



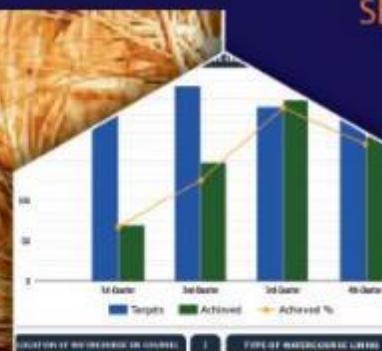
FEDERAL PROJECT MANAGEMENT UNIT
FEDERAL WATER MANAGEMENT CELL
MINISTRY OF NATIONAL
FOOD SECURITY & RESEARCH
ISLAMABAD - PAKISTAN

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

MONITORING, EVALUATION
AND IMPACT EVALUATION
CONSULTANTS

MONTHLY MONITORING REPORT

SEPTEMBER 2022



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



In Association with S&S Associates



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
SEPTEMBER 2022

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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
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 September 2022” comprises of 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 monitoring 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 September 2022 to 30th September 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 (August 2022)
- Data Analysis in progress and Submission of draft synopsis 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 Quarters 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 cleaned & processed for uploading on Dashboard pertaining to the 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)	19 th MMR (Jul. 2022)	Submitted
		20 th MMR (Aug. 2022)	Submitted
		21 st MMR (Sep. 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 (First 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), 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&D), ADA Consultants Inc. Canada, and S&S Associates.
ME&IE Consultant Mobilized:	November 20, 2020

1.2 PROJECT DESCRIPTION

Project description includes the project development objectives, project objectives, project benefits, 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's general and quantitative objectives:

a) 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.

b) 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 watercourses' 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, cost sharing, with the

expectation to save about 50% irrigation water for wheat and about 68% of irrigation water for paddy.

Project impacts

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

Project indirect benefits to industry/economic activities

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

Awareness support to farmers

- i) Motivating farmers through an awareness campaign for watercourse improvement.
- ii) 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.

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.

1.2.5 Project Targets

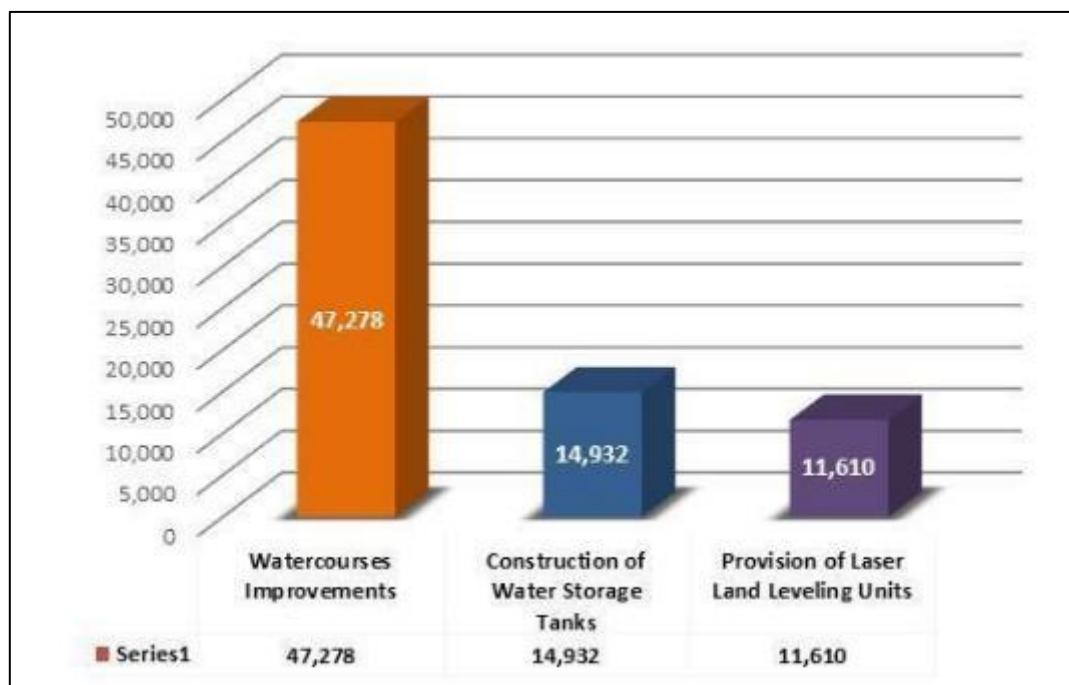


Figure 1.1: NPIWC-II Project - WCs Improvement, CWSTs, and LLL Targets in Pakistan.

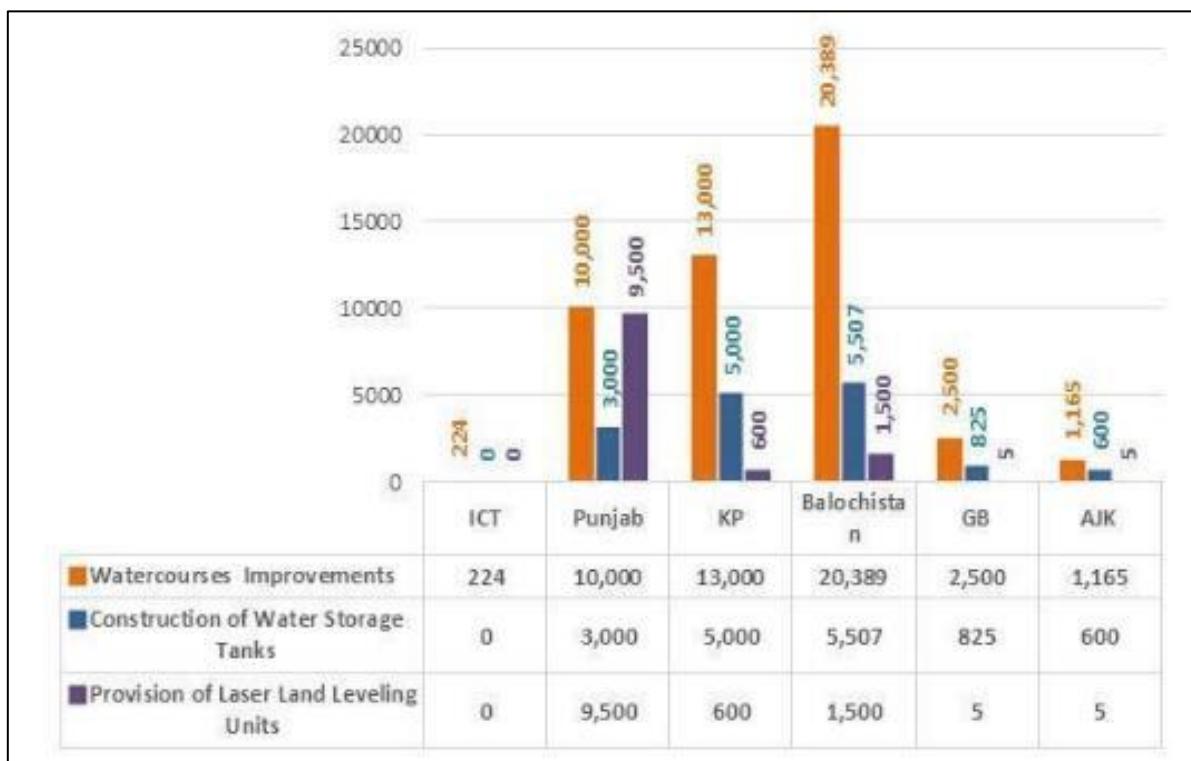


Figure 1.2: Zone-Wise WCs Improvement, WSTs, and LLL Target

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 to the extent of community mobilization, financial and administrative

sustainability of water users' associations and ensuring the maintenance of watercourses, water storage tanks and provision of laser land Levelers,

- viii) Economic impact of project interventions,
- ix) Carry out the impact evaluation of the project intervention on the economy and stakeholders,
- x) Develop a website containing information on facilities and services, applications, procedures, watercourses, water storage tanks, laser land Levelers database, etc. (while the project staff will maintain the website), and
- xi) 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.

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 the Inception Report.

2.3 MONITORING STRATEGY OF CONSULTANTS

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 reach and tail reach.

			<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 Socio-Economic Expert	<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 estimated. It is benefitted towards food security Project costs and benefits will be compared in economic and

			financial terms to carry out economic and financial analysis. <ul style="list-style-type: none"> 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 ensuring the quality of construction, material, functioning, 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 20th MMR for the month of August 2022 (1st August 2022 to 31st August 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, website, etc. The Consultants of ICT Team, also remained in contact with the 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 BASELINE SURVEY REPORT 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 prepared draft report. The Draft Report of Baseline Survey Phase-II is submitted to NPC on 26th August 2022 for review and comments from stakeholders. Final Report will be submitted after

incororatiing the comments of Client and Stakeholders, if any. Comments are awaited.

3.3 IMPROVEMENT OF MTS & REFRESHER TRAINING

Improvement of Monitorings tool (MTs) is a continuous process during the assignment. MTs were refined / modified during the reporting month, and a refresher training workshop on MTs amongst the ME&IE consultants was conducted to familiarize them with updated Android application for data collection. SOPs were also devised for data collection in order to ensure the efficiency and quality of the data at the field level. For this purpose, a four (04) days' workshop was held in National office, Islamabad, from 21st to 24th September 2022. All the DTLs and Field Team In-charges of all provincial offices participated in the workshop. The workshop was conducted under the supervision of Team Lead and Authorized representative of JV. All the FTIs were advised to disseminate the learning to their respective field officers and they must follow the SOPs for the upcoming data collection processes.

This training/refresher was held to enable the participants to improve the Android based data collection for Baseline, Impact and Monitoring Surveys. Activities of the training are detailed below.

Day-1:

- Introduction of participants
- Management Speeches
- Role of FTI/Supervisors & Enumerators
- Survey Methodology
- Issues/Problems at Province Level
- Presentation of Monitoring Tools
- General Discussion
- ME&IE Consultants updated progress

Day-2

- Importance of technology during field survey
- Farming practices and input data
- Planning of activities for 2022-23
- Speech by NPC, FPMU
- Android Application and Digital Forms
- Discussion of hurdles, issues, data monitoring, validation & reliability checks
- Annual Workplan and Budget

Day-3

- Field visit in ICT Zone along all participants

- Water Flow Measurement through Pygmy Meter
- Discussion session, field experience and hurdles mutually shared for enhancing undersatnding
- Meeting of TL, DTLs and Core Team Members on planning for next quarter and discussion of management issues.

Day-4

- Field Data Validations
- Management Speech
- Closing remarks by all DTLs
- Wrap-up Session



Figure-3.1: NPC, FPMU, NPIWC-II, Director G3EC / Authorized Representative of JVs, TL, DTLs and other ME&IE Consultants and staff participating in workshop, at National Office, Islamabad



Figure-3.2: Meeting of TL, DTLs and ICT Specialist - Core Team Members - Islamabad



Figure-3.3: Field visit and water flow measurement at NARC by using Pygmy Meter



Figure-3.4: ME&IE Consultants' visit of PATCO Office at NARC office, Islamabad



Figure-3.5: Group photo of ME&IE Team with Management, National Office, Islamabad

3.4 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 severely affected. Detail of data collection and regular field monitoring by field teams of Zonal Offices is given below:

3.5 SUMMARY OF ACTIVITIES ISLAMABAD ZONE – SEP 2022

The major activities conducted by ME&IE consultants during reporting month were:

- Updated Progress of ME&IE Consultants, Islamabad Zone.
- Four days' Workshop, Refresher Training and Annual Planning at National Office, Islamabad.
- Two days' workshop / refresher on MTs at National Office, Islamabad
- Meetings
- Worked on the preparation of Quarterly Monitoring and Evaluation Report (July to September 2022)
- Quarterly Work Plan (October to December 2022) – Islamabad Zone.

3.6 UPDATED PROGRESS OF ME&IE CONSULTANTS - ISLAMABAD.

Overall Progress:

The ME&IE Consultants, Islamabad had carried out first baseline survey of 6 Watercourses and 2 WST during June 2021, while another 8 watercourses and 4 WST during July and August months of 2021 for baseline 2. These were a total of 20 interventions during the year 2021.

As per TORs ME&IE had submit midline survey reports against the baseline targets during the middle of the project. ME&IE Consultants carried out Midline

Survey during August and September 2022 on the basis of First & Second Baseline Survey. The ME&IE has monitored a total of 10 interventions (06 Watercourses and 4 Water Storage Tanks). Due to heavy rains in AJK the field activities of ME&IE were delayed badly during July and August. However, the field activities will be started from the month of October 2022 as per routine.

Total activities, District-wise portrayed in the matrix format as below:

Sr. #	District	First Phase Baseline		Second Phase Baseline		Midline/Impact Survey		Regular Monitoring / Spot Checking		Total
		WC	WST	WC	WST	WC	WST	WC	WST	
1	Islamabad	2	-	5	-	4	-	5	-	16
2	Attock	-	-	-	7	-	2	-	5	14
3	Chakwal	-	1	-	-	-	-	-	-	1
4	Kalar Kahar	-	1	-	-	-	-	-	-	1
5	Kalar Saidan	-	-	-	2	-	2	-	2	6
6	Taxila	-	-	-	1	-	-	-	1	2
7	Bhimber	-	-	9	-	-	-	2	-	11
8	Kotli	-	-	2	1	-	-	-	1	4
9	Mirpur	2	-	6	-	-	-	1	-	9
10	MuzaffarAbad	2	-	3	3	2	-	5	4	19
Sub-Total		6	2	25	14	6	4	13	13	83

Activities being carried out against total target as a whole and during the month of September 2022

Main Theme	Activity	Areas	Total Project Targets	Total Achieved by Last Month	This Month Targets against TS	This Month achievements
Baseline and Midline	Baseline, Watercourses	Islamabad		7	-	-
		Kashmir		24	-	2
	Baseline, WST	Islamabad		-	-	0
		Kashmir		4	10	4
	Baseline LLL	Rawalpindi		12		
		Kashmir		-		
	Midline, Watercourses	Islamabad		4		
		Kashmir		2	-	2
	Midline, WST	Islamabad		-		
		Kashmir		-		
		Rawalpindi		4		
Monitoring activities	Midline LLL	Kashmir		-		
		Islamabad				
		Kashmir				
	Water Users Association	Rawalpindi				

	Watercourse	Islamabad				
		Kashmir			-	3
	Water Storage Tank	Kashmir			10	4
		Rawalpindi				
	Laser Land Leveling	Kashmir				
Coordination Meetings	Meeting with OFWM		Need Based	-	Need Based	-
	Meeting with any Other		Need Based	-	Need Based	-
Training of Monitoring teams	Orientation of ICT Team for Baseline Tools		1	1	1	1
	Orientation of ICT Team on Android based data collection system		1	1	1	1

Achievements against Outputs

Islamabad team has to cover 1 district of Islamabad, 10 at AJK and 3 Districts of Rawalpindi Division. The Islamabad Zonal field teams have monitored the sites of 2 districts of AJ&Kr during the current month of September.

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

By this month, baseline assessment of the 10 WSTs at AJK were planned, however due to different factors, team carried out baseline of three watercourses and four WSTs. Additionally, team collected the data of Impact survey of two watercourses of AJK.

The following were the main findings:

1. It was found that Water User association was active in all the watercourses in Kashmir areas.
2. Farmers can allocate desired amount of water for their crops.
3. Mostly they don't have disputes but some who pointed, they have resolved all their issues by meetings through the coucelling of WUAs.
4. Most of the farmers are educated and they are calm in their routine work. They explained that they are well aware of the lining importance and they worked very hard with Govt for lining of their watercourses.
5. Female remain involved in agricultural practices and they also took part in decision making regarding crop growing.
6. Generally landholding is small and different number of farmers possess land on single watercourse.

7. Rice was main crop grown before the earthquake of the 2005, however, due to destruction of watercourses, people started to grow wheat and maize on their lands. There was less or no irrigation at all after 2005. Now with the construction of these watercourses farmers started growing rice as well as vegetables in the area.

8. There was no waterlogging menance in the area.

Detail reports of the field visits are given in **Annex J**:

Name of schemes	UC/Tehsil/District
Maira Duppata WC	HatiyahDuppata/Muzaffarabad/Muzaffarabad
Dhanl Mai Sahiba WC	SeriDarra/Muzaffarabad/Muzaffarabad
Kardila WC	Muzaffarabad/Muzaffarabad/Muzaffarabad
Kukkar warra WST	Langla/Hattain/Jhelum valley
Kukkar warra WC	Langla/Hattain/Jhelum valley
Gujar Bandi WST	Gujar Bandi/Hattain/Jhelum valley
Khatae WC	/Hadiyah Bala/Jhelum valley
Lower Dudh Pura WST	Lamian/Hattain/Jhelum valley
Dudh Pura WST	Lamian/Hattain/Jhelum valley
Soha WC	Langla /Hattain/Jhelum valley

Output 2: Monitoring of the selected watercourses;

ME&IE teams during its visit monitored six watercourses and four WSTs. During the monitoring, debris and vegetation was found in the

watercourses, which community told that they will remove it before the onset of next cropping season. They further told that now a day's crops are ready to harvest and they were not in need of water, while due to heavy rains the debris fell in the watercourses and blocked it.



Figure 3.6: Kukkarwara watercourse, full of Vegetation.



Figure 3.8: Dhani Mai Sahiba Watercourse filled with debris



Figure 3.7: Maira Dupatta Watercourse full with debris after rainfall

Coordination Meetings

During the current reporting month of September 2022, a total of one coordination meetings was carried out. These meetings were not pre-scheduled, however, upon reaching to Irrigation Department Muzaffarabad Office due to presence of PD (Project Director), the consultants' team had an interaction with him. The Team introduced Ms. Abida (Gender Specialist) with him and he called his female M&E officer, who interacted with GS and answered her questions.



Figure 3.9: Meeting with PD AJ&K

Capacity Building of ME&IE Consultants and OFWM staff on Android Application

Monitoring tools were modified during September and a refresher of MTs and how to feed the data on Android application was accomplished during the

reporting month. Few SOPs were also settled for the proper collection of the data at field level.

The national office, Islamabad arranged four days' workshop for all DTLs and Field Team In-charges housed in national and provincial zones under the supervision of Team Leader and Authorized representative of JV with effect from 21st to 24th September 2022.

Later, it was advised that all the FTIs may disseminate the learning to their field officers and they must follow the SOPs for the upcoming data collection processes.

Two days training / refresher was conducted in Islamabad Office. The training was given by FTIs under the supervision of DTL. The aim of the training was to re-fresh their learning against the Inception targets.

Comprehensive discussions were made on MTs and M&E Officers gave their suggestion to include few questions regarding one of the main objective of Conveyance Losses.



Figure-3.10: The FTI discussing to M&E Officer, Islamabad Office



Figure-3.11: Discussion underway at Islamabad Office

Justification for not meeting the targets

The project activities have been planned, however due to different field realities, Islamabad, OFWM team did not support/cooperate with ICT field team and upon every reminder/plan to visit OFWM department, the officer denied by giving excuses either the officials are on vacations or engage in official/ personal activities.

It is important to mention that ME&IE team got very good response from the teams of AJK during their field visit. All the staff support the ME&IE team with professional way and also cooperate in the collection of desired data. ME&IE team was not able to visit Kashmir during July and August 2022 due to heavy rainfall and slidings, however, some visits were performed in September after rainfalls settled.

Key Challenges & mitigation measures adopted.

Some Limitations:

There were certain limitations noted while orientation of the staff members:

- Smooth running of the project's activities warrants a continuous coordination with OFWM directorate. It would be good, that this coordination may come to a level that for any activity or support, they may extend their services on telephone call.
- There may be chances that there may not be time to coordinate formally with Directorate, thus, they may understand that they have to facilitate monitoring team out of the way for their activities.
- Public holidays can hinder the activities like the water management which are not bound with the routine activities rather a dynamic nature.

Suggestions:

For the Smooth operations of field activities following are the main Suggestions:

- Equipment is needed for measuring flow of water and recording the data on the tool, like pygmy meter or better equipment which is more reliable and easy to handle efficiently and effectively.
- First aid box, basic necessities like, umbrella, water with cooler must be

provided to the field teams in order to meet any emergency situation.

- Tablet must be providing at least 2-3 days' prior field visit.
- Each member of field team must have their official identity card when the team visits the field or the office of OFWM.

Lessons Learned

1. It would be good that formal system through letters/emails may be followed with all the stakeholders in a way that sufficient timing may be given to the stakeholders for their planning to meet their mutual needs and demands of the ME&IE as well as the clients.
2. ME&IE teams may follow visits according to the mutually and exclusively agreed plans with the respective stakeholders, because abrupt change of plans may yield

inefficiencies in the quantity and quality of data results and on the top induces bad reputation.

QUARTERLY WORK PLAN – ISLAMABAD ZONE

The Islamabad team started Midline Survey in July 2022 as per work plan and collected the required data. Data collection, but unfortunately it could not be completed as per plan due to heavy rain and non-accessibility. However, remaining sites of Midline survey will be surveyed in the month of October 2022.

The ME&IE Consultants, Islamabad is committed to accomplish all deliverables on due dates.

A comprehensive tentative Quarterly Work Plan for next quarter is being attached as an Annexure-2.

3.6.2 Regular Monitoring/Field Visits by Zonal Office Punjab

Overall Progress

Till now ME&IE Punjab team covered the following number of Watercourses and WST in the below mentioned districts.

Total activities, District-wise

Sr. #	District	First Phase Baseline		Second Phase Baseline			Midline Survey		Regular Monitoring / Spot Checking		Total
		WC	WST	WC	WST	LLL	WC	WST	WC	WST	
1	Kasur	2	2	1			2	2			9
2	Okara	4	1				4	1			10
3	Gujranwala	7	1				7	1			16
4	Gujrat	-	1				-	1			2
5	Muzaffargarh	6	2				6	-			14
6	Sahiwal								6	1	7
7	Sheikhupura			5					1	1	7
8	Nankana Sahib								-	2	2
9	Hafizabad			4	1				9	3	17
10	MB Din								1	2	3
11	Multan								9	6	15
12	Faisalabad			1	1						2
13	Sargodha			4	2						6
14	DG Khan			3	3	7					13
15	Bahawalnagar			10	3	11					24
16	Bhakkar			3	5	5					13
17	R.Y Khan			11	2	2					15
Total		19	7	42	17	25	19	5	26	15	175

Monitoring/Field Visits

The monitoring / Baseline pertains to Various interventions of the project viz 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 activity of an intervention are collected by field teams of ME&IE Consultants on android-based system. Such data are directly submitted from the field on MIS/GIS system for further processing by ICT department.

The brief feature 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 Consultants remarks regarding on monitoring and feedback of beneficiaries.

During the month under review the data collected were relevant to water storage tanks intervention and these were on monitoring and midline survey like Baseline Survey.

The water storage tank visited for monitoring as well for midline were the same as earlier visited for baseline/Monitoring. The owner/ beneficiaries of such interventions were also the same as far baseline/ monitoring purposes. In all 5 water storage tanks could be visited for Midline Survey during the month of September 2022 the beneficiaries interviewed at the spot for determining Respondents midline impact baseline on key performance indicators of project are given as under:

A total of five WST were visited, the following were the main finding:

1. It was found that 80% WST were properly maintained, while 20% WST (1) was poorly maintained that its membrane was erode due to high temperature.
2. Three farmers (60%) installed drip irrigation with WST while remaining were using as flood irrigation.

3. They are satisfied with the benefit of the WST and it is their hope that they will get good yield in coming years.
4. Land holding on these WST ranges from 1.5 acre to 8 acres almost.
5. Vegetable, fruit trees (Citrus, guava), wheat, maize canola and sugarcane are among the grown crops.



Figure 3.12: Eroded View of Geomembrane WST

Meeting with Stake holders

3.6.3 Meetings/Coordination of Me&IE Consultants With Stakeholders

It is one of the main components of field activities for ME&IE Consultants to meet and coordinate with stakeholders of the project especially the OFWM Field staff. The consultants were regularly in touch with field staff for getting information/data from the respective offices. During the month under review following meetings were held:

1. Meeting with ADA Noshera Virkan

Date	13-09-2022
Venue	Assistant Director of Agriculture (OFWM) Noshera Virkan
Participants	
i.	Mr. Tariq Mehmood Assistant Director of Agriculture (OFWM) Noshera Virkan
ii.	Mr. Muhammad Rizwan Suleman Field Team in Charge- II
iii.	Mr. Noman Rasheed Field Team Engineer
iv.	Mr. Sohail Ahmad Field Team Engineer
Meeting Agenda/Points discussed:	

- Briefing of ME & IE Consultants on project activities Midline Survey.
- Review of midline survey the progress of project in the respective area and basic data of sampled Water Storage Tank.
- Seek the cooperation/coordination of field staff



Figure 3.13: ME&IE Team along with Assistant Director Agriculture (OFWM) Noshera Virkan, Tariq Mehmood accompany during the field visit to the beneficiary of WST regarding Midline Survey/ Monitoring

2. Meeting with ADA Wazirabad

Date	14-09-2022
Venue	Assistant Director of Agriculture (OFWM)Wazirabad / (This office team was looking after the WST in Gujrat.)
Participants	
i.	Mr. Aftab Ahmad Assistant Director of Agriculture (OFWM) Wazirabad
ii.	Mr. Muhammad Rizwan Suleman Field Team in Charge – II
iii.	Mr. Norman Rasheed Field Team Engineer
iv.	Mr. Sohail Ahmad Field Team Engineer
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> - Briefing of ME & IE Consultants on project activities Midline Survey. - Review of the progress of project in the respective area and basic data of sampled water storage tank. - Seek the cooperation/coordination of field staff 	



Figure 3.14: Meeting with Assistant Director of Agriculture (OFWM)Wazirabad Aftab Ahmad regarding Midline Survey/ Monitoring

3. Meeting with DDA Okara

Date	15-09-2022
Venue	Deputy Director of Agriculture (OFWM) Okara
Participants	
i.	Mr. Saeed Ullah Alvi Deputy Director of Agriculture (OFWM) Okara
ii.	Mr. Awais Jahangeer Field Team in Charge - I
iii.	Mr. Bilal Sohail Field Team Engineer
iv.	Mr. Sohail Ahmad Field Team Engineer
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> - Briefing of ME & IE Consultants on project activities Midline Survey. - Review of the progress of project in the respective area and basic data of sampled water storage tank. - Seek the cooperation/coordination of field staff 	



Figure 3.15: Meeting with Deputy Director of Agriculture (OFWM) Okara Saeed Ullah Alvi regarding the ongoing Midline Survey of Water storage tanks in Tehsil Okara.

Mr. Alvi also discussed upcoming Baseline Survey Phase-III. DDA Okara shared the limitations and constraints they are facing in achieving the targets.

4. Meeting with ADA Okara

Date	15-09-2022
Venue	Assistant Director of Agriculture (OFWM) Okara
Participants	
i. Mr. Engr. Muhammad Younus Assistant Director of Agriculture (OFWM) Okara ii. Mr. Awais Jahangeer Field Team in Charge-I iii. Mr. Bilal Sohail Field Team Engineer iv. Mr. Sohail Ahmad Field Team Engineer	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> - Briefing of ME & IE Consultants on project activities Midline Survey. - Review of the progress of project in the respective area and basic data of sampled water storage tank. - Seek the cooperation/coordination of field staff 	
 <p>Figure 3.16: Meeting with Assistant Director of Agriculture (OFWM) Okara a Engr. Muhammad Younus regarding the ongoing Midline Survey of Water storage tanks in Tehsil Okara. Also discussed upcoming Baseline Survey Phase-III</p>	

5. Meeting with ADA Kasur and Chunian

Date	16-09-2022
Venue	Assistant Director of Agriculture (OFWM) Kasur
Participants	
i. Mr. Mr. Atique Ur Rehman Assistant Director Agriculture OFWM Tehsil Chunian District Kasur ii. Mr. Awais Jahangeer Field Team Incharge-I iii. Mr. Bilal Sohail Field Team Engineer iv. Mr. Sohail Ahmad Field Team Engineer	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> - Briefing of ME & IE Consultants on project activities Midline Survey. - Review of the progress of project in the respective area and basic data of sampled water storage tank. 	

- Seek the cooperation/coordination of field staff



Figure 3.17: Field Team 1 Punjab Zonal Office Lahore had a meeting with Assistant Director Agriculture as well as Tehsil Chunian he also has an additional charge of ADA Kasur office.

Mr. Atique Ur Rehman discussed regarding the ongoing Midline Survey of Water storage tanks in Tehsil Kasur. He also discussed upcoming Baseline Survey Phase-III.

Internal Meetings of Zonal office Punjab

The deputy team leader Punjab zone holds meetings with his field team in charge and field team members as per need to discuss certain issues.

During this month a meeting was called by National office for the Training of the Field Team Incharges. The Meeting was held on September 21 to 24, 2022 in National office Islamabad. From the zonal office Punjab following Field Officers Attended the meeting:

1. Awais Jahangeer Field Team In-charge – I
2. Muhammad Rizwan Suleman Field Team Incharge – II
3. Muhammad Zubair Field Team Incharge-III

Training at Zonal Office Punjab

The Punjab FTIs were trained during training as “Master Trainer” their respective zonal teams. On return from Islamabad, they trained the other field engineers/members of field team during 26 to 30, 2022 from time to time on various aspects.

The Main Type of training were:

1. Planning for Future Field Activities
2. Data Collection from field
3. Transmitting Data on ODK

4. Monitoring Tools 5. Pygmy Current Meter

Some Session of training were held as under



Figure 3.18: Introductory Training Session of Field Team Members Conducted By Deputy Team Leader, and Agri Economist and Field Team Incharge

Mock Exercise

A mock exercise was also conducted among the field team members to make them better understand the Monitoring Tools.



Figure 3.21: Mock exercise among the field team members being monitored by Deputy Team Leader



Figure 3.19: 1st Training Session by Mr. Rizwan suleman FTI-II



Figure 3.22: Mock exercise between field team members



Figure 3.20: 3rd Training Session By M. Zubair FTI – III



Figure 3.23: Question & Answer session

3.6.4 Regular Monitoring / Field Visits by Zonal Office KP

Teams visited to field area for field activities of Impact survey in Northern, Central and Southern region. One field team was deputed to the Southern zone covering the districts of D.I. Khan, Lakki, Bannu, Karak, Kohat, and Hangu. Another team worked in the Northern Zone covering the Hilly districts of the province for monitoring and Midline survey of the water courses and water storage tanks from the sample districts. The Northern zone sampled districts comprising Swat, Buner, Dir, Abbottabad, Mansehra and Haripur. Third field team was engaged in the central zone covering the districts of Peshawar, Nowshera, Mardan, Swabi, and Charsadda.

Following were the key findings of the field teams:

1. Mostly WUA were formed but they were not active and meetings were not conducted.
2. Female were not part of the WUA and female family members were only involved in agricultural practices if house was near.
3. More than 60% farmers started new cropping system of vegetables, orchard, tobacco and sugarcane. Remaining farmers do practice wheat, maize, fodder with vegetables.
4. Some farmers were not interested in farming practices and they did not cultivate any crop after construction of WST/WC lining.
5. Pigs remain a major issue for local farmer and it destroys the crops more often.
6. Only 5-10 % farmers were actively engaged cleaning activities of their watercourses.

7. There was no waterlogging in all the targeted schemes.

8. Almost 30% farmers grown their crops first time after installation of tubewells.

9. All the farmers claimed that they are saving 50% time for irrigating their lands in conveyance losses.

10. One farmer claimed that his diesel tubewell bill reduced to half due to lining of the watercourse.

11. Many crops were damaged due to recent floods and rainfall.

Brief summary of the ME/IE consultants' activities of KP Zone for the month of September, 2022:

Apart from the weekly progress review meetings of the Team Leader and all DTLS and other Core team members and general meetings with Directorate of OFWM KP of the ME/IE consultants, KP zone, the three field teams were deputed to the three zones of the province for conducting the Impact Evaluation Survey.

Before launching the teams for conducting the Impact Evaluation Survey, a detailed meeting was held with the Team Members to ensure the accuracy of the data.

As a routine activity, digitally close coordination was made with the Project coordinator of NPIWC-II, and other District Director of OFWM department KP for acquiring the required data and extending cooperation in this regard. Summary of the activities undertaken in the month of September 2022 is given as under.

Summary Table of the activities undertaken in the month of September, 2022.

S.No	Date	Description of Activity	Venue	Agenda
1.	1 st September	Guidance to the FTI and FTEs for collection of information	Zonal office Peshawar KP of the ME/IE Consultants, NPIWC – II.	Ensuring the Accuracy of the data
2.	1-22 September	Impact Evaluation survey	Central, Southern and Northern districts of Khyber Pakhtunkhwa	Conducting Midline Survey
3.	21-24 September	Four days Workshop	National office Islamabad	Discussion on Revised MTs

4.	27-29 September	Training of the FTEs by the FTIs	Zonal office Peshawar KP of the ME/IE Consultants, NPIWC – II.	To impart training to the FTEs by the FTIs on the MTs for the Baseline and Impact Evaluation Survey
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Detail of activities undertaken in the month of September, 2022.

A. Meetings:

Formal as well as informal meetings of the ME/IE consultants, NPIW-II KP zone Peshawar were held with the District Directors and Water Management Officers of the M&E officers for extending cooperation for collection of the data for the Impact Evaluation Survey.

B. Workshop:

A 4 days' workshop of the ME&IE consultant was held at National office Islamabad from September 21st to 24th 2022. Which was replicated at KP Zonal Office. A 3 days training was provided by the FTI's to their field team members at KP zonal office Peshawar. Monitoring tools were discussed on the first 2 days of training and a brief discussion was done among the team members. The 3rd day of the training was scheduled for onsite training on pygmy meters to measure the water flow on the field. The best available canal water for training purposes was 3900/R in Nowshera. All the three teams reached at 8:45 to 3900/R Nowshera. Physical training was given by the FTIs on Pygmy meter and all the members participated in training. The 3 days training on MTs and Pygmy meter completed successfully.



Figure 3.25: Demonstration of measuring water flow to the team members by the FTIs

C. Impact Evaluation Survey

Field teams (Team 1, Team 2, and Team 3) were sent for the Midline survey. During the survey the field teams visited all those schemes already covered in the baseline survey during the fiscal year 2021-22 in Central, Southern, and Northern zones.

Details of Water Courses and Water Storage Tanks Re-Surveyed in Impact Survey in Khyber Pakhtunkhwa during September, 2022

S.No	District	WC	WST	Total
1	Dera Ismail Khan	2	0	2
2	Tank	0	1	1
3	Lakki Marwat	1	0	1
4	Bannu	1	0	1
5	Kohat	3	0	3
7,	Haripur	2	2	4
8	Abbottabad	2	0	2
9	Mansehra	2	0	2
10	Batagram	1	0	1
11	Torgar	1	0	1
12	Peshawar	3	1	4
13	Nowshera	9	3	12



Figure 3.24: Demonstration of measuring water flow to the team members by the FTIs

14	Charsadda	2	0	2
15	Mardan	5	1	6
16	Swabi	2	0	2
Total		36	8	44

List of Schemes Visited for Data Collection for Impact Evaluation Analysis During the Month of September 2022 in KP

S.No.	District	Name of WC/WST
1	Kohat	Abdul Qadir TWWC Ghulam Banda/ Togh
2	Kohat	Ahsan Hayat TWWC Bali Tang/ Ghumbat
3	Kohat	Asim Altaf TWWC Ghumbat/ Ghumbat
4	Bannu	Habib Ullah TWWC Azem Kaly/ Domil
5	DI Khan	Sona Khan TWWC Rodi Khel
6	Lakki Marwat	Gulo Khan TWWC Wanda Dalan
7	Haripur	Shakir Tube well WC
8	Haripur	Nazakat Khan TWWC
9	Haripur	Nazakat Khan WST
10	Abbottabad	Abid Gul Pipe WC
11	Abbottabad	Baghoter Doga Pipe WC
12	Mansehra	Ashaiq Hussain TWWC
13	Mansehra	Moeen Pipe WC
14	Batagram	Badiuzaman Pipe WC
15	Torgar	Jaga Baala WC
16	Charsadda	Noor Al Amin TWWC Mardhand
17	Charsadda	3077/R TWWC Muzafer Kally
18	Peshawar	Shad Muhammad TWWC
19	Peshawar	70000/L Hazar Khwani,
20	Peshawar	159000/L WGC
21	Peshawar	Aqeel Afzal WST
22	Haripur	Abid Khan WST Ghazi
23	Nowshera	9284/TF Bara Banda
24	Tank	Mehtab Ahmad WST Maidad Khel
25	Mardan	Ahmad Ali Water Storage Tank Rustam
26	Mardan	Muhammad Zaib TWWC, Rustam
27	Mardan	Ali Serwar TWWC
28	Mardan	1700/L Canal Water Course

29	Mardan	Fazle Subhan Water Course, Takhtbhai
30	Mardan	6550 / R Canal Water course, Rustam
31	Swabi	026/L Canal Water course
32	Swabi	Baz Muhammad Tube well Water course
33	Nowshera	Iftikhar Water Storage Tank
34	Nowshera	Rehaj Gul Water Storage Tank, Jehangira
35	Nowshera	Swab Ud Din Water Storage Tank, Jehangira
36	Nowshera	Muhammad Tahir Shah Tub well Water course
37	Nowshera	Muhammad Zaib Water course Jehangira
38	Nowshera	3900/ R Canal Water course, Jehangira
39	Nowshera	Abdullah Tube well Water course, Pabbi
40	Nowshera	Sartaj Tube well Water course
41	Nowshera	15881/L Canal Water course
42	Nowshera	Wajahat TWWC and Shahin Shah TWWC

3.6.5 Regular Monitoring / Field Visits by Zonal Office Balochistan

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

- Updated Summarized Progress of ME&IE Consultants, Balochistan Zone.
- Reallocation of Zonal Office, Quetta.
- Plan for Dashboard, Balochistan Zone.
- 04 days' Workshop, Refresher Training and Annual Planning at National Office, Islamabad.
- 02 days' workshop / refresher on MTs at Regional Office, Quetta
- Meetings
- Quarterly Work Plan (October to December 2022) – Balochistan Zone.

UPDATED PROGRESS OF ME&IE CONSULTANTS - BALOCHISTAN.

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 tills to date.

As per TORs ME&IEC are responsible to submit midline survey reports in the middle of the assignment, in this context ME&IE Consultants have started Midline Survey in the month of July 2022 on the basis of First Baseline Survey. The ME&IEC has monitored a total of 22 sites (08 Watercourses and 14 Water Storage Tanks). Due to heavy flooding in Balochistan the field activities of ME&IEC were affected badly, However the field activities will be started from the month of October 2022 as per routine.

The Balochistan field teams are also conducting regular monitoring of on-going / completed sites covering all financial years i.e., 2019-20, 2020-21 and 2021-22 on a monthly basis. The Balochistan field teams have so far monitored 73 watercourses and 88 Water Storage Tanks. Total 161 sites have been monitored till to date.

Updated status of total activities done is given in below table:

Sr. No.	Type of Visit	No. of Visits
1	Pre-Testing Visits	16
2	First BLS (Phase-I)	32
3	First BLS (Phase-II)	21
4	First BLS (Phase-III)	15
5	Midline Survey / Impact Evaluation	22
6	Executive Monitoring Visits	11
7	Regular Monitoring/Spot Checking	161
Total Activities		278

Summary of total activities done, District-wise:

Sr. #	District	Pre Testing		Executive Visits (NPC, DG, & other Stakeholders)		First Baseline / Bench Marked		Midline Survey		Regular Monitoring / Spot Checking		Total
		WC	WST	WC	WST	WC	WST	WC	WST	WC	WST	
1	Quetta	3	2	-	-	-	6	-	4	5	15	35
2	Pishin	3	1	2	5	-	8	-	-	2	9	30
3	Killa Abdullah	-	-	-	-	1	1	-	-	3	2	7
4	Ziarat	-	-	-	-	-	3	-	-	2	4	9
5	Mastung	-	-	1	1	1	5	1	2	5	8	24
6	Nushki	1	2	1	-	-	-	-	-	2	1	7
7	Sibi	-	-	-	-	-	-	-	-	1	3	4
8	Jhal Magsi	-	-	-	-	1	4	-	-	1	4	10
9	Kachhi	-	-	-	-	-	8	-	-	1	10	19
10	Naseerabad	-	-	-	-	2	4	2	1	14	6	29
11	Jaffarabad	1	1	-	-	-	-	-	-	3	-	5
12	Sohbatpur	-	-	-	-	7	-	3	-	14	-	24
13	Loralai	-	-	-	-	1	2	1	4	2	6	16
14	Duki	-	-	-	-	-	-	-	-	2	1	3

Sr. #	District	Pre Testing		Executive Visits (NPC, DG, & other Stakeholders)		First Baseline / Bench Marked		Midline Survey		Regular Monitoring / Spot Checking		Total
		WC	WST	WC	WST	WC	WST	WC	WST	WC	WST	
15	Zhob	1	1	-	-	-	-	-	-	2	1	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	-	-	2	7	16
20	Kalat	-	-	-	1	1	3	-	-	4	4	13
Sub-Total		9	7	4	7	17	51	8	14	73	88	278

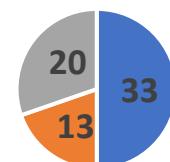
The beneficiaries list of F.Y. 2022-23 is under progress by the OFWM. As soon as OFWM initiates the works on F.Y. 2022-23 and finalizes the beneficiaries' lists, the ME&IEC, Balochistan will start the "Baseline Survey (Phase-IV)" activities accordingly.

Districts Coverage

There are 33 districts in Balochistan, 02 more districts have been notified but their administrative setup yet to be functional. The Balochistan Team has planned to cover all Balochistan as each district has different agriculture setup. All districts have different crops, vegetable, fruits based on their different climate and soil types. Some districts i.e., Quetta, Ziarat, Kalat, Muslim Bagh have extreme cold weather while some districts i.e., Sibi, Naseerabad, Jaffarabad, Sohbatpur, Lasbella lies in extreme hot weather. Due to this reason ME&IEC, Balochistan have planned to cover all Balochistan to give a complete picture of cropping pattern and its intensity, social and gender data, water situation, cost production etc., to make more authentic data.

The Balochistan Zonal field teams have monitored the sites of 20 districts of 33 districts, the remaining 13 districts to be covered in upcoming months.

No. of Districts Covered by ME&IEC
- Balochistan



- Total Districts
- Districts yet to be covered

REALLOCATION OF ZONAL OFFICE, QUETTA.

In the month of September 2022, the office building of zonal office, Quetta has been shifted to House # 40, Marri Street, Arbab Karam Khan Road, Quetta from House # 543/3, Chiltan Road, Cantt, Quetta.

The key advantages of new building are as under:

1. About 02 KM away from the office of DG, OFWM, Balochistan.
2. Five minutes walking distance from Project Consultants (NESPAK) Office.
3. Easy accessibility to staff and other stockholders.
4. Sufficient space for office arrangements and vehicles parking.

PLAN FOR DASHBOARD, BALOCHISTAN ZONE

The NPIWC-II, dashboard, Balochistan zone is in progress. The initial required data of F.Y. 2019-20 and F.Y. 2020-21 have been received from OFWM, Balochistan, however complete required data are yet to be received. The data of missing districts of said financial year and data of F.Y. 2021-22 also yet to be received. The NPC, FPMU, NPIWC-II keenly looks into the matter and DG, OFWM, Balochistan has also given necessary directions to all DDs to provide the required data to ME&IE Consultants on top priority.

Dashboard implementation phase consists of three stages:

Stage I - Digitize and Migrate the Data:

- Digitize the hard copy data
- Process the preliminary data cleaning and validation
- Migrate the complete data in the respective databases.

Stage II – Nominations of Data Collection Focal Personals at District Level

Stage III - Training and Capacity Building:

Training will be designed for multiple groups of users as per divisional distribution of districts.

Potential user groups will be the following:

- Provincial DG (OFWM) - PMU
 - Deputy Directors (OFWM)
 - Field Teams (OFWM)
- Project Consultants (NWMC) – Balochistan

A Focal Person nomination will be nominated by DG, OFWM, Balochistan. The focal person will be responsible for following activities:

- Provide coordination between DG & PMIS team, ME&IEC.
- Coordinate with PMIS, ME&IEC team for bottlenecks/problems resolution
- Coordinate with District DDs to facilitate the PMIS, ME&IEC team
- Provide any other technical support on behalf of DG OFWM, Balochistan.

Data Entry Responsibility (OFWM)

- OFWM nominated staff will fill the previously completed and on-going schemes data through customized android base application developed by the ME&IE consultants.

Data Verification Responsibility (OFWM & ME&IE Consultants)

- ME&IEC PMIS team will monitor the received data (Aggregate Server) from field/district enumerators through customized android-based application and after cleaning and validation the wrong data will communicate to concerned enumerators for correction.

Training Mechanism (ME&IEC)

- Cluster based training will be conducted
- Training venue and arrangement will be the responsibility of DG, OFWM, Balochistan.
- Division based districts enumerates will be gathered on an announced venue by the OFWM department and PMIS team will provide one-day comprehensive training on data collection using android application.
- After conducting division-based trainings PMIS team will plan training and presentation of Dashboard workshop for the capacity building of DG OFWM Department at the DG office/ any other arranged venue by DG OFWM Department

Management Information System will enable Federal and Provincial PMUs to demonstrate to Key Stakeholders the following activities:

- Project is achieving the stated goals.
- Outcomes and outputs in accordance with the targeted time frame.

GIS based Management Information System will provide the means of:

- Comprehensively tracking the project inputs and outputs using mainly the set of key performance indicators outlined under each component at frequent intervals.
- Monitoring of project outcome indicators.
- Robustly analyzing the relevant ME&IE data.
- Reporting progress on an open-access and regular basis, to support knowledge sharing, greater transparency, and improved project governance.

A customized android based (Tablet) Data Collection application developed as per the project requirement.

Features:

- Well optimized application for better work in online/offline environment User friendly interface.
- Consume less internet bandwidth for better connectivity at low internet/remote areas.
- Data is automatically uploaded when a connection is detected.
- Data immediately available right after it's collected.
- Capture GPS, error validation, logic, repeats, signatures, photos and much more.
- Strong safeguards against data loss.
- Synchronize data via SSL, ensuring data can't be read by a third party.
- Encrypted data will be saved at device and server.

Secured hosted under SSL encryption a robust aggregation and data storage application server also designed and customized as per the project requirement.

Features:

- It supports a wide range of data types
- It hosts blank designed data collection form and on any update in form it synchronizes with mobile application and update the blank form
- Store and manage submission data
- Visualize collected data using maps and simple graphs
- Create summary reports with graphs and tables and fine-tune your report's charts, colors and questions
- Visualize collected data on a map
- Disaggregate data in reports and maps
- Export and publish data in a variety of formats

04 DAYS' WORKSHOP, REFRESHER TRAINING & ANNUAL PLANNING

The head office arranged a four days' workshop of all DTLs/Zonal Heads including Field Team In-charges of all provinces. The core team members also participated in this workshop. It was conducted at the National Office, Islamabad from 21st to 24th September 2022.

- Training objectives:
- This training/refresher was held to enable the participants to improve the Android based data collection for Baseline, Impact and Monitoring Surveys.

02 DAYS' TRAINING OF M&E OFFICERS AT ZONAL OFFICE QUETTA.

Two days training / refresher was conducted in Regional Office, Quetta. The training was given by DTL and FTIs. The aim of this training / refresher was to transfer what they learned to M&E Officer in four days' workshop.

Comprehensive discussions were made on MTs and M&E Officers gave their suggestion as per their ground experiences.



Figure-3.26: The FTI giving training to M&E Officer, Zonal Office, Quetta



Figure-3.27: The DTL giving session to M&E Officer, Zonal Office, Quetta.

MEETINGS

During the reporting month different meetings were held by the ME&IEC, Balochistan with clients and other stakeholders.

Date	10 Sep. 2022
Venue	Office of the DG, OFWM, Agriculture Department, Govt. of Balochistan, Rani Bagh, Sariab Road, Quetta.
Participants	
I.	Mr. Abdul Wahab Kakar, Director General, OFWM, Balochistan.
II.	Mr. Manzoor Kasi, M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	

- A meeting was held with DG, OFWM, Balochistan regarding data collection for Dashboard, Balochistan.



Figure-3.28: Meeting held in Office of Director General, OFWM, Balochistan

assured the NPC and ME&IEC for their best cooperation in this regard and the DG, OFWM, Balochistan give necessary directions to all DDs to provide desire data to ME&IEC immediately



Figure-3.29: Meeting held in Office of Director General, OFWM, Balochistan

Date	12 Sep. 2022
Venue	Office of the DG, OFWM, Agriculture Department, Govt. of Balochistan, Rani Bagh, Sariab Road, Quetta.
Participants	
I.	Mr. Asif Kakar, NPC, FPMU, NPIWC-II
II.	Mr. Abdul Wahab Kakar, Director General, OFWM, Balochistan.
III.	Mr. Bashir Agha, Director, Water Management
IV.	Mr. Abdul Wali, Deputy Director, Technical, OFWM, Quetta.
V.	Mr. Behram Malgani, Agriculture Officer, OFWM, Quetta.
VI.	Mr. Khalid Mehmood, DTL, NWMC, NESPAK, Balochistan
VII.	Mr. Rizwan Ahmed, DTL, ME&IEC, G3EC, Balochistan
VIII.	Mr. Manzoor Kasi, M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • A presentation on overall progress of National Programs given by DG, OFWM, Balochistan to the NPC, PFUM, NPIWC-II. • The issues regarding funding, project budget was discussed • A report regarding flood damages was presented to the NPC, FPMU, NPIWC-II. • The targets / funds for F.Y. 2022-23 were discussed. • The NPC, FPMU, NPIWC-II discussed the issues facing ME & IEC regarding collecting the data for Dashboard, Balochistan. The DG, OFWM, Balochistan 	

Date	30 Sep. 2022
Venue	Office of the DG, OFWM, Agriculture Department, Govt. of Balochistan, Rani Bagh, Sariab Road, Quetta.
Participants	
I.	Mr. Abdul Wali, Deputy Director, Technical, OFWM, Quetta.
II.	Mr. Behram Malghani, Agriculture Officer, OFWM, Quetta
III.	Mr. Rizwan Ahmed, DTL, ME&IEC, Balochistan.
IV.	Mr. Manzoor Kasi, M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • A meeting was held with Deputy Director, Abdul Wali, Deputy Director, Technical, OFWM, Quetta and Mr. Behram Malghani, Agriculture Officer, OFWM, Quetta regarding data collection for Dashboard, Balochistan. 	



Figure-3.30: Meeting held in Office of Director General, OFWM, Balochistan

QUARTERLY WORK PLAN – BALOCHISTAN ZONE

The Balochistan team has started Midline Survey in July 2022 as per work plan, but unfortunately it could not be completed as per plan due to heavy flood and non-accessibility. However, remaining sites of Midline survey will be surveyed in the month of October 2022.

The beneficiary list of new schemes/targets for the Financial Year 2022-23 is in progress by the Department. The ME&IE Consultants have planned to start the Baseline Line Survey (Phase-IV) of F.Y. 2022-23 from Oct. 2022.

The ME&IE Consultants will continue their regular monitoring / spot checking in each month with Baseline and Midline Survey.

The ME&IE Consultants, Balochistan is committed to accomplish all deliverables on due dates.

A comprehensive tentative Quarterly Work Plan for next quarter is being attached as an Annexure-1.

3.7 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.

3.7.1 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.

3.7.2 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.

3.7.3 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
Poonth	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 373 Watercourse has been completed & 155 watercourses are under progress. Due to farmers unwillingness 90 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	16	217
Mirpur	2	16	64	10	92
Overall	52	123	277	28	480

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 132 WSTs are under progress. Due to un-willingness of farmers there 70 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	18	30	7	58
Bannu	73	35	93	0	201
D.I. Khan	417	12	93	0	522
Hazara	84	56	146	18	304
Khyber Agency	6	13	6	0	25
Kohat	98	39	57	0	194
Kurram Agency	1	5	2	0	8
Malakand	178	167	395	1	741
Mardan	102	59	49	0	210
M. Agency	4	26	13	0	43
Orakzai Agency	0	1	0	0	1
Peshawar	136	85	78	2	301
S.W. Agency	3	12	13	0	28
N. W Agency	2	3	0	0	5
Overall	1107	531	975	28	2641

KP zone currently 2641 total watercourses data live on Dashboard and by which 2384 schemes have been completed and 257 schemes are under progress due to un-willingness of farmers 05 Schemes work order has been cancelled till to 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	6	0	16
Bannu	12	18	23	0	53
Dera Ismail Khan	79	6	19	0	104
Hazara	28	42	80	2	152
Khyber Agency	1	9	6	0	16
Kohat	29	17	32	0	78
Kurram Agency	1	1	0	0	2
Malakand	74	88	146	0	308
Mardan	15	8	18	0	41
M. Agency	1	36	4	0	41
Orakzai Agency	0	2	0	0	2
Peshawar	36	25	37	2	100
S.W Agency	0	15	14	0	29
N.W Agency	0	0	5	0	5
Overall	277	276	390	4	947

KP zone currently 932 total WST data live on Dashboard and by which 845 schemes have been completed and 101 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.

3.7.4 Refresher Training Workshop in KP Zone

The ICT Team conducted 04 days Refresher Training & Annual Planning Workshop at National office Islamabad for ME&IE staff to enhance their capability of Baseline, Impact & Monitoring data collection through the Android Based Application for rapid and validated data transmission. 22 members from all Zone/Units participated in this training. Training details given as **Annex-I**.

3.8 MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT

FIELD VISIT REPORT

On September 7th and 8th September 2022, ME, IE team, and Social and Gender Specialist planned and organized the visit to the AJK. The aim of the visit is to observe the impact of Midline survey on targeted interventions under the project NPIWC II. AJK visit was coordinated with Deputy Director Mr. Basharat (OFWM Muzaffarabad) who managed the visit locations. The social and Gender Team along with ME&IE Team (Ms. Maryam, Ms. Sana Gul and Muhammad Bilal) visited water courses with OFWM officials, Eng. Assistant Director OFWM,

Khuwaja Owais Ali and Assistant Director OFWM Mr. Tariq.

Following watercourses and water storage tanks were visited during visit.

In addition, the team conducted two focus group discussions in village Khatae Muzaffarabad.

Gender checklist was used during the interview of beneficiaries. The checklist covered the impact of the intervention on livelihood.

The following planned activities were completed during field visits.

Project target (AJK) of water storage tank	600
Project target (AJK)watercourse	1165
Total number of watercourses visited	07
Total no. of water storage tank visited	04
Total no. of baseline completed	07
Total no. of midline completed	02
Total no. of District visited	02
Total no. of village visited	09
Total no of beneficiaries interviewed.	08
Number of Focus group discussion conducted.	02

INTERVENTION # 1

INTERVENTION INFORMATION

Name of schemes	UC/Tehsil/District
Maira Duppata	HatiyahDuppata/Muzaffarabad/ Muzafarabad
Dhanl Mai Sahiba	SeriDarra/Muzaffarabad/ Muzafarabad
Kardila	Muzafarabad/Muzaffarabad /Muzafarabad
Kukkar warra	Langla/Hattain/Jhelum valley
Gujar Bandi	Gujar Bandi/Hattain/Jhelum valley
Khatae	/Hadiyah Bala/Jhelum valley
Lower Duddh Pura	Lamian/Hattain/Jhelum valley
Duddh Pura	Lamian/Hattain/Jhelum valley
Soha	Langla /Hattain/Jhelum valley

Name of scheme	Maira Duppata
Type of scheme	Watercourse/Water storage tank
Union Council	Maira Duppata
Tehsil	Hatiyah Dupatta
District	Muzaffarabad
Name of beneficiary	Raja Nazeer
Type of survey	Midline
WUAs member	Chairmain
Female member WUAs	02



Figure 3.31: Mrs. Yasmeen gave interview to Ms. Abida Munir (Social & Gender Specialist) at Maira Duppata village.



Figure 3.32: Mrs Yasmeen described the impact of schemes



Figure 3.33: Maira Duppata watercourse intervention

BENEFICIARY INFORMATION

Mrs. Yasmin Nazir is a 75-year-old educated woman. She belongs to Maira Duppata village. After completing her 40 years of service, she got retirement from the education department. She has only one daughter. Raja Nazeer is a very cooperative husband, he always encourages her to give her opinion on vital family decisions. She is not restricted by her husband, so she can go anywhere alone. She is the owner of vast land in her village but is unaware of how much area she owns.

She said that now she could not do the tough chores of the household. She was too preoccupied with household activities. To cut the work burden, she hired a maid who assists her in routine house tasks and activities. Mrs. Yasmeen has good knowledge of agriculture and crops. Previously she was also involved in farming activities physically, now her health condition didn't allow her to work in farming activity. She has knowledge of NPIWC II of the project but she doesn't know about WUAs.

BEFORE INTERVENTION

Mrs. Yasmeen Akhter's husband Raja Nazeer owns the land of 200 Kanal in Maira Duppata village. She told that before the construction of the water storage tank/water course they had less labor and the yield of crops was also low. Water supply and storage is the main issue in their area. The yield of crops did not increase because of a shortage of water. Mrs. Yasmeen mentioned that due to an insufficient supply of water they were not able to multi-cropping. She

added that before intervention they were spending a lot of money on purchasing vegetables, maize, and dairy products from the market.

Mrs. Yasmeen also told that WST was damaged due to heavy rain and flood and it needs to be renovated.

IMPACT OF INTERVENTION

Ms. Yasmeen Akhter is very grateful to the team and described that after the construction of the water course, now they have sufficient water for their rice crops because more water is required for the rice crops as compared to other crops. She briefly described that now they also cultivate seasonal vegetables like koram sag (The local name of a popular Green leaf vegetable). In her farm they had both female and male labors. They were giving more wages to male labor as compared to female labors this rationale was due to level of activity. The female labor was involved only in picking the vegetables, whereas male labor does all other hard farming activities.

They were giving RS 700/- daily wage to female labors and RS 1200/- per day to male labors.

She further added that they were using crops and vegetables of their own farm which is more fresh and healthy. It saves a lot of their money. Their workload substantially decreased in terms of being far from their home just for purchasing the purchase of food items. Mrs. Yasmin has a cow from which they are getting fresh milk yogurt and butter which they consume at her home.

Mrs. Yasmeen was thankful to the team that after getting sufficient water their agriculture yield has increased to big level. Moreover, less expenditure saved their time and money. They were also providing employment to poor families in their area.

INTERVENTION # 2

INTERVENTION INFORMATION

Name of scheme	Kakar Wala
Type of scheme	Watercourse/WST
Union Council	Langla
Tehsil	Hattain
District	Jhelum valley
Name of beneficiary	Syed Nay ul Hassan
WUAs member	Chairmain
Type of survey	Baseline

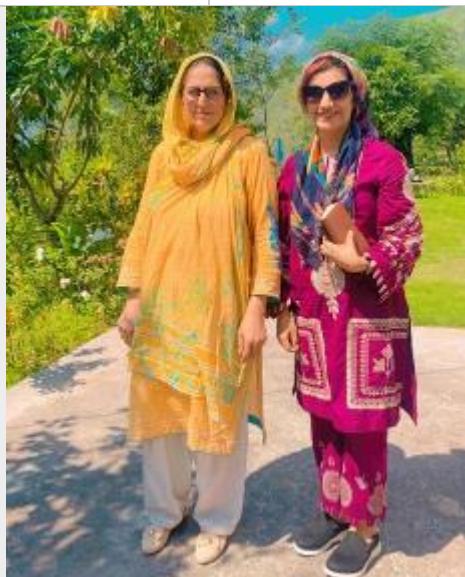


Figure 3.34: Mrs. Syeda Samina Gillani with Social and gender specialist Ms. Abida Munir at Kakar wala village Muzaferabad

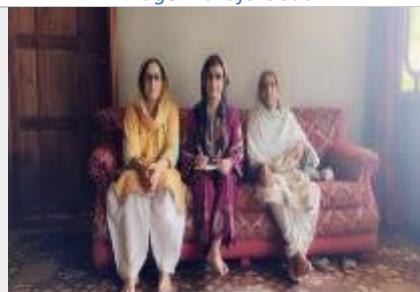


Figure 3.35: Mrs. Syeda Samina Gillani and her family at Kakarwala Muzaferabad

BENEFICIARY INFORMATION

Mrs. Syeda Samina Gillani is a 50-year-old educated woman. She belongs to Kakar Wala village. She

completed her high school studies. Her husband Syed Nay ul Hassan is 64 years old. He has an F.A. degree. She has five children (04 daughters & 1 son). Every child is literate.

Syed Nay ul Hassan is a very supportive spouse who usually encourages his wife in making decisions for the family. She is not restricted by her spouse; therefore, she is allowed to travel alone. She is the owner of the land but she is unaware of how much area does she own.

She hired a maid to assist her to perform common household tasks because she felt overburdened by household duties. She is well-versed in farming and crops. She was also interested in farming activities. Although she is aware of the NPIWC project, she is familiar with WUAs.

BEFORE INTERVENTION

According to Syeda Samina Gillani, her husband has 15 years of farming expertise. Before the construction of the water storage tank, and watercourse Syeda Samina stated, they had few labor and limited crop yield. Their major issue is a shortage of water in the area, which has caused a decrease in crop yield. Before the intervention, she explained, they were spending a large amount of money at the market to buy maize rice, and other seasonal vegetables. Previously she was doing kitchen gardening for their own use. They planned to expand their agricultural activities, but they are unable to cultivate any crops and vegetables on their farm due to a shortage of water.

IMPACT OF INTERVENTION

Syeda Samina Gillani shared that their crop yield increased after the construction of a water storage tank and watercourse. She is practically engaged in both personal and professional kitchen gardening.

Currently, they are growing maize and other several seasonal vegetables like okra, kurram saag, and onions. She added that most of the growing vegetables were damaged after extremely heavy rain fall this year.

She is now more knowledgeable about agriculture and knows it better than many other women. She is doing picking and planting. Furthermore, she said that she looks after livestock as there is the virus affecting milking animals. They just have one cow at

the moment and they use her milk and other dairy products for their use.

She extremely appreciated the NPIW team for making their farming efforts simpler and more profitable than before.

She explained that earlier, they had to put more effort and attention into their work. Now that they have enough water supply for their crops yield has increased, and they have hired workers too to work effectively and efficiently in the field. They've now saved both time and money. The advantages no longer only benefit the upper class but increase in labors indicates rise of employment. Additionally, they provided housing foodstuffs, and crops to their farm labors. They are consuming the vegetables and crops of their land.

INTERVENTION # 3

INTERVENTION INFORMATION

Name of scheme	Gujar Bandi
Type of scheme	Watercourse/Water storage tank
Union Council	Langla
Tehsil	Hattain
District	Jhelum valley
Name of beneficiary	Syed Nay ul Hassan
WUAs	Chairman
Female member in WUAs	No female member in WUAs
Type of survey	Baseline



Figure 3.36: Mrs. Maida during interview in Gujar Bandi village



Figure 3.37: Dairyfarm and WST at Gujar bandi village



Figure 3.38: Water storage tank at Gujar Bandi village

BENEFICIARY INFORMATION

Mrs. Maida Naqvi is 35 years-old-woman and she has a Master's degree. She belongs to Gujjar Bandi village. Her husband is 55 years old. She has 02 children (01 daughters & 01 son). Every child is literate.

Her husband Syed Shafiq is a very supportive spouse who usually encourages his wife in making decisions for the family. She is not restricted by her husband; therefore, she is allowed to travel alone. She is the owner of the land but she is unaware of how much area she owns.

She hired a maid to assist her in order to perform common household tasks because she felt overburdened by household duties. She is well aware of farming and crops. She was also interested in farming activities. Although she is aware of the NPIWC project, she is not familiar with WUAs.

BEFORE INTERVENTION

According to Mrs. Maida Naqvi, the main problem in the village of Gujjar Bandi is water scarcity, which has reduced crop productivity and yield. They were spending a lot of money on water tanks prior to the construction of the water storage tank. Mrs. Maida stated that they previously purchased four water tanks on their farm on alternate days. There were

spending approx. 16000/- PKR per week on water tanks, which cost 2000/- PKR each. Four water tanks were used within three days. Only agricultural and dairy farms were served by this water. They produced fewer crops and had few labors. They intended to grow more crops and vegetables but were unable due to a shortage of water. Mrs. Maida explained that her husband had previously planned to expand the commercial dairy business but was unable to do effectively

due to a lack of water, which prevented him from cultivating fodder.

IMPACT OF INTERVENTION

Her husband expanded his dairy farm after the intervention and they no longer needed to buy the water tanks for livestock and farming

activities. She admired the team and was extremely grateful for them as their 16000 PKR were saved.

Now, her husband has a large dairy farm where he had over ten cows and thirty buffalos. He has grown maize marketed grass for use as cattle fodder. Since rainwater was saved and used, there is no longer a water shortage.

She mentioned that everything is now done by machine, which saves time but more people are employed for their farms.

She continued by saying that they were only selling 140 PKR for one-liter milk, which was a relatively cheap price compared to other dairy farms. They produce dairy products for their own consumption too.

She is very much satisfied with the intervention. The advantages no longer only benefit the upper class but to the labor class as well. Additionally, they provided housing foodstuffs and crops to their farm labors to increase their agricultural production.

INTERVENTION # 4

INTERVENTION INFORMATION

Name of scheme	Kardala
Type of scheme	Watercourse
Union Council	Muzafarabad

Tehsil	Muzafarabad
District	Muzafarabad
Name of beneficiary	Mr. Muhib Ali
WUAs member	Chairmain
Female WUAs	0
Type of survey	Baseline



Figure 3.39: Mrs. Sehrish gave information to Social and Gender specialist (Ms. Abida Munir) regarding the intervention at Kardila village.

BENEFICIARY INFORMATION

Mrs. Sehrish is a 28-year-old woman. She belongs to Kardila village. She has done MSc. Her Husband Mr. Muhib Ali is a Government servant. She has 02 daughters. Her husband Mr. Muhib Ali is a very supportive spouse who usually encourages her in making decisions for the

family. She is not restricted by her spouse; therefore, she is allowed to travel alone. She is

owner of land she is unaware of how much land comes under her ownership.

She hired a maid to assist her who performs common household tasks because she felt overburdened by household chores. She is well-versed in farming and crops and she was also interested in farming activities

although she is aware of the NPIWC project, she is not familiar with WUAs.

BEFORE INTERVENTION

Mrs. Sehrish told that Azad Kashmir's rain has not fallen sufficiently like in Punjab province. After 2005 earthquake, the land was unfertile. They only cultivated fodder for livestock. Mrs. Sehrish told before intervention they were cultivating fodder which resulted less amount of income generation. Earlier, they had to put more effort and time into their work but crops yield was not enough they could only cultivate fodder for their livestock. She explained that earlier, they had to put more effort and attention into their work crops yield was not increased.

AFTER INTERVENTION

Mrs. Sehrish shared that after 17 years of earthquakes now they got sufficient water after the intervention of the watercourse. Mrs. Sehrish was very grateful to the NPIWC-II program she explained that after the construction of the watercourse their need for agricultural water is fulfilled. Now they are cultivating rice and maize. Previously they were not cultivating rice, because rice is that type of crop which require more water as compared to other crops. Now that they have a sufficient water supply for their crops the yield has increased. Mrs. Sehrish shared that they had to hire labors now to complete the work effectively and efficiently in the field. Their time and money is saved after the intervention of NPIWC-II and WST. Now they have kept livestock on their farm. The advantages of the scheme are benefited by all. Additionally, they provided housing, foodstuffs, and crops to their farm labors. The employment is increasing whereas poverty is decreasing.

INTERVENTION # 5

INTERVENTION INFORMATION

Name of scheme	Khatae
Type of scheme	Watercourse
Union Council	Khatae
Tehsil	Hadiyah Wala



Figure 3.40: Mrs. Shakeela gave information regarding intervention.



Figure 3.41: Mrs. Shakeela washing dishes on Khatae watercourse

BENEFICIARY INFORMATION

Ms. Shakeela is 32-year-old. She has completed primary education. Her Husband Mr. Ejaz is in the police forces. She has 02 daughters (02 years & 04 years) and 02 sons (10 years and 12 years).

Shakeela's husband is a very supportive spouse who usually encourages his wife in making decisions for the family. She is not restricted by her spouse and

therefore, is allowed to travel alone. She doesn't own any land. She didn't hire a maid to assist her because she can't afford to pay the salary. She was also interested in farming activities. Although she doesn't know about NPIWC-II project as well with WUAs.

Mr. Muhib is a very sensible and humble person who keeps his wife involved in all decisions. She 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 was well aware of the crops.

BEFORE INTERVENTION

According to Mrs. Shakeela that before the intervention of the watercourse we had to travel to collect the water from far away of their houses. Before the intervention, they faced many problems related to domestic water supply. They had to travel more than an hour for fetching water. Their life was very hard because tap water was not sufficient to fulfill their domestic water needs in their area. After completing the household chores, she went to

collect the water accompanied by her children which caused an effect on their studies of the children. The children were unable to focus on their studies and their homework was usually incomplete. It was very hard to collect sufficient water for domestic purposes because more water means more human resources and she faced health issues due to carrying heavy water buckets and pots. She further told that she can't leave their children alone at home. Because nobody was there to look after the children, the majority of household activity was done by female members. She shared that in crucial weather they were compelled to collect water. Male members have not participated in water collection activity as they were busy with jobs outside the village. They can't take leave from their job and can't go alone for fetching water.

AFTER INTERVENTION

Mrs. Shakeela is very thankful to the team that after construction of watercourses now their time is saved. Watercourse is so near from there house that there is no need to travel far away. They can use sufficient water without any tension. They are utilizing using water for washing dishes, clothes, cleaning home and bathing/personal & domestic hygiene etc. They have now time for other household task. Mrs. Shakeela

shared she is doing kitchen gardening at home level, in her spare time because water is no problem for them anymore.

Now their health related issues are resolved as she didn't have to carry heavy pot and travel for long. She is rather spending more time with her family.

INTERVENTION # 6

INTERVENTION INFORMATION

Name of scheme	Hatiya wala village
Type of scheme	Watercourse
Union Council	Khatae
Tehsil	Hadiyah Wala
District	Jhelum valley
Name of beneficiary	Muhammad Naveed
Type of survey	Baseline



Figure 3.42: Team with beneficiaries at Hatiya wala village Muzafarabad

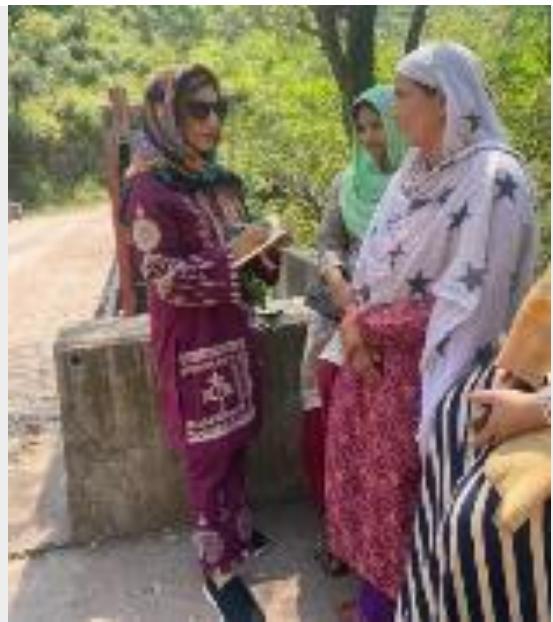


Figure 3.43: Gardening information with beneficiaries at Hatiya wala village Muzaferabad

BENEFICIARY INFORMATION

Nagina belongs to Hatiya wala Bala village. She is 35 years old. She has 03 daughters and 02 sons. She shared that she is illiterate but her all children are studying in school. Her husband is daily wage labour.

Her husband Muhammad Naveed is a very supportive spouse who usually encourages his wife in making decisions of the family. She is not restricted by her spouse; therefore, she is allowed to travel alone. She does not own any land.

She didn't hire a maid to assist her because she can't afford the salary of maid. She has done all household activities like cooking washing dishes & clothes, cleaning home, take care of children as well as older family members. Ms. Nagina also participate in animal gazing. She also made dairy items like butter, desi ghee. She was also interested in farming activities. She was well aware of the crops.

Mrs. Nageena shared that after completing her household task she goes out for feeding the animals near farm. She also gives bath to milking animals. She shared that both husband and wife had to do work for fulfill their basic needs. They were also selling the milk and dairy products. She further told that in their area there was no health facility nearby their residence. She highlighted the drinking water issues in her area. their work but crops yield was not

increased. They wanted to cultivate more crops in their farm.

AFTER INTERVENTION

Nagina shared that after the intervention they got sufficient water in the area. She explained that after construction of watercourses their need of agriculture water is fulfilled. Now they are cultivating maize and other vegetables in more quantity. shared that they have hired labors to work effectively and efficiently in the farm by doing so they've saved both time and money. They have also kept livestock in their farm. She explained that earlier, they had to put much effort and attention into their work but crops yield was not according to their desire.

Additionally, they providing vegetables to their farm labors.

INTERVENTION # 7

INTERVENTION INFORMATION

Name of scheme	Khatae
Type of scheme	Watercourse
Union Council	Khatae
Tehsil	Hadiyah Bala
District	Jhelum valley
Name of beneficiary	Haji Qadoos
Type of survey	Baseline



Figure 3.44: Khatae watercourse

BENEFICIARY INFORMATION

Ms. Rehana is 22-year-old. She lives with her family as her husband gave him divorced after 07 months of her marriage life. She is studying in madrasa to complete the Alima course.

Her father is a very helpful man who encourages her daughter to get education. She shared that there is no restriction by her parents therefore, she can travel alone. She has a land but she doesn't know how much area she actually owns. She further told that she will hand her land to her brother because in their culture women gives their land to their male members.

She didn't hire a maid to assist her because her father can't afford to pay her or give her salary. She is interested in farming activities although she doesn't know about NPIWC project as well with WUAs.

BEFORE INTERVENTION

Before the intervention of watercourses, Ms. Rehana said, individuals had to go long distances to collect water from far away from their dwellings. Before the intervention, Ms. Rehana added, there were several problems regarding domestic water consumption, for water collection they have to travel for more than an hour.

BEFORE INTERVENTION

Before the intervention of watercourses, Ms. Rehana said, individuals had to go long distances to collect water from far away from their dwellings. Before the intervention, Ms. Rehana added, there were several problems regarding domestic water consumption, for water collection they have to travel for more than an hour. For the purpose of getting water, they cannot travel alone because the tap water in their area was insufficient to meet their domestic water requirements and this had made their lives really hard. They performed their household chores and then travel far away accompanying other women to fetch the water. It was extremely difficult to gather enough water for domestic needs since more water requires more manpower. Sometimes they slip over the weight of the water pot, ruining the entire water supply and wasting their precious time due to the weight of the water bucket and pots. This activity caused her various health issues. Sometimes they were going to be late from the water gathering task.

Majority of home chores were performed by women. Men weren't involved in the activity of fetching water. They had a lot of work to do that their requirements cannot be met by the water they carry from the farfarlag region. They occasionally have to spend the entire day doing laundry. They wash their clothing at the nearby water source and they returned after drying the clothing.

AFTER INTERVENTION

Ms. Rehana is satisfied with the intervention. She told that her time is saved and have less work to do. In addition, she told that the intervention has been appreciated by more women because they have enough water for domestic usage. They can wash their dishes, clothing, and clean their house without any hassle. As part of their home level, they also began kitchen gardening. They don't need to wait more for water because it flows continuously. However, they live fearlessly since the watercourse is so close to their home.

Now there is no need to visit health facility and spend money on medicines, because now there is no need to travel so long with heavy pots, bottles

AFTER INTERVENTION

Mrs. Nageena shared that after construction of watercourses, need of agriculture water is fulfilled. Previously they were not cultivating the rice, because more water as compared to other crops. After construction of watercourse the landowner crops yield increased so they need more labours. She was very happy and thankful to her landlord for providing their family home, maize and vegetables. She told that due to sufficient water in field, the yield became ample quantity. She additionally expressed the land owner gave her 02 maund maize instead of giving him cash in exchange of the labor. Moreover, she told that the land owner also gave her vegetables for their daily use. Her husband sold the maize and bought the grocery for the whole month.

BASIC INFORMATION

Khurshid Bibi is 65-year-old. Her Husband Mr. Malik Aman is retired from government job. She has a son. She lost her 04 children in 2006 earthquake.

Her husband is a very supportive spouse who usually encourages his wife in making decisions

for the family. She is not restricted by her spouse; therefore, she is allowed to travel alone. She doesn't own any land.

She didn't hire a maid because she wanted to busy herself in household activities. She is doing all household activities like washing clothes, and dishes, cleaning home, milking & bathing animal. Although she doesn't know about NPIWC-II project by its name but has information about intervention as well with WUAs.

She was well aware of the crops and also participating in farming activities.

BEFORE INTERVENTION

Mrs. Khurshid Bibi told that in Azad Kashmir rain has not falling sufficient like that happens in Punjab province. After 2005 earthquake the land was unfertile. She told that water is a big issue in her area. They only cultivated fodder for livestock. Mrs. Khurshid was very grateful to NPIWC-II program and told that before intervention they were cultivating fodder and vegetables therefore; they were not getting enough amount of profit. She explained that earlier, they had to put more effort and time into this activity.

INTERVENTION # 8

INTERVENTION INFORMATION

Name of scheme	Dhani Mai Sahiba
Type of scheme	Watercourse
Union Council	Seri Darra
Tehsil	Muzafarabad
District	Muzafarabad
Name of beneficiary	Mr. Rafiq Abbasi
WUAs member	Chairmain
Type of survey	Midline
WUAs female member	01



Figure 3.45: Dhani Mai Sahiba Watercourse

BENEFICIARY INFORMATION

Nosheen is 38 years old woman. Nosheen is a housewife. Mr. Rafiq Abbasi is her husband and is 62 years old. He is a landlord. She has four children.

Her husband is an incredibly encouraging partner who frequently supports his wife in making decisions for the family. She is allowed to go alone because her spouse does not have any restrictions. She doesn't possess any land.

She decided not to hire a maid in order to keep herself occupied with domestic duties. She is taking care of all domestic chores, including washing the dishes, cleaning the house, and caring for the animals. She is unaware of the NPIWC-II and doesn't know about WUAs.

She participated in farming tasks and was well aware of the crops.

BEFORE INTERVENTION

According to Mrs. Nosheen, Azad Kashmir does not receive as much rainfall as the Punjab province, and as a result, the soil remained. They only cultivated fodder for livestock. Mrs. Nosheen was very grateful to NPIWC-II program. Before the intervention, according to Mrs. Nosheen they were growing vegetables and fodder, thus they were only making a very small profit. In the past, she said, they had to put in more time and effort, but agricultural productivity did not grow. They desired expanding their farm's crop yield.

AFTER INTERVENTION

According to Mrs. Nosheen after the intervention, they received enough water for crops. She said that after the construction of watercourse their water requirement for cultivation was fulfilled. Maize and other vegetables are now growing more. They are also giving work to landless and unemployed workers on farms in order to work efficiently and perfectly.

INTERVENTION # 9

INTERVENTION INFORMATION

Name of scheme	Dhani Mai Sahiba
Type of scheme	Watercourse
Union Council	Seri Dara
Tehsil	Muzafarabad
District	Muzafarabad
Name of beneficiary	Malik Aman
Type of survey	Midline



Figure 3.46: Khurshid Bibi describe the intervention impact at Dhai Mai Sahiba village Muzafarabad

BENEFICIARY INFORMATION

Khurshid Bibi is 65-year-old. Her Husband Mr. Malik Aman is retired from Government job. She has one son. She lost her 04 children in 2006 earthquake.

Her husband is a very supportive spouse who usually encourages his wife in making decisions for the family. She is not restricted by her spouse; therefore, she is allowed to travel alone. She is landless.

She didn't hire a maid because she wanted to busy herself in household activities. She is doing all household activities like washing clothes, and dishes, cleaning home, milking & bathing animal. Although she doesn't know about NPIWC-II project as well with WUAs.

She was well aware of the crops and also participating in farming activities.

BEFORE INTERVENTION

Mrs. Khurshid Bibi told that Azad Kashmir rain has not fallen sufficient like Punjab province after the 2005 earthquake the land was unfertile. She told that water is a big issue in her area. They only cultivated fodder for livestock. Mrs. Sehrish told before intervention they were cultivating fodder and vegetables therefore; they were not getting a big amount of profit in a very lesser amount. She explained that earlier, they had to put more effort and time into their work but crop yield was not increased. They wanted to cultivate more crops in their farm.

AFTER INTERVENTION

Khurshid Bibi shared that after the intervention they got sufficient water. She explained that after construction of watercourses their need of agriculture water is fulfill. Now they are cultivating maize and other vegetables in more quantity. Khurshid Bibi shared that they have hired labors also to work for effectively and efficiently in the farm. They've now saved both time and money. Now they keep livestock in their farm. She explained that earlier, they had to put more effort and attention into their work but crops yield was not increased.

The advantages no longer only benefit the upper class. Additionally, they providing vegetables to their farm labors

Overall observations were found during field visits;

Most Kashmiri women are participating in farming activities.

Women doing kitchen gardening at the home level.

Picking activity done by female farmers, and all other remaining hard farming activities done by male members.

Household chores are done by female members. Male doesn't assist female in household activities.

Livestock care and bathing activity is done by female members.

Female members are making dairy products for their personal use and for business purposes.

There is no restriction on female members to work in fields. Females are not restricted by male members which means they can go anywhere alone.

Male members are very cooperative and supportive and encourage females, to give their opinion on vital family decisions.

It was observed that most female members were permitted to take pictures during interviews.

Majority female members are land owners but don't know how much area they owned. According to them that they can give their property to male members. It is in their culture/custom and they have to do it. They have no issue in transferring their land to male members.

Water collection activity is done by females and children. Male members are not participating in the water collection activity.

Most of the females hired maids for assisting them in household chores.

Mostly females are unaware of the NPIWC II project as well as WUAS.

It was observed that female is members of WUAs Dhani Mai Sahiba and Maira Duppata village.

FOCUS GROUP DISCUSSION

EXECUTIVE SUMMARY

The Government of Pakistan is implementing a project entitled "National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II). The NPIWC-II comprises four components to be implemented in Punjab, KP, Balochistan, GB, AJK, and ICT: The Project Development Objectives (PDO) are to improve irrigation water management at tertiary and field levels in Pakistan.

Generally, in the rural set up of Pakistan women's involvement in agricultural farming and livestock rearing is often unpaid. So does seen in AJK, there females are considered to be the helping hands of

their male family members. Agricultural labor is an extra workload done by these females who are also engaged in performing household chores and looking after their family and children. However, there are many women who also work in other farmer's fields. These women are engaged in activities includes the cultivation and harvesting of different crops; moreover, they get money against their labor, and there are some who are working as housemaids.

The engagement of women in the rural workforce is often influenced by social, economic, and cultural contexts, and in some social systems, it is also strongly influenced by religious norms. There are similarities in rural women's engagement in agriculture farming, livestock rearing, domestic chores, groundwater management, and other economic activities in different provinces in Pakistan, but there are also some observed dissimilarities



Figure 3.47: Focus group discussion at Khatae village
Muzaferabad

INTRODUCTION

A Focus group discussion was conducted in Khatae village with 10 female beneficiaries to explore their views regarding intervention. The purpose of the FGD is to together with females from similar backgrounds and experiences discuss the impact of the intervention. Most female belongs to the same village Khatae. The FGDs were held separately for female farmers. Most of the females are involved in farming activities. Water is the main issue in the area. Due to insufficient water, most farmers faced problems.

METHODOLOGY

Social al & Gender specialists conducted FGD with the female farmers of the area named Khatae. Focus

group discussion was arranged in a common venue where females can reach easily without any issue. Target audience were 10 adult females who have farming knowledge and also from the same area and languages were selected for the discussion. Venue and time were decided with the mutual consensus of the female beneficiaries. Tool for the FGD were developed as per required data.

OBJECTIVES

- identify the role of women in agriculture and other associated fields
- Situation before the intervention.
- Impact of intervention/watercourse in the area.

KEY FINDINGS

- Azad Kashmir does not receive as much rainfall as the Punjab province, which results in the soil remaining unfertile.
- Women's agricultural labor is an extra workload besides doing household chores and caring for children and family elders.
- Female farmers also worked together with male farmers on the field. Mostly, the crops are grown by men as compared to women whereas picking and soil cleaning activity done by female farmers.
- Mostly males participated in market activities. The majority of male farmers are involved in marketing activities. Females farmer are not allowed to go to market, due to cultural constraints.
- Before the intervention they faced many problems in farming and yield was less due to insufficient water and they got very less profit.
- Females were not doing multi-cropping due to water shortage.
- There was no female organization before the intervention.
- Females were doing kitchen gardening on the home level due to a shortage of water.
- They were spending a lot of money on purchasing vegetables, crops, and dairy products from the market.
- Most females have to travel for more than an hour for the collection of domestic water. Women faced health issues to traveling with water containers.

- According to the female participant "kia pani bharna sirf aurat ka kam hy" (does water collection a task for women?)
- No cultivation of rice crops because this crop required more water as compared to other crops.
- Females were doing kitchen gardening on the home level only.
- Below-poverty families were unemployed. No opportunity for work as a labor.
- No cultivation of rice crops because this crop required more water as compared to other crops.

Conclusion

- The farmers are facing many issues including scarcity of both domestic and irrigation water, land degradation due to water logging and salinity, and low agricultural production. These issues have significantly affected the livelihood sources of farming communities and pushed them towards poverty.
- The involvement of women in agriculture production is more than men but they are not appreciated due to social and cultural norms. These restrictions keep these women away from natural resources and decision-making.
- Women are mostly involved in the pre and post crop production like sowing, thinning, weeding, picking, harvesting and seed storage.
- In relation to households, women play an important role in water management, as there they are the collectors, users and managers of water. Because of these roles, women have considerable knowledge about water resources, including quality and reliability, restrictions and acceptable storage methods.
- Women do not play any role in decision making regarding water management at the field level, purchase/sale of farming implements, land preparation and determination of type and amount of fertilizers (pesticides, herbicides) used due to traditional and cultural barriers.

- The community received sufficient water for crops and now yield has been increased.
- Below-average poverty labors got the opportunity to work on farms, and landlords provide them shelter.
- Time is saved and there is no need to travel far. The water course is nearby to their home.
- The water issue was resolved and now yield is increased.
- Beneficiaries are using their own crops and vegetables from their own farm which are fresh and healthy. It saves a lot of their money as well as time saved.
- Female members are practically engaged in both personal and professional kitchen gardening. Several seasonal vegetables like okra, kurram saag (Hybrid Sarsong), and onions are cultivated.
- Agriculture knowledge improved. Farming efforts are simpler and more profitable.
- Most farming activities are done by machine, which saves time and effort.
- WUAs (Male) are very active so there is a reduction in water-related disputes.
- Beneficiaries are involved in fodder production to keep livestock on their farm. They are producing professional dairy farm activities.
- Rural women are undertaking a lot of work; their work is not well acknowledged by male members as well as society.

	with water containers.	
4	Azad Kashmir does not receive as much rainfall as the Punjab province, which results in the soil remaining unfertile.	The water issue was resolved and now yield increased. The crop yield has increased.
5	They were spending a lot of money on purchasing vegetables, crops, and dairy products from the market.	Now they are using their own crops and vegetables from their own farm which are fresh and healthy. It saves a lot of their money as well as time saved.
6	Females were doing kitchen gardening on the home level only.	Now female members are practically engaged in both personal and professional kitchen gardening.
7	Multi-cropping	Several seasonal vegetables like okra, kurram saag (Hybrid Sarsong), and onions are cultivated.
8	Less to no knowledge of agriculture equipment	Agriculture knowledge improved. Farming efforts are simpler and more profitable. Most farming activities are done by machine, which saves time.
9	Difficulties in less fodder production	Now they do fodder production to keep livestock on their farm. They are producing professional dairy farms activities.
10	No cultivation of rice crops because this crop required more water as compared to other crops.	Now they have sufficient water for the rice crops. The requirement of water is fulfilled which results in a high yield.
11	Before WUAs were not formed.	WUAs (Male) are very active so there

s.#	Before Intervention	After Intervention
1	Insufficient water for crops and less yield. The farmers were making very less profit	The community received sufficient water for crops and now yield has increased.
2	Below-poverty families were unemployed. No opportunity for work as a labor.	Below-average poverty labors got the opportunity to work on farms, and landlords provided them shelter.
3	Most females have to travel for more than an hour for collection of domestic water. Women faced health issues to traveling	Now time is saved and there is no need to travel. The water course is nearby to their home.

		is a reduction in water-related disputes.
13	The electricity bill cost very high	Reduction in electricity bill.

Overall observations were found during field visits;

- Most Kashmiri women are participating in farming activities.
- Women doing kitchen gardening at the home level.
- Picking activity done by female farmers, and all other remaining hard farming activities done by male members.
- Household chores are done by female members. Male doesn't assist female in household activities.
- Livestock care and bathing activity is done by female members.
- Female members are making dairy products for their personal use and for business purposes.
- There is no restriction on female members to work in fields. Females are not restricted by male members which means they can go anywhere alone.
- Male members are very cooperative and supportive and encourage females, to give their opinion on vital family decisions.
- It was observed that most female members were permitted to take pictures during interviews.
- Majority female members are land owners but don't know how much area they owned. According to them that they can give their property to male members. It is in their culture/custom and they have to do it. They have no issue in transferring their land to male members.
- Water collection activity is done by females and children. Male members are not participating in the water collection activity.
- Most of the females hired maids for assisting them in household chores.
- Mostly females are unaware of the NPIWC II project as well as WUAS.

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

The ME&IE Consultants' activities initiating during the 3rd Quarter of year 2022 (1st July 2022 to 30th September 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 | 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
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 K

ANNEX-A: TENTATIVE WORK PLAN

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

TENTATIVE WORK PLANNED FOR THE QUARTER (Oct 2022 To Dec 2022)												Legend				
No.	ACTIVITIES	3 Months-Year 2022 (Weeks)														
		Oct				Nov				Dec						
		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	Pre-Field Activities															
	1.1 Preparation for 2nd-Phase Baseline Survey (Finalization of MTs)	Activity starts														
	1.2 Internal Meetings of ME&IE Consultants' Zonal Offices for development of Methodology for 2nd Phase Baseline Survey	Activity starts														
	1.3 Training of Field Staff for 2nd-Phase Baseline Survey	Activity starts														
2	Field Activities															
	2.1 Regular Monitoring of Interventions in the Field	Activity starts														
	2.2 Data collection of the interventions in the field	Activity starts														
	2.3 Baseline Survey stage - 2	Activity starts														
	2.4 Online data entry in android based application	Activity starts														
3	ICT Assignment															
	3.1 Development / Improvement of website of NPIWC-II	Activity starts														
	3.2 Monitoring online data collection and Data entry	Activity starts														
	3.3 Monitoring Android based Mobile Application under implementation by field staff.	Activity starts														
	3.4 Data collection of interventions in MIS/GIS database	Activity starts														
	3.5 Data Cleaning, Development & Launching of Dashboard for Client Offices	Activity starts														
4	Coordination															
	4.1 Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues	Activity starts														
	4.2 Meeting of DTLs with respective DTL of PC & concerned OFWM Departments	Activity starts														
	4.3 ME&IE Consultants Internal Meetings	Activity starts														
5	Deliverable															
	5.1 Monthly Monitoring Report	Activity starts														
	5.2 Quarterly Monitoring Report (January-March 2022)	Activity starts														
	5.3 Preparation of Baseline Survey Report 2nd-Phase	Activity starts														

ANNEX - B: MATRIX OF RESPONSIBILITIES

MATRIX OF RESPONSIBILITIES

SR. NO.	DELIVERABLE / ACTIVITIES
1	Provision of Pre-requisite data of project components for starting of Field Activities: <ul style="list-style-type: none"> • Organization of Water Users Associations, • Watercourses Improvement, • Water Storage Tanks, • Laser Land Levelers,
2	Certification of operational documents of the project, <ul style="list-style-type: none"> • 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

LEGEND				
NPC-FPWIU	Agriculture Dept. (OEWMA)	Project Consultants	ME&IE Consultants	
○	●	-	-	
○	○	●	-	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
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-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	

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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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.	a) Establishment of 47,278 Water users' associations (WUAs); b) Registration of 47,278 WUAs; c) Improvement and realignment of earthen section of 47,278 watercourses; d) Lining of up to 50% length of 47,278 watercourses either by: • Precast concrete parabolic lining (PCPL) segments, or • Rectangular brick masonry, or any other method as approved by the project	a) 47,278 WCAs established; b) 47,278 WCAs registered; c) 47,278 watercourses improved and lined;	a) Conveyance losses for improved watercourses decreased by about 15 percentage points. b) 1.654 million households benefited from the activity; c) 11.347 million acres served with improved watercourses	a) Increase in cropping intensity on improved watercourses by 5-24%; b) Increase in crop yields. c) Increase in irrigated area d) Increase in agriculture output per unit of water by about 37%	a) Increase in farm income; b) Increase in employment for farm labour; c) Reduction in poverty; d) Enhanced food security for the country.	a) The water flow measurements will be carried out at before and after watercourse improvement on 2-5% sample basis; b) Agriculture survey before and after watercourse improvement on 2-5% sample basis; c) The survey will determine: • Cropping pattern before and after the improvement; • Cropping intensities before and after improvement; • Before and after crop yields;
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								<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)	<p>a) Construction of 14,932 water storage tanks</p> <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 received</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 watercourses</p>		

		subsidy at 40% on issuance of FCR					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 teams after

								one years of delivery c) The unit will be verified d) Area treated during the year will be collected e) Farmers' feedback collected on quality of the unit, quality of the after-sale service, etc.
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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				Overall
				1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
MZD	Muzaffar abad	55	5	8	8	18	13	107
	Jhelum	18	0	6	0	14	6	44
	Neelum	23	12	13	5	0	0	53
Muzaffarabad Total		95	96	17	27	13	32	19
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	80	50	12	1	3	8
Mirpur	Mirpur	66	1	0	0	7	27	101
	Bhimber	99	0	0	0	0	0	99
	Kotli	32	22	5	0	1	0	60
Mirpur Total		197	23	5	0	8	27	260
Overall		373	90	44	14	43	54	618

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	15	85
	Bagh	33	18	3	0	54
	Haveli	15	16	3	15	49
	Sudhnoti	11	2	6	10	29
Poonch Total		104	55	18	40	217
Mirpur	Mirpur	7	0	4	10	21
	Bhimber	11	0	0	20	31
	Kotli	25	12	3	0	40
Mirpur Total		43	12	7	30	92
Overall		278	70	46	86	480

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	46	5	2	5	0	58
Bajaur Agency Total		46	5	2	5	0	58
Bannu	Bannu	93	0	0	0	0	93
Bannu	Lakki Marwat	106	2	0	0	0	108
Bannu	N.W Agency	199	2	0	0	0	201
Bannu Total		482	2	0	0	0	484
D.I. Khan	D.I. Khan	38	0	0	0	0	38
D.I. Khan	Tank	520	2	0	0	0	522
D.I. Khan Total		24	2	1	0	0	27
Hazara	Abbottabad	38	3	0	0	0	41
Hazara	Battagram	58	0	15	0	0	73
Hazara	Haripur	7	0	0	13	0	20
Hazara	Lower Kohistan	77	0	29	1	0	107
Hazara	Mansehra	23	0	1	1	0	25
Hazara	Torghar	9	0	0	0	0	9
Hazara	Upper Kohistan	2	0	0	0	0	2
Hazara Total		238	5	46	15	0	304
Khyber Agency	Khyber	19	0	0	5	1	25
Khyber Agency Total		19	0	0	5	1	25
Kohat	Hangu	42	0	0	0	0	42
Kohat	Karak	67	0	1	0	0	68
Kohat	Kohat	84	0	0	0	0	84
Kohat Total		193	0	1	0	0	194
Kurram Agency	Kurram	8	0	0	0	0	8
Kurram Agency Total		8	0	0	0	0	8
Malakand	Buner	94	0	0	0	0	94
Malakand	Chitral	88	1	0	0	0	89

KP - Watercourse Data Submission – Summary							
Division	District	Completed	Under Progress				Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Malakand	Lower Dir	68	5	6	11	0	90
Malakand	Malakand	76	0	1	4	1	82
Malakand	Shangla	39	0	0	0	0	39
Malakand	Swat	164	28	55	1	2	250
Malakand	Upper Dir	85	0	12	0	0	97
Malakand Total		614	34	74	16	3	741
Mardan	Mardan	124	0	0	2	0	126
Mardan	Swabi	81	0	0	2	1	84
Mardan Total		205	0	0	4	1	210
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	126	0	0	13	0	139
Peshawar	Nowshera	76	0	0	13	4	93
Peshawar	Peshawar	64	0	0	5	0	69
Peshawar Total		266	0	0	31	4	301
S.W Agency	S.W Agency	27	0	0	1	0	28
S.W Agency Total		27	0	0	1	0	28
N.W Agency	N.W Agency	5	0	0	0	0	5
N.W Agency Total		5	0	0	0	0	5
Overall		2384	48	123	77	9	2641

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

KP - WST Data Submission – Summary								
Division	District	Completed	Work Order Cancelled	Under Progress				Overall
				1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Bajaur Agency	Bajaur	16	0	0	0	0	0	16
Bajaur Agency Total		16	0	0	0	0	0	16
Bannu	Bannu	11	0	0	0	0	0	11
Bannu	Lakki Marwat	34	0	0	0	0	0	34
Bannu	N.W Agency	8	0	0	0	0	0	8
Bannu Total		53	0	0	0	0	0	53
D.I. Khan	D.I. Khan	80	0	0	0	8	0	88
D.I. Khan	Tank	16	0	0	0	0	0	16
Dera Ismail Khan Total		96	0	0	0	8	0	104
Hazara	Abbottabad	18	0	0	0	0	0	18
Hazara	Battagram	23	0	0	0	4	0	27
Hazara	Haripur	40	0	0	0	0	0	40
Hazara	Kolai Pallas	2	0	0	0	2	0	4
Hazara	Lower Kohistan	0	0	0	0	0	1	1
Hazara	Mansehra	32	0	0	2	5	0	39
Hazara	Torghar	11	0	0	0	4	0	15
Hazara	Upper Kohistan	7	0	0	0	0	1	8
Hazara Total		133	0	0	2	15	2	152
Khyber Agency	Khyber	10	0	0	0	6	0	16
Khyber Agency Total		10	0	0	0	6	0	16
Kohat	Hangu	14	0	0	0	0	0	14
Kohat	Karak	60	0	0	0	0	0	60
Kohat	Kohat	4	0	0	0	0	0	4
Kohat Total		78	0	0	0	0	0	78
Kurram Agency	Kurram	2	0	0	0	0	0	2
Kurram Agency Total		2	0	0	0	0	0	2
Malakand	Buner	43	0	0	0	0	0	43
Malakand	Chitral	20	1	0	0	0	0	21
Malakand	Dir Lower	15	0	0	0	10	2	27
Malakand	Dir Upper	24	0	0	0	0	0	24
Malakand	Malakand	21	0	0	0	1	0	22
Malakand	Shangla	95	0	3	6	29	2	135
Malakand	Swat	33	0	1	0	1	1	36
Malakand Total		251	1	4	6	41	5	308

KP - WST Data Submission – Summary								
Division	District	Completed	Work Order Cancelled	Under Progress				Overall
				1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Mardan	Mardan	30	0	0	0	0	0	30
Mardan	Swabi	9	0	0	0	0	2	11
Mardan Total		39	0	0	0	0	2	41
Mohmand Agency	Mohmand	41	0	0	0	0	0	41
Mohmand Agency Total		41	0	0	0	0	0	41
Orakzai Agency	Orakzai	2	0	0	0	0	0	2
Orakzai Agency Total		2	0	0	0	0	0	2
Peshawar	Charsadda	13	0	0	0	1	0	14
Peshawar	Nowshera	57	0	0	0	0	0	57
Peshawar	Peshawar	25	0	0	0	2	2	29
Peshawar Total		95	0	0	0	3	2	100
S.W Agency	S.W Agency	29	0	0	0	0	0	29
S.W Agency Total		29	0	0	0	0	0	29
N.W Agency	N.W Agency	0	0	0	0	5	0	5
S.W Agency Total		0	0	0	0	5	0	5
Overall		845	1	4	8	78	11	947

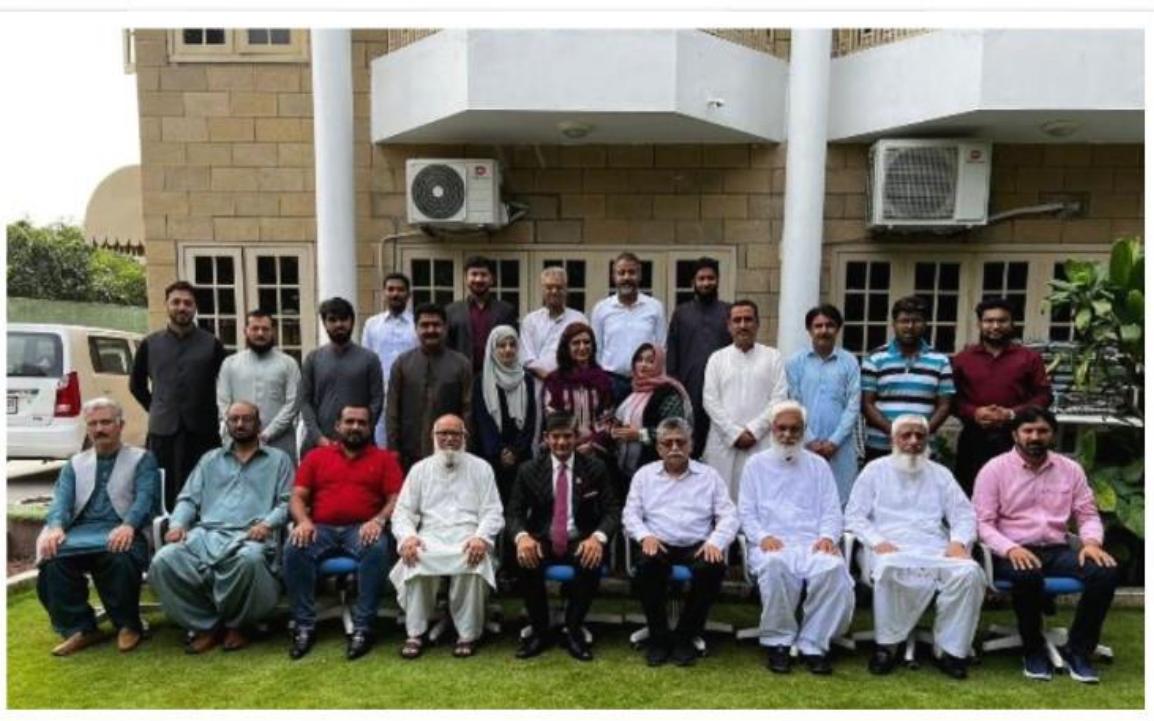
ANNEX - I: Participants of the 4 Days' Workshop at National Office Islamabad

Sr.#	Name	Designation	Place of Posting
1	Saifullah Ejaz Choudhary	Authorized Representative of G3JV	Director
2	Dr Usman Mustafa	Team Leader	Islamabad
3	Dr Ikram Saeed	DTL - ICT Zone	Islamabad
4	Rizwan Saleem	ICT/Technology Specialist	Islamabad
5	Dr Muhammad Abdul Quddus	Agricultural Economist - Lahore Zone Office	Islamabad
6	Dr Humayon Khan	DTL - KP Zone	KP
7	Rizwan Ahmed	DTL - Balochistan Zone	Balochistan
8	Shumail Mehmood	Data Analyst	Islamabad
9	Fawad Ahmed	ICT Manager - KP Zone	KP
10	Muhammad Waseem Rana	Admin & Accounts Manager	Islamabad
11	Muhammad Bilal	FTI - ICT Zone	Islamabad
12	Hafiza Mariyam	M&E officer - ICT Zone	Islamabad
13	Sana Gul	M&E officer - ICT Zone	Islamabad
14	Awais Saqi	FTI - Punjab Team-1	Lahore
15	Rizwan Suleman	FTI - Punjab Team-2	Lahore
16	Muhammad Zubair	FTI - Punjab Team-3	Lahore
17	Mumtaz Ullah	FTI - KP Team-1	KP
18	Inam Ullah Khan	FTI - KP Team-2	KP
19	Mehmood Ul Hassan	FTI - KP Team-3	KP
20	Manzoor Ahmed Kansi	FTI - Balochistan Team-1	Balochistan
21	Naseeb Jaan	FTI - Balochistan Team-2	Balochistan
22	Muhammad Tariq Khosa	FTI - Balochistan Team-3	Balochistan

ANNEX - J: Pictorial View of the Workshop



Director G3 / Authorized Representative Giving Briefing to NPC



ME&IE Consultants and Management Staff during 4 days' Workshop



ICT Specialist explaining Revision in MTs



ICT Expert Mr. Shumail Explaining Android Application

ANNEX - K: Field Visit Reports

Visit Reports of Islamabad Teams

Table shows some details of visited watercourses AJK

Date of Visit	Scheme	Name of village:	District	Source of irrigation:	Type of Watercourse	Length	Total Command area:	No of beneficiaries:	Reduction in water disputes/thefts
7/9/2022	Water course	Maira Dupatta	Muzaffrabad	Nulla	Rectangular	3048 m	52.875 Acre	13	No problems related to water theft
7/9/2022	WC	Dhani Mai Sahiba	Muzafrabad	nalla	Rectangular		23.125 Acre	48	No problems related to water theft
8/9/2022	WC	Kardala	Muzafrabad	Nalla	Rectangular	3440 meter	28.25 Acre	20	No problems related to water theft
8/9/2022	Water Course	Kukkar warra	Jehlum	Spring	Rectangular	2000 m	23.75 Acre	13	No problems related to water theft
8/9/2022	Water Course	Soha	Jehlum	Nullah	Rectangular	4020 m	63.5 Acre	34	No problems related to water theft

Table shows some details of visited WST

Date	Scheme	Village	Distt	Source of irrigation:	Shape of WST	Length, width	Depth of WST	Command area of WST :	No of beneficiaries:	Reduction in water disputes/thefts
8/9/2022	Water storage Tank	Kukkar warra	Jehlum	Spring	Square	14/14ft	7.5ft	5.875 Acre	13	No problems related to water theft
8/9/2022	Water storage Tank	Lower Doodh Pora	Jehlum	Nalla	Square	14/14		18.625 Acre	4	No problems related to water theft
8/9/2022	WST	Upper Dood Pora	Jehlum	Nalla	Square	14/14		16 Acre	3	No problems related to water theft
8/9/2022	WST	Gojar Bandi	Jehlum	Nalla	Square	14/14		6 Acre	12	No problems related to water theft

1. Brief Profile of WST / Owner

ME&IE team reached village along with Assistant director of OFWM. The aim of this visit was midline survey and to observe the impact.

It was observed that the beneficiaries of Maira dupatta were happy with this intervention. Before the intervention there was problem in irrigating crops but now they were getting the required amount of water for each crop.



Watercourse Maira Dupatta

There were total 13 beneficiaries at this watercourse. The source of water for this intervention is stream. All the farmers were getting benefited by the intervention. The cropping intensity was increased. Rice was not produced before this intervention in the area due to non-availability of water but now rice crops was also grown. Farmers started to grow different Kharif vegetables crops.



ME&IE team discussion with farmers

Interviews were taken from 6 beneficiaries, 2 from head, 2 from mid of the WC and 2 from the tail of

WC. During the interview the beneficiaries gave data about land holding by them, crops and yield obtained this year.

Most of the farmers were obtaining more yield of their crops this year than before this intervention.

2. Brief Profile of WC/ Owner



Intervention Dhanni Mai sahiba



Vegetables crop at Dhani Mai sahiba

ICT field team visit **Dhani Mai Sahiba**, in order to conduct mid line survey. Team met with chairman of WUA and beneficiaries of WC. The beneficiaries were happy with the intervention. They told the field team that due to the sufficient water and timely availability of water their number of crops increased than before also increase in production has been noticed.

Total number of beneficiaries were 40, the team arranged to meet some of them, interviews were taken. The land occupied by each farmer was not more than few kanals but they were getting benefitted by their small piece of land. Kashmiri collard was the main crop grown in this area known as currum saag in local language. It's a kharif

vegetable and most of the farmers were growing currum saag.

The farmers were well aware of the agricultural practices. They were using Urea and FYM as fertilizer.

Watercourse was monitored by the team, measurements and coordinates at the spot were taken. It was observed that the watercourse was maintained to be cleaned.

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 and were active in household decision but they didn't own any piece of land.



Maize crop at Kardla

3: Brief Profile of WC/ Owner

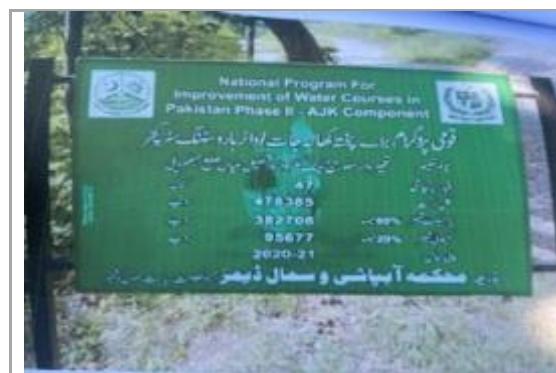
The team visit watercourse Kardala in order to conduct baseline survey. This watercourse is located in village Kardala. The village is located to the right side of Nallah Sehli.

The purpose of this intervention, according to the OFWM team, is enough water for agricultural irrigation as well as for domestic use and drinking needs of inhabitants and livestock.

During the introduction the farmers told about their family, the land occupied by them, and some information about the crops grown.

Most of them have livestock including goats, cows and buffaloes. Most of the farmers were using Urea and DAP as fertilizer, FYM was used as a fertilizer by most of the farmers. According to them the land is fertile and also suitable for different crops.

The team also met the females that were indirect beneficiaries of the watercourse Kardala. 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 and were active in household decision but they didn't own any piece of land



Maize crop at Kardla

4: Brief Profile WST/Owner;

The team visit the village kukarwarra for baseline survey. Interviews were taken from the beneficiaries. During the introduction they told about the crops grown, and some information about the land occupied by him. He was well educated and was quite aware of all the agricultural practices. The team visited his land. The farmer has agricultural land in non-canal area. He also has livestock including some cows and buffaloes. The farmer used Urea and FYM as a major fertilizer. The land is fertile and also suitable for different crops. 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 or tenancy.

5: Brief Profile of WST/Owner;

ICT team visit the village Doodh Pora Lower for baseline survey, and take coordinates and measure the WST along with OFWM Team. The beneficiaries were interviewed. They used to grow rice and maize.

And this farmer has one PHL, farmer paid him on monthly basis. Farmer told us that he hired CHL on need 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 or tenancy.

6: Brief Profile of WST/Owner;



WST Upper Dood pura

The team has visited two interventions at village dood pura named as lower dood pura WST and Upper dood pura WST. This intervention has only three beneficiaries. The WST was completed and was filled with water.

During the introduction they told about the crops grown, and some information about the land occupied by him. He was well educated and was quite aware of all the agricultural practices. The team visited his land. The farmer has agricultural land in non-canal area. He also has livestock including some cows and buffaloes. The farmer used Urea and FYM as a major fertilizer. The land is fertile and also suitable for different crops.

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 or tenancy.

7: Brief Profile WST/Owner;

The scheme was located in village Soha. The village was situated near Nalla Ager. The purpose of intervention is to provide enough water for agricultural irrigation, domestic use and also meet drinking needs of inhabitants and livestock.

During the introduction they told about the crops grown, and some information about the land occupied by him.

Main crop of the area was maize but the beneficiaries were also growing vegetables and Rice. ICT team take interview related to intervention from 6 beneficiaries, two from head, two from middle and two from tail of WC.

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

8: Brief Profile of WST/Owner;



WST Gojar Bandi



Live stock farm Gojar Bandi

ICT team visit village Gujjar Bandi intervention (WST). The Farmer is very cooperative and was quite satisfied from the OFWM department. Farmer told about land occupied by him and detail information about crops.

The main crop of the farmer was fodders. He was cultivating different types of fodders for his livestock farm. He was not using crops for commercial use but only for livestock. He had numbers of cows and buffaloes. Milk of the cows

and buffaloes was using commercially by the beneficiary.

Visit Reports of Punjab Teams

Date of Visit	WST Owner:	Name of village:	Tehsil & District:	Source of irrigation:	The shape of the water storage tank:	Size of water storage tank:	Depth of WST:	Command area of water storage tank:	No of beneficiaries:	Name of the Orchard
13-09-2022	Rana Jalil Ahmad	Kot Nisar Shah	Noshera Virkan, Gujranwala	Tube well	Square	22 ft x 22ft	6.5 ft	5.5 Acre	1	Green Chili, Bitter Gourd
14-09-2022	Shamim Haider	Lakhan Wall	Gujrat, Gujrat	Tube well	Square	22ft x 22ft	6 ft	7.83 Acres	1	Guava
15-09-2022	Rao Muhammad Farooq	47/2L	Okara, Okara	Canal + Tube well	Rectangular	80 x 70 ft	10ft	6.5 Acre	1	Citrus intercropped with Wheat, Canola, Sugarcane, Maize
16-09-2022	Arif Masood	Mojika	Chunian, Kasur	Canal	Rectangular	150 x 70ft	5.5ft	6 Acre	1	Guava, Citru, (Lemon)
16-09-2022	M Asghar	Rasool Pur Bairoon	Kasur, Kasur	Canal + Tube well	Rectangular	60ft x 45ft	5ft	1.5 Acre	1	Sugarcane

1. Water Storage Tank (Rana Jalil Ahmad)

ME&IE Consultants observed that WST was properly maintained and the quality of the material was satisfactory. WST was also used for the purpose of drip irrigation.



View of WST of Rana Jalil Ahmad



Interview session with beneficiary Rana Jalil Ahmad

According to the farmer A Water Storage Tank, has a fare impact on his farming.

Farmer installed drip irrigation system in 2019 but has no proper system to store water at his farm. According to him the time consumed to fill one acre by tube well before construction of WST was 1 to 1.5 hours. After construction WST in 2019-20, the time consumed to fill one Acre has been significantly reduced to 20-25 minutes.

The farmer has also introduced fertilizer mixing plot at his farm with the facility of drip irrigation system. The yield of various vegetables crops grown there like Cucumber, lady finger, Green Chili has been increased by 30-40%.

2 Water Storage Tank (Shamim Haider)

It was seen that the WST was properly maintained by the beneficiary. The WST was of the PCC type and during the inspection of WST it was further observed that the maintenance was as per standards.



Scenic view of WST of Shamim Haider



Data Collection done from the beneficiary Shamim Haider

Before the construction of WST, land was barren and its terrain was uneven.

Owner of WST purchased this land in 2018 at the lowest cost. He didn't introduce proper system to store the water at his farm.

After construction of WST farmer connected this to drip irrigation system and was started growing guava orchard in this land. Still this ordered is young and expected to yield next year. Value of land significantly increase.

3 Water Storage Tank (Rao M. Farooq)

Consultants visited the site and inspection was carried in which it visualized that the WST was properly maintained with proper filling of the joints. The owner informed that he is using WST for farming in addition to use this water for irrigation purposes.



Pictorial View of Concreted WST



Figure 6: Field Team Members collecting data from the beneficiary Rao Muhammad Farooq

Before construction of Water Storage Tank, he used to cultivate wheat, maize, sunflower and now after construction of WST he started intercropping he grow guava, orchard and in orchard the primpingly grown crops are again is intercropping. The yield of maize and sunflower has increased by 30%

He says that he saves the fertilizers quantity because he mixes the fertilizer in the pond and used it by drip irrigation.

He also used FYM as a fertilizer in the WST and also the food of fishes.

4 Water Storage Tank (Arif Masood)

During the visit of ME&IE consultant it was seen that the WST's geomembrane was eroded from different patches which showed negligence in the maintenance. The farmer told the team that the maintenance problem aroused because the high temperature made the membrane stiff from regular freeze and thaw cycles that made membrane eroded.



Interview session with the Beneficiary Arif Masood

The Land was barren, and this area was the path of River. (Salaba land) before construction of Water Storage tank.

After constructed of Water Storage Tank and he grow the Guava orchard in this land. Orchard is still young expected yield in next year.

The farmer is expecting that the intervention will reap good results.

5 Water Storage Tank (M. Asghar)

ME&IE consultants observed that the WST was maintained properly and the quality of the material was satisfactory. The farmer was quite satisfied with the performance of the WST.



*Beautiful View of Concreted WST in which
Orchard is shown in the background*



*Beneficiary giving its input during the Data
Collection session*

Mr. Asghar informed that he is using WST for irrigation purposes. He stores the canal water in the pond and then use it for irrigation.

He growing Sugarcane and other crops production also increased and yield is increase.

Expected that in near future the WST will impact a significant profit in his farm income returns.

Visit Reports of KP Teams

Details of the WC/WST						
Name of Watercourse/WST	Abdul Qadir TWWC	Ahsan Hayat TWWC	Asim Altaf TWWC	Habib Ullah TWWC	Sona Khan TWWC	Gulo Khan TWWC
Type of watercourse/WST	PVC 3 Inch	PVC 4 Inch	PVC 4 Inch	PVC 4 Inch	PCPS	PVC 6 Inch
Category of water course	Tube Well	New	New	New	New	New
Culturable Command Area (CCA) Acers	16 Acer	13 Acer	17 Acer	25 Acer	68 Acer	14 Acer
Sanctioned Length of Watercourse	678	800	930	1100	528	402
Measured Length of Watercourse	0	0	0	0	0	0
No. of beneficiaries	12	10	9	21	6	12
District	Kohat	Kohat	Kohat	Bannu	DiKhan	Bannu
Tehsil	Kohat	Ghumbat	Ghumbat	Domel	Pharpure	Laki Marwat
Village	Ghulam Banad/ Togh	Bali tang/ Togh	Gumbat	Azeem kala	Rodi Khel	Mela Shahab khel
Cropping pattern Rabi and Kharif	Rabi: Wheat, Garlic Kharif: Maize Fodder, Vegetable	Rabi: Wheat, Garlic Kharif: Maize Fodder, Vegetable	Rabi: Wheat, Garlic Kharif: Maize Fodder, Vegetable	Rabi: Wheat, Grain Kharif: Maize Fodder, Vegetable	Rabi: Wheat Kharif: Maize Fodder, Vegetable	Rabi: Wheat Kharif: Maize Fodder, Vegetable
Water Logging & Salinity	No	No	No	No	No	No
Warabandi System	No	No	No	No	No	No

Designed Discharge	7.21 LPS	13.4 LPS	11.91 LPS	12.15 LPS	24 LPS	35 LPS
Main Source of water	Tube Well					
Additional Source of water	No/ Barani					
Date of Technical Sanction	6/10/2020	6/10/2020	26/06/2020	8/12/2020	9/11/2020	6/1/2021

Details of the WC/WST						
Name of Watercourse/WST	Shakir Tube well WC	Nazakat Khan TWWC	Abid Gul Pipe WC	Baghoter Doga Pipe WC	Ashaiq Hussain TWWC	Moeen Pipe WC
Type of watercourse/WST	PVC"5	PVC"4	PVC	PVC"3	PVC"	PVC
Category of water course	Regular (New)	Regular (New)	Regular (New)	Regular (New)	Regular (New)	Regular (New)
Culturable Command Area (CCA) Acers		7	5	26	12.5	5.4
Sanctioned Length of Watercourse						
Measured Length of Watercourse	N/A					
No. of beneficiaries	2	1	1	20	1	1
District	Haripur	Haripur	Abbottabad	Abbottabad	Mansehra	Mansehra
Tehsil	Haripur	Haripur	Abbottabad	Abbottabad	Mansehra	Mansehra
Village	Mohrri Malya	Jagal Deendha	Chuna Kaari	Mera Doga	Maswal	Ather Sheesha

Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetable Kharif: Maize, Vegetable	Rabi: Wheat, Vegetable Kharif: Maize Vegetables	Rabi: Vegetables Kharif: Vegetables	Rabi: Wheat, Vegetables Kharif: Maize, Vegetables	Rabi: Tobacco Kharif: Peas	Rabi: Vegetables Kharif: Vegetables
Water Logging & Salinity	Nil	Nil	Nil	Nil	Nil	Nil
Warabandi System	N/A	N/A	N/A	N/A	N/A	N/A
Designed Discharge	Lps: 22					
Main Source of water	Tube well	Tube well	Tubewell	Spring	Tube Well	Tubewell
Additional Source of water	Nil	Nil	Nil		Nil	Nil
Date of Technical Sanction		7/11/2020	16/11/2020	21/05/2021	10/11/2020	5/5/2021

Details of the WC/WST						
Name of Watercourse/WST	Badiuzaman Pipe WC	Jaga Baala WC	Nazakat Khan WST	Noor Al Amin TWWC	3077/R TWWC	Shad Muhammad TWWC
Type of watercourse/WST	PVC	PCC (Rectangular)	Square	HDPE Pipe	PCPS	PCPS
Category of water course	Regular (New)	Regular (New)		New	Additional Lining	Regular (New)
Culturable Command Area (CCA) Acres	3 Acres Of one beneficiary	70	7	38 Acer	114 Acer	28
Sanctioned Length of Watercourse		205	Length 1: Length 2:	583	806	531
Measured Length of Watercourse		221	Width 1: Width 2: Depth:	0	0	Nil

No. of beneficiaries	1 interviewed	9	1	10	15	9
District	Battagram	Torgar	Haripur	Charsadda	Charsadda	Peshawar
Tehsil	Battagram	Judba	Haripur	Tangi	Tangi	Peshawar
Village	Dharia	Jaga Bala	Dhenda	Koz Bahram/ Mar Dhand	Muzafer Kallay	Tela Band
Cropping pattern Rabi and Kharif	Rabi: Wheat, Rice, Vegetables Kharif: Maize, Vegetables	Rabi: Wheat, Vegetables Kharif: Rice, Maize & Vegetables	Rabi: Wheat & Vegetable Kharif: Maize, Vegetable	Rabi: Wheat , Onion Kharif: Fodder	Rabi: Wheat , Garlic Kharif: Fodder	Rabi: Wheat, Vegetable Kharif: Maize Vegetables
Water Logging & Salinity	Nil	Nil	Nil	No	No	Nil
Warabandi System	N/A	Yes	N/A	No	No	N/A
Designed Discharge		Lps: 32		24 LPS	28.89 LPS	1 Cusec
Main Source of water	Natural Stream	Natural Stream	Solar Tube well	Tube Well	Canal	Tube well
Additional Source of water	Nil	Nil	Nil	No/ Barani	No/ Barani	Nil
Date of Technical Sanction	5/5/2021	25/05/2021	4/11/2020		14/2/202	24/01/2020

Details of the WC/WST						
Name of Watercourse/WST	70000/L Hazar Khwani	159000/L WGC	Aqeel Afzal WST	Abid Khan WST	9284/TF	Mehtab Ahmad TWWC
Type of watercourse/WST	PCPS	PCPS	Square	Square	PCPS	Rectangular Brick
Category of water course	Regular (New)	Regular (New)	Regular (New)	Regular (New)	Additional Lining	

Culturable Area (CCA) Acers	500	250	15	12	330 Acer	9.5 Acer
Sanctioned Length of Watercourse	592	1406	Length 1: 2: Length 2:	Length 1: 2: Length 2:	0	0
Measured Length of Watercourse	Nil	Nil	Width 1: Depth: 4. Width 2:	Width 1: Depth: 4. Width 2:	0	0
No. of beneficiaries	30 But Interviewed only two farmers due to non-availability	49	1	1	13	10
District	Peshawar	Peshawar	Peshawar	Haripur	Nowshera	Tank
Tehsil	Peshawar	Peshawar	Peshawar	Ghazi	Bara Banda	Tank
Village	Urmari Miana	Urmari Miana	Garhi Chandan	Khair Bara	Bara Banda	Maidad Khel
Cropping pattern Rabi and Kharif	Rabi: Wheat, vegetable Kharif: Maize, vegetable, Orchard	Rabi: Wheat, Vegetable, Orchard Kharif: Maize, Vegetable	Rabi: Wheat, Vegetable Kharif: Maize, Vegetable	Rabi: Wheat, Vegetable Kharif: Maize, Vegetable	Rabi: Wheat Kharif: Fodder	Rabi: Wheat, Grain Kharif: Fodder
Water Logging & Salinity	Nil	Nil	Nil	Nil	No	No
Warabandi System	Exist	Exist	N/A	N/A	No	No
Designed Discharge	2.82 Cusec	3.17 Cusec	Lps: 10	Lps: 4	80 LPS	0 LPS
Main Source of water	WGC Canal	Canal (WGC)	Solar Tube well	Tube well	Canal	Tube Well
Additional Source of water	Nil	Nil	Nil	Nil	No/ Barani	No/ Barani
Date of Technical Sanction	7/2/2020	7/2/2020	19/04/2021	1/12/2020	2/6/2021	

Details of the WC/WST						
Name of Watercourse/WST	Ahmad Ali WST	Muhammad Zaib TWWC	Ali Sarwar TWWC	1700/L	Fazle Subhan	6550/R
Type of watercourse/WST	Rectangular	PVC	PCPS	PCPS		PCPS
Category of water course	Regular (New)	Regular (New)	Regular (New)	Regular (New)	Regular (New)	Regular (New)
Culturable Command Area (CCA) Acres	10 Acres	12 Acres	30 Acres	150 Acres	17 Acre	Acre
Sanctioned Length of Watercourse	Length 1 : 11 Width 1 :10 Depth: 1.36		698 M	1610 M		670
Measured Length of Watercourse	Length 2 : 11 Width 2 :10		253 M	322 M		
No. of beneficiaries	1	1	2	2	1	2
District	Mardan	Mardan / Rustam	Mardan / Mardan	Mardan	Mardan/Takhtbai	Mardan/Rustum
Tehsil	Rustum	Rustum	Mardan / Mardan	Mardan	Takhtbai	Rustum
Village	Beroch	Nakhtar Banda	Garyala	Nadir Sher Garh	Ikram Pur	Rasheed Abad
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maiz, Orchard (Citrus)	Rabi: Wheat, Vegetable Kharif: Maize, Vegetable, Orchard	Rabi: Wheat Kharif: Maize	Rabi: Wheat, Vegetable, Fodder Kharif: Maize	Rabi: Wheat Kharif: Maize, Orchard	Rabi: Kharif: Maize
Water Logging & Salinity	Nil	Nil	Nil	Nil		
Warabandi System				N/A	Nil	Nil

Designed Discharge	8		Lps:	Lps:		LPS
Main Source of water	Tube well	Tube well	Tube well	Tube well	Tube well	Canal
Additional Source of water	Nil	Nil	Nil	Nil	Nil	Nil
Date of Technical Sanction	10/11/2020	12/2/2022	30-10-2020	10/3/2020	22-01-2020	16/11/2020

Details of the WC/WST						
Name of Watercourse/WST	026/L	Baaz Muhammad TWWC	Iftikhar WST	Rahaj Gul WST	Sawab Ud Din WST	Muhammad Tahir Shah TWWC
Type of watercourse/WST	HDPE	PVC	Bricks Masonry	Bricks Masonry	Bricks Masonry	PVC
Category of water course	Regular (New)	Regular (New)	Square	Square	Square	Regular (New)
Culturable Command Area (CCA) Acres	Acres	15 Acres	15 Acres	10 Acres	12 Acres	40 Acres
Sanctioned Length of Watercourse	173 M	400 M	Length 1 : 12 Width 1 : 12 Depth: 1.36	Length 1 : 12 Width 1 : 12 Depth: 1.36	Length 1 : Width 1 : Depth:	1600 M
Measured Length of Watercourse			Length 2 : 12 Width 2 : 12	Length 2 : 12 Width 2 : 12	Length 2 : Width 2 :	700 M
No. of beneficiaries	2	2	1	1	1	1

District	Swabi/Swabi	Swabi/Swabi	Nowshera	Nowshera, jahangira	Nowshera, Jahangira	Nowshera, Nowshera
Tehsil	Swabi/Swabi	Swabi/Swabi	Nowshera	Jahangira	Jahangira	Nowshera, Nowshera
Village	Bajawand	Boko	Manai	Umary Kaly	Mera Akora	Dheri Kahi Khel
Cropping pattern Rabi and Kharif	Rabi: Kharif:	Rabi: Wheat, Tobacco Kharif: Maize, Bean Sugarcane	Rabi: Wheat Kharif: Maize, Orchard	Rabi: Orchard Kharif:	Rabi: Wheat, Sugarcane, Veg Kharif: Maize, Veg	Rabi: Wheat, Tobacco Kharif: Maize, Bean Sugarcane
Water Logging & Salinity			Nil	Nil	Nil	Nil
Warabandi System	Nil	Nil	N/A	N/A	N/A	
Designed Discharge	Lps: 30	Lps:	Lps: 6	Lps: 7	Lps:	Lps:
Main Source of water	Canal	Tube well	Tube well	Tube well	Tube well	Tube well
Additional Source of water	Nil	Nil	Nil	Nil	Nil	Nil
Date of Technical Sanction	7/2/2020	6/2/2020	31-Dec-20	12-Dec-20	7-Dec-20	23-Nov-20

Details of the WC/WST						
Name of Watercourse/WST		Muhammad Akbar TWWC	3900/R WC	Abdullah TWWC	Sartaj TWWC	15881/L TWWC
Type of watercourse/WST		PVC	PCPS	PCPS	PCPS	PCPS

Category of water course	Regular (New)	Regular (New)	Regular (New)	Regular (New)	Regular (New)
Culturable Command Area (CCA) Acres	3 Acre	251 Acres	45 Acres	20 Acres	462 Acres
Sanctioned Length of Watercourse	400 M	2790 M	870	1475 M	1200 M
Measured Length of Watercourse	200 M	837 M	290	590 M	578 M
No. of beneficiaries	1	3	12	15	15
District	Nowshera, jahangira	Nowshera, jahangira	Nowshera, Pabbi	Nowshera, Nowshera	Nowshera, Nowshera
Tehsil	Jahangira	Jahangira	Pabbi	Nowshera, Nowshera	Nowshera, Nowshera
Village	Umaray Kali	Boko	Dag ismail khel	Khweshgi Mera	Misri Banda
Cropping pattern Rabi and Kharif	Rabi:Wheat, Sunflower, Vegetable Kharif: Maize, Vegetable	Rabi:Wheat Kharif: Maize, Sugarcane	Rabi:Wheat, Vegetable Kharif: Maize, Orchard	Rabi:Wheat, vegetable Kharif: Maize, Sugarcane	Rabi: Wheat ,Tobacco Kharif: Maize
Water Logging & Salinity	Nil	Nil	Nil	Nil	Nil
Warabandi System					
Designed Discharge	Lps:	Lps:	Lps: 9	Lps:	Lps: 90
Main Source of water	Tube well	Tube well	Tube well	Tube well	Tube well
Additional Source of water	Nil	Nil	Nil	Nil	Nil
Date of Technical Sanction	7-Jun-21	12-Dec-21	22-Apr-20	19-Aug-20	11-Jun-20

Scheme-wise details are presented as follows:

1. Water Course No & Name: Abdul Qadir TWWC
Ghulam Banda/ Togh Kohat KPK 2021-22)

Date: 31 August 2022

Description:

Team Visit: KP Team

Outcome of visit: Midline Impact Survey

Observation

Water User Association

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

The scheme was completed on 5/11/2020. Team visited before for Baseline and Monitoring 16/08/2021.

Water Table:

Underground water was available on 18 feet but the quality of water was good for drinking and agriculture purposes.

Farming Status:

Abdul Qadir was the owner of 16 Acres among which cultivated land was 15 Acer. Two farmer Gul Akbar and Muhammad Iran was doing forming activities on the above land.

Status of Gul Akbar Farming:

Gul Akbar was doing forming activities on 8 acres. Last year he cultivated Wheat, Garlic and Maize.

Wheat was grown on 4 acres. Total production of wheat was 90 mounds and cost of production at form level was Rs 969/40kg mound. Average yield of wheat production was 22.5 mounds/acre.

Garlic: Garlic was grown on 3.5 acres. Total production of garlic was 122 mounds and cost of production at farm level was Rs 1145/40kg mound. Average yield of wheat was 34.85 mounds/acre.

Maize: Maize was grown on 4 acres. Maize was sold out on Rs 23000 Per Acer while totally on Rs 92000.

The cost of production at form level was Rs 10200 per acre.

Status of Muhammad Irfan Farming:

Muhammad Irfan was doing farming on 8 acers. Last year he grew in Rabi season Wheat and in Kharif season fodder, Maize.

Wheat was grown on 7.5 acres. Total production of wheat was 170 mounds (yield 22.6 mounds per acre)

Maize: Maize was grown on 3.5 acres. Maize was sold out by the farmer on Rs 24000 Per Acre while totally on Rs 84000.

Social and Gender Information:

Female was not the part of the water user association and was not actively involved in forming activities.



*Interview with Gul Akbar and Muhammad Irfan
the farmer of Abdul Qadir TWWC Ghulam
Banda Kohat*



Maize Crop badly Affected from Rain Water

2. **Water Course No & Name: Ahsan Hayat
TWWC Bali Tang/ Ghumbat Kohat KPK
(2020-21)**

Date: 1 August 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Impact Evaluation Survey

Observation and findings

Water User Association

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

The scheme was completed on 5/11/2020. Team visited before for Baseline and Monitoring on 13/08/2021. Last year when team visited for BLS and Monitoring former Akhter Ali and Alim Khan was doing forming on the above scheme but currently Muhammad Ali Khan doing farming activities. Muhammad Ali Khan rent in the 13 acers land on Rs 5,00,000 per annum.

Water Table:

Underground water was available on 60 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Ahsan Hayat was the owner of the land among which cultivated land was 13 Acer.

Status of Muhammad Ali Khan Farming:

Muhammad Ali Khan was doing farming activities on 13 acers.

Wheat was grown by the former on 5 acres. Total production of wheat was 150 mounds and cost of production at farm level was Rs 818/40kg mound. Average yield of wheat was 30 mounds/acre.

Garlic: Garlic was grown on 2.5 acres. Total production of garlic was 100 mounds and cost of production at farm level was Rs 1142/40kg mound. Average yield of Garlic was 40 mounds/acre.

Kharif Fodder: Maize was grown on 2.5 Acres which was used by the former for domestic purposes of feeding animals.

Social and Gender Information:

Female was not part of the water user association and was not actively involved in forming activities.



Interview with Muhammad Ali Khan the farmer of Ahsan Hayat TWWC Bali Tang Kohat



Farmer Stored Straw of Wheat for Animal and for selling in Peak session

3. **Water Course No & Name: Asim Altaf TWWC
Ghumbat/ Ghumbat Kohat KPK (2019-20)**

Date: 1 August 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Impact Evaluation Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

The scheme was completed on 5/11/2020. Team visited before for Baseline and Monitoring

15/06/2021. Last year when team visited for BLS and Monitoring former Asim Altaf, was doing forming on the above scheme but currently Muhammad Ali Khan has rented in 13 acre land on Rs 5,00,000 per annum.

Water Table:

Underground water was available on 15 feet but the quality of water was good for drinking and agriculture purposes.

Status of Asim Altaf Farming:

Asim Altaf was the owner of the land and did farming on 17 Acres land among which cultivated land was 15 Acres

Wheat was grown by the farmer on 6.25 acres. Total production of wheat was 100 mounds and cost of production at farm level was Rs 1409/40kg mound. Average yield of wheat production was 16 mounds/acre.

Garlic: Garlic was grown by the farmer on 2 acres. Total production of garlic was 22.5 mounds and cost of production at farm level was Rs 3911/40kg mound. Average yield of wheat production was 11.25 mounds/acre.

Kharif Fodder: Maize was grown on 5 Acer which was used by the former for domestic purposes of feeding animals.

Social and Gender Information:

Female was not part of the water user association and was not actively involved in farming 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.



Interview with the farmer of Asim Altaf TWWC Ghumbat Kohat



Farmer Removing Straw from Garlic

Water Course No & Name: Habib Ullah TWWC

Azem Kaly/ Domil Bannu KPK (2020-21)

Date: 2 Sep 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Midline Impact Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

Team visited before for Baseline and Monitoring 18/06/2021. Last year when the team visited for BLS and Monitoring, farmer Noor Alam was farming on 4 Acres and Zahid Ullah was doing farming activities on 12 Acres. Due to some family dispute and domestic issues 4 Acres land of Noor Alam and 5 Acres land of Zahid Ullah was fallow not cultivated in this session.

Water Table:

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

Status of Zahid Ullah Forming:

Zahid Ullah was the owner of the land and doing farming on 12 Acer land.

Wheat: was grown on 10.5 acres. Total production of wheat was 250 mounds and cost of production at farm level was Rs 1217/40kg mound (?). Average yield of wheat production was 23.8 mounds/acre.

Grain: Grain was grown on 5 acres. Total production of garlic was 6 mounds and cost of production at farm level was Rs 17420/40kg

mound. Average yield of wheat production was 1.2 mound/Acer.

According to the farmer Zahid Ullah the production of Grain was very low as the grain crops were affected by rust disease.

Kharif Fodder: Kharif Fodder was grown on 2 Acer which was used by the former for domestic purposes of feeding animals.

Social and Gender Information:

Female was not part of the water user association and was not actively involved in forming activities.



*Interview with the farmer of Habib Ullah
TWWC Azeem Kaly Domil Bannu*

4. Water Course No & Name: Sona Khan TWWC Rodi Khel/ Dikhan KPK (2020-21)

Date: 5 Sept 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Midline Impact Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

Team visited before for Baseline and Monitoring 17/06/2021. Last year when the team visited for BLS and monitoring former Sona Khan, was doing farming on 15 Acres and Musa Khan was doing farming activities on 15 Acres and Gulzar Ahmad on eight acres of land.

Water Table:

Underground water was available on 30 feet.

Status of Farming:

Sona Khan was the owner of the land and doing farming on 38 Acer land.

Wheat: was grown on 30 acres. Total production of wheat was 750 mounds and cost of production at farm level was Rs 757/40kg mound. Average yield of wheat production was 25 mounds/acre.

Kharif Fodder: Kharif Fodder Janther Jenjan was grown on 6 acres which was used by the farmer for domestic purposes of feeding animals.

Social and Gender Information:

Female was not part of the water user association and was not actively involved in forming activities.



*Interview with the farmer of Sona Khan TWWC
Rodi Khel Dikhan*



Farmer land affected from Flood Water

5. **Water Course No & Name: Gulo Khan TWWC
Wanda Dalan/ Lakki Marwat KPK (2020-21)**

Date: 3 Sep 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Midline Impact Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

Team visited before for Baseline and Monitoring 16/06/2021. Last year when the team visited for BLS and monitoring farmer Feroz Khan was doing farming on 3 Acres and Abdul Qayum was doing farming activities on 2.87 Acres and Abdul Rehman on 2 acres.

Water Table:

Underground water was available on 30 feet.

Status of Inam Ullah Forming:

Inam Ullah was the owner of the land and doing farming on 14 Acer land.

Wheat: was grown by the farmer on 9 acres. Total production of wheat was 300 mounds and cost of production at form level was Rs 582/40 kg mound. Average yield of wheat was 33.8 mounds/acre.

Rabi Fodder: Berseem was grown on 5 acres. 1 Acer was used for the domestic purpose of feeding animals while 4 acres was sold out at Rs 64000 per acre while totally on Rs 256000.

Kharif Fodder: Kharif Fodder Janther Jenjan was grown on 3 Acres which was used by the former for domestic purposes of feeding animals.

Social and Gender Information:

Female was not 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.



*Interview with the farmer Inam Ullah at TWWC
Gulo Khan TWWC Lakki Marwat*

6. **Water Storage Tank: Mehtab Ahmad WST
Maidad Khel/ Tank KPK (2020-21)**

Date: 13 Sep 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Impact Evaluation Survey

Observations and findings

Team did not visit the WST properly as the road of scheme at District Tank was damaged due to flood and there is no way of access to reach the site properly. So the team takes the information telephonically for impact surveys.

Status of Water Storage Tank:

Mehtab Ahmad Water Storage Tank was completed last year and the team visited there for BLS & Monitoring. The owner of the land was doing farming activity personally on the 9.25 Acer land.

Status of Shabir Ahmad Forming:

Shabir Ahmad was the owner of the land and doing farming on 9.25 Acres land. Last year he grew only wheat on 9 Acer land and total production of wheat was 112 mounds/Acer average yields was 12.44 mounds/Acer.

This year the farmer grows Wheat and Grain on 5.5 and 2.75 respectively. The production of crops was following.

Wheat: Wheat was grown on 5.5 acres. Total production of wheat was 77.5 mounds and cost of production at form level was Rs 846.41/40kg mound. Average yield of wheat production was 14.09 mounds/acre.

Grain:

Grain was grown by the farmer on 2.75 acres. Total production of Grain was 30 mounds and cost

of production at form level was Rs 1229/40kg mound. Average yield of wheat production was 10.90 mounds/acre.

Kharif Fodder: Kharif Fodder Maize was grown on 2.5 Acer which was used by the former for domestic purposes of feeding animals.

Impact on Cropping:

According to the farmer Shabir Ahmad my land was Barani and irrigated by flood water of stream. Then I decided to installed tube well on my land. When I installed tube well I started cultivation my land but the necessities of water for cultivation was not sufficient in Kacha unlined water course. Then I requested OFWM Tank for WST and my application was improved. Now I cultivated my land in both session and my income was increased due to cash crop like Wheat, Grain, fodder and Vegetable. Last year the average yield of wheat on 9 Acres was 12.44 mounds/acre while this year the average yield was 14.09 mounds/acre and was increased by **2 mounds/acre**.

Observations and findings

The farmer has kept the WST very clean and nice. Our team noticed greenery in the field opposite last year where there **were** no crops on the field. The Maize crop looks very good and a good yield is expected for the first time. The farmer told our team that he is very happy with the wheat crop this year and that the wheat production has increased prominently.

7. Water Course No & Name: Noor Al Amin TWWC Mardhand/ Charsadda KPK (2020-21)

Date: 7 Sep 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Midline Impact Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

Noor Al Amin, the owner of the land, was doing farming activity personally on the 10 Acer land. Fifteen acres land was fallow and needed to be

improved. The scheme was completed and Team last year visited for BSL and Monitoring.

Water Table:

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

Status of Noor Al Amin Forming:

Noor Al Amin was the owner of the land and doing farming on 10 Acer land.

Wheat: Wheat was grown on 4 acres. Total production of wheat was 93.7 mounds and cost of production at form level was Rs 1287/40kg mound. Average yield of wheat production was 23.44 mounds/acre.

Onion:

Onion was grown by the farmer on 2.5 acres. Total production of Onion was 900 mounds and cost of production at form level was Rs 304/40kg mound. Average yield of wheat production was 360 mounds/acre.

Kharif Fodder: Kharif Fodder Maize was grown on 2.5 Acer which was used by the former for domestic purposes of feeding animals.

Impact on Cropping:

According to the farmer the land was arid and not able for cultivation. He installed a tube well on his land. But the water for cultivation was not sufficient in Kacha unlined water course. Then the ONFWM Charsadda provided a Pipe water course. Now I cultivated my land in both seasons and my income has increased due to cultivation of cash crops like Wheat, Onion, and vegetables.



Noor Al Amin TWWC Charsadda.

8. **Water Course No & Name: 3077/R TWWC**
Muzafar Kally/ Charsadda KPK (2019-20)

Date: 7 Sep 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Midline Impact Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

The scheme was completed and Team last year visited for BSL and Monitoring.

Water Table:

Underground water was available on 40 feet but the quality of water was good for drinking and agriculture purposes.

Status of Farming:

Two farmers were interviewed for farming intervention on the scheme. Ajmal Khan was farming on 5.5 Aver land and Adbar Khan was farming on 2.5 Acres land.

Farming of Ajmal Khan:

Wheat: Wheat was grown on 2 acres. Total production of wheat was 90 mounds and cost of production at form level was Rs 675/40kg mound. Average yield of wheat production was 23.44 mounds/acre.

Tobacco:

Tobacco was grown by the farmer on 2 acres. Tobacco was sold out at Rs 340,000 while per acre at Rs,170,000 (?)

Kharif Fodder: Sorghum was grown on 1.5 Acer and was sold out at Rs 10,000 as a whole.

Farming of Idbar Khan:

Wheat: Wheat was grown on 1.5 acres. Total production of wheat was 62.5 mounds and cost of production at form level was Rs 928/40kg mound. Average yield of wheat production was 41.67 mounds/acre.

Garlic:

Garlic was grown by the farmer on 1 acre. Total production of Garlic was 25 mounds and cost of production at form level was Rs 1062/40kg mound. Average yield of wheat production was 25 mounds/acre.

Impact on Farming:

According to both farmers our land now irrigated properly after construction of PCPS water course. Water was not reaching us before the WC and taking a lot of time till reaching us in an unlined portion. Now the time of water flow was reduced to 20 minutes till reaching us from Mogha point. Similarly, our farming activities were also increased as water shortage was decreased up to 50% was noticed by us.

Due to watercourse our land was cultivated properly and our income was increased due to Wheat, Garlic, and Vegetable. Fodder for livestock was sufficient now for us.



Interview with the farmer of WC 3077/R TWWC Charsadda.



WC 3077-R Water Course Structure



Using Pygmy Current Meter for measuring water Flow

9. **Water Course No & Name: 9284/TF Bara Banda/ Nowshera KPK (2019-20)**

Date: 8 Sep 2022

Description:

Team Visit: KP Team 2

Outcome of visit: Midline Impact Survey

Observations and findings

Water User Association Information:

Water user association was formed but not functional. No Record of water user association of meeting and problem solving was found.

Status of Water Course:

The scheme was completed and Team last year visited for BSL and Monitoring.

Water Table:

Underground water was available on 30 feet but the quality of water was good for drinking and agriculture purposes.

Status of Forming:

Two farmers were interviewed for farming intervention on the scheme. Anwar ullah was farming on 5.5 Acres land and Mustaman was farming on 11.5 Acres.

Farming of Anwar Ullah Khan:

Wheat: Wheat was grown on 3 acres. Total production of wheat was 55 monds. Average yield of wheat production was 18 pounds/acre.

According to the farmer our Wheat crop was affected by disease and cropping yield was very low.

Maize:

Maize was grown by the farmer on 1 acre and was used by the farmer for domestic purposes of feeding animals.

Farming of Mastaman Khan:

Wheat: Wheat was grown on 11 acres. Total production of wheat was 187.5 pounds and cost of production at farm level was Rs 1821/40kg mound. Average yield of wheat production was 17.04 pounds/acre.

Impact on Farming:

According to both farmers we are facing a lot of hurdles for the irrigation of water from Canal Water. As the Mogha was very far away from the land and we used labor for bringing water to our land for irrigation. After the water course improvement, a lot of our time was reduced and now water was sufficient for irrigation.

Cropping intensity was also increased (?) due to the water course, we now grow Wheat, vegetables, Fodder for animal feeding every year.



Interview with the farmer of WC 9284/TF
TWWC Nowshera.



WC 9284/ TF Water Course Structure.

10. Water course No & Name/Water Storage Tank

Name

Date: 31/08/2022

Description:

Team Visit: Team 3 (Haripur)

Outcome of visit: Visit for Impact Survey

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 his cropping intensity has increased and now he is cultivating wheat, vegetables, maize, and vegetables.

The yield of wheat was 17 mound per Acre, the reason of low yield is, he used seed of their own Before lining his land was totally rainfed and the land was also uneven, he was farming on half of his land and he cultivated only wheat. But now he developed and leveled his total 10 Acres land for farming, and he also rented 6.25 acres for which he paid about 52000/- rupees per acre.

The farmer has their own tractor, which he uses for all purposes such as ploughing, for carriage of fertilizer, for harvesting, for irrigation and for threshing, and he is paying only diesel cost for all the activities.

The second beneficiary Qamar Zaman has 3.8 Acres, before the scheme he was cultivated only maize but now he is cultivating peas also

In the previous season the yield of maize was 48 mounds per acre, a much unexpected figure, but he used hybrid seed and treated it very well.



Field Team 3 visited Shakir Tubewell WC for Impact survey to Tehsil & District Haripur



Field Team 3 collecting data at Shakir Tubewell WC for Impact survey Tehsil & District Haripur

Team 3 visited Shakir Tubewell WC for Impact data collection in Tehsil & District Haripur. Team members FTI Mahmood Ul Hassan, Field engr. Farhan Tayyab and Muhammad Qasim along with Sub Engineer Mr. Muhammad Asim OFWM District Office Haripur and meet there with owner of the WC at Shakir Tubewell WC. The team interviewed there two beneficiaries which we interviewed in Baseline survey, first one was Shakir Ali the owner, having 10 Acres cultivable land and he was also the Chairman of WUA and the other one was Qamar Zaman having 3.8 Acres land for farming, we interviewed both farmers for impact data.

11. Water course No & Name/Water Storage Tank Name

Date: 31/08/2022

Description:

Team Visit: Team 3 (Haripur)

Outcome of visit: Impact Survey visit

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, the CCA was 30 Kanal, beneficiary bought about 25 Kanals and now his land holding is 55 Kanal.

The owner has a Tenant, before the scheme he obtained 25000/- per Acre and now he is obtaining about 56000/- per Acre.

The farmer has no cost for irrigation because it was a solar tube well.

Before the scheme he cultivated two crops in a year but due to the availability of the water he increased his crops. He prefers to produce cash crops such as Vegetables.



Visit to Nazakat Khan TWWC Tehsil and District Haripur For Impact Survey



Interview the farmer on Nazakat khan TWWC Haripur

12. Water course No & Name/Water Storage Tank Name

Date: 01/09/2022

Description:

Team Visit: Team 3 (Abbottabad)

Outcome of visit: Impact Survey visit

Observations and findings

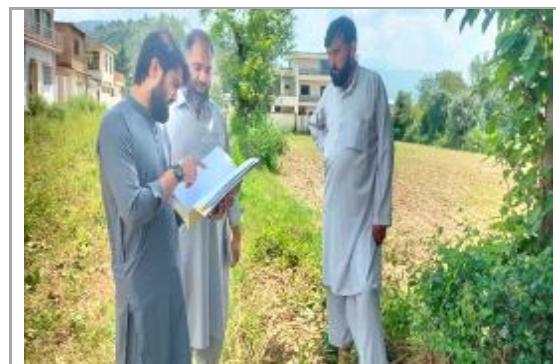
The farmer on Abid Gul pipe wc was sharecropper, he is doing farming on 50-50 share, he is producing cash crops such as Vegetables, the farmer producing Cabbage, Potato, Freshbeen, Peas and also Coriander on small piece of land.

According to the farmer the crop of the Cabbage was not good due to disease.

We observe that the cropping intensity has increased, before the scheme he cultivated 2 crops and now he is cultivating 4-5 vegetable crops.

In the total land there is about 6-8 Kanal farm land which is sandy and the water absorption is very high, so the farmer produces from that land those crops which do not need much water such as Peas and coriander.

WUA is formed but the members of the association are his family members. WUA is not functional, there are no meetings and no gathering of the association.



Field team 3 visit for Impact survey to Abid Gul Pipe WC in Tehsil and District Abbottabad



Farmers interview on Abid Gul Pipe WC

13. Water course No & Name/Water Storage
Tank Name

Date: 01/09/2022

Description:

Team Visit: Team 3 (Abbottabad)

Outcome of visit: Impact Survey visit

Observations and findings

The two beneficiaries which we interviewed are cultivated before the scheme, only maize and wheat. But after the lining of the watercourse the cropping intensity has increased from 2 to 5 crops. They started with vegetables along with maize and wheat, such as peas, Potato, Garlic and Onion, the acreage and yield are already mentioned and uploaded on server.

In this area they have no Land preparation cost because it is a hilly area and the farm was terraces type farm, so they are using their own bull for land preparation and they have no irrigation cost, they are using natural spring.

Thresher is used only for wheat, not for maize. They are doing traditional farming, no use of machinery.

Females are also participating in farming activities such as harvesting of the wheat and maize and taking care of livestock.

The Warabandi system does not exist, any one who needs water can use it, especially for vegetables.



Interview of the farmers on Baghoter Doga Pipe Watercourse

14. Water course No & Name/Water Storage
Tank Name

Date: 02/09/2022

Description:

Team Visit: Team 3 (Mansehra)

Outcome of visit: Impact Survey visit

Observations and findings

Before the lining the owner did farming by himself but after the improvement, he gave his land on lease and obtaining 120000/-

The previous pattern was Wheat and maize and now they convert to cash crops Tobacco and Vegetable (Peas).

After the lining of the watercourse the first crop is peas which he sold as such Rs. 210000/- and the second crop tobacco which he produced and still not prepared totally for sale.

The WUA members were 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.



Field team visited Baghoter Doga Watercourse for Impact survey in Tehsil and District Abbottabad



field team visit Ashiq Hussain TWWC for Impact survey in Tehsil and District Mansehra



First Grown crops after lining of watercourse
(Tobacco)



interview of the Tenant of Ashaiq Hussain the
owner

15. Water course No & Name/Water Storage
Tank Name

Date: 02/09/2022

Description:

Team Visit: Team 3 (Mansehra)

Outcome of visit: Impact Survey visit

Observations and findings

Before the intervention the owner had rented out his land on 3000 per kanal due to non-availability of water, but after lining the water course he has rented out his land on 10000 rupees per kanal.

He has also spent his own money in installing wolves in the pipe to control the flow of water and solarize his Tubewell to get more water and minimize the cost of electricity.

The beneficiary converted his cropping pattern from wheat and Maize to cash crops and now they are sowing different vegetables like Cabbage, Radish and potatoes.

The cropping pattern on the scheme is Rabi: wheat, vegetable and Kharif: maize, vegetables

WUA was not functional it was an individual based scheme, the formation of WUA is a formality to fulfill the requirement of the file.



Field visit to Moeen Pipe Watercourse Tehsil
and District Mansehra



Interviewing the beneficiary on Moeen Pipe
Watercourse

16. Water course No & Name/Water Storage
Tank Name

Date: 02/09/2022

Description:

Team Visit: Team 3 (Battagram)

Outcome of visit: Impact Survey visit

Observations and findings

The cropping intensity has increased, according to the farmers, about 200% intensity has increased. The general pattern of the area was Wheat, Maize, Rice, but now the farmers of the area are producing vegetables now.

The beneficiary which we interviewed has 3 Acres land in which rented out about 1.735 acres and he obtained 52000/- Rupees per Acre. The rest of the land is cultivating by himself in which he produces Maize and wheat.

Revenue department charging the land tax from the farmer per year, ie., Rs. 736/Acre.

On the rented out land the Tenant produces Peas, Onion, Potato, Garlic, Cauliflower in different times and seasons.



Field visit to Badiuzaman Pipe Watercourse for Impact Survey in Tehsil and District Battagram



Interviewing the beneficiary on Badiuzaman Pipe Watercourse

17. Water course No & Name/Water Storage Tank Name

Date: 03/09/2022

Description:

Team Visit: Team 3 (Torgar)

Outcome of visit: Impact Survey visit

Observations and findings

The start inlet point was damaged due to flood and the length was about 6 meters. The sanctioned length was 205 meters, but the engineer of OFWM lined it about 227 meters for the safe side, the lining which we measured is more than sanctioned lining. But the safe Wc's condition was very good. The general pattern of the area was wheat, maize, rice, vegetables.

We interviewed Rehmat Ullah on behalf of his father Muhammad Ayaan an aged and his health was not good. Rehmat Ullah has not changed his pattern but his yield is increased then before, he is cultivating vegetables for home use not for commercial base.

The second beneficiary Said Malik Now produces Wheat, Maize, Rice and vegetable for home use. Female participation is positive in the area, they perform their duties in farming activities such as sowing, harvesting, taking care of livestock, bringing drinking water and fire wood.

The farmers in the area are using hand machine name Chainchi for land preparation and the cost of the machine is about 600/- rupees per acre.

The use of fertilizer is very less in the area, the main reason is financial weakness and carriage, most of the farmers are using FYM of their own livestock. The cropping pattern on the scheme is Rabi: wheat, vegetable and Kharif: maize, vegetables



Measuring the length of Jaga Baala Watercourse Tehsil Judba District Torgar



Interview of beneficiaries on Jaga Baala Watercourse

18. Water course No & Name: Shad Muhammad TWWC, Peshawar

Date: 06/08/2022

Description:

Team Visit: Team 3 (Peshawar)

Outcome of visit: Impact Survey visit

Observations and findings

Before the lining of the watercourse the farmer cultivated inter crop in the archard of peach and Aloocha, but due to some disease they had cut down the orchard trees and now he is cultivating wheat and vegetables.

The farmer has a solar tubewell and no cost on irrigation. We interviewed the nephew of the farmer who worked on the Shad Muhammad land. Individual scheme, WUA was not functional.



Team visited Shad Muhammad TWWC for impact survey in tehsil and district Peshawar



Interviewing the beneficiary on Shad Muhammad TWWC

19. Water course No & Name: 70000/L Hazar Khwani, Peshawar

Date: 07/08/2022

Description:

Team Visit: Team 3 (Peshawar)

Outcome of visit: Impact Survey visit

Observations and findings

The beneficiary we interviewed told us that before the lining of the watercourse we irrigated our farm

by lift irrigation and we had a lot of cost on irrigation but now we have only paying Abyana or Tax of Rs. 1200/- per acre and have sufficient water. The farmer told me that now I will cultivate vegetables along with the crops which I have already cultivated.



Team 3 visited 70000/L Hazar Khwani Canal Wc (WGC) for Impact Survey in Tehsil and District Peshawar



Interviewing the beneficiary on 70000/L Hazar Khwani

20. Water course No & Name: 159000/L WGC Peshawar

Date: 07/08/2022

Description:

Team Visit: Team 3 (Peshawar)

Outcome of visit: Impact Survey visit

Observations and findings

Pattern of the area is Crops and Archard, but most of the agricultural area covered with Archard and farmers of the area are cultivating intercrops in which wheat and vegetable are mostly cultivating due to its small height.



Visited 159000/L WGC Watercourse in Tehsil
and District Peshawar



Interview of beneficiaries on watercourse

21. Water Storage Tank Name: Aqeel Afzal WST, Peshawar

Date: 06/08/2022

Description:

Team Visit: Team 3 (Peshawar)

Outcome of visit: Impact Survey visit

Observations and findings

No WUA, individual scheme.

The farmers have no cost for irrigation because it was solar tubewell and they had no labor cost and using family labor for farming.

The Pigs are found in the area and the farmer said that the Pigs are destroying our crops, especially maize.

The cropping intensity has increased, such as from maize, wheat and onion to wheat, maize, onion, Garlic, Luffa (Thori), Calabash (Lokki), Cauliflower. Means that they have much focus on cash crop.

The farmer said that this year the yield of wheat is less than the previous season due to some disease. The decrease in the yield is about one fourth.



Field team 3 visited Aqeel Afzal WST in Tehsil
and District Peshawar



Interviewing the farmer on Aqeel Afzal WST

22. Water Storage Tank Name: Abid Khan WST Ghazi, Haripur

Date: 07/09/2022

Description:

Team Visit: Team 3 (Ghazi)

Outcome of visit: Impact Survey visit

Observations and findings

Team 3 conducted telephonic interviews from Abid Khan in Village Khair Bara, Tehsil Ghazi and District Haipur.

The reason behind the telephonic interview was the worse condition of the paths and the threat from National Disaster Management Authority around the Tarbela lake area and the targeted scheme is located in the area where the threat issued from the department.

23. Ahmad Ali Water Storage Tank Rustam

Mardan

Date: 31/08/2022

Description:

Team Visit: KP Team 1

Survey Type: Impact Survey



Ahmad Ali WST



Farmers Interview at Ahmad Ali WST

24. Muhammad Zaib TWWC, Rustam, Mardan

Date: 31/08/2022

Description:

Team Visit: KP team 1

Survey Type: Impact Survey

Observations and findings

G3 KP team 1 reached M Zaib WC along with WMO Onform Mardan Mr Tufail at 9:20 AM. Our team found that the Watercourse was full of vegetation and our team suggested the farmer for cleaning

immediately. During the interview the farmer told our team that the wheat yield was 200 mounds last year which has increased to nearly 300 mounds this year on the same land. The farmer also informed our team that it always took 12 hours to irrigate 1.5 acres of his land which is reduced to 8 Hours to irrigate the same 1.5 acre land after lining the watercourse. The farmer also starts sowing Maize and vegetables after the lining of the water course. Our team noticed that there is a list of WUA members in the file but in actual WUA is not functional.



M Zaib Water course (Baisson)



M Zaib WC- Data Collection (Impact Survey)

25. Ali Serwar TWWC

Date: 31/08/2022

Description:

Team Visit: KP Team 1

Survey Type: Impact

Observations and findings

The water course was completed a year ago but according to the farmer there was no change in the wheat yield this year as compared to last year. By asking the farmer if there was any change in irrigation timing, the farmer said that it used to take 6 hours to irrigate 1 acre land but now they can irrigate the same 1 acre in 5 hours, meaning there is 1 hour difference after the water course lining. Our team didn't see any difference in cropping intensity. By probing the farmer our team think that

the main reason behind the no change in yield and cropping intensity may be that the farmer is not active and taking much interest in farming. The crops on the subject land before the lining were Wheat and Maize which remain the same after the lining of the water course.



Field area at Ali Sarwar TWWC



Ali Serwar TWWC

26. 1700/L Canal Water Course

Date: 01/09/2022

Description:

Team Visit: KP Team 1

Survey Type: Impact

Observations and findings

KP team 1 noticed some good changes after the lining of the water course. There were only 2 crops: Wheat and Maize before the lining. The farmers now growing vegetables and Fodder along with old crops i.e Wheat and Maize. Irrigation time was

saved by 30% (Approx) which is a remarkable achievement.



Data collection session (Impact survey)



1700/L Water course (Un-lined portion)

27. Fazle Subhan Water Course

Date: 01/09/2022

Description:

Team Visit: KP Team 1

Survey Type: Impact

Observations and findings

Our KP team 1 reached on site and found that Fazle Subhan was in hospital therefore his brother was interviewed on his behalf. The farmer look happy with the lining. According to farmer the wheat yield this year was 120 mound in total which was 80 mound last year. The farmer also told our team that before lining he used to irrigate 1 acre in 5-6 hours which is reduced to 3-4 hours per acre. The farmer further told our team that his generator bill reduced by 20% after the lining of water course. Our team also noticed that the Maize crop in the field looks very good and a good yield is expected. Like other water courses WUA here in also not active.



Data collection by KP team 1



6550/R Water course



Fazle Subhan Water Course



Data collection on 6550/R WC

28. 6550 / R Canal Water course

Date: 02/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and findings

The farmers on 6550/R watercourse have been growing orchards for a long time. According to the farmer, the orchard production increased this year after the lining of the watercourse. The farmer added 10 acres of land and planted some more Peach plants which are expected to start production next year. The farmer also noticed a remarkable decrease in irrigation timing.



Orchard on 6550/R WC

29. 026/L Canal Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact

Observations and findings

026/L water course was clean and no vegetation was on in the water course. Initially there were 2 crops i.e Wheat, Maize and vegetable on a small area. both in Rabi and Kharif and a new crop of Sugarcane is on the land. Irrigation time is 50% saved.

Our team also noticed that the farmer has used extra quantities of FYM and fertilizer this year.



026/L Watercourse Swabi



Maize Crop at 026/L Swabi

30. Baz Muhammad Tube well Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and observations

KP team 1 reached on site of Baz Muhammad WC Swabi and started impact survey. By questioning the farmer about the crops the former told our team a new crop of sugarcane is starting this year. Tobacco which was initially on one-acre area has increased to four acres this year due to availability of water after lining of water course. The farmer further told our team that 50% time is saved in irrigation after the lining. Maize crop this year is very good which can be seen in the above picture.



Maize Crop on Baz Muhammad WC Swabi



Data collection at 026/L Swabi



Baz Muhammad WC Swabi

31. Iftikhar Water Storage Tank

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and findings

Iftikhar (Owner) got a remarkable achievement after the WST was constructed. Before the WST there was no crop at all. The farmer now started sowing Wheat, Maize and Orchards. Wheat yield was 22 mounds from 2 acres of land this year. There was no irrigation before the construction of the WST but now the farmer irrigates three acres land. According to the farmer, two acre land is almost ready and the farmer is expecting to start farming on this in the coming season.



Iftikhar WST Nowshera



Farmer interview Iftikhar WST Nowshera

Observations and findings

The farmer on Rehaj Gul WST gave a very high figure of expenses during the interview. According to the farmer, due to the very hard earth surface plough took 4 hours per acre. The same is with weedicides and seeds the farmer used are very high. The farmer used such a high quantity of seeds and spent a heavy amount of sprays and fertilizers but the wheat yield came down from last year. Last year the wheat yield was 120 mounds which came down to 70 mounds this year. No crop has been taken from the land by farmers since the WST was constructed. The farmer was complaining about the pigs in the area and according to him the main reason for not growing the crops is the pigs. The farmer also told our team that the landlord is not taking interest in the farming activities hence there was no crop since the construction of the WST.



Rehaj Gul WST Nowshera



Rehaj Gul WST (Orang Plants)

32. Rehaj Gul Water Storage Tank

Date:

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

33. Swab Ud Din Water Storage Tank

Date:

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and findings

Half of the land before the WST was arid and the only crop was wheat. The farmer has started growing Wheat, Vegetables and Maize. Currently vegetables (Cauliflower) is the main crop of the land. Wheat is now intercropped and growing inside the orchard. The farmer told our team that 1 acre used to take 16-17 hours to irrigate which now takes 5-6 hours to irrigate the same area.



Data Collection on Sawabud din Water course

34. Muhammad Tahir Shah Tub well Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and finding

The land on Tahir Shah TWWC was uneven and mostly non culturable. The farmer spent a heavy amount of money to level the land. Initially total culturable land was 2 acres which has gone up to 12

acres after the lining of the water course. Before the lining of the water course Maize and crops were sown on less than two acre area. This year only wheat was grown on a 10 acres area which produced 250 mounds of wheat. Maize crop looks good as can be seen in the above picture. Out of 21 acres land 12 acres is culturable and according to the farmer the rest of the land is getting ready and will be under cultivation soon.



Maize crop on land of Tahir Shah, Nowshera



Data collection on M Tahir Shah WC Nowshera

35. Muhammad Zaib Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and Finding

KP team 1 reached to Muhammad Akbar water course at 9:45 am. Due to heavy rain in the area no photographs of the watercourse could be taken. The former informed our team about the crops and the yield and told our team that last year wheat yield was 4 mounds from 2 acre land. This area produced 10 mounds of wheat. The farmer also told our team that 1 acre of land was irrigated in 6 hours which has now come down and one acre land takes 2-3 hours. Before the water course there was only an orchard (Citrus) on the land. After the water course the farmer starts growing wheat, sunflower and different types of vegetables.

36. 3900/ R Canal Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and Finding

3900/R is a canal water course in Nowshera District. The watercourse was lined up last year and the beneficiaries on the water course are getting benefit of it. The farmers on the water course told our team that overall production of wheat crop has increased from 80 mounds last year to 110 mounds this year. According to farmers the irrigation system took 3 hours to irrigate 1 acre of land. Now after the lining of the watercourse it takes 50-60 minutes to irrigate 1 acre land. The farmer has also started sugarcane crop. The sugarcane as can be seen in the above picture looks very impressive.



3900/R Water Course Nowshera



Crop on 3900/R WC Nowshera

37. Abdullah Tube well Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observation and findings

The farmer during the interview with our team complained that the water is not properly reaching to the end of the land. He also told our team that the wheat crop at the end was very bad. However, overall wheat production was good and the yield this year increased comparatively to the last year. Time saving on land irrigation is 50% as per farmer statement.



Data collection on Abdullah WC Nowshera

38. Sartaj Tube Well Water course

Date: 05/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and findings

The KP team 1 reached Sartaj watercourse and started the impact survey by interviewing the beneficiaries. Overall farmers seem happy with the lining of the watercourse but the farmer doesn't see an increase in wheat production this year. According to the farmer the wheat yield was between 17-18 mounds, the same as last year. However, the farmers appreciated the time saving during irrigation. The farmers said that it used to take 7-8 hours to irrigate one-acre land which reduced to 3-4 hours per acre. Like other farmers in the area here on Sartaj WC sugarcane crop started after the lining of the water course.



ME&IE team Interviewing Farmers at site

39. 15881/L Canal Water course

Date: 08/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Observations and Findings

According to the farmers, the wheat and tobacco production increased by 25-30% this year. The farmer also told our team that irrigation time is reduced and that one acre of land is taking half of the time as compared to irrigation before the water course.

40. Wajahat TWWC and Shahin Shah TWWC

Date: 08/09/2022

Description:

Team Visit: Team 1

Outcome of visit: Impact Survey

Due to heavy floods and rain in District Nowshera the above site was not accessible. All the roads to the sites were full of water and mud and there was no chance to visit these sites.

Our KP team (one) discussed this with OFWM and tried our best to get access to these sites but it was not possible.

Our team after consultation with the DD OFWM Nowshera and after discussing with our DTL Dr Humayun khan has decided to interview the farmer by mobile phone and get the necessary data.

After contacting the farmers, they were not in a position to give us full time for an interview due to flooding in their areas however our team got some information.

According to the information we got on phone, farmers on both water courses told our team that there was some increase in the production.

According to Wajahat he noticed an increase in wheat production and that he also sown Okra and tomato this year. Jahangir of Shahin shah watercourse also saw an increase in his yield as October 3, 2022 as compared to his crop last year. Jahangir told our team that the time to irrigate their land is reduced and that he can irrigate his full land now.