
	1.3	Online data entry in android based applcation															
2	ICT Assignment																
	2.1	Development of website of NPIWC-II															
	2.2	Monitoring online data collection and Data entry															
	2.3	Monitoring Android based Mobile Application under implementation by field staff.															
	2.4	Data collection of interventions in MIS/GIS database															
	2.5	Designing of dashboard of Project Interventions															
3	Coordination																
	3.1	Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues															
	3.2	Meeting of DTLs with respective DTL of PC															
4	Deliverable																
	4.1	Monthly Monitoring Report															
	4.2	Quarterly Monitoring Report															
	4.3	Second Baseline Survey & Report Report															

ANNEX - B: MATRIX OF RESPONSIBILITIES

MATRIX OF RESPONSIBILITIES

SR. NO.	DELIVERABLE / ACTIVITIES	LEGEND			
		● Primary Responsibility	○ Secondary Responsibility	○ Assistance	
		NPC-PPMU	Agriculture Dept. (OEIWW)	Project Consultants	ME&IE Consultants
1	Provision of Pre-requisite data of project components for starting of Field Activities: • Organization of Water Users Associations, • Watercourses Improvement, • Water Storage Tanks, • Laser Land Levelers,	○	●	-	-
2	Certification of operational documents of the project, • Design, cost estimates, completion reports of watercourses, • Design, cost estimates, completion reports of water storage tanks,	○	○	●	-
3	Undertake baseline, midline and endline surveys of the project activities/interventions in all the project areas.	-	-	-	●
4	Develop monitoring strategy, framework and Result Based Monitoring (RBM) indicators,	-	-	-	●
5	Assessing the water saving per annum on watercourse and water storage tanks as well as aggregate due to the project interventions.	-	-	-	●
6	Assessing the improvement in water availability due to provision of conveyance system.	-	-	-	●
7	Assessing the economic benefits to the agriculture in terms of increase in yield, irrigated area, cropping pattern, cropping intensity, farm income and employment in command area of watercourses and water storage tanks.	-	-	-	●
8	Assessing the extent of community mobilization, financial and administrative sustainability of Water Users' Associations and ensuring the maintenance of watercourses, water storage tanks and laser land levelers.	-	-	-	●
9	Economic Impact of project interventions.	-	-	-	●
10	Carryout impact evaluation of the project investment on the economy and stakeholders.	-	-	-	●
11	Preparation of Monthly, Quarterly and Annual Monitoring, Evaluation and Validation Reports of the project activities.	-	-	-	●
12	Develop a website containing information of facilities and services, applications, procedures, watercourses, water storage tanks, and laser levelers database etc. (Maintaining website should be the responsibility of project staff).	-	-	-	●
13	Provide technical support for the development of a custom-designed mobile application (Android) to capture on-site project progress, geo tagged photos; should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the	-	-	-	●

ANNEX - C: MONITORING LOG-FRAME

Annex-C: Monitoring Log-frame

Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
C1: Organization of Water Users' Associations (WUAs)	Reactivation of existing / organization of water users' associations. Ensuring one on each target watercourse. Total WUAs ensured 47,278.	a) Community mobilization at 47,278 watercourses	a) Total 47,278 WUAs reactivated / established/registered	a) Right of way of 47,278 watercourses available b) Skilled and unskilled labour required for watercourse improvement available c) Construction material for civil works of watercourses procured d) Alternate arrangement for water conveyance during construction made e) Watercourse improved	a) Disputes among the water users settled b) Farmers' branched improved c) Water allocation made amicably d) Maintenance of watercourses, WST and laser units done e) Cooperation among farmers increased	a) 47,278 watercourses improved and 15 percentage points conveyance losses reduced b) Litigation among farmers reduced	a) The functioning of the WUAs will be established through sample interview surveys of WUAs members twice during the project period

C2: Watercourses Improvements	Improvement of 47,278 watercourses on cost sharing basis: 40% farmers in terms of labour, and 60% funded by project.	<p>a) Establishment of 47,278 Water users' associations (WUAs);</p> <p>b) Registration of 47,278 WUAs;</p> <p>c) Improvement and realignment of earthen section of 47,278 watercourses;</p> <p>d) Lining of up to 50% length of 47,278 watercourses either by:</p> <ul style="list-style-type: none"> ● Precast concrete parabolic lining (PCPL) segments, or ● Rectangular brick masonry, or any other method as approved by the project 	<p>a) 47,278 WCAs established;</p> <p>b) 47,278 WCAs registered;</p> <p>c) 47,278 watercourses improved and lined;</p>	<p>a) Conveyance losses for improved watercourses decreased by about 15 percentage points.</p> <p>b) 1.654 million households benefited from the activity;</p> <p>c) 11.347 million acres served with improved watercourses</p>	<p>a) Increase in cropping intensity on improved watercourses by 5-24%;</p> <p>b) Increase in crop yields.</p> <p>c) Increase in irrigated area</p> <p>d) Increase in agriculture output per unit of water by about 37%</p>	<p>a) Increase in farm income;</p> <p>b) Increase in employment for farm labour;</p> <p>c) Reduction in poverty;</p> <p>d) Enhanced food security for the country.</p>	<p>a) The water flow measurements will be carried out at before and after watercourse improvement on 2-5% sample basis;</p> <p>b) Agriculture survey before and after watercourse improvement on 2-5% sample basis;</p> <p>c) The survey will determine:</p> <ul style="list-style-type: none"> ● Cropping pattern before and after the improvement; ● Cropping intensities before and after improvement; ● Before and after crop yields;
--------------------------------------	----------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

							<ul style="list-style-type: none"> • Before and after employment; <p>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.</p>
C3: Construction of Water Storage Tanks (WSTs)	a) Construction of 14,932 water storage tanks	<p>a) 14,932 small farmers mobilized to construct water storage tanks for irrigation</p> <p>b) They agree to contribute 40% of the cost</p> <p>c) Agree to first construct the tank with his/her own funds and then</p>	<p>a) 14,932 WSTs constructed</p> <p>b) 14,932 WSTs operated and maintained</p>	<p>a) Water which was otherwise largely going to be wasted is saved</p> <p>b) Irrigation provided at critical stages of the crops</p> <p>c) Flexibility achieved for irrigation</p>	<p>a) More area irrigated</p> <p>b) Increased cropping intensities</p>	<p>a) Increased crop yields</p> <p>b) Increased total crop output quantum</p> <p>c) Increased farm income</p> <p>d) Increased farm employment</p>	<p>a) 2-5% sample of WSTs will be surveyed</p> <p>b) A data collection form will be designed to measure water saving due to WSTs</p> <p>c) The forms used for baseline and impact surveys in case of</p>

		received subsidy at 40% on issuance of FCR					watercourses will also be used for WSTs d) Same data analysis will be carried out here as in case of watercourses.
C4: Provision of Land Leveling Units	a) Provision of 11,610 laser land leveling units to farmers and service providers on a cost sharing basis: 50% by farmer / service provider and 50% by the project.	a) 11,610 laser units provided to farmers / service providers; b) Farmers trained in using the units.	a) 11,610 farmers / service providers received PLL units; b) Farmers / service providers received training in using the units.	a) Land leveled on Farmers' / service providers' farms; b) Land leveled on fellow farmers on rent; c) Total 3.483million acres levelled by 11,610 units.	a) Water application efficiency increased at field level; b) Even germination of seed. c) Field application losses reduced by 10 percentage points d) Water productivity increased by 24%	e) Increased area under irrigated crops; f) Enhanced crop yields g) Increased farm income	a) The land levelling is expected to save irrigation water and result in better and even germination of seeds which can enhance crop yields. The crop yields thus affected will be reflected in agriculture sample surveys. b) 2-4% sample units will be visited by ME&IE Consultants

							<p>teams after one years of delivery</p> <p>c) The unit will be verified</p> <p>d) Area treated during the year will be collected</p> <p>e) Farmers' feedback collected on quality of the unit, quality of the after-sale service, etc.</p>
--	--	--	--	--	--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

ANNEX - D: DELIVERABLES/REPORTING REQUIREMENTS

Deliverables/Reporting Requirements

Sr. No.	Document	Copies	Due
1	Draft Inception Report	8	45 days after the effectiveness of the Consulting services Agreement.
2	Final Inception Report	15	One week after the issuance of comments by the Client on Draft Inception Report
3	Monthly Monitoring Report	10	10 th of the following month
4	Baseline Survey Report	10	4 months after start of the assignment
5	Midline Survey Report	10	In the middle of the assignment
6	Endline Survey Report	10	At the end of the endline survey
7	Quarterly Monitoring and Evaluation Report	10	10 th of the first month of following quarter
8	Annual Monitoring and Evaluation Report	10	During first month of following year
9	Draft Assignment Completion Report	5	At completion of physical works / activities
10	Final Completion Report	25	At completion of works as well as financial transactions
11	Special Reports	10	As and when required

ANNEX - E: WATERCOURSE DATA SUBMISSION SUMMARY OF AJK ZONE

AJK - Watercourses Data Submissions – Summary

Division	District	Completed	Work Order Cancelled	Under Progress				Over all
				1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
MZD	Muzaffarabad	54	5	8	8	18	13	106
	Jhelum	18	0	6	0	14	6	44
	Neelum	23	12	13	5	0	0	53
Muzaffarabad Total		95	17	27	13	32	19	203
Poonch	Poonch	31	12	7	1	0	1	52
	Bagh	24	14	1	0	0	0	39
	Haveli	6	9	0	0	2	7	24
	Sudhnoti	19	15	4	0	1	0	39
Poonch Total		80	50	12	1	3	8	154
Mirpur	Mirpur	66	1	0	0	7	26	100
	Bhimber	99	0	0	0	0	0	99
	Kotli	32	22	5	0	1	0	60
Mirpur Total		197	23	5	0	8	26	259
Overall		372	90	44	14	43	53	616

ANNEX - F: WATER STORAGE TANK DATA SUBMISSION SUMMARY OF AJK ZONE

AJK - WST/WHs Data Submissions - Summary

Division	District	Completed	Work Order Cancelled	Under Progress		Overall
				Work Order Issued	Work Order Pending	
Muzaffarabad	Muzaffarabad	120	3	8	13	144
	Jhelum	11	0	13	3	27
Muzaffarabad Total		131	3	21	16	171
Poonch	Poonch	45	19	6	8	78
	Bagh	33	18	3	0	54
	Haveli	15	16	3	15	49
	Sudhnoti	11	2	6	10	29
Poonch Total		104	55	18	33	210
Mirpur	Mirpur	7	0	4	9	20
	Bhimber	11	0	0	20	31
	Kotli	25	12	3	0	40
Mirpur Total		43	4	7	29	83
Overall		278	70	46	78	472

ANNEX - G: WATERCOURSE DATA SUBMISSION SUMMARY OF KP ZONE

KP - Watercourse Data Submission - Summary							
Division	District	Completed	Under Progress				Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Bajaur Agency	Bajaur	50	0	1	3	8	62
Bajaur Agency Total		50	0	1	3	8	62
Bannu	Bannu	95	0	0	0	0	95
Bannu	Lakki Marwat	107	2	0	0	0	109
Bannu	N.W Agency	202	2	0	0	0	204
Bannu Total		443	4	1	14	0	462
D.I. Khan	D.I. Khan	39	0	0	0	0	39
D.I. Khan	Tank	482	4	1	14	0	501
D.I. Khan Total		24	3	1	0	0	28
Hazara	Abbottabad	39	3	0	0	0	42
Hazara	Battagram	48	1	18	0	0	67
Hazara	Haripur	7	0	0	13	1	21
Hazara	Lower Kohistan	75	0	29	2	0	106
Hazara	Mansehra	26	0	1	1	1	29
Hazara	Torghar	9	0	0	0	10	19
Hazara	Upper Kohistan	2	0	0	0	0	2
Hazara Total		230	7	49	16	12	314
Khyber Agency	Khyber	19	0	0	5	2	26
Khyber Agency Total		19	0	0	0	0	19
Kohat	Hangu	42	0	0	0	0	42
Kohat	Karak	67	0	1	0	0	68
Kohat	Kohat	86	0	0	0	0	86
Kohat Total		195	0	1	0	0	196
Kurram Agency	Kurram	8	0	0	0	0	8
Kurram Agency Total		8	0	0	0	0	8
Malakand	Buner	95	0	0	0	0	95

KP - Watercourse Data Submission - Summary							
Division	District	Completed	Under Progress				Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Malakand	Chitral	89	1	0	1	0	91
Malakand	Lower Dir	64	8	2	6	0	80
Malakand	Malakand	82	0	1	6	1	90
Malakand	Shangla	38	0	0	1	0	39
Malakand	Swat	162	21	49	1	9	242
Malakand	Upper Dir	87	0	1	0	0	88
Malakand Total		617	30	53	15	10	725
Mardan	Mardan	129	0	0	2	0	131
Mardan	Swabi	85	0	0	2	48	135
Mardan Total		214	0	0	4	48	266
Mohmand Agency	Upper Mohmand	32	0	0	0	0	32
Mohmand Agency	Lower Mohmand	11	0	0	0	0	11
Mohmand Agency Total		43	0	0	0	0	43
Orakzai Agency	Orakzai	43	0	0	0	0	43
Orakzai Agency Total		1	0	0	0	0	1
Peshawar	Charsadda	129	0	1	11	2	143
Peshawar	Nowshera	77	0	0	14	5	96
Peshawar	Peshawar	64	1	0	4	0	69
Peshawar Total		270	1	1	29	7	308
S.W Agency	S.W Agency	20	0	0	1	0	21
S.W Agency Total		20	0	0	1	0	21
N.W Agency	N.W Agency	5	0	0	0	1	6
N.W Agency Total		5	0	0	0	0	5
Overall		2356	44	106	87	88	2681

ANNEX - H: WATER STORAGE TANK DATA SUBMISSION SUMMARY OF KP ZONE

KP - WST Data Submission - Summary					
Division	District	Under Progress			Overall
		Completed	Work Order Issued	Work Order Pending	
Bajaur Agency	Bajaur	16	0	1	17
Bajaur Agency Total		16	0	1	17
Bannu	Bannu	11	0	1	12
Bannu	Lakki Marwat	34	0	0	34
Bannu	N.W Agency	8	0	0	8
Bannu Total		53	0	1	54
D.I. Khan	D.I. Khan	71	5	0	76
D.I. Khan	Tank	16	0	0	16
Dera Ismail Khan Total		87	5	0	92
Hazara	Abbottabad	18	0	0	18
Hazara	Battagram	25	4	0	29
Hazara	Haripur	40	0	0	40
Hazara	Kolai Pallas	2	2	0	4
Hazara	Lower Kohistan	0	0	1	1
Hazara	Mansehra	32	7	0	39
Hazara	Torghar	11	5	0	16
Hazara	Upper Kohistan	7	0	6	13
Hazara Total		135	18	7	160
Khyber Agency	Khyber	10	6	5	21
Khyber Agency Total		10	6	5	21
Kohat	Hangu	14	0	0	14
Kohat	Karak	60	0	0	60
Kohat	Kohat	4	0	0	4
Kohat Total		78	0	0	78
Kurram Agency	Kurram	2	0	0	2
Kurram Agency Total		2	0	0	2
Malakand	Buner	43	0	0	43

KP - WST Data Submission - Summary					
Division	District	Under Progress			Overall
		Completed	Work Order Issued	Work Order Pending	
Malakand	Chitral	20	1	0	21
Malakand	Dir Lower	14	3	0	17
Malakand	Dir Upper	24	0	0	24
Malakand	Malakand	21	1	0	22
Malakand	Shangla	96	23	27	146
Malakand	Swat	34	2	1	37
Malakand Total		252	30	28	310
Mardan	Mardan	32	0	0	32
Mardan	Swabi	9	0	10	19
Mardan Total		41	0	10	51
Mohmand Agency	Mohmand	41	0	0	41
Mohmand Agency Total		41	0	0	41
Orakzai Agency	Orakzai	2	0	0	2
Orakzai Agency Total		2	0	0	2
Peshawar	Charsadda	13	2	0	15
Peshawar	Nowshera	44	2	0	46
Peshawar	Peshawar	22	2	3	27
Peshawar Total		79	6	3	88
S.W Agency	S.W Agency	15	0	0	15
S.W Agency Total		15	0	0	15
N.W Agency	N.W Agency	0	0	1	1
N.W Agency Total		0	0	1	1
Overall		811	65	56	932

ANNEX - I: REFERESHER TRAINING WORKSHOP FOR KPK OFWM STAFF

PROCEEDINGS OF REFRESHER TRAINING WORKSHOP

One-day training workshop on Capacity Building (***Android Based Data Collection Application and Improvement of the Quality of Data Collection***) for the staff of Khyber Pakhtunkhwa districts' field teams of (NPIWC-II), was conducted at Directorate OFWM office, Peshawar on August 12, 2022. The Director General OFWM, Mr. Javed Iqbal and Hamid Ullah (Focal Person) also attended the training workshop, encouraging participants to take the training seriously with the aim of improving data collection and overcoming pendency and discrepancies of the collected data.

Training Methodology and Approach: The multitude of training methodologies was utilized in order to make sure all the participants get the whole concepts and they learn to present better-quality data.

- **Discussion Approach:** A participatory-discussion approach was used because the target staff were in a better position to identify existing weaknesses, strengths and need for change. In the course of discussion, the members of survey teams familiarized themselves with the environment and were provided proper guidance for gathering the Baseline-IV, data in respect of Agricultural and Technical aspects.
- **Training Method:** Participatory training methods were used during the workshops, which involved the learners actively. During the training workshops, the following learner-centered training methods were used:
 - Brainstorming for good data collection
 - Group discussion.
 - Demonstrations of discrepancies of the formerly collected data.

As much as possible, Trainers stuck to the workshop timetable while at the same time working through materials at the participants pace. In order to accommodate every participant and to allow them to participate freely, ample time was given for discussion, which helped to bring out their experiences.

- **Training Intervention:**

Delivery Process: The training was delivered in three modules. The capacity levels of the various participants differed from one to the other, which presented a challenge in the delivery of the trainings. To overcome this challenge, different approaches were used.

Module 1 – Understanding of Digital Data Collection and their Benefits

- Problems in Data Collection and Management
 - Data reliability (will we get the same data, when collected again?)
 - Data validity (Are we measuring what we say we are measuring?)
 - Data integrity (Is the data free of manipulation?)
 - Data accuracy/precision (Is the data measuring the “indicator” accurately?)
 - Data timeliness (Are you getting the data in time?)
 - Data security/confidentiality (Loss of data / loss of privacy)
- How technology helps us to address the above issues?
- Why use Mobile Technology in Data Collection?

Module 2 – Introduction to Data Collection Forms

- Technical discussion on each field of the Watercourse Data Collection forms
- Technical discussion on each field of Data Collection forms

Module 3 – Introduction to Android Application & Digital Data Collection Forms

- Application Interface
- Digital Forms
- Fill Blank Form
- Edit save Form
- Send Finalized Form
- Pre-Designed Forms of Watercourses and Water Storage Tanks

Module 4 – Discussion

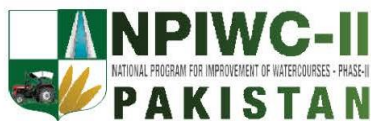
- All participants discussed their related forms
- Discuss the data validation and review the mistakes during the discussion

• Participants Feedbacks

At the end of the workshop, participants were invited to fill up the feedback forms. While most participant responses were aligned with the workshop objectives, there were many who had never participated in such training before and were fairly unclear about what to expect. The list of feedbacks has been summarized below:

- Learn more about the Android Application
- Knowledge to improve the technical skills
- How the teams will save time in comparison to conventional data collection methods
- How delays can be handled between activities
- Reduce the communication gaps between teams and higher authorities
- Learn more about the Watercourses activities data
- Knowledge on conservations
- To be committed up to the end of the Training Workshop
- To learn how to conduct trainings
- To be able to transfer knowledge to other team members
- To learn about keeping good records

• Training Details: Detail of Training is given below:



One Day Refresher Training Workshop Field Progress Data Collection Through Android Application

Organized by OFWM KP, NPIWC-II - KP

August 12th, 2022

Venue: Directorate on Farm Water Management Office, Peshawar.

Agenda

Training Objectives

This training workshop will enable percipients to use the Android based data collection application for feeding data for MIS Dashboard.

Workshop Trainers

Name	Prefix	Role	Designation
Mr. Shumail Mehmood	[SM]	Trainer	Data Analyst
Mr. Fawad Ahmad	[FA]	Co-Trainer	ICT/Technology Specialist

Friday, August 12th, 2022

Time	Topic	Presenter
Workshop Opening:		
10:00 AM - 10:10 AM	Recitation of Holy Quran	
10:10 AM - 10:30 AM	Introduction of facilitators and participants	
10:30 AM - 10:45 AM	Introduction to digital data collection & GIS based Progress Monitoring Dashboard	[SM]
10:45 AM - 12:00 AM	Demonstration of approved WC and WST forms on Android Application	[SM]
12:00 PM - 01:00 PM	Discussion Session on Previously Faced Issues	[SM,FA]
01:00 PM - 02:15 PM	Lunch/Prayer Break	
02:15 PM - 04:30 PM	Hands-On Practice	[SM,FA]
04:30 PM - 05:00 PM	Wrap Session and Closing Remarks	[SM]

• **Participants of the Training**

Sr. #	Name	Designation	Place of Posting
1	Qalb e Abbas	Water Management Officer	Mansehra
2	Waseem Ullah	Water Management Officer	Bannu
3	Sami Ullah	Water Management Officer	Lakki Marwat
4	Zeeshan Ahmad	Junior Clerk	Swabi
5	Shakir Ullah	Sub Engineer	D.I.Khan
6	Ihsan Ullah Khan	District Officer	Kurram
7	Akhtar Munir	Sub Engineer	Mansehra
8	Qaiser Alam	Sub Engineer	Malakand
9	Shakil Ahmad	Sub Engineer	Malakand
10	Sardar Ali	Sub Engineer	Malakand
11	Muhammad Shoaib	Water Management Officer	Malakand
12	Asif Khan	Sub Engineer	Shangla
13	Bashir Ahmad	Sub Engineer	Lower Dir
14	Nazir Jan	Sub Engineer	Lower Dir
15	Fazal Hussain	Water Management Officer	Chitral
16	Dr. Rafiq ur Rehman	District Officer	Upper Dir
17	Farhad Ali	Sub Engineer	Swabi
18	Zarmast Khan	Sub Engineer	Battagram
19	Mohsin Ali	Sub Engineer	Abbotabad
20	Gulistan Khan	Sub Engineer	Haripur
21	Muhammad Qasim	Water Management Officer	Haripur
22	Salman Ahmed	Project Associate	Peshawar
23	Sami Ullah	Project Associate	Khyber
24	Muhammad Waseem	Project Associate	Peshawar
25	Akhtar Ali	Sub Engineer	Swat
26	Farman Ali	Sub Engineer	Swat
27	Fawad Ali	Sub Engineer	Bajaur
28	Mazhar Iqbal	Water Management Officer	Karak
29	Muhammad Tufail	District Officer	Karak
30	Mazhar Iqbal	Sub Engineer	Abbotabad
31	Nasir Shah	Sub Engineer	Mansehra
32	Arif Khan	Sub Engineer	Mansehra

Sr. #	Name	Designation	Place of Posting
33	Azam Mehmoob	Sub Engineer	Mansehra
34	Akhyar Alam	Computer Operator	Nowshera
35	Afaq Ali	Sub Engineer	Nowshera
36	Abdul Rashid	Sub Engineer	Hangu
37	Muhammad Nadeem	District Officer	South Waziristan
38	Salim Javed	Water Management Officer	Lower Dir
39	Muhammad Riaz	Water Management Officer	Peshawar
40	Umar Farooq	Sub Engineer	Mardan
41	Muhammad Uzair	Sub Engineer	Kohistan Upper
42	Rafaqat Hussain	Sub Engineer	Kohat
43	Aman Ullah	Computer Operator	Bannu
44	Kifayat Ullah	Sub Engineer	Bannu

• Pictorial View of the Training



Director General OFWM, Mr. Javed Iqbal Inaugrating the Refresher Training Workshop



Mr. Fawad Ahmad ICT Manager at KP Office Peshawar is delivering lecture during training



Mr. Shumail ICT Manager at National Office Islamabad is delivering lecture during training