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FEDERAL WATER MANAGEMENT CELL
MINISTRY OF NATIONAL
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ISLAMABAD - PAKISTAN

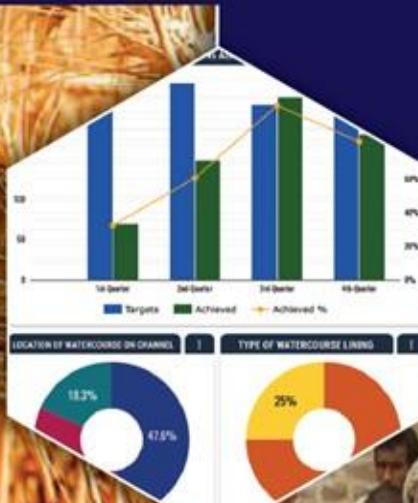
NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN PHASE-II: (NPIWC-II)

MONITORING, EVALUATION
AND IMPACT EVALUATION
CONSULTANTS



MONTHLY MONITORING REPORT

JULY 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
JULY 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
PPMU	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 July 2022” comprises five chapters:

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

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

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

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

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

Chapter-3 explains purpose of Monthly Monitoring Report (MMR). This current MMR covers the period from 1st July 2022 to 31st July 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 (June 2022)
- Data Collection of Interventions in the field the 2nd Phase of Baseline Survey
- Regular Monitoring of Interventions in the Field
- Data acquisition from Client, Data entry, Data cleaning, Data processing and analysis
- Meetings of ME&IE Consultants with Stakeholders about Project Progress / Issues
- Data collection of interventions for MIS/GIS database
- Dashboard data collection and data entry

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

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

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

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

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

No.	Activities Planned for the Reporting Quarter		Status
1	Pre-Field Activities		
1.1	Preparation for 2 nd Phase Baseline Survey	Complied	
1.2	Internal Meetings of ME&IE Consultants	Complied	
1.3	Training of Field Staff for 2 nd Baseline Survey	Complied	
2	Field Activities:		
2.1	Regular Monitoring of Interventions in the Field	Complied	
2.2	Data collection of the interventions in the field	Complied	
2.3	Baseline Survey Phase-II	In progress	
2.4	Online data entry in android-based application	Complied	
3	ICT Assignment:		
3.1	Development / Improvement of website of NPIWC-II	Complied	
3.2	Monitoring online data collection and Data entry	Complied	
3.3	Monitoring Android based Mobile Application under implementation by field staff.	Complied	
3.4	Data collection of interventions in MIS/GIS database	Complied	
3.5	Data cleaning for Dashboard for Project Interventions	Complied	
4	Coordination		
4.1	Meetings of TL ME&IE Consultants with NPC regarding Project Progress / Issues	Meetings conducted on regular basis	
4.2	Meeting of DTLs with respective DTL of NWMC	Meetings conducted on regular basis	
4.3	Internal Meetings of ME&IE Consultants	Weekly meetings conducted on regular basis	
5	Deliverables:		
5.1	Monthly Monitoring Reports (MMRs)	17 th MMR (May. 2022) 18 th MMR (Jun. 2022) 19 th MMR (Jul. 2022)	Submitted Submitted To be submitted in stipulated time
5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER Jan-Mar 2022 QM&ER Apr-June 2022	Submitted Submitted
5.3	2 nd Annual Monitoring & Evaluation Report	(July 2021 – June 2022)	Submitted
5.4	Baseline Survey Report Ph-II (Draft)	Data cleaning & Data Analysis is in progress. Report will be submitted in stipulated time	

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 (CSRD), ADA Consultants Inc. Canada, and S&S Associates.
ME&IE Consultant Mobilized:	November 20, 2020

1.2 PROJECT DESCRIPTION

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

1.2.1 Project Development Objectives

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

1.2.2 Project Objectives – General & Quantitative

Following are the project general and quantitative:

1) General Objectives:

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

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

2) Quantitative Objectives' Outputs and Impacts:

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

Project outputs

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

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

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

Project impacts

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

Project indirect benefits to industry/economic activities

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

Awareness support to farmers

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

1.2.3 Project Beneficiaries

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

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

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

1.2.4 Project Components

The NPIWC-II project comprises four components.

C1: ORGANIZATION OF WATER USERS ASSOCIATIONS:

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

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

C2: WATERCOURSE IMPROVEMENTS:

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

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

C3: CONSTRUCTION OF WATER STORAGE TANKS:

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

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

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

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**.

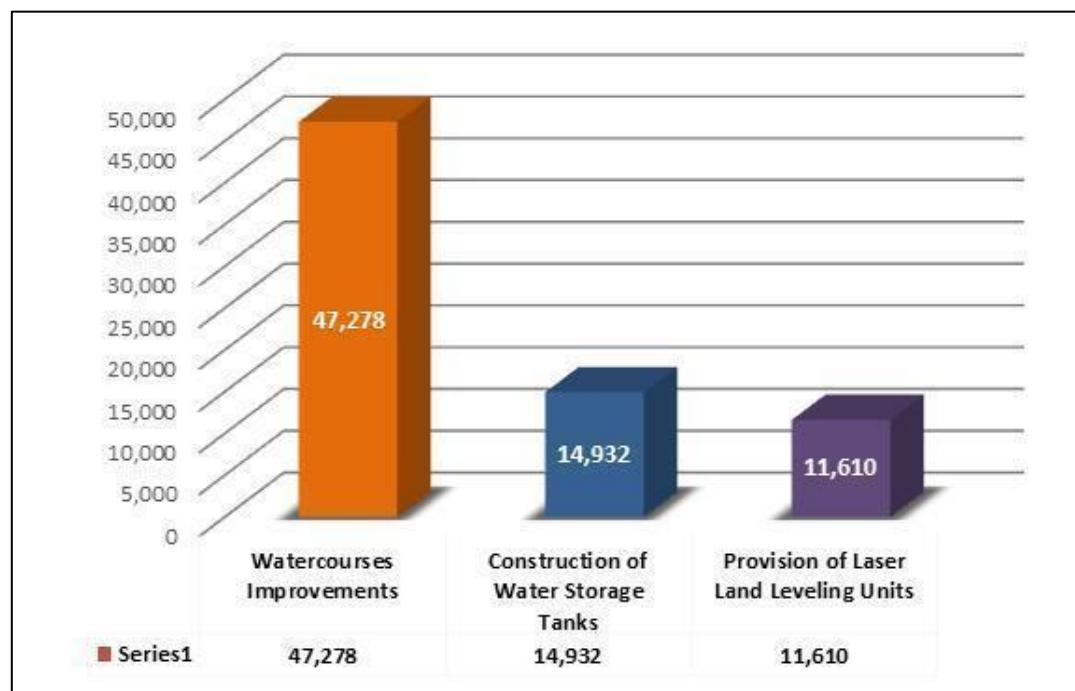


Figure 1.1: NPIWC-II Project WCs Improvement, WSTs, and LLL Targets in Pakistan.

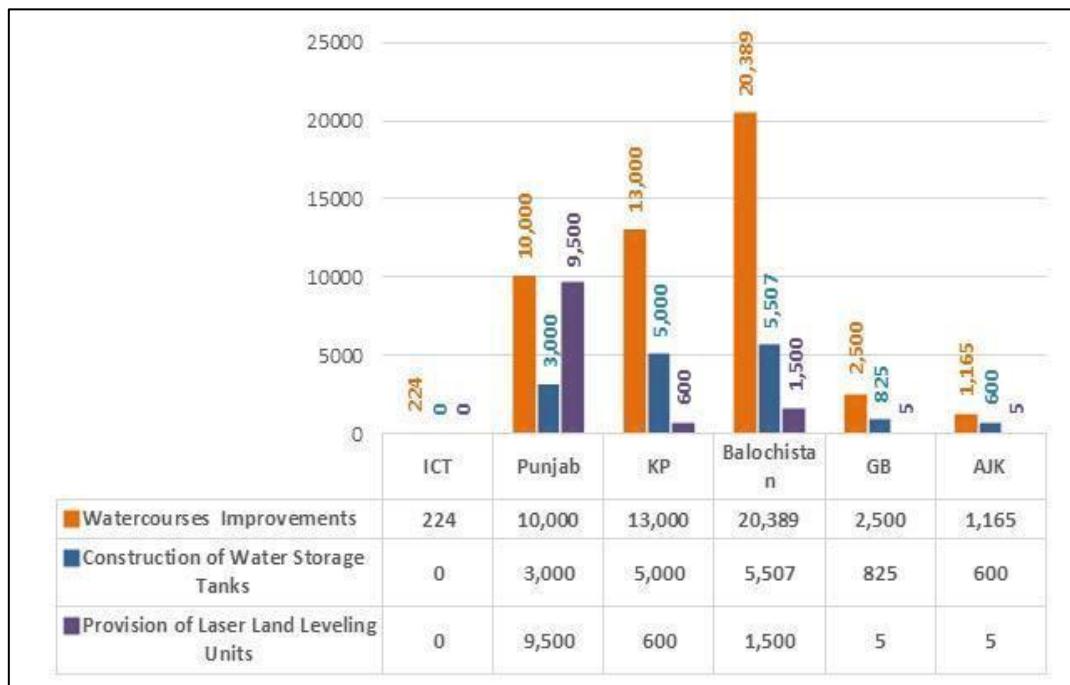


Figure 1.2: Zone-Wise WCs Improvement, WSTs, and LLL Target

CHAPTER 2: SCOPE AND SERVICES OF ME&IE CONSULTANTS

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

2.1 OBJECTIVES OF CONSULTING SERVICES

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

2.2 SCOPE OF CONSULTING SERVICES

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

- i) Undertake baseline, midline and endline surveys for the project activities / interventions in all the project areas,
- ii) Develop monitoring strategy, framework and Result-Based Monitoring (RBM) indicators,
- iii) Preparation of monthly, quarterly and annual monitoring, evaluation and validation reports of the project activities,
- iv) Assessing the water saving per annum on watercourses, water storage tanks and field levels as well as aggregate due to the project interventions,
- v) Assessing the improvement in water availability due to the provision of conveyance system,
- vi) Assessing the economic benefits to the agriculture in terms of changes in yields, irrigated area, cropping pattern, cropping intensity, farm income and employment in command area of watercourses and water storage tanks,
- vii) Assessing the extent of community

mobilization, financial and administrative sustainability of water users' associations and ensuring the maintenance of watercourses, water storage tanks and 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 and laser Levelers database, etc. (while the project staff will maintain the website),
- 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-gradation of water management GIS database.*
- *Development of web-based GIS application as a dashboard interface for comprehensive representation of all spatial and tabular information: custom designed web GIS application be developed for large LED screens, should be self-operative and represent project data on multiple layouts of application interface.*
- *Development of a MIS application as an integral part of web GIS to maintain information on facilities and services, applications, procedures, watercourses database, etc.*
- *Development of a custom designed mobile application (Android) to capture on-site project progress, geo-tagged photos; should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the management.*
- *Application should generate custom designed reports and analysis as per user-defined requirements.*
- *Application should generate alerts (SMS,*

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

2.3 MONITORING STRATEGY OF CONSULTANTS

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

Table 2.1: Monitoring Strategy for ME&IE Activities

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

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

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

2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS

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

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

CHAPTER 3: CONSULTANTS' ACTIVITIES DURING THE REPORTING MONTH

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

3.1 SUBMISSION OF MONTHLY MONITORING REPORT (MMR)

As per contractual obligation, consultants submitted eighteenth MMR for the month of June 2022 (1st June 2022 to 30th June 2022) in 1st week of current month.

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

3.2 START OF BASELINE SURVEY PHASE-II

Consultants mobilized provincial field monitoring teams to the field for data collection for Baseline Survey-II. Field teams collected data from the field as well as from the client offices through android based application and transferred to project MIS system. Data collection, data cleaning, and data analysis is in progress and Baseline Survey-II report will be submitted within due date.

3.3 REGULAR MONITORING / FIELD VISITS BY ME&IE CONSULTANTS

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

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

During the current reporting month, July, 2022, Islamabad Capital Territory (ICT) Zone team planned to carry out field visits of AJK and Islamabad territory. As a result of planned visit, 9-10 interventions were carried out at AJK region while 4-5 interventions at Islamabad territory. Since, OFWM, Islamabad had completed 14 interventions during June where it was an opportunity for the monitoring team to collect the baseline data.

The visit plan for the month of July, 2022 was shared with PD Irrigation, Mr. Basharat of AJK, who assured the cooperation at his level best with the ME&IE team members. However, due to heavy rain falls in conjunction with devastating land sliding menace, the visit to AJK was postponed. Later on, the same visit was planned to carry out after Eid-ul-Azha Holidays, however, the heavy rainfalls along with land sliding situation remained the same and so the visit was not carried out.

Another letter was sent to Islamabad OFWM office for facilitation to the ME&IE teams in order to conduct monitoring field activities. In compliance to ME&IE consultants, Islamabad zone's reminder, no official respond was provided by them. One of the team members from ME&IE called to the Water Management Officer, who responded that he is on leave and may arrange the visit during upcoming week.

In continuation of the follow up, a letter was again sent to the OFWM office Islamabad and a copy was shared with NPC office too, however no official respond was given from the Islamabad OFWM, office.

During the course of time, the monitoring team remained busy in data cleaning and verification, as well as, uploaded for dash board and further processing and data analyses. For the purpose of second baseline, Islamabad team surveyed 31 interventions and now the data may be checked for any error or omissions before finalization of the analyses and report writing.

As a result of modifications in the monitoring tools due to stakeholders' feedback, android system was also changed accordingly. Therefore, the monitoring team of Islamabad has to make extra efforts to upload again the previous as well as fresh available data on the dashboard. Thus, in this process the Islamabad team remained busy during the entire month of July, 2022.

3.3.2 Regular Monitoring / Field Visits by Zonal Office Punjab

The Monitoring/Baseline pertains to the intervention of the project viz., watercourse improvement, Water Users Association, construction of Water Storage Tank and subsidized distribution of Laser Land Leveler. Such surveys are carried out from time to time as a part of regular activity of ME&IE Consultants. The activities relate to baselines Survey, regular monitoring and impact, wherever, it is visible. The overall findings about unit of interventions visited by the field teams are reflected in the form of:

1. Field Visits of targeted interventions:
 - i. Improvement of Watercourses
 - ii. Construction of Water Storage Tank.
 - iii. Provision of Laser Land Leveler
2. Meetings with Field Officers and Staff of OFWM.
3. ME&IE Consultants' observations.

Field visits during the month under review were carried out in irrigated cotton zone (Bahawalnagar district) and in partially Barani zone (Bhakkar district). The number of the various interventions visited is summarized in the table as Under:

Data were collected on the under mentioned aspects of an intervention:

- Brief profile of the various interventions on the site visited;
- Interaction with the beneficiaries; and
- ME & IE Consultants Field Teams' Observations & views of beneficiaries / OFWM.

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

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

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

- **Field Visits of Watercourses:**

i) **Field Visits of Watercourse No. 20245-R, Rahim Yar Khan, Sadiq Abad, Punjab On 1st July 2022**

Water course No	20245-R	
Type of Watercourse	Regular	
Chak No/Village	Iqbal Nagar	
District and Tehsil	R.Y Khan, Sadiq Abad	
Name of Distributary	Bong	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	188 LPS
	Middle	105 LPS
	Tail	65 LPS
Sanctioned Discharge	141 LPS	
Designed Discharge	205	
Culturable Command area	347 Acre	
Total No of water users	23	
Estimated lining Length	1695 M	

Pictorial view of visit is given in picture 3.1.



Picture 3.1: Joint Inspection of Watercourse by ME&IE Field Team, OFWM Staff and Farmers

Table 3.1: List of Farmers, their locations on WC & tenure status on WC 20245-R –Rahim Yar Khan, Punjab

Name of Farmer	Location of WC	Area (Acres)				Status	Pictorial view of meeting with farmers is given in picture 3.2
		Owned	Rented	Rented Out	Operated Area		
Bilal Dastgeer	Tail	2	-	-	2		
Muhammad Hussain	Middle	11.5	1	3	9.5		
Shan Ali	Tail	8	2	-	10		
Ameer Buksh	Head	4.5	8	-	12.5		
Syed Makhdoom Hussain	Head	100	-	-	100		
Bashir Ahmad	Middle	2		-	2		

Picture 3.2: General Discussion with Farmers about Benefits of a watercourse by Field Team members

ii) Field Visit of Watercourse No. 9636-TR, Rahim Yar Khan, Sadiq Abad, Punjab on 2nd July 2022

Watercourse No	9636-TR	
Type of Watercourse	Additional	
Chak No/Village	148-P	
District and Tehsil	R.Y Khan, Sadiq Abad	
Name of Distributary	Seena war	
Type of Moga	Open Flume	
Measured Discharge Before Improvement	Head	77 LPS
	Middle	65 LPS
	Tail	50 LPS
Sanctioned Discharge	70 LPS	
Tube well Discharge (if any)	241 Acres	
Designed Discharge	95 LPS	

Culturable Command area	-
Total No of water users	23
Estimated lining Length	1818 M
Pictorial view of visit is given in picture 3.3.	
	

Picture 3.3: Visit of Watercourse 9636-TR

Table 3.2: List of Farmers, their locations on WC & tenure status on WC 9636-TR–Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres				Status	Pictorial view of meeting with beneficiaries is given in picture 3.4 below.
		Owned	Rented In	Rented Out	Operated Area		
Muhammad Tariq	Tail	2		-	2		
Muhammad Saleem	Tail	10	5	-	15		
Muhammad Afzal	Tail	7.5	8	-	15.5		
Muhammad Naeem	Middle	12.5	-	-	12.5		
Muhammad Arif	Head	3	-	-	3		
Ghulam Muhammad	Middle	-	12.5	-	12.5		

Picture 3.4: Interview of Beneficiary at WC No. 26066/L

iii) Field Visit of Watercourse No. 9636-TL, Rahim Yar Khan, Sadiq Abad, Punjab on 2nd July 2022

Watercourse No	9636-TL				
Type of Watercourse	Additional				
Chak No/Village	148-P				
District and Tehsil	R.Y Khan, Sadiq Abad				
Name of Distributary	Seena war				
Type of Moga	Open Flume				
Measured Discharge Before Improvement	Head	120 LPS			
	Middle	110 LPS			
	Tail	100 LPS			
Sanctioned Discharge	100 LPS				
Tube well Discharge (if any)	20 LPS				
Designed Discharge	160 LPS				
Culturable Command area	358 Acre				
Total No of water users	15				
Estimated lining Length	1190 M				

Pictorial view of visit is given as in picture 3.5 below:



Picture 3.5: view of lined portion of Watercourse

Table 3.3: List of Farmers, their locations on WC & tenure status on WC 9636-TL–Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres				Status	Farmers' interview is shown in picture 3.6 below.
		Owned	Rented In	Rented Out	Operated Area		
Muhammad Saleem	Head	10	5	-	15	TS	Picture 3.6: ME&IE Team Collecting Data from the beneficiaries of Watercourse
Muhammad Afzal	Tail	4	50	-	54		
Muhammad Latif	Middle	5.15	-	-	5.15		
Muhammad Arif	Head	4	-	-	4		
Muhammad Shafique	Head	7.5	-	-	7.5		
Muhammad Naeem	Middle	5	-	-	5		

iv) Field Visit of Watercourse No. 33100-R, Bindoor Abbasiyan, Rahim Yar Khan, Punjab on 3rd July 2022

Watercourse No	33100-R		
Type of Watercourse	Regular		
Chak No/Village	Bindoor Abbasiyan		
District and Tehsil	R.Y Khan, Sadiq Abad		
Name of Distributary	Bindoor Abbasiyan		
Type of Moga	ASOM		
Measured Discharge Before Improvement	Head	-	
	Middle	-	
	Tail	-	

Sanctioned Discharge	160 LPS
Tube well Discharge (if any)	-
Designed Discharge	205 LPS
Culturable Command area	-
Total No of water users	20
Estimated lining Length	2985 M

Visit of ME&IE field team is given as picture 3.7.



Picture 3.7: At Site, Inspection Visit of Watercourse

Table 3.4: List of Farmers, their locations on WC & tenure status on WC 33100-R, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	Field team's meeting with farmers is shown in picture 3.8 below.
		Own ed	Rented In	Rented Out			
Muhammad Abbas	Head	50		-	50	ICR-II	Picture 3.8: General Discussion with the Farmer regarding water saving perception
Abdul Ghaffar Abbasi	Head	10	10	-	20		
Abdul Samad	Middle	10	-	-	10		
Allah Buksh	Head	50	29	-	79		
Abdul Rehman Abbasi	Tail	4	-	-	4		

v) Field Visit of Watercourse No. 118915-TL, 1-L/Abay Hayat, Rahim Yar Khan, Punjab on 4th July 2022

Watercourse No	118915-TL	
Type of Watercourse	Additional	
Chak No/Village	114/1L	
District and Tehsil	Rahim Yar Khan	
Name of Distributary	1 – L / AbayHayat	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	125 LPS
	Middle	100 LPS
	Tail	80 LPS
Sanctioned Discharge	100 LPS	
Tube well Discharge (if any)	-	
Designed Discharge	125 LPS	
Culturable Command area	360 Acres	
Total No of water users	20	
Estimated lining Length	1328 M	

Visit of field team is shown in picture 3.9.



Picture 3.9: Taking Coordinates at Moga point of Watercourse

Table 3.5: List of Farmers, their locations on WC & tenure status on WC 118915-TL, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	Field team's meeting with farmers is shown in picture 3.14. 
		Owned	Rented In	Rented Out			
Ameer Buksh	Middle	6	6	-	12		
Aslam Sohail	Tail	80	-	30	50		
Muhammad Qasim	Middle	4	-	-	4		
Muhammad Shehzad	Tail	-	30	-	30		
Noor Muhammad	Tail	6	--	-	6		
Ali Nawaz	Tail	35	25	-	60		
Muhammad Idrees	Head	4	-	-	4		

vi) Field Visit of Watercourse No. 104950-L, 1-L/Abay Hayat, Rahim Yar Khan, Punjab on 4th July 2022

Watercourse No	104950-L	
Type of Watercourse	Additional	
Chak No/Village	116/1L	
District and Tehsil	Rahim Yar Khan , Khanpur	
Name of Distributary	1 – L / bay hayat	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	100 LPS
	Middle	80 LPS
	Tail	60 LPS
Sanctioned Discharge	80 LPS	
Tube well Discharge (if any)	-	
Designed Discharge	120 LPS	
Culturable Command area	650 Acres	
Total No of water users	28	
Estimated lining Length	2116 M	

Picture 3.11 depicts visit of field team.



Picture 3.11: Inspection of WC Segments at site

Table 3.6: List of Farmers, their locations on WC & tenure status on WC 104950-L, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	Field team's meeting with farmers is shown in picture 3.12. 
		Owned	Rented In	Rented Out			
Muhammad Idrees	Head	4	-	-	4		
Muneeb Ahmad	Tail	12.5	-	-	12.5		
Zahid Ahmad	Tail	12.5	-	-	12.5		
Babar Fareed	Tail	-	10	-	10		
Tahir Iqbal	Tail	33	-	-	33		
Ameer Ahmad	Head	20	20	-	40		

Picture 3.12: Data Collection on ODK from beneficiaries of Watercourse

vii) Field Visit of Watercourse No. 1560-R, 1-L/Abay Hayat, Rahim Yar Khan, Punjab on 5th July 2022

Watercourse No	1560-R	
Type of Watercourse	Additional	
Chak No/Village	Khan Wah	
District and Tehsil	Rahim Yar Khan, Khanpur	
Name of Distributary	I – R chak	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	62 LPS
	Middle	55 LPS
	Tail	45 LPS
Sanctioned Discharge	60 LPS	
Tube well Discharge (if any)	28 LPS	
Designed Discharge	90 LPS	

Culturable Command area	266 Acre
Total No of water users	16
Estimated lining Length	776 M
	<i>Picture 3.13: Inspection of lined portion of watercourse</i>

Table 3.7: List of Farmers, their locations on WC & tenure status on WC 1560-R, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Muhammad Ahsan	Tail	13.5	-	-	13.5	
Ghulam Sarwar	Head	3	-	-	3	
Raiz Ahmad	Middle	7	-	-	7	
Jafar Hussain	Tail	1.5	-	-	1.5	
Muhammad Zahid	Tail	-	2.5	-	2.5	
Hafiz Liaquat Ali	Middle	13.5	-	-	13.5	

Picture 3.14: Discussion with the beneficiaries of watercourse regarding Watercourse Cleaning

viii) Field Visit of Watercourse No. 95500-R 1-L/Abay Hayat, Rahim Yar Khan, Punjab on 5th July 2022

Watercourse No	95500-R	
Type of Watercourse	Additional	
Chak No/Village	105/L	
District and Tehsil	Rahim Yar Khan , Khanpur	
Name of Distributary	1L – Abr Hait	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	-
	Middle	-
	Tail	-
Sanctioned Discharge	110 LPS	
Designed Discharge	130 LPS	

Culturable Command area	287
Total No of water users	13
Estimated lining Length	1197
Field teams visit is shown in picture 3.15.	
	<i>Picture 3.15: Field Team collecting Data on ODK at site during monitoring of watercourse</i>

Table 3.8: List of Farmers, their locations on WC & tenure status on WC 95500-R, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status FCR	Farmers meeting with field team is shown in picture 3.16.
		Owned	Rented In	Rented Out			
Imran Ali	Tail	16.5	-	-	16.5		
Liaquat Ali	Tail	6	-	-	6		
Muhammad Nadeem	Middle	-	24	-	24		
Muhammad Asif Rana	Tail	12	-	-	12		
Shahid Mehmood	Middle	16	-	-	16		
Muhammad Asif	Tail	12	-	-	12		

ix) Field Visit of Watercourse No. 20585-R 1-Chak No. 138/A, Liaqatpur, Rahim Yar Khan, Punjab on 6th July 2022

Watercourse No	20585-R	
Type of Watercourse	Additional	
Chak No/Village	138/A	
District and Tehsil	Rahim Yar Khan, Liaqatpur	
Name of Distributary	Abbasian	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	130 LPS
	Middle	120 LPS
	Tail	100 LPS
Sanctioned Discharge	96 LPS	

Culturable Command area	327 Acres
Total No of water users	-
Estimated lining Length	1393 M
Field visit is shown in picture 3.17.	
	

Picture 3.17: ME&IE Team talong Coordinates at Moga Point

Table 3.9: List of Farmers, their locations on WC & tenure status on WC 25585-R, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status FCR	Field team's meeting with farmers is shown in picture 3.18.
		Owned	Rented In	Rented Out			
Mushtaq Hussain	Middle	8.5	-	-	8.5		
Afzal Ahmad	Middle	12	-	-	12		
Muhammad Saqib	Head	4	-	-	4		
Nishat Ahmad	Middle	6.5	-	-	6.5		
Muhammad Suleman	Middle	4	1	-	5		
Ghulam Haider	Middle	5	-	-	5		

Picture 3.18: Data Collection on ODK, from beneficiaries of watercourse regarding Cost of Production

x) Field Visit of Watercourse No. 93445-L-Chak No. 3/A, Liaqatpur, Rahim Yar Khan, Punjab on 6th July 2022

Watercourse No	93445-L
Type of Watercourse	Additional
Chak No/Village	3/A

District and Tehsil	Rahim Yar Khan, Liaqatpur	
Name of Distributary	Abbasian Canal	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	121 LPS
	Middle	80 LPS
	Tail	61 LPS
Sanctioned Discharge	-	
Tube well Discharge (if any)	20 LPS	
Designed Discharge	170 LPS	
Culturable Command area	322 Acre	
Total No of water users	-	

Estimated lining Length	-
Field visit of ME&IE team is shown in picture 3.19.	
	

Picture 3.19: General discussion with beneficiary of watercourse about benefits of watercourse

Table 3.10: List of Farmers, their locations on WC & tenure status on WC 93445-L, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	Field team in meeting with farmers is shown in picture 3.20.
		Owned	Rented In	Rented Out			
Naseer Ahmad	Tail	16.5	-	-	16.5		
Akbar Ali	Middle	15	-	-	15		
Iftikhar Ahmad	Tail	1.5	20	-	21.5		
Muhammad Ajmal	Middle	12	-	-	12		
Muhammad Tahir	Middle	12.5	-	-	12.5		
Mumtaz Khan	Tail	7	6	-	13		Picture 3.20: Discussion with the Beneficiaries of watercourse regarding Change in Cropping Pattern

xi) Field Visit of Watercourse No. 17635-R –Chak No. 54/A, Liaqatpur, Rahim Yar Khan, Punjab on 7th July 2022

Watercourse No	17635-R	
Type of Watercourse	Regular	
Chak No/Village	54/A	
District and Tehsil	Rahim Yar Khan, Liaqatpur	
Name of Distributary	3-R	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	-
	Middle	-
	Tail	-
Sanctioned Discharge	75 LPS	
Tube well Discharge (if any)	-	
Designed Discharge	110 LPS	

Culturable Command area	-
Total No of water users	-
Estimated lining Length	2608
Field team's visit is given in picture 3.21.	
	

Picture 3.21: Data Collection on ODK by Field Team regarding Monitoring

Table 3.11: List of Farmers, their locations on WC & tenure status on WC 17635-R, Rahim Yar Khan, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	Farmer's interview by field team is shown in picture 2.22.
		Owned	Rented In	Rented Out			
Khadam Hussain	Tail	10	2.5	-	12.5	FCR	
Muhammad Umair	Middle	13	6	-	19		
Muhammad Bota	Tail	10	-	-	10		
Muhammad Tayyab	Middle	0	25	-	25		
Tahir Zaman	Middle	0	75	-	75		
Muhammad Riaz Khan	Head	25	25	-	50		

Field Visit of Water Storage Tanks

- Field Visit of Water Storage Tanks

The brief profile of water storage tanks visited for baseline purpose is given below:

i) **Field Visit Water Storage Tank, Abdul Ghaffar Khan Abbasi, Sadiqabad, Rahim Yar Khan, Punjab, on 3rd July 2022**

WST Owner:	Abdul Ghaffar Khan Abbasi
Name of village:	Bindoor Abbasiyan
Tehsil & District:	Sadiqabad, Rahim Yar Khan
Source of irrigation:	Canal
The shape of the water storage tank:	Square
Size of water storage tank:	22x22 Sq. feet
Depth of WST:	6 Feet
Command area of water storage tank:	12 Acre
No of beneficiaries:	1
Name of the Orchard	Mango, Citrus

View of water storage is given in picture 3.23.



Picture 3.23: View of Water Storage Tank

ii) **Field Visit Water Storage Tank, Abuzar, Sadiqabad, Rahim Yar Khan, Punjab, on 3rd July 2022**

WST Owner:	Abuzar
Name of village:	Thapar
Tehsil & District:	Sadiqabad, Rahim Yar Khan
Source of irrigation:	Canal + Tube Well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	22x18 Sq. Feet
Depth of WST:	6.5
Command area of water storage tank:	6 Acre
No of beneficiaries:	1
Name of the Orchard	Mango, Guava, Citrus

Field visit of monitoring team is shown in picture 3.24.



Picture 3.24: ME&IE Team with Farmers during Monitoring of Water Storage Tank

- **Field Visits of Laser Land Leveler**

Detail of visits of Laser Land Levelers, and particulars of owner of laser land levelers are also shown as under:

i) **Field Visit to Laser Land Leveler of Mr. Muhammad Aslam in Rahim Yar Khan, Punjab, on 3rd July 2022**

Owner of LLL	Muhammad Aslam
District	Rahim Yar Khan
Tehsil	Rahim Yar Khan
Quantity Of ground Water	Good for Irrigation
Major Crops	Wheat, Cotton, Sugarcane

Pictorial view is given in picture 3.25.



Picture 3.25: ME&IE Team with Farmer during Monitoring of LLL

ii) **Field Visit to Laser Land Leveler of Mr. Waqar-Ul-Haq, Rahim Yar Khan, Punjab, on 4th July 2022**

Owner of LLL	Waqar-Ul-Haq
District	Rahim Yar Khan
Tehsil	Rahim Yar Khan
Quantity Of ground Water	Good for Irrigation

Major Crops	Wheat, Cotton, Sugarcane
Pictorial view of visit is given in picture 3.26.	
	

Picture 3.26: ME&IE Team with Farmers during Monitoring of LLL

- **Observations**

The Field Team 1 composition for the visit on Jun 30, 2022 to July 7, 2022 was as under:

Name	Designation
Muhammad Rizwan Suleman	Field Team In charge
Noman Rasheed	Field Team Engineer
Sohail Ahmad	Field Team Engineer

Following were the main findings / Points observed during the field visit in District Rahim Yar Khan. The visits were Carried over in various Tehsils i.e., Rahim Yar Khan, Sadiqabad, Khanpur and Liaqatpur.

i) **Baseline-II Survey Observations of Watercourse Improvement:**

Following are the observation during Baseline Survey of watercourse Improvement:

- The canal on which the watercourse was constructed is a perennial canal.
- Wara Bandi at the watercourse was *Pakki* (Weekly).
- Waterlogging was not prevailing in Sadiqabad and Rahim Yar Khan tehsils whereas it was noted in the other areas up to 9%.
- Salinity patches were also noticed in the same areas maximum up to 4%.
- Quality of Groundwater was observed as unfit for irrigation. The same case was observed and found fit after mixing with canal water.
- The Time consumed to irrigate one-acre field was significantly reduced.
- It has been observed that number of watercourse cleaning has reduced significantly as a result reduced in labor hours per cleaning.
- Conveyance Water losses were reduced at the tail due to improvement of watercourses.

- Major Crops grown noticed included sugar cane, wheat, cotton, and mango orchards found particularly in Sadiqabad tehsil area.

ii) Monitoring / Observations of watercourse improvement:

During the Field visit it was observed that:

- joints of the watercourse were properly filled
- Alignment of the watercourse was good
- Quality of segment was quite satisfactory
- Proper compaction of WC bed was practiced at the site
- Lining of the watercourse was as per design
- The backfilling of the watercourse was not found proper at the visited sites.

iii) Field observations during Monitoring/ Baseline-II Survey on Water Storage Tank

- Before the construction of WST, the land was barren and its terrain was uneven.
- The time consumed to irrigate one acre after construction was 3 to 4 hrs. There is no shortage of water in Rabi season. During the Kharif season, farmers faced acute shortage of water, crops wholly depend upon rainwater in kharif season.
- Farmers were very happy and fully satisfied with OFWM department.
- Now after construction of WST farmer has started growing Orchard of citrus.

iv) Field observations of Laser Land Leveler

During the Field Visit following benefits of Laser Land Leveling unit observed at the site:

- Yield has increased upto 15%.
- Uniform distribution of irrigation water across the field observed along with the reduction in time per application.

v) Monitoring of Laser Land Leveler (LLL)

- Most of the equipment was in good condition.
- Most of the Owners /service provider were happy about the benefits of LLL.

vi) Regular Monitoring / Midline Survey/ Revisit of the Water Courses surveyed during Baseline Survey - I

The monitoring / Midline survey pertains to the watercourses surveyed in Baseline Survey – I. The

data collected have been directly submitted through android based system to ICT department for further processing / analysis. A brief profile of watercourses and respondents earlier monitored / surveyed respectively. The water courses are same as of Baseline-I, but in some cases, the respondents are changed, same as the earlier beneficiaries interviewed. Efforts were made to select the respondents of the same location's watercourse, category of farm size and tenurial status. Detail of field visits for BLS-I surveyed, water courses is as under:

- Meetings with field officers and staff of OFWM.
- Farmers' perception
- ME&IE Consultants' remarks

Summary of Regular Monitoring / Mid line Survey of Water Courses During the month of July 2022 is given below:

Crop Ecological Zone	District	No of Unit
Irrigated Rice Zone	Kasur	2
	Gujranwala	6
Irrigated Mix Zone	Okara	4
Irrigated Cotton Zone	Muzaffargarh	6
Total		18

Midline data were collected by ME&IE consultants' teams. Composition of the team is as under:

- Irrigated Rice Zone – Field Team – 1 (District Kasur)
Field Team 1
 - Mr. Awais Jahangir, F.T.I
 - Mr. Bilal Sohail, Field Engineer
 - Mr. Abdul Rauf Saad, Field Engineer
- Field Team 2 (District Gujranwala)
 - Mr. Muhammad Rizwan, F.T.I
 - Mr. Nouman Rasheed, Field Engineer
 - Mr. Sohail Ahmad, Field Engineer
- Irrigated Mix Zone – was surveyed by Field Team – 1
- Irrigated Cotton Zone – Surveyed by Field Team 3 as under:
 - Mr. Muhammad Zubair, Field Team Incharge

- Mr. Muhammad Misbah, Field Engineer
- Mr. Umer Farooq Hammad, Field Engineer

Detail of visited interventions in all the zones during reporting month, under regular monitoring / midline survey is given below:

• **Irrigated Rice Zone**

i) **Field Visit of Watercourse No. 11430-L in Chak Mojoki, District Kasure, Punjab on 25th July 2022**

Watercourse No	11430-L		
Type of Watercourse	Additional		
Chak No/Village	Mojoki		
District and Tehsil	Kasur, Chunian		
Name of Distributary	Mojoki		
Type of Moga	AOSM		
Measured Discharge Before Improvement	Head	121 LPS	
	Middle	118 LPS	

	Tail	105 LPS
Sanctioned Discharge	76 LPS	
Designed Discharge	140 LPS	
Culturable Command area	313 Acres	
Total No of water users	50 Nos	
Estimated lining Length	1106 m	

Pictorial view of visit is given in picture 3.27



Picture 3.27: ME&IE Team Inspecting Joints in Watercourse

Table 3.12: List of Farmers, their locations on WC & tenure status on WC 11430-L, Kasur Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status FCR
		Owned	Rented In	Rented Out		
M. Asfaq	Head	2	3	0	5	
M. Farooq	Head	1	4	0	5	
M. Javed	Head	1	1.5	0	2.5	
Munir Ahmed	Head	2	0	0	2	
Asif Ali	Head	5	-	-	5	
Muhammad Siddique	Head	1	-	-	1	

Picture 3.28: General Discussion of Field Team with Farmers about Benefits of watercourse improvement

ii) **Field Visit of Watercourse No. 3854-R in Chak Baqar Ke, District Kasure, Punjab on 25th July 2022**

Watercourse No	3854-R		
Type of Watercourse	Regular		
Chak No/Village	Baqar Ke		
District and Tehsil	Kasur		
Name of Distributary	Baqar Ke		
Type of Moga	AOSM		
Measured Discharge Before Improvement	Head	49 LPS	
	Middle	40 LPS	
	Tail	32 LPS	
Sanctioned Discharge	64 LPS		

Designed Discharge	80 LPS
Culturable Command area	400 Acre
Total No of water users	45 Nos
Estimated lining Length	1227 m

Picture of field visit is given below in picture 3.29.



Picture 3.29: Watercourse Monitored by ME&IE Team

Table 3.13: List of Farmers, their locations on WC & tenure status on WC 3854-R, Kasur Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status FCR
		Owned	Rented In	Rented Out		
Javaid Amjad	Middle	16	-	-	16	
M. Ramzan	Tail	1.5	-	-	1.5	
Rashid Javed	Head	4	-	-	4	
Muhammad Bilal	Middle	-	30	-	30	
Abdul Ghaffor	Middle	4	-	-	4	

Picture 3.30: Field Team Collecting Data from Beneficiaries of watercourse

iii) Field Visit of Watercourse No. 58622-L in Chak Pandoki, Gujranwala, Punjab on 25th July 2022

Watercourse No	58622-TL	
Type of Watercourse	Additional	
Chak No/Village	Pandoki	
District and Tehsil	Gujranwala / Wazirabad	
Name of Distributary	Pathan ke	
Type of Moga	Open Flume	
Measured Discharge Before Improvement	Head	69 LPS
	Middle	50 LPS
	Tail	40 LPS
Sanctioned Discharge	LPS	
Designed Discharge	70 LPS	
Culturable Command area	225 Acres	
Total No of water users	12 Nos	

Estimated lining Length 284 m

Field visit of field team is given in picture 3.31 below.



Picture 3.31: Field Team taking Coordinates of Lined Portion of Watercourse at the Tail end

Table 3.14: List of Farmers, their locations on WC & tenure status on WC 58622-TL, Gujranwala, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	
		Owned	Rented In	Rented Out			
Moazzam Abbas	Head	55	-	-	55	FCR	
Ghazanfar Ali	Middle	10	-	-	10		
Ahsan Ullah	Tail	45	-	-	45		

Picture 3.32: Field Team Collecting Data from Beneficiaries of watercourse

iv) Field Visit of Watercourse No. 12445-R in Chak Dhela Chatha, Gujranwala, Punjab on 26th July 2022

Watercourse No	12445-R	
Type of Watercourse	Additional	
Chak No/Village	Dhella Chatha	
District and Tehsil	Gujranwala / Wazirabad	
Name of Distributary	Nokhar	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	Head
	Middle	Middle
	Tail	Tail
Sanctioned Discharge	49 LPS	
Designed Discharge	105 LPS	
Culturable Command area	339 Acres	
Total No of water users	10	

Estimated lining Length	1928 M
Pictorial view is give as picture 3.33 & 3.34.	
	

Picture 3.33: Field Team Inspecting Joints of Watercourse

Table 3.15: List of Farmers, their locations on WC & tenure status on WC 12415-R, Gujranwala, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	
		Owned	Rented In	Rented Out			
Abid Hussain	Head	8	-	-	8	FCR	
Muhammad Azam	Head	38	-	-	38		
Muhammad Ishfaq	Head	17	-	-	17		
Riaz Ahmad	Middle	24	-	-	24		
Muhammad Imran	Middle	-	40	-	40		
Hasnain Naveed	Tail	18	-	-	18		

Picture 3.34: Field Team Collecting Data from Beneficiaries of watercourse and briefing role of ME&IE Consultants

v) Field Visit of Watercourse No. 18715-R Village Hazrat Kalian Wala, Gujranwala, Punjab on 27th July 2022

Watercourse No	18715-R
Type of Watercourse	Additional
Chak No/Village	Hazrat Kalian Wala
District and Tehsil	Gujranwala / Wazirabad

Name of Distributary	Venika	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	120 LPS
	Middle	110 LPS
	Tail	100 LPS
Sanctioned Discharge	LPS	
Designed Discharge	145 LPS	
Culturable Command area	Acres	
Total No of water users	10 Nos	
Estimated lining Length	800 m	
Field visit is shown in picture 3.35 & 3.36.		



Table 3.16: List of Farmers, their locations on WC & tenure status on WC 18715-R, Gujranwala, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Ikhlak Ahmad	Head	50	50	-	100	
Hamid Mehmood	Head	70	-	-	70	
Muhammad Luqman	Tail	45	-	-	45	
Syed Ahsan Shah	Middle	25	-	-	25	
Ghulam Rasool Chatta	Middle	130	-	-	130	
Muhammad Zaman Chatta	Tail	78	-	-	78	

Picture 3.36: Field Team Collecting Data from Beneficiaries of watercourse

vi) Field Visit of Watercourse No. 21600-R, Village Tung Khurd, Gujranwala, Punjab on 28th July 2022

Watercourse No	21600-R	
Type of Watercourse	Additional	
Chak No/Village	Tung Khurd	
District and Tehsil	Gujranwala / Noshera Virkan	
Name of Distributary	Mango ki	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	42 LPS
	Middle	35 LPS
	Tail	30 LPS
Sanctioned Discharge	29 LPS	
Designed Discharge	75 LPS	
Culturable Command area	470 Acres	

Total No of water users	31 Nos
Estimated lining Length	1390 m
Field visit is shown in picture 3.37 & 3.38.	

Picture 3.37: Field Team Inspecting Watercourse Covered with Weeds, Showing Improper Maintenance



Table 3.17: List of Farmers, their locations on WC & tenure status on WC 21600-R, Gujranwala, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Mian Arshad	Head	19	-	-	19	FCR
Muneer	Head	10	-	8	2	
Abdul Sami Khan	Middle	15	5	-	20	
Ahmad Ali	Middle	4.25	-	-	4.25	
Haji Taj	Tail	10	5	-	15	
Muneer Ahmad	Tail	2	1	-	3	

Picture 3.38: Field Team Collecting Data from Beneficiaries of watercourse

vii) Field Visit of Watercourse No. 73300-R, Village Khan Musalman, Gujranwala, Punjab on 28th July 2022

Watercourse No	73300-R	
Type of Watercourse	Regular (New)	
Chak No/Village	Khan Musalman	
District and Tehsil	Gujranwala / Noshera Virkan	
Name of Distributary	Noshera Virkan	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	63 LPS
	Middle	55 LPS
	Tail	45 LPS
Sanctioned Discharge	18.40 LPS	
Designed Discharge	80 LPS	
Culturable Command area	239 Acres	

Total No of water users	16 Nos
Estimated lining Length	1133 m
Field visit is shown in picture 3.39 & 3.40.	



Picture 3.39: Field Team on Visit of Watercourse No. 7330-R

Table 3.18: List of Farmers, their locations on WC & tenure status on WC 73300-R, Gujranwala, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Muhammad Mansha	Head	4.5	-	-	4.5	FCR
Tariq Mahmood	Middle	8	-	-	8	
Mansha	Middle	4.5	-	-	4.5	
Abdul Rehman	Tail	6	-	-	6	
Ghulam Abbas	Tail	28	4	-	32	
Kashif Abbas	Tail	8	-	-	8	

Picture 3.40: Field Team in Meeting With Beneficiaries of watercourse, along with Assistant Director OFWM Noshera Virkan, Tariq Mahmood and other OFWM staff

viii) Field Visit of Watercourse No. 125800-R, Village Garmula Virkan, Gujranwala, Punjab on 26th July 2022

Watercourse No	125800-R	
Type of Watercourse	Additional	
Chak No/Village	Garmula Virkan	
District and Tehsil	Gujranwala / Noshera Virkan	
Name of Distributary	Noshera	
Type of Moga	Open Flume	
Measured Discharge Before Improvement	Head	52 LPS
	Middle	45 LPS
	Tail	35 LPS
Sanctioned Discharge	15 LPS	
Designed Discharge	60 LPS	
Culturable Command area	381 Acres	

Total No of water users	16 Nos
Estimated lining Length	1133 m
Pictorial view of field visit is shown in picture 3.41 & 3.42.	
	

Picture 3.41: Field Team Inspecting lined portion of Watercourse

Table 3.19: List of Farmers, their locations on WC & tenure status on WC 125800-R, Gujranwala, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Nazir Hussain	Head	-	6.5	-	6.5	
Mehfooz Ullah	Middle	3	5	-	8	
Ghulam Murtaza	Tail	-	7	-	7	
Allah Ditta	Tail	8	-	-	8	
Shokat Ali		-	35	-	35	
		-	-	-	-	



Picture 3.42: Field Team accompanied with Assistant Director, Tariq Mehmood, OFWM Noshera Virkan, during Field visit and Focal group discussion with the Beneficiaries of Watercourse

• Perception of Farmers

Main perception of sampled farmers as under:

- i. Water supply has increased significantly, practicing *Pakki warabandi* (weekly timing)
- ii. Minimum extent of water logging and salinity were present.
- iii. Ground water in most of the areas was fit for irrigation.
- iv. Water availability at the tail increased to the extent that presently no major shortages of water were reported.
- v. No changes were noticed in cropping pattern.
- vi. Time to irrigating for an acre has reduced by 50%.

- vii. The time for cleaning the water course by the labor has reduced.
- viii. Irrigation and water theft cases are significantly reduced.
- ix. The income of farmers has increased as a result of increased water supply induced increase in yield but unfortunately rise in the prices of fertilizers and other inputs has reduced the margin.

• ME&IE Consultants Remarks

As a result of water supply increase, the yield per cropped area has increased, hence increased in income.

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

• **Irrigated Mix Zone**

i) **Field Visit of Watercourse No. 10483-L, Village Shareefabad, Okara, Depalpur, Punjab on 19th July 2022**

Watercourse No	10483-L	
Type of Watercourse	Additional	
Chak No/Village	Sahreefabad	
District and Tehsil	Okara, Depalpur	
Name of Distributary	Makhdoom Minor	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	129 LPS
	Middle	99 LPS
	Tail	84 LPS
Sanctioned Discharge	65 LPS	
Designed Discharge	140 LPS	

Culturable Command area	493 Acres
Total No of water users	10 Nos
Estimated lining Length	5730 m
Field visit is shown in picture 3.43 & 3.44.	



Picture 3.43: Field Team Inspecting Watercourse during Field Visit

Table 3.20: List of Farmers, their locations on WC & tenure status on WC 10483-L, Okara, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Ashraf Ali	Middle	40	-	30	10	
M. Aslam	Middle	40	-	-	40	
Javed Iqbal	Middle	80	-	-	80	
Mubashir Iqbal	Middle	50	-	40	10	
Aftab Iqbal	Middle	53	-	-	53	
Mohsin Iqbal	Middle	80	-	-	80	



Picture 3.44: ME&IE Team in Meeting with Farmers for Data Collection on ODK

ii) **Field Visit of Watercourse No. 67700-L, Village Faridpur Sohag, Okara, Depalpur, Punjab on 20th July 2022**

Watercourse No	67700-L	
Type of Watercourse	Additional	
Chak No/Village	Faridpur Sohag	
District and Tehsil	Okara, Depalpur	
Name of Distributary	Lower Soha	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	125 LPS
	Middle	100 LPS
	Tail	80 LPS
Sanctioned Discharge	102 LPS	
Designed Discharge	145 LPS	

Culturable Command area	648 Acres
Total No of water users	5 Nos
Estimated lining Length	2553 m
Field visit is shown in picture 3.45 & 3.46.	



Picture 3.45: Field Team Monitoring the Watercourse at Site during Field Visit

Table 3.21: List of Farmers, their locations on WC & tenure status on WC 67700-L, Okara, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Sohail Khan	Head	103	-	53	50	FCR
Raoof Nawaz Khan	Head	15	-	-	15	
Farooq Khan	Head	42	-	37	5	
Ahmed Faraz Khan	Head	25	-	25	-	
Tariq Khan	Head	0	55	0	55	



Picture 3.46: ME&IE Team Collecting data on ODK

iii) Field Visit of Watercourse No. 20100-L, Village Arora Mian Khan, Okara, Depalpur, Punjab on 20th July 2022

Watercourse No	20100-L	
Type of Watercourse	Regular	
Chak No/Village	Arora Mian Khan	
District and Tehsil	Okara, Depalpur	
Name of Distributary	Sahby Wala	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	53 LPS
	Middle	42 LPS
	Tail	34 LPS
Sanctioned Discharge	49 LPS	
Designed Discharge	65 LPS	
Culturable Command area	229 Acres	
Total No of water users	10 Nos	
Estimated lining Length	915 m	

Pictorial view of field visit is shown in picture 3.47 & 3.48.



Picture 3.47: Field Team Monitoring Watercourse during Field Visit

Table 3.22: List of Farmers, their locations on WC & tenure status on WC 20100-L, Okara, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	FCR	
		Owned	Rented In	Rented Out				
Shafqat Khan	Middle	25	-	-	25			
M. Ahmad	Middle	35	-	-	35			
M. Aslam	Middle	30	-	-	30			
M. Ittefaq	Middle	30	-	-				
Muddassar Ali	Middle	5	-	5	-			
Nasir Ahmed	Middle	3	-	-	3			<i>Picture 3.48: Field Team in general Discussion with Farmers about Benefits of an Improved Watercourse</i>

iv) Field Visit of Watercourse No. 18000-L, Village Bothana, Okara, Depalpur, Punjab on 20th July 2022

Watercourse No	18000-L	
Type of Watercourse	Additional	
Chak No/Village	Bothana	
District and Tehsil	Okara, Depalpur	
Name of Distributary	Nehran Wala	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	54 LPS
	Middle	41 LPS
	Tail	35 LPS
Sanctioned Discharge	65 LPS	
Designed Discharge	80 LPS	
Culturable Command area	264 Acres	

Total No of water users	28 Nos
Estimated lining Length	760 m
Field visit is shown in picture 3.49 & 3.50.	
	

Picture 3.49: Field Team Monitoring Watercourse at Site during Field Visit

Table 3.23: List of Farmers, their locations on WC & tenure status on WC 18000-L, Okara, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	FCR	
		Owned	Rented In	Rented Out				
Khushi Muhammad	Middle	5	5	-	10			
Riaz Ahmad	Middle	12	-	4	8			
Muhammad Nawaz	Middle	4	-	-	4			
Asghar Ali	Middle	7.5	4	-	11.5			
M. Nazar Abbas	Middle	8	-	-	8			
Ghulam Muhammad	Middle	5	3	-	8			<i>Picture 3.50: Field Team in general Discussion with Farmers and Data Collection</i>

• Farmers Perception

Following are the main observations of ME&IE Consultants:

- Farmers were very happy because the flow increased and water theft reduced resulted in 30-40% increase in water supply.
- No changes were noticed on cropping pattern.

- iii. There is no water logging and salinity observed in surveyed area.
- iv. Farmers conveyed that 100 percent time is reduced for irrigating an unit of land after WC improvement.
- v. Farmer was asking and insisting to increase the lining length of the watercourse upto 70-75% and they were looking forward to get assistance from the Govt.
- vi. Overall, the cooperation and behavior of OFWM field staff was friendly with the farmers and they are satisfied.

ME&IE Consultant Remarks

- i. The productivity per acre has increased due to increase in water supply
- ii. Meanwhile Farmers are dissatisfied for the increase in the prices of fertilizers and other inputs

Irrigated Cotton Zone

i) **Field Visit of Watercourse No. 26590-L, Pul-88, Moza Shadi Khan Munda, Muzaffargarh, Kot Addu, Punjab on 20th July 2022**

Watercourse No	26590-L
Type of Watercourse	Additional

Chak No/Village	Pul-88, Moza Shadi Khan Munda			
District and Tehsil	Muzaffargarh, Kot Addu			
Name of Distributary	Thal			
Type of Moga	Pipe			
Measured Discharge Before Improvement	Head	LPS		
	Middle	LPS		
	Tail	LPS		
Sanctioned Discharge	100 LPS			
Designed Discharge	130 LPS			
Culturable Command area	237 Acres			
Total No of water users	29 Nos			
Estimated lining Length	1357 m			
Field visit is depicted in picture 3.51 & 3.52.				
				

Picture 3.51: Field Team Taking Measurement of Watercourse during Field Visit

Table 3.24: List of Farmers, their locations on WC & tenure status on WC 26590-L, Muzaffargarh, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Abdul Razaq	Head	15	-	-	15	
Sabir Hussain	Middle	15	-	-	15	
Muhammad Sideeq	Tail	8	-	-	8	
Abul Aziz	Tail	10	-	-	10	
Gulam Fareed	Tail	18	-	-	18	
Muhammad Nawaz	Tail	40	-	-	40	



Picture 3.52: Field Team in Meeting with Beneficiaries of Watercourse, for Data Collection

ii) **Field Visit of Watercourse No. 17600-L, Village Moza Raan, Muzaffargarh, Kot Addu, Punjab on 21st July 2022**

Watercourse No	17600-L
Type of Watercourse	Additional
Chak No/Village	Mozah Raan

District and Tehsil	Muzaffargarh, Kot Addu	
Name of Distributary	Magi Magsan	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	98 LPS
	Middle	85 LPS
	Tail	65 LPS
Sanctioned Discharge	100 LPS	

Designed Discharge	125 LPS
Culturable Command area	277 Acres
Total No of water users	8 Nos
Estimated lining Length	2063 m
Field visit is shown in picture 3.53 & 3.54.	



Picture 3.53: Field Team Taking Measurement in the length of Improved Watercourse

Table 3.25: List of Farmers, their locations on WC & tenure status on WC 17600-L, Muzaffargarh, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Muhammad Imran	Head	18	-	-	18	FCR
Abdul Hussain	Head	12	-	-	12	
Malik Allah Yar	Head	25	-	-	25	
Ijaz Ahmad	Middle	27	-	-	27	
Iftikhar Hussain	Middle	27	-	-	27	
Khadi姆 Hussain	Middle	12	-	-	12	

Picture 3.54: Field Team in Meeting with Beneficiaries of Watercourse, for Data Collection and listing the issues of Farmers

iii) Field Visit of Watercourse No. 26338-R, Village Khar Sharqi, Muzaffargarh, Kot Addu, Punjab on 21st July 2022

Watercourse No	26338-R	
Type of Watercourse	Additional	
Chak No/Village	Mozah Khar Sharqi	
District and Tehsil	Muzaffargarh, Kot Addu	
Name of Distributary	Kariya Sanawan	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	90 LPS
	Middle	75 LPS
	Tail	55 LPS
Sanctioned Discharge	65 LPS	
Designed Discharge	100 LPS	
Culturable Command area	223 Acres	

Total No of water users	14 Nos
Estimated lining Length	1380 m

Field visit is shown in picture 3.55 & 3.56.



Picture 3.55: Field Team Taking Measurement the length of Improved Watercourse

Table 3.26: List of Farmers, their locations on WC & tenure status on WC 26338-R, Muzaffargarh, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Gulam Abbas	Head	6	-	-	6	FCR
Gulam Shabeer	Head	27	-	-	27	
Muhammad Aslam	Middle	22	-	-	22	
Wahid Baksh	Middle	23	-	-	23	
Muhammad Rafeeq	Tail	26	-	-	26	
Mukhtar Ahmad	Tail	8	-	-	8	

Picture 3.56: Field Team in Meeting with Beneficiaries of Watercourse, for Data Collection

iv) Field Visit of Watercourse No. 211073-R, Chak No. 521 TDA Noor Shah Talai, Muzaffargarh, Kot Addu, Punjab on 22nd July 2022

Watercourse No	211073-R	
Type of Watercourse	Additional	
Chak No/Village	Chak 521 TDA, Noor Shah Talai	
District and Tehsil	Muzaffargarh, Kot Addu	
Name of Distributary	Baghal	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	90 LPS
	Middle	78 LPS
	Tail	55 LPS
Sanctioned Discharge	36 LPS	
Designed Discharge	90 LPS	
Culturable Command area	480 Acres	

Total No of water users	18 Nos
Estimated lining Length	2064 m
Field visit is shown in picture 3.57 & 3.58.	
	

Picture 3.57: Field Team Monitoring the Improved Watercourse along with Farmers

Table 3.27: List of Farmers, their locations on WC & tenure status on WC 211073-R, Muzaffargarh, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status
		Owned	Rented In	Rented Out		
Muhammad Rafique	Head	10	-	-	10	
Muhammad Afzal	Head	40	-	-	40	
Muhammad Waqas	Middle	6	-	-	6	
Gulam Abbas	Middle	25	-	-	25	
Zaheer Abbas	Middle	5	-	-	5	
Adnan Ashraf	Tail	3	-	-	3	



Picture 3.58: Field Team in Meeting with Beneficiaries of Watercourse, and collecting data related to Cropping Pattern

v) Field Visit of Watercourse No. 94934-L, Chak No. 604 TDA UC Wandhar, Muzaffargarh, Kot Addu, Punjab on 22nd July 2022

Watercourse No	94934-L	
Type of Watercourse	Additional	
Chak No/Village	Chak No.604 TDA, UC Wandhar	
District and Tehsil	Muzaffargarh, Kot Addu	
Name of Distributary	Lanju	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	95 LPS
	Middle	68 LPS
	Tail	LPS
Sanctioned Discharge	53 LPS	
Designed Discharge	100 LPS	

Culturable Command area	432 Acres
Total No of water users	11 Nos
Estimated lining Length	1550 m
Field visit is shown in picture 3.59 & 3.60.	
	

Picture 3.59: Field Team Taking Coordinates of Moga Point of Watercourse

Table 3.28: List of Farmers, their locations on WC & tenure status on WC . 94934-L, Muzaffargarh, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	FCR	
		Owned	Rented In	Rented Out				
Fida Hussain	Head	7	-	-	7	FCR		
Ihsan Kamal Khan	Middle	3	-	-	3			
Muhammad Aziz ulah	Middle	13.5	-	-	13.5			
Hafiz Habib ullah	Middle	11	-	-	11			
Muhammad Qasim	Tail	11	-	-	11			
Abdul Sattar	Tail	9	-	-	9			



Picture 3.60: Beneficiary giving his Remarks on Benefits of Improved Watercourse

vi) Field Visit of Watercourse No. 46922-L, Chak No. 583 TDA UC Sadiqabad, Muzaffargarh, Kot Addu, Punjab on 22nd July 2022

Watercourse No	46922-L	
Type of Watercourse	Additional	
Chak No/Village	Chak no.583 TDA,UC Sadiqabad	
District and Tehsil	Muzaffargarh, Kot Addu	
Name of Distributary	2-L-Lanju	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	LPS
	Middle	LPS
	Tail	LPS
Sanctioned Discharge	48 LPS	
Designed Discharge	80 LPS	
Culturable Command area	723 Acres	

Total No of water users	21 Nos
Estimated lining Length	1138 m
Pictorial view of field visit is given in picture 3.61 & 3.62.	

Picture 3.61: Field Team Measuring Improved Watercourse by using Measuring Wheel

Table 3.29: List of Farmers, their locations on WC & tenure status on WC . 46922-L, Muzaffargarh, Punjab

Name of Farmer	Location on WC	Area/Acres			Operated Area	Status	FCR
		Owned	Rented In	Rented Out			
Muhammad Saeed	Head	40	-	-	40		
Abdul Ghafoor	Middle	26	-	-	26		
Gulam Mustafa	Middle	34	-	-	34		
Muhammad Javed	Tail	76	-	-	76		
Muhammad Rafique	Tail	25	-	-	25		
Muhammad Akhtar	Tail	74	-	-	74		



Picture 3.62: Field Team Interviewing Farmers at Watercourse

Farmer perceptions:

i. Water flow increased approx. by 35%

ii. Irrigation applications time decreased approx. by 30-40 minutes per acre.

- iii. Yield of Wheat Increases Approx. by 25-30%
- iv. Yield of Rice Increases Approx. by 20%

Major Crops: Rice, wheat,
WC ID: 211073/R

Although the farmers were well aware of the program but quite unserious towards the construction of the watercourse

District	Type of Nature of Scheme	
	Water course	Water Storage Tank
Dera Ismail Khan	29	3
Nowshera	9	3
Peshawar	4	5
Buner	6	1
Swat	0	1
Total	48	13

ME&IE Consultant Remarks

- i. Warabandi should be *pakki* (Weekly timing)
- ii. Naccas should be properly fixed to further reduce the water leakages.
- iii. The cooperation of OFWM department was exemplary

3.3.3 Regular Monitoring / Field Visits by Zonal Office KP

ME&IE Consultants' Team of KP Zone remained engaged in different activities related to ME&IE of the Project including data collection and monitoring for baseline survey-II. Three field teams were deputed to all the three zones of the Province of KP for conducting the Baseline Survey-II. Field Team-1 was deputed to the Southern zone covering the districts of D. I. Khan, Karak, Kohat, and Hangu. Field Team-2 worked in Northern Zone covering the hilly districts of the Province KP, while Team-3 carried out field activities in the central zone for monitoring and baseline survey of the water courses and water storage tanks from the sample districts. In addition to the weekly progress review zoom meetings chaired by the Team Leader and all DTLs and other Core team members and general meetings with Directorate of OFWM KP of the ME/IE consultants were also conducted during the reporting month.

As a routine activity, digitally close coordination was made with the Project coordinator of NPIWC-II, and other District Directors of OFWM department KP for acquiring the required data and extending cooperation in this regard. Detail of field activities undertaken for monitoring and baseline-II during the month of July, 2022 are given below.

Water Courses and Water Storage Tanks covered in KP for Baseline Survey-II during July, 2022 are given in table below:

Watercourse Monitoring

Province	Division	No.
KP	Dera Ismail Khan	26
	Malakand	6
	Peshawar	12
Overall		44

WST Monitoring

Province	District	No.
KP	Buner	2
	Dera Ismail Khan	3
	Nowshera	3
	Peshawar	4
	Swat	1
Overall		13

Water Flow Measurement

Province	District	Water Channel Name / Number	No. of Records
KP	Dera Ismail Khan	Abbas TWBC	1
KP	Dera Ismail Khan	Sanaullah TWBC	1
Overall			2

Social & Gender		
Province	District	No.
KP	Buner	8
	Dera Ismail Khan	29
	Nowshera	12
	Peshawar	7
	Swat	1
Overall		57

Scheme-wise Basic Information of Some of the Schemes Surveyed by KP Team-2, is given below:

i. Field Visit of Water Course Muhammad Ayaz TWWC Kot Dolat D. I. Khan, KPK, on 26th July 2022

Name of Watercourse/WST	Muhammad Ayaz TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	63 Acer
Coordinates	31.975496, 70.518225
Sanctioned Length of Watercourse	532
Measured Length of Watercourse	577
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Kulachi
Village	Kot Dolat
Cropping pattern Rabi and Kharif	Rabi: Wheat, Grain, Beet Kharif: Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,742
Demographic information	
Name	Muhammad Jamshed
Age	34
Family size	30
Education	Middle 8 th
Tenurial status	Owner
Area owned	63
Cultivable land	60
Fallow land	3

Beneficiary Name	Farmers'	Muhammad Jamshed
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Observations and Findings during Monitoring & Baseline:

Water User Association Information:

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

Status of Water Course:

The scheme was completed but on ICR1. First installment of Rs. 305,278 was released but remaining still pending. The farmers were satisfied with the Water Course improvement because the available irrigation water has increased than before. Specially, the tail end (kacha portion) users are receiving enough water.

The land was arid before the installation of tube well and after installation of tube wells farmers were facing problem to irrigate their agricultural lands due to undulated fields. After water course improvement, available water consumption was increased with controlled quantity at specific reaches.

Water Table:

Underground water was available at 35 feet depth but the quality of water was good for drinking and agriculture purposes.

Farming Status

Jamshed Khan was the owner of the land and was doing farming. The major crops, he was grown last years was wheat and Fodder.

Wheat was grown by the farmer on 40 acres. Total production of wheat was 817 monds and cost of production at farm level was Rs 666. Average yield of wheat production was 20.44 monds per acre. Kharif Fodder (Jenjan) was grown at 4 acers. Farmer used the fodder for own animals comprising of 8 cows and 13 goats.

Social and Gender Information:

Female was the part of water users' association but usually not actively involved in farming activities. Whose farm land was not attached to the homesteads, their females are not participating in

the agricultural activities like cutting fodders for animals, keeping animals for milking.

**ii. Field visit of Water Curse Sabir Hussain
 TWWC Sikandar Shumali Chahkan D. I.
 Khan KPK, on 26th July 2022**

Name of Watercourse/WST	Sabir HussainTWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	20 Acer
Coordinates	31.898446, 70.644295
Sanctioned Length of Watercourse	480
Measured Length of Watercourse	503
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Sikander Shumali Chahkan
Cropping pattern Rabi and Kharif	Rabi: Wheat Rabi Fodder, Barseem, Kharif: Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	28/03/2022
Sanctioned Cost	Rs: 824,688
Demographic information	
Name	Rahmat Ullah
Age	34
Family size	16
Education	Middle
Tenurial status	Owner
Area owned	20
Cultivable land	18
Fallow land	2
Beneficiary Farmers' Name	Rahmat Ullah

Observations and Findings during Monitoring & Base Line:

Water Users Association Information:

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

Status of Water Course:

The scheme was completed but on ICR1. First installment of Rs 304199 was released but remaining funds still pending. The farmers were satisfied with the Water Course improvement because now more land can be irrigated. Before watercourse improvement scheme land was not irrigated properly since water was not reaching till the end of kacha portion (tail of WC) but now available water has increased significantly.

Water Table:

Underground water was available at the depth of 95 feet but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Rahmat Ullah was the owner of the land and was doing farming. The major crops grown during the last rabi season was wheat and Fodder, Barseem.

Wheat was grown by the farmer on 15.5 acres. Total production of wheat was 325 mond. Average yield of wheat production was 20.96.

Rabi Fodder (Barseem) was grown on 2.5 acer. Famer has planted on 0.5 acer fodder for domestic animal while remaining 2 acers of fodder was sold out at the rate of Rs 112000. Per acer.

Social and Gender Information:

Female was the part of water user association and was not actively involved in farming activities. The similar state of affairs has discussed in the earlier sections.

**iii. Field Visit of Water Course Muhammad Haris
 TWWC Maddi Kulachi D. I. Khan, KPK on 26th July 2022**

Name of Watercourse/WST	Muhammad Haris TWWC
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Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	16.75 Acer
Coordinates	31.88240, 70.58557
Sanctioned Length of Watercourse	477
Measured Length of Watercourse	449
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Kulachi
Village	Maddi
Cropping pattern Rabi and Kharif	Rabi: Rabi Fodder Barseem, Kharif: Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Muhammad Haris Khan
Age	28 years
Family size	5
Education	Master 16th
Tenurial status	Owner
Area owned	16.75 acres
Cultivable land	6 acres
Fallow land	10 acres
Beneficiary Farmers' Name	Muhammad Haris Khan

Observations and Findings during Monitoring & Base Line:

Water User Association Information:

Water user association was formed but not functional. The farmer was not aware from the actual cost of the scheme. Record of water user association of meeting and problem solving was not found. No more female participation was found due to death of one female who used to be the member of the WUA.

Status of Water Course:

The scheme was completed but on ICR1. First installment of Rs 305270 was released but remaining still pending. The farmers were satisfied with the Water Course improvement as a result the available irrigation water supply significantly increased especially at the farms of tail of the water course.

Water Table:

Underground water was available at the depth of 35 feet but the quality of water was good for drinking and agriculture purposes.

Farming Status

Rabi Fodder (Barseem) was grown on 6 acres. Farmer used 1 acre fodder for own animals but remaining 5 acres fodder was sold out worth Rs 520,000.

Social and Gender Information:

Female was the part of water user association and found her no activity in farming chores because of cultural barriers.

iv. Water Course Umar Farooq TWWC Kat Jhok Tahir D. I. Khan KP, on 27th July 2022 by KP Team-2

Name of Watercourse/WST	Umar Farooq TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	14.75 Acer
Coordinates	31.71155, 70.88858
Sanctioned Length of Watercourse	477
Measured Length of Watercourse	
No. of beneficiaries	10
District	D.I.Khan
Tehsil	Parova
Village	Kot Jhok Tahir
Cropping pattern Rabi and Kharif	Rabi: Sugarcane
Water Logging & Salinity	No
Warabandi System	No

Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	28/03/2022
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Javid Akhter
Age	61 years
Family size	11
Education	14 years
Tenurial status	Owner/ Care Taker
Area owned	14.75 acres
Cultivable land	13 acres
Fallow land	1.75 acres
Beneficiary Farmers' Name	Javid Akhter

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The farmer was not aware of the actual cost of the scheme. Record of water user associations' meetings and their problem solving strategies was not found.

Status of Water Course:

The scheme was completed but the ICR1 and under progress. First installment of Rs 3028530 was released remaining still pending. The farmers were satisfied on the scheme of Water Course improvement because the available water for irrigating to their cultivated crops increased significantly, especially at the farms located at the tail of WC.

Water Table:

Underground water was available on the depth of 13 feet but the quality of water was good for drinking and agriculture purposes.

Farming Status:

Javid Akhter was the owner of the land and was doing forming. The major crop grown during last year was only Sugarcane which is generally ratoon crop. Sugarcane was grown on 13 acres. Total production of Sugarcane was 11700 monds with an

average per mond cost of production at farm level was Rs 94. Average yield of Sugarcane production was 900 monds per acre.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities, mainly because of cultural barriers.

v. Field Visit of Watercourse of Muhammad Fahim TWWC Malana D. I. Khan, KPK on 27th July 2022 by KP Team-2

Name of Watercourse/WST	Muhammad Fahim TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	16.5 Acer
Coordinates	31.71477, 70.90309
Sanctioned Length of Watercourse	477
Measured Length of Watercourse	Under Progress
No. of beneficiaries	10
District	D.I.Khan
Tehsil	Parova
Village	Malana
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	19 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Muhammad Fahim
Age	32 years
Family size	23
Education	Middle
Tenurial status	Owner
Area owned	16.5 acres
Cultivable land	8 acres
Fallow land	8 acres

Beneficiary Farmers' Name	Muhammad Fahim
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Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional and desired information was not updated.

Status of Water Course:

The scheme was under progress on ICR1. First installment of Rs 305278 was released remaining still pending. The quality of work was not satisfactory as the broken PCPS was used in lining portion and about 8 broken PCPS were observed. Since the farmers are realizing the importance of improved water courses mainly due to saving of scarce and precious water resources.

Water Table:

Underground water was available on the depth of 20 feet but the quality of water was good for drinking and agriculture purposes.

Farming Status:

Muhammad Fahim was the owner of the land and was doing farming. The major wheat crop was grown during the last rabi season. Wheat was grown by the former on 8 acres. Total production of wheat was 300 monds and cost of production at farm level was Rs 508. Average yield of wheat production was 37.5 monds per acre.

Social and Gender Information:

Female was part of water user association and was not actively involved in farming activities. Their active participation is major hurdle due to women folk norms of the sample areas.

vi. Field Visit of Watercourse Ummar Amin WST Hathala Kulachi D. I. Khan KPK, on 28th July 2022 by KP Team-2

Name of Watercourse/WST	Ummar Amin WST
Type of watercourse/WST	Square 9*9*1.36
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	50 Acer

Coordinates	32.0253180, 70.6045090
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Kulachi
Village	Malana
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Fodder, BTAP Plantation, Olive
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	10 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 420000
Demographic information	
Name	Saif Ur Rehman
Age	44 years
Family size	30 years
Education	Middle
Tenurial status	Owner Care Taker/ Tenant
Area owned	50 acres
Cultivable land	48 acres
Fallow land	0
Beneficiary Farmers' Name	Saif Ur Rehman

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The desired record was not maintained.

Status of Water Storage Tank:

The WST scheme was completed and issued FCR. The cost of WST was partly shared with the arrangement of Project share by 75% of the material cost accounting worth Rs 420000 and Farmer share by 25% valued against the Skill and Unskilled labor cost accounting worth Rs. 140000

accounted towards Total cost of WST worth Rs. 560000.

Water Table:

Underground water was available at 7 feet depth with good quality suitable for drinking and agriculture purposes.

Farming Status:

Ummar Amin was owner of land but he has rented out his land to the tenants for farming. The major crop grown last years was Kharif Fodder, Jenjan.

The farmer planted Olive (Zaitoon) on 23 Acer during last 1.5 year but plants did not bear fruit till now. Similarly, BTAP project was planted on 15 acers from last 2 years. Kharif fodder was grown on 10 acers which was used for own animals like Cows, Goats and Horses.

Social and Gender Information:

Female was the part of water user association and was not actively involved in farming activities mainly due to cultural norms.

vii. Field Visit of Watercourse Abdul Razzaq TWWC Budh Sharqi D.I. Khan KPK on 28th July 2022 by KP Team-2

Name of Watercourse/WST	Abdul Razaq TWWC
Type of watercourse/WST	PVC 4 inch
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	50 Acer
Coordinates	31.972424, 70.711632
Sanctioned Length of Watercourse	600
Measured Length of Watercourse	600
No. of beneficiaries	12
District	D.I.Khan
Tehsil	D.I.Khan
Village	Budh Sharqi
Cropping pattern Rabi and Kharif	Rabi: Wheat, Barseen Kharif: Fodder Jenjan
Water Logging & Salinity	No
Warabandi System	No

Designed Discharge	14.5 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Faryad
Age	32
Family size	17
Education	Primery
Tenurial status	Owner
Area owned	50
Cultivable land	31
Fallow land	17
Beneficiary Farmers' Name	Faryad

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional as well as not being maintained the desired records.

Status of Water Course:

The scheme was completed and issued the FCR. The cost sharing arrangement was 75:25 percent ratios between project management and farmers. Whereas, out of total WC improvement cost counted to be Rs. 1005580, and amount of Rs. 754185 on account of material cost has to pay out of project funds and rest of the amount worth Rs. 251395 on account of skilled and unskilled labor services has to render by the farmers.

Water Table:

Underground water was available at the depth of 150 feet but the quality of water was good for drinking and agricultural purposes.

Farming Status:

Mr. Faryad was the owner of the land and was doing farming. The major crops grown last years on his farm were Wheat, Rabi Fodder (Barseem) and Kharif Fodder (Jantar/Jenjan)

Wheat was grown by the farmer on 25 acres. Total production of wheat was 375 mond and cost of

production at farm level was Rs 1455. Average yield of wheat crop production was 15 mond/acer. Rabi Fodder Barseem was grown on 6 acers.

Kharif Fodder (Jantar/ Jenjan) was grown on 5 acers. One acre of this fodder was sold by the farmer at the rate of Rs. 40000. Farmer had earned Rs. 200,000 by selling fodder out of 5 acers. Besides, farmer owned barani lands of 17 acers which were fallow and used for animal grazing.

Social and Gender Information:

Although Female folks are part of water user association without any active participation, mainly due to their cultural norms as well as their farms are away from homesteads.

viii. Field Visit of Watercourse Muhammad Ramak D. I. Khan KPK, on 29th July 2022 by KP Team-2

Name of Watercourse/WST	Muhammad TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	37.5 Acer
Coordinates	31.397738, 70.59189
Sanctioned Length of Watercourse	505
Measured Length of Watercourse	507
No. of beneficiaries	11
District	D.I.Khan
Tehsil	Paroa
Village	Ramak
Cropping pattern Rabi and Kharif	Rabi: Wheat.
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	24 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	

Name	Atta Ullah
Age	42
Family size	27
Education	0
Tenurial status	Owner
Area owned	37.5
Cultivable land	35
Fallow land	0
Beneficiary Farmers' Name	Atta Ullah

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The desired record by the WUA was not maintained.

Status of Water Course:

The scheme was completed by issuing FCR. AS a result of WC improvement, the status of available water is increased with the facility of controlled water supply and it facilitated more to the areas of arid lands.

Water Table:

Underground water was available at the depth of 350 feet but the quality of water was good for drinking and agriculture purposes.

Farming Status:

Atta Ullah was owner operator, he had grown Wheat crop on 35 Acres. He fetched Total production of wheat to the tune of 875 Monds against cost of production at farm level was Rs 1112. Average yield of wheat was 25 Mond/Acer.

Social and Gender Information:

Female was the part of water user association and was not actively involved in farming activities. Since, the land was not attached to the most of homes of the farmers. Thus the female folks are not doing farming activities like cutting of fodders for animals, keeping animals for milking and livestock.

ix. Field Visit of Watercourse Muhammad Akram TWWC Kala Gorh D. I. Khan KPK, on 30th July 2022

Name of Watercourse/WST	Muhammad Akram TWWC
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Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	15.5 Acer
Coordinates	32.04998, 71.00875
Sanctioned Length of Watercourse	477
Measured Length of Watercourse	480
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Pharpur
Village	Kala Ghorh
Cropping pattern Rabi and Kharif	Rabi: Wheat, Sugarcane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	20 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Muhammad Akram
Age	70
Family size	12
Education	Primery
Tenurial status	Owner
Area owned	15.5
Cultivable land	15
Fallow land	0
Beneficiary Farmers' Name	Muhammad Akram

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The mandatory information record is not updated.

Status of Water Course:

The scheme was physically completed with the status of ICR1. The First installment of Rs 305278 was released remaining still pending. Farmers were

of the opinion that WC improvement made significant difference in respect of saving of water losses and water available increases especially at the tail level farms.

Water Table:

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

Farming Status:

Muhammad Akram was owner operator of his farm. He has grown Wheat and Sugarcane during last rabi and kharif seasons. Wheat was grown on 6 acres with total production of 150 mond against the cost of production worth Rs 1443/40kg/mond. Average yield of wheat production was 25 mond/acer.

Sugarcane was grown on 9 acers with total production of 5000 mond against the cost of production to the tune of Rs 128/40 kg mond. Average yield of sugarcane was 555 mond/acer.

Social and Gender Information:

Female was the part of water user association and was not actively involved in farming activities. No farming activity was done by the women folks due to cultural barriers.

x. Field Visit of Watercourse Fatima Begum, WST Paharpur D. I. Khan KPK, on 30th July 2022 by KP Team-1

Name of Watercourse/WST	Fatima Begum WST
Type of watercourse/WST	Square 9*9*1.36
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	10.12Acer
Coordinates	32.3212793, 70.94709
Sanctioned Length of Watercourse	
Measured Length of Watercourse	
No. of beneficiaries	11
District	D.I.Khan
Tehsil	Paharpur
Village	Paharpur

Cropping pattern Rabi and Kharif	Kharif: Gaur Cluster Bean
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	12 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 420000
Demographic information	
Name	Muhammad Amir
Age	37
Family size	11
Education	Master
Tenurial status	Owner / Land on his mother name
Area owned	10.12
Cultivable land	8
Fallow land	1
Beneficiary Farmers' Name	Muhammad Amir

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. No record was maintained by WUA.

Status of Water Storage Tank:

The WST scheme was physically completed and stands at ICR1. The cost of WST scheme was based on share of 75% posted against material cost worth Rs. 420000.

Water Table:

Underground water was available on 55 feet depth but the quality of water was good for drinking and agriculture purposes.

Farming Status:

Muhammad Amir was the owner farmer but the land was against the name his mother Fatima Begum. The major crops grown during the last cropping year were Kharif Gaur, Cluster Bean. Cluster bean was grown by the farmer on 8 acres yielded 25 mond against the production cost worth

Rs 2016/40kg mond at farm gate. Average yield of wheat production was 3.12 mond/acer.

Social and Gender Information:

The land was in the name of Fatima Begum, she is also member of Water User Association but not actively involved in forming activities. She is like other women not active in the chores of farming.

x. Field visit of Watercourse Sana Ullah TWWC Yarik, D. I. Khan, KPK on 28th July 2022 by KP Team-2

Name of Watercourse/WST	Sana Ullah TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	60
Coordinates	32.0971518 70.7768866
Sanctioned Length of Watercourse	532
Measured Length of Watercourse	532
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Yarik
Cropping pattern Rabi and Kharif	Rabi: Wheat ,Grain Kharif: Maize,Millet
Water Logging & Salinity	Yes
Warabandi System	No
Designed Discharge	16 LPS
Main Source of water	Tube Well
Additional Source of water	Barani & Rodh Kohi
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,742
Demographic information	
Name	Sana Ullah
Age	47
Family size	15
Education	Bachelor
Tenurial status	Owner
Area owned	6.25

Cultivable land	5
Fallow land	1.25
Beneficiary Farmers' Name	1. Sana Ullah 2. Muhammad Ramzan 3. Abdul Rehman

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed and functional up to some extent. Record of water user association pertaining to meeting and problem solving was not found. The total cost of the scheme was RS 824,742. First installment comprising of 40% was released amounting to RS 329,695 during the financial year 2021-2022 while, the 2nd installment is still pending which will be released during 2021-2022.

Social and Gender Information:

Female was not part of the water user association as well as not actively involved in farming activities. They are rarely involved in decision making regarding farm related activities. Majority of female working as House Wife as well as supporting their family male in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of farmers are also associated with Handicraft and stitching.

xii. Field Visit of Watercourse Malik Habib Ullah TWWC Qazi Koker D. I. Khan, KPK, on 2th July 2022 by KP Team-2

Name of Watercourse/WST	Malik Habib Ullah TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	13.41
Coordinates	32.0208515 71.0141491
Sanctioned Length of Watercourse	540
Measured Length of Watercourse	620
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Pahar Pur

Village	Qazi Koker
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize, Beet Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	32 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Habib Ullah
Age	50
Family size	12
Education	0
Tenurial status	Owner
Area owned	13.41
Cultivable land	11
Fallow land	2.5
Beneficiary Farmers' Name	Malik Habib Ullah

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. Record of water user association of meeting and problem solving was not found. The farmer was owner of the land and they prepared land in Kachha of Indus river side. According to farmer the water was not reaching to the tail located fields before construction of WC. Now enough water is available at the tail end fields. Farmer and WUA was unaware from the actual cost of scheme and the department took his signatures on blank check.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. and they are only involved during harvesting season. Majority of female are working as House Wife and support their family male partners in livestock care, milking of animal, food preparation, washing of clothes and caring of their family elders and children, as well as in Handicrafts & stitching.

**xiii. Field Visit of Watercourse Ghulam Rabbani
TWWC Rodi Khel Pahar Pur D. I. Khan KPK, on
28th July 2022, by KP Team-2**

Name of Watercourse/WST	Ghulam Rabbani TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	25
Coordinates	32.0701579 70.8054826
Sanctioned Length of Watercourse	528
Measured Length of Watercourse	528
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Paharpur
Village	Rodi Khel
Cropping pattern Rabi and Kharif	Rabi: Wheat ,Grain Kharif: Maize, Barly
Water Logging & Salinity	Yes
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,742
Demographic information	
Name	Ghulam Rabbani
Age	49
Family size	26
Education	Matric
Tenurial status	Owner
Area owned	25
Cultivable land	23
Fallow land	2
Beneficiary Farmers' Name	Ghulam Rabbani

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed and functional at low pace. The record maintenance by the water

user association is missing about the meetings and status of problem solving. The farmers were cooperative with one another. The total cost of the scheme was RS 824,742. First installment of 40% was released worth RS 329,695 during the financial years 2021-2022 while the 2nd installment is still pending which will be released in 2022-2023.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. They are rarely involved in decision making regarding farming related activities. Majority of female working as House Wife while supporting their family male in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of farming community are associated with Handicrafts and stitching.

**xiv. Field Visit of Watercourse Ghulam Sadiq
TWWC Kiri Khaisor D. I. Khan, KP, in 04th July
2022 by KP Team-2**

Name of Watercourse/WST	Ghulam Sadiq TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	25.16
Coordinates	32.3164857 71.2038176
Sanctioned Length of Watercourse	466
Measured Length of Watercourse	0
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Pahar Pur
Village	Kiri Khaisor
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	27 LPS
Main Source of water	Tube Well
Additional Source of water	Barani

Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,862
Demographic information	
Name	Muhammad Nabi
Age	59
Family size	7
Education	0
Tenurial status	Owner
Area owned	8.38
Cultivable land	7.38
Fallow land	1
Beneficiary Farmers' Name	1. Muhammad Nabi Ghulam Nabi

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The farmer was not aware about the actual cost of the scheme. Record of water user association about the meeting and problem solving was not found. The scheme was on ICR 1 with the status at release of first installment worth RS. 304557 and the remaining releases were still pending.

Water Table:

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

Farming Status:

Ghulam Nabi and Muhammad Nabi were having the joint ownership and doing self-farming. The major crops, wheat and sugar cane were grown at their farm.

Social and Gender Information:

Female was not the part of water user association and was actively involved in farming activities. The land was attached to the homestead of the former thus, their females are doing activities like cutting of fodders for animals, keeping animals for milking.

xv. Field Visit of Watercourse Saif-Ur-Rehman TWWC Dhap Chaba D. I. Khan, KPK, on 23rd July 2022 by KP Team-2

Name of Watercourse/WST	Saif Ur Rehman TWWC
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Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	20.25
Coordinates	31.7621304 70.8913902
Sanctioned Length of Watercourse	450
Measured Length of Watercourse	451
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Dhap Chabak
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize, Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	22 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Saif Ur Rehman
Age	53
Family size	12
Education	Middle
Tenurial status	Owner
Area owned	20.25
Cultivable land	19
Fallow land	1.25
Beneficiary Farmers' Name	Saif Ur Rehman

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. Record of water user association of meeting and problem solving was not found. The farmer was owner of the land and they prepared land towards the Kachha of Indus river side. According to the farmer, the irrigation water is

readily available with more quantity at the tail end farms after improvement of WC.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved during harvesting season. Majority of female were working as House Wife while supporting their family male in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of farmers have associated to Handicraft and stitching.

**xvi. Field Visit of Watercourse Ijaz-Ud-Din WC
Sheikh Rajo D. I. Khan, KPK, on 23rd July 2022,
by KP Team-2**

Name of Watercourse/WST	Ijaz Ud Din WC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	12.5
Coordinates	31.7621304 70.8913902
Sanctioned Length of Watercourse	404
Measured Length of Watercourse	480
No. of beneficiaries	12
District	D.I.Khan
Tehsil	D.I.Khan
Village	Sheikh Rajo
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize, Barly
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	14 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 420,000
Demographic information	
Name	Muhammad Imran
Age	40

Family size	12
Education	Bachelor
Tenurial status	Tenant
Area owned	0
Cultivable land	6
Fallow land	2
Beneficiary Farmers' Name	Muhammad Imran

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. Record of water user association pertaining to the proceedings of the meetings and problem solving status was not found. The farmer was tenant cultivator. According to farmer their water was not reaching till the end of the fields before construction of WC, but now water reached till the end of fields.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved during harvesting season. Majority of female working as House Wife as well as supporting to their family male members in keeping livestock, milking animals, food preparation, washing clothes and caring of their family elders and children. Female of farmers are associated to the Handicraft and stitching entrepreneurial trades.

xvii. Field Visit of Watercourse Ikram Ullah WST & TWWC Bahadri D. I. Khan, KPK, on 05th July 2022 by KP Team-2

Name of Watercourse/WST	Ikram Ullah WST&TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	27.875
Coordinates	32.0208515 71.0141491
Sanctioned Length of Watercourse	524
Measured Length of Watercourse	538

No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Bahadri
Cropping pattern Rabi and Kharif	Rabi: Wheat, Kharif: Millet, Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	WST10 LPS/ WC 14 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2022
Sanctioned Cost	Rs: 824,926
Demographic information	
Name	Aslam Khan
Age	60
Family size	6
Education	0
Tenurial status	Shared in Crops 50%/ Tenant
Area owned	Shared in crop 27.875
Cultivable land	25
Fallow land	2.87
Beneficiary Farmers' Name	Aslam Khan S/O Gul Azam Crop Share holder

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The farmer was not aware of the actual cost of the scheme. Record of water user association about the deliberations of the meeting and problem solving was not found. According to the farmer that their water was not reaching till the end of fields especially on the fields of located at the tail of WC before construction of WST & WC, since their fields were not leveled and now the farmers had leveled the lands along with the improvement of water course.

Water Table:

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

Farming Status:

Aslam Khan, a Tenant and care taker of land doing farming on the scheme. The tenant is doing farming on 50:50 crop and cost of production sharing basis.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved during harvesting season. Majority of female of the farmers were working as House Wife and supporting their family male members in keeping livestock, milking animal, food preparation. Female involved in harvesting season in farming.

xviii. Field Visit of Watercourse Ali Muhammad TWWC Kachi Painda Khan D. I. Khan, KPK, on 29th July 2022 by KP Team-2

Name of Watercourse/WST	Ali Muhammad TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	13.875
Coordinates	32.0208515 71.0141491
Sanctioned Length of Watercourse	180
Measured Length of Watercourse	620
No. of beneficiaries	11
District	D.I.Khan
Tehsil	D.I.Khan
Village	Kachi Painda Khan
Cropping pattern Rabi and Kharif	Rabi: Wheat, Fodder, Kharif: Millet, Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	30 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 359578
Demographic information	

Name	Ali Muhammad
Age	31
Family size	15
Education	Metric
Tenurial status	Owner
Area owned	13.875
Cultivable land	12
Fallow land	1
Beneficiary Farmers' Name	1. Ali Muhammad Owner 2. Saif Ullah Provision of Water from tube well 3. Bashir Ahmad Provision of water from tube well

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The farmer was not aware of the actual cost of the scheme and the department has taken the signatures on the blank check. Record of water user association of the meetings and problem solving was not found. The farmer was owner of the land and they prepared land in Kachha of Indus river side. According to the farmer that the irrigation water was not reaching till to the end of fields before construction of WC. Now the land has leveled the more water is being watered to the fields in addition to more water available with the improved WC.

Forming Status:

Ali Muhammad is the owner of land and doing self-forming. The farmer is supplementing the irrigation to their fields through tube well and sharing the water course with the neighboring farmers through mutual exchange. He provided water to Saif Ullah and Bashir Ahmad.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved during the harvesting season. Majority of female working as House Wife while supporting their family male members in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of the farmers are also engaged with different Handicrafts and stitching.

xix. Field Visit of Watercourse Muhammad Sher TWWC Umer Khel Kaccha D. I. Khan, KPK, on 04th July 2022, by KP Team-2

Name of Watercourse/WST	Muhammad Sher TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	13.35
Coordinates	32.0208515 71.0141491
Sanctioned Length of Watercourse	391
Measured Length of Watercourse	0
No. of beneficiaries	10
District	D.I.Khan
Tehsil	Pahar Pur
Village	Umer Khel kacha
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	26LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2022
Sanctioned Cost	Rs: 824,309
Demographic information	
Name	Muhammad Sher
Age	55
Family size	12
Education	0
Tenurial status	Owner
Area owned	13.35
Cultivable land	5
Fallow land	8.35
Beneficiary Farmers' Name	Muhammad Sher

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

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

cost of the scheme. The desired records in this regard are not being maintained. Most of the available water situations has improved significantly after WC improvement.

Water Table:

Underground water was available at 100 feet depth but the quality of water was good for drinking and agriculture purposes.

Forming Status:

Muhammad Sher was the owner of the land and doing self-forming. The first crop he sown was wheat.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved during harvesting season. Majority of female working as House Wife while supporting their family male members in keeping livestock, milking animal, food preparation.

xx. Field Visit of Watercourse Allah Dad TWWC Sheikh Rajo D. I. Khan, KPK, on 27th July 2022, by KP Team-2

Name of Watercourse/WST	Allah Dad TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	19.13
Coordinates	32.0290014 71.0167323
Sanctioned Length of Watercourse	440
Measured Length of Watercourse	431
No. of beneficiaries	10
District	D.I.Khan
Tehsil	Pahar Pur
Village	Qazi Koker
Cropping pattern Rabi and Kharif	Rabi: Wheat, Kharif: Maize, Beet Sugar Cane
Water Logging & Salinity	No

Warabandi System	No
Designed Discharge	26 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Allah Dad
Age	63
Family size	12
Education	Middle
Tenurial status	Owner
Area owned	19.12
Cultivable land	16.63
Fallow land	2.5
Beneficiary Farmers' Name	Qayum Nawaz

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. Record of water user association i.r.o meeting and problem solving was not found. The farmer was owner of the land and they prepared land in Kachha of Indus river side. According to farmer their water was not reaching till to the end of fields before construction of WC. Now the status of available water improved and reaching till to the end of fields.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved in agri. activities during harvesting season. Majority of female are working as House Wife while supporting their family male members in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. They are also engaged with Handicrafts and stitching.

xxi. Field Visit of Watercourse Sabir Hussain TWWC Sheikh Rajo D. I. Khan, KPK, on 24th July 2022, by KP Team-2

Name of Watercourse/WST	Sabir Hussain TWWC
Type of watercourse/WST	PCPS

Category of water course	Tube Well
Culturable Command Area (CCA) Acres	7.625
Coordinates	31.758583 70.8944304
Sanctioned Length of Watercourse	442
Measured Length of Watercourse	431
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Sheikh Rajo
Cropping pattern Rabi and Kharif	Rabi: Wheat, Kharif: Maize,
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Sabir Hussain
Age	50
Family size	5
Education	Middle
Tenurial status	Owner
Area owned	7.6
Cultivable land	6
Fallow land	1.6
Beneficiary Farmers' Name	Sabir Hussain

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was farmed but not functional. Record of water user association of meeting and problem solving was not found. The farmer was owner of the land and they prepared land in Kachha areas towards the Indus river side. According to the farmers the status of water availability has improved and reaching till to the end the construction of WC. The condition of WC was not in good condition as the back filling was not done properly, the vegetation along the banks of

the WC was not properly removed and the WUA was not caring the maintenance of watercourse.

Social and Gender Information:

Female was not the part of water user association and was not actively involved in farming activities. Female are only involved during harvesting season. Majority of female working as House Wife while supporting their family males in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children, in addition to engaging themselves in the hobbies of Handicraft and stitching.

xii. Field Visit of Watercourse Ghulam Rabbani TWWC Rodi Khel Pahar Pur D. I. Khan, KPK, on 28th July 2022, by KP Team-2

Name of Watercourse/WST	Ghulam Rabbani TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	25
Coordinates	32.0701579 70.8054826
Sanctioned Length of Watercourse	528
Measured Length of Watercourse	528
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Paharpur
Village	Rodi Khel
Cropping pattern Rabi and Kharif	Rabi: Wheat ,Grain Kharif: Maize,Millet
Water Logging & Salinity	Yes
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,742
Demographic information	
Name	Ghulam Rabbani

Age	49
Family size	26
Education	Matric
Tenurial status	Owner
Area owned	25
Cultivable land	23
Fallow land	2
Beneficiary Farmers' Name	Ghulam Rabbani

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed and functional up to some extent. Record of water user association of meeting and problem solving was not found. The formers were cooperative with one another. The total cost of the scheme was RS 824,742. First installment of 40% was released worth RS 329,695 during the financial years 2021-2022 while 2nd installment is still pending which will be released during 2022-2023.

Social and Gender Information:

Female was not part of water user association and not actively involved in farming activities. They are rarely involved in decision making regarding farming related activities. Majority of female working as House Wife while supporting their family males in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children, as well as busy in Handicrafts and stitching.

xxiii. Field Visit of Watercourse Sardar Malik Liaqat Ali TWWC Rakh Lakri D. I. Khan, KPK, on 06th July 2022. By KP Team-2

Name of Watercourse/WST	Sardar Malik Liaqat Ali TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	20
Coordinates	31.507997 70.753087
Sanctioned Length of Watercourse	471

Measured Length of Watercourse	472
No. of beneficiaries	11
District	D.I.Khan
Tehsil	Parova
Village	Rakh Lakri
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	33 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Sardar Malik Liaqat Ali
Age	46
Family size	11
Education	Middle
Tenurial status	Owner
Area owned	20
Cultivable land	18
Fallow land	2
Beneficiary Farmers' Name	Sardar Malik Liaqat Ali

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The former was not aware of the actual cost of the scheme. Record of water user association regarding meeting and problem solving was not found. The scheme was completed. The farmers were satisfied from the water supply after Water Course improvement as majority of land now irrigated. Before this scheme our land was not irrigated properly as water was not reaching till to end kacha portion but now water reaching till to end successfully.

Water Table:

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

Forming Status:

Sardar Malik Liqat Ali was the owner of the land and was performing self-farming. The major crops were grown including wheat and sugar cane. Last year they have grown wheat and sugar cane on 18 acers. The Mango orchid was also grown on the same land.

Social and Gender Information:

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

xxiv. Field Visit of Watercourse Abass TWWC Yarik D. I. Khan, KPK, on 22nd July 2022, by KP Team-2

Name of Watercourse/WST	Abass TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	10
Coordinates	32.0945329 70.812669
Sanctioned Length of Watercourse	453
Measured Length of Watercourse	453
No. of beneficiaries	11
District	D.I.Khan
Tehsil	D.I.Khan
Village	Yarik
Cropping pattern Rabi and Kharif	Rabi: Wheat ,Grain Kharif: Maize,Millet
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	16 LPS
Main Source of water	Tube Well
Additional Source of water	Barani & Rodh Kohi
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517

Demographic information	
Name	Abass
Age	57
Family size	11
Education	0
Tenurial status	Owner
Area owned	16
Cultivable land	10
Fallow land	6
Beneficiary Farmers' Name	1) Abass 2) Mati Ullah

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The desired record of water user association is not being maintained. The total cost of the scheme was RS 940569 among which material cost was RS 705426 and farmer shared in land worth RS 235142. First installment was released amounting to RS 329695 during the financial years 2021-2022 while 2nd installment is still pending which will be released in 2021-2022. According to FCR from material cost PCPS 498 demanding while actually 516 segment was on ground where there was a difference of 18 number of segments.

Social and Gender Information:

Abass was not agreed to provide gender related information regarding their female due to cultural constraints. Female was not the part of water user association and not actively involved in farming activities. They are rarely involved in decision making regarding farm related activities. Majority of female working as House Wife and supporting their family males in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children.

xxv. Field Visit of Watercourse Shah Nawaz TWWC Skinder Shumali D. I. Khan, KPK, on 29th July 2022, by KP Team-2

Name of Watercourse/WST	Shah Nawaz TWWC
Type of watercourse/WST	PCPS

Category of water course	Tube Well
Culturable Command Area (CCA) Acres	10.125
Coordinates	32.0208515 71.0141491
Sanctioned Length of Watercourse	520
Measured Length of Watercourse	
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Skindar Shumali
Cropping pattern Rabi and Kharif	Rabi: Wheat, Grain, Kharif: Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	28/03/2022
Sanctioned Cost	Rs: 821,891
Demographic information	
Name	Shah Nawaz
Age	66
Family size	30
Education	0
Tenurial status	Owner
Area owned	10.125
Cultivable land	7.5
Fallow land	2.5
Beneficiary Farmers' Name	Shah Nawaz Owner

Observations and Findings during Monitoring & Baseline:

Water User Association Information:

Water user association was formed but not functional. The farmers are not maintaining the mandatory data records.

Water Table:

Underground water was available at 550 feet but the quality of water was not good for drinking. They used the water only for agriculture purposes.

Farming Status:

Shah Nawaz the owner of land doing farming via irrigating their crop fields with the source of tube wells.

Social and Gender Information:

Female was not part of water user association and she didn't take part actively in forming activities. Female are only involved during harvesting season. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of farming community associated to Handicraft and stitching.

Scheme-wise Basic Information of Some of the Schemes Surveyed by KP Team-3, is given below:

i. Field Visit of Watercourse Zahir Ul Amin WC Nakband Azakhil, Peshawar, KP, on 5th July 2022 by KP Team-3

Name of Watercourse	Zahir Ul Amin WC
Type of watercourse	HDPE
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	20
Coordinates	
Sanctioned Length of Watercourse	1047
Measured Length of Watercourse	1047
No. of beneficiaries	1
District	Peshawar
Tehsil	Peshawar
Village	Nakband Azakhel
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetables Kharif: Maize, Vegetables
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 6.5
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	21/03/2022
Financial Year	2021-22

Sanctioned Cost	Rs. 1269405/-
Status	Completed

Observations and Findings during Monitoring & Baseline:

No observations

ii. Field Visit of Watercourse Mogha No.19725/L, Nowshera, KP, on 14th July 2022 by KP Team-3

Name of Watercourse	Mogha No.19725/L
Type of watercourse	PCPS
Category of watercourse	Add. 15%
Culturable Command Area (CCA) Acres	80
Coordinates	
Sanctioned Length of Watercourse	390
Measured Length of Watercourse	N/A
No. of beneficiaries	10
District	Nowshera
Tehsil	Jahangira
Village	Shuja Abad
Cropping pattern Rabi and Kharif	Rabi: Wheat, Sugarcane, Vegetables Kharif: Maize, Vegetables
Water Logging & Salinity	Nil
Warabandi System	Exist
Designed Discharge	Lps: 65
Main Source of water	Canal
Additional Source of water	Nil
Date of Technical Sanction	25/5/2022
Financial Year	2021-22
Sanctioned Cost	Rs.1644099
Status	ICR-2

Observations and Findings during Monitoring & Baseline:

The status of watercourse is ICR-2. We interviewed 3 beneficiaries of this Watercourse the remaining were not available at that time.

iii. Field Visit of Watercourse Mogha No.9800/L, Nowshera, KP, on 14th July 2022, by KP Team-3

Name of Watercourse	Mogha No.9800/L
Type of watercourse	PCPS

Category of water course	Add. 16%
Culturable Command Area (CCA) Acres	213
Coordinates	
Sanctioned Length of Watercourse	800
Measured Length of Watercourse	868
No. of beneficiaries	15
District	Nowshera
Tehsil	Jahangira
Village	Shawa Khan Korona
Cropping pattern Rabi and Kharif	Rabi: Wheat, Sugarcane, Vegetables, Tobacco Kharif: Maize, Vegetables
Water Logging & Salinity	Nil
Warabandi System	Exist
Designed Discharge	Lps: 65
Main Source of water	Canal
Additional Source of water	Nil
Date of Technical Sanction	15/02/2022
Financial Year	2021-22
Sanctioned Cost	Rs.1396500
Status	Completed

Observations and Findings during Monitoring & Baseline:

The condition of the improved watercourse was very good especially due to perfect back filling, joints properly filled and no damage seen, but in some portions there were lot of vegetation observed on both sides which covered the watercourse. Since the farmer told that he could not manage timely due to heavy rain. We interviewed 3 beneficiaries of this Watercourse the remaining were not available at that time.

iv. Field Visit of Watercourse Ibrahim Khan WST, Peshawar, KP, on 4th July 2022 by KP Team-3

Name of Water Storage Tank	Ibrahim Khan WST
Type of Water Storage Tank	Square (Bricks Masonry)
Category of Water Storage Tank	Regular (New)

Culturable Command Area (CCA) Acres	25 Acres
Coordinates	
Size of Water Storage Tank	Length 1: 34.4 Length 2: 34.4 Width 1: 34.6 Width 1: 34.6 Depth: 4.8
No. of beneficiaries	2
District	Peshawar
Tehsil	Peshawar
Village	Adenzai
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetables Kharif: Maize, Vegetables
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps:10
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	11/03/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 453942/-

Observations and Findings during Monitoring & Baseline:

- i. The land topography is uneven like terracing, one fourth of the agricultural land, which is not cultivable due to undulated terrain. The land is occupied with forest trees mainly used for firewood. The farmer told that it will take a lot of money to clear and level this area, currently we can't afford to develop land.
- ii. According to the farmer, there are plenty of wild boar those are destroying our crops specially in Kharif season (Maize). Therefore farmers are asking for aid to fund for erecting Fence around their Farms.

v. Field Visit of Watercourse Afaq Ahmad WST, Peshawar KP, on 4th July 2022 by KP Team-3

Name of Water Storage Tank	Afaq Ahmad WST
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Type of Water Storage Tank	Square (Bricks Masonry)
Category of Water Storage Tank	Regular (New)
Culturable Command Area (CCA) Acres	30
Coordinates	
Size of Water Storage Tank	Length 1: 34.7 Length 2: 34.7 Width 1: 34.6 Width 1: 34.6 Depth: 4.6
No. of beneficiaries	3
District	Peshawar
Tehsil	Peshawar
Village	Badaber
Cropping pattern Rabi and Kharif	Rabi: Wheat, vegetables Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 4.50
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	11/05/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 454572/-

Observations and Findings during Monitoring & Baseline:

The CCA of this WST is 30 Acres, which is owned by 3 brothers and they shared out among three farmers. So we interviewed three beneficiaries on this WST.

vi. Field Visit of Watercourse Zahir Ul Amin WST, Peshawar, KP, on 5th July 2022, by KP Team-3

Name of Water Storage Tank	Zahir Ul Amin WST
Type of Water Storage Tank	Square (Bricks Masonry)
Category of Water Storage Tank	Regular (New)
Culturable Command Area (CCA) Acres	10
Coordinates	

Size of Water Storage Tank	Length 1: 33.9 Length 2: 33.9 Width 1: 33.9 Width 1: 33.9 Depth: 4.8
No. of beneficiaries	1
District	Peshawar
Tehsil	Peshawar
Village	Nakband Azakhel
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetables Kharif: Maize, Vegetables
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 6.5
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	15/03/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 466242/-

Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetables Kharif: Cauliflower
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 7.5
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	11/05/2022
Financial Year	2021-22
Sanctioned Cost	Rs. 592959/-

Observations and Findings during Monitoring & Baseline:

According to file the CCA on this WST is 40 Acres but the farmer reported 6.5 Acres on which he is doing farming.

3.3.4 Regular Monitoring / Field Visits by Zonal Office Balochistan

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

- Updated Progress of ME&IE Consultants, Balochistan Zone.
- Field activities regarding Midline Survey
- Meetings
- Quarterly Work Plan (July to September 2022) – Balochistan Zone.

3.3.4.1 Updated Progress – Balochistan Zone

i. Overall Progress:

The ME&IE Consultants (ME&IEC), Balochistan monitored 17 Watercourses and 51 Water Storage Tanks in during First Baseline Survey activities. Till date, total benchmarked sites in First Baseline Survey were 67.

As per TORs ME&IEC are responsible to submit midline survey report in the middle of the assignment. In this context ME&IE Consultants started Midline Survey from the reporting month

Name of Water Storage Tank	Muhammad Usman (WST)
Type of Water Storage Tank	Square
Category of Water Storage Tank	Regular (New)
Culturable Command Area (CCA) Acres	6.5
Coordinates	
Size of Water Storage Tank	Length 1: 39.8 Length 2: 39.8 Width 1: 39.9 Width 1: 39.9 Depth: 4.5
No. of beneficiaries	1
District	Peshawar
Tehsil	Peshawar
Village	Rahim Abad

on the basis of First Baseline Survey. The ME&IEC monitored total 22 sites, which include 08 Watercourses and 14 Water Storage Tanks.

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 so far have monitored 83 watercourses and 79 Water Storage Tanks. Total 162 sites have been monitored till date. Updated status of field visits is given in below Table 3.1.

Table 3.1: Updated Status of field Visit

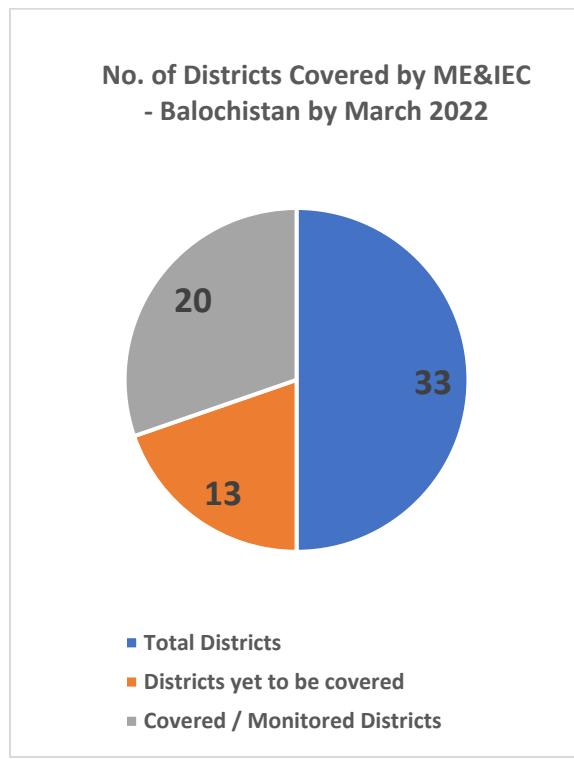
Sr. #	District	Baseline / Bench Marked		Midline Survey		Regular Monitoring / Spot Checking		Total
		W C	W S T	W C	W S T	W C	W S T	
1	Quetta	-	6	-	4	10	15	35
2	Pishin	-	8	-	-	4	13	25
3	Killa Abdullah	1	1	-	-	3	2	7
4	Ziarat	-	3	-	-	2	4	9
5	Mastung	1	5	1	2	7	9	25
6	Nushki	-	-	-	-	2	1	3
7	Sibi	-	-	-	-	1	3	4
8	Jhal Magsi	1	4	-	-	1	2	8
9	Kachhi	-	8	-	-	1	2	11
10	Naseera bad	2	4	2	1	14	6	29
11	Jaffarabad	-	-	-	-	4	1	5
12	Sohbatpur	7	-	3	-	14	-	24
13	Loralai	1	2	1	4	2	6	16
14	Duki	-	-	-	-	2	1	3
15	Zhob	-	-	-	-	3	2	5
16	Kila-Saifullah	2	1	1	3	5	4	16
17	Musa khel	-	-	-	-	1	1	2
18	Sherani	-	-	-	-	2	2	4
19	Khuzdar	1	6	-	-	1	1	9
20	Kalat	1	3	-	-	4	4	12
Sub-Total		17	51	8	14	83	79	252

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

ii. 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.



3.3.4.2 Midline Survey - Balochistan.

As per TORs of the assignment, Midline Survey is conducted in the middle of Project to check the overall performance and benefits of the project and prepare a Midline Survey Report.

The baseline survey provides a reference point for tracking the project's progress; that is, to measure the degree and quality of change during an activity's implementation.

Midline surveys research is an opportunity to examine how the program / project is performing and what corrective measures should be taken where required to improve the project.

Objective of Midline Survey (NPIWC-II):

- Evaluate the impacts of project's interventions
- To check if the project is on track
- Quality of work done
- Protocols of the project are being followed or not
- Is scheme file available and completed in all respects

During the current month ME&IEC, Balochistan surveyed a total 22 sites of the Midline Survey as listed in Table 3.2 below.

Table 3.2: Sites Surveyed for Midline Survey

Sr . #	District	Midline Survey		Total
		WC	WST	
1	Quetta	-	4	4
2	Mastung	1	2	3
3	Naseerabad	2	1	3
4	Sohbatpur	3	-	3
5	Loralai	1	4	5
6	Kila-Saifullah	1	3	4
Sub-Total		8	14	22

¹ ECHO, 19 July 2022

3.3.4.3 Heavy Rains and Floods in Balochistan During the Reporting Month

ME&IEC's field activities in the reporting month were affected badly due to heavy rains and floods in Balochistan.

The monsoon season affected several provinces of Pakistan, causing floods, flash floods and severe weather-related events, and resulting in an increased humanitarian impact.

The Provincial Disaster Management Authority (PDMA) in Balochistan has declared a state of emergency in the wake of flash floods and heavy rains in Balochistan. According to initial assessments at least 150,000 people require humanitarian assistance, 30,000 people have been severely affected in Balochistan, and 400 families have been displaced¹.

A recent storm caused a spell of heavy rainfall in Balochistan, which resulted in extreme flash floods in July 2022. These flash floods were sudden and unexpected at this time of the year and affected 50,000 catchment population, with the loss of property and livelihoods.

The floods destroyed critical agricultural assets and infrastructure, and also resulted losses in the production of crops, livestock and fisheries. It may change agricultural trade flows, and cause losses in agricultural-dependent manufacturing subsectors such as the textile and food processing industries.

3.3.4.4 Way forward to accomplish Midline Survey:

As mentioned above the field activities of Midline Survey were affected badly and ME&IEC could not achieve the targets of midline survey as per planned targets for July 2022, therefore, the field activities regarding midline will continue in the month of August 2022. The ME&IEC, Balochistan has planned to achieve the remaining targets of midline in the first two weeks of August 2022 subject to availability of access to the targeted sites as most of

the sites are not reachable after heavy flooding. It is expected that weather conditions may be normalized in the month of August 2022 and the field team could achieve the targets as per plan.

3.3.4.5 General Profile and Observations of Monitored Sites – Midline Survey

The Midline filed visits were conducted by Mr. Manzoor Kasi, FTI/M&E Expert, Mr. Tariq Khoso, FTI/M&E Expert, Mr. Naseeb Jan, FTI/M&E Expert, Mr. Qaisar, M&E Officer, Mr. Hamza, M&E Officer, Ms Mahgul Noor, M&E Officer, Mr. Saleem Abro, M&E Officer and Mr. Basit M&E Officer.

The Midline Survey field activities are given in below tables:

i. **Field Visit of Water Storage Tank Khudai Dad in Jalazai, Kila Saif Ullah, Balochistan, on 19th July 2022**

Scheme:	Water Storage Tank
Name of Farmer:	Khudai Dad
Name of village:	Jalalzai
Union council:	Sadar
Chairman WUA:	Khudai Dad
District:	Killa Saif Ullah
Tehsil	Killa Saif Ullah
Coordinates	N 30.726.779 E 68.898.299
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of WST:	50'x50'
Depth:	4'.75"
Command area:	10 acres
No of beneficiaries:	1 No.
Starting date:	28 May 2022
Completion date:	15 June 2022
Quality of Work	Good
Reduction in Water Logging and salinity	<i>No such problem in this area</i>
Cropping intensity increased	Yes
Crops yield increased	Yes

Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	To some extent
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> ● Farmers are very happy to get benefits of this intervention and thankful to the Agriculture Department. ● Farmers were requesting the Government provide a Solar Energy Panel as heavy load shading is affecting their agricultural activities. ● The farmer told the ME&IE team that due to non-availability of industries and markets, a very large number of products of his land, mainly Carrot, Chili and Tomato are wasted. Farmers requested the Government to build mini-industries in the area so that the Value-added products be produced and the wastage of Crop production can be eradicated. ● Farmer told to ME&IEC that when the vegetables are ripe and are ready to be picked and sold,

	imports from Iran and Afghanistan highly impact the prices of our local production
General Observations	<ul style="list-style-type: none"> The farmer was well aware about news crops and land. After provision of WST on his land, the farmer has started to grow Tobacco on his farm. In this area, the farmers were demanding more WSTs, to increase their production. There is a shortage of Fertilizers in the District.
Field visit is shown in picture 3.63.	
 	

Picture 3.63: ME&IE Team at WST Khudadi Dad, with Farmer and OFWM Team, collecting Data

ii. Field Visit Date – 19 July 2022

Scheme	Water Storage Tank
Farmer Name	Shams Ur Rehman
Name of village:	Molvi Shah Mohammad
Union council:	Khusnob Jalalzai
Chairman WUA:	Shams Ur Rehman

District:	Killa Saif Ullah
Tehsil	Killa Saif Ullah
Coordinates	N 30-8194439 E 68.375826
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.75"
Command area of water storage tank:	10 acres
No of beneficiaries:	8 Nos.
Starting date:	1 May-2022
Completion date:	16 May-2022
Quality of work	Good
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	To some extent
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer is very happy to get benefits of this intervention and thankful to the Agriculture Department. Farmer was requesting the Government provide a Solar Energy Panel as heavy load shading is affecting their agricultural activities.

	<ul style="list-style-type: none"> The farmer told the ME&IE team that due to non-availability of industries and markets, a very large number of products of his land, mainly Carrot, Chili and Tomato are wasted. Farmers requested the Government to build mini-industries in the area so that the Value-added products be produced and the wastage of Crop production can be eradicated. Farmer told to ME&IEC that when the vegetables are ripe and are ready to be picked and sold, imports from Iran and Afghanistan highly impact the prices of our local production
General Observations	<ul style="list-style-type: none"> There was salinity in the land, due to which the farmer was having problems. There should be an awareness campaign held in the district about the problems of Salinity.
Field visit is shown in picture 3.64.	
	

Picture 3.64: ME&IE Team Inspecting WST and discussing about the benefits and impacts of WST

iii. Field Visit of WST, Abdul Rasheed, in Kharkaran, Killa Saifullah, Balochistan on 19th July 2022

Scheme	Water Storage Tank
Farmer Name	Abdul Rasheed
Name of village:	Kharkaran
Union council:	Saddar
Chairman WUA:	Abdul Rasheed
District:	Killa Saif Ullah
Tehsil	Killa Saif Ullah
Coordinates	N 30-7176475 E 16.58231
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.75"
Command area of water storage tank:	7 acres No.
No of beneficiaries:	8 Nos.
Quality of work	Satisfactory
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	No
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No

Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was happy with this intervention provided by the Govt. Heavy load shedding was observed in this area due to this farmer was demanding Solar Panel on subsidies rates from the Government. Total command area of the beneficiary was very dispersed and was demanding a WC for his land to increase his cultivable area. Heavy floods affected his land, especially tomatoes. Now he will be required to preparation land again 	iv. Field Visit of Watercourse Hayat Ullah, in Sardar Rozi Khan, Killah Saifullah, Balochistan on 19th July 2022																																																
General Observations	<ul style="list-style-type: none"> The farmer was well aware about his land. He was growing Carrots and Turnips and was supplying them to KP, Sindh and Punjab. 	<table border="1"> <tr> <td data-bbox="878 350 1124 384">Scheme:</td><td data-bbox="1132 350 1403 384">Watercourse</td></tr> <tr> <td data-bbox="878 395 1124 428">Name of Farmer:</td><td data-bbox="1132 395 1403 428">Hayyat Ullah</td></tr> <tr> <td data-bbox="878 440 1124 473">Name of village:</td><td data-bbox="1132 440 1403 473">Sardar Rozi Khan</td></tr> <tr> <td data-bbox="878 485 1124 518">Union council:</td><td data-bbox="1132 485 1403 518">Bandat Mirzai</td></tr> <tr> <td data-bbox="878 530 1124 563">Chairman WUA:</td><td data-bbox="1132 530 1403 563">Hayyat Ullah</td></tr> <tr> <td data-bbox="878 574 1124 608">District:</td><td data-bbox="1132 574 1403 608">Killa Saif Ullah</td></tr> <tr> <td data-bbox="878 619 1124 653">Tehsil</td><td data-bbox="1132 619 1403 653">Killa Saif Ullah</td></tr> <tr> <td data-bbox="878 664 1124 676">Coordinates</td><td data-bbox="1132 664 1403 676">N 30-7272909</td></tr> <tr> <td data-bbox="878 687 1124 720"></td><td data-bbox="1132 687 1403 720">E 16.5823388</td></tr> <tr> <td data-bbox="878 732 1124 765">Source of irrigation:</td><td data-bbox="1132 732 1403 765">Tube Well</td></tr> <tr> <td data-bbox="878 777 1124 810">Total length of watercourse:</td><td data-bbox="1132 777 1403 810">2000 ft</td></tr> <tr> <td data-bbox="878 822 1124 878">Estimated length of lining:</td><td data-bbox="1132 822 1403 878">2000 ft</td></tr> <tr> <td data-bbox="878 889 1124 923">Command area of watercourse:</td><td data-bbox="1132 889 1403 923">50 Acres</td></tr> <tr> <td data-bbox="878 934 1124 968">No of beneficiaries:</td><td data-bbox="1132 934 1403 968">12 Nos.</td></tr> <tr> <td data-bbox="878 979 1124 1035">Cost of Construction of WC:</td><td data-bbox="1132 979 1403 1035">15,483,67</td></tr> <tr> <td data-bbox="878 1046 1124 1080">Quality of Work</td><td data-bbox="1132 1046 1403 1080">Satisfactory</td></tr> <tr> <td data-bbox="878 1091 1124 1125">Reduction in Water Logging and salinity</td><td data-bbox="1132 1091 1403 1125">No such problem in this area</td></tr> <tr> <td data-bbox="878 1136 1124 1192">Cropping intensity increased</td><td data-bbox="1132 1136 1403 1192">Yes</td></tr> <tr> <td data-bbox="878 1203 1124 1237">Crops yield increased</td><td data-bbox="1132 1203 1403 1237">Yes</td></tr> <tr> <td data-bbox="878 1248 1124 1304">Equity in water distribution increased</td><td data-bbox="1132 1248 1403 1304">No such problem in this area</td></tr> <tr> <td data-bbox="878 1316 1124 1372">Reduction in water disputes/thefts</td><td data-bbox="1132 1316 1403 1372">No such problem in this area</td></tr> <tr> <td data-bbox="878 1383 1124 1439">Poverty reduction through generation of employment.</td><td data-bbox="1132 1383 1403 1439">To some extent</td></tr> <tr> <td data-bbox="878 1450 1124 1675">Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</td><td data-bbox="1132 1450 1403 1675">No</td></tr> <tr> <td data-bbox="878 1686 1124 1900">Overall feedback of Farmer / Beneficiary</td><td data-bbox="1132 1686 1403 1900"> <ul style="list-style-type: none"> The farmer was educated and knew about all the benefits of a lined WC, due to which the maintenance of the WC was very good. </td></tr> </table>	Scheme:	Watercourse	Name of Farmer:	Hayyat Ullah	Name of village:	Sardar Rozi Khan	Union council:	Bandat Mirzai	Chairman WUA:	Hayyat Ullah	District:	Killa Saif Ullah	Tehsil	Killa Saif Ullah	Coordinates	N 30-7272909		E 16.5823388	Source of irrigation:	Tube Well	Total length of watercourse:	2000 ft	Estimated length of lining:	2000 ft	Command area of watercourse:	50 Acres	No of beneficiaries:	12 Nos.	Cost of Construction of WC:	15,483,67	Quality of Work	Satisfactory	Reduction in Water Logging and salinity	No such problem in this area	Cropping intensity increased	Yes	Crops yield increased	Yes	Equity in water distribution increased	No such problem in this area	Reduction in water disputes/thefts	No such problem in this area	Poverty reduction through generation of employment.	To some extent	Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No	Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer was educated and knew about all the benefits of a lined WC, due to which the maintenance of the WC was very good.
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Field visit is shown in picture 3.65.																																																		
<i>Picture 3.65: Spot checking of WST by ME&IEC</i>																																																		

	<ul style="list-style-type: none"> The farmer was planning to increase his cultivable land and improve his cropping pattern and plant low delta crops, and was demanding HEIS for his land.
General Observations	<ul style="list-style-type: none"> The farm well maintained the farm and pruned the orchards timely. The demand of farmer for the provision of HEIS technology for his farm. The field team of ME&IEC advice to farmer to remove the bushes from the edges of watercourse

Field visit is shown in picture 3.66.



Picture 3.66: ME&IE Team, Spot checking of WC and discussion with farmer about the scheme.

v. Field Visit of WST Abdul Majeed, in Killi Khalli Quetta, Balochistan on 19th July 2022

Scheme	Water Storage Tank
Farmer Name	Abdul Majeed
Name of village:	Killi Khalli
Union council:	Shadinzai
Chairman WUA:	Abdul Majeed
District:	Quetta
Tehsil	Zarghoon
Coordinates	N 30.1581, E 66.9476

Source of irrigation:	Tub well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.5"
Command area of water storage tank:	10 Acres
No of beneficiaries:	1 No.
Quality of work	Satisfactory
Cropping intensity increased	No
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	To some extent
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> He told the ME&IE team that he had increased his cultivable area by 3 acres, and improved his cropping pattern. He started tunnel farming after the provision of WST. He was requesting a PVC scheme from the National Program because his WST and tube well were very far away from his cultivable land.
General Observations	<ul style="list-style-type: none"> Sign board of the scheme was not available.

	<ul style="list-style-type: none"> File was complete, but TS and the inputs from the project consultants were not complete. <p>Field visit is shown in picture 3.67.</p>
	

Picture 3.67: ME&IE team along with Qari Abdul Basit, Sub-Engineer, OFWM and Beneficiary ii). View of WST

vi. Field Visit of WST Waseemullah Khan, in Killi Sardar Karez, Quetta, Balochistan on 19th July 2022

Scheme	Water Storage Tank
Farmer Name	Waseemullah Khan
Name of village:	Killi Sardar Karez
Union council:	Shadinzai
Chairman WUA:	Waseemullah Khan
District:	Quetta
Tehsil	Zarghoon
Coordinates	N 30.1475 E 66.9527
Source of irrigation:	Tube well

Shape of water storage tank:	Square
Size of water storage tank:	60x60
Depth of WST:	4'.75"
Command area of water storage tank:	10 Acre
No of beneficiaries:	1 No.
Quality of work	Good
Cropping intensity increased	No
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	No
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was requesting for HEIS, because the cropping pattern only consisted of Tunnel Farming.
General Observations	<ul style="list-style-type: none"> A Sign Board was available. File was completed, but TS and the inputs from the project consultants were not completed.

Field visit is shown in picture 3.68.



Picture 3.68: ME&IE team along with Qari Abdul Basit, Sub-Engineer, OFWM and Beneficiary ii). View of WST

vii. Field Visit of WST Watan Yar, in Quetta, Balochistan on 19th July 2022

Scheme	Water Storage Tank
Farmer Name	Watan Yar
Name of village:	Yaranabad
Union council:	Baleli
Chairman WUA:	Watan Yar
District:	Quetta
Tehsil	Kuchlak
Coordinates	N 30.2943, E 60.9054
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60'x60'
Depth of WST:	4'.75"
Command area of water storage tank:	10 Acre
Quality of work	Good
Cropping intensity increased	WST was not in use
Crops yield increased	WST was not in use
Equity in water distribution increased	No such problem in this area
Reduction in water disputes/thefts	No such problem in this area
Poverty reduction through generation of employment.	WST was not in use

Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<i>Farmer was not available</i>
General Observations	<ul style="list-style-type: none"> Sign board was not available. File was completed, but TS and the inputs from the project consultants not complete. The WST was not connected to the water source, and was not in use.

Field visit is shown in picture 3.69.



Picture 3.69: View of WST showing pile of mud inside outflow and was not in use at all.

viii. Field Visit of WST Ahmed Yar, in Yaranabad, Quetta, Balochistan on 19th July 2022

Scheme	Water Storage Tank
Farmer Name	Ahmed Yar
Name of village:	Yaranabad
Union council:	Baleli

Chairman WUA:	Ahmed Yar
District:	Quetta
Tehsil	Kuchlak
Coordinates	N 30.2906, E 66.9060
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60'x60'
Depth of WST:	4'.75"
Command area of water storage tank:	10 Acres
No of beneficiaries:	1 No.
Quality of work	Not Satisfactory
Cropping intensity increased	No
Crops yield increased	To some extent
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	No
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<i>Farmer was not Available</i>
General Observations	<ul style="list-style-type: none"> Sign board was not available. File was completed, but TS and the inputs from the project consultants were not completed. A crack was found which has damaged one wall to another wall including the bed of WST. Back filling of this WST was very

	weak because the soil of that area was Clayey and had salinity.
	Field visit is shown in picture 3.70.
	

Picture 3.70: Spot checking of WST with OFWM staff.
Boundary of WST is damaged

ix. Field Visit of Watercourse Abdul Ghani, in Mamani, Mastung, Balochistan, on 20th July 2022

Scheme:	Watercourse
Name of Farmer:	Abdul Ghani
Name of village:	Mamani
Union council:	Shamsabad
Chairman WUA:	Abdul Ghani
District:	Mastung
Tehsil	Mastung
Coordinates	N 29.8211, E66.9166
Source of irrigation:	Tube well
Total length of watercourse:	3500 rft.
Estimated length of lining:	2000 rft.
Command area of watercourse:	10 Nos.
No of beneficiaries:	1 No.
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	<i>No such problem in this area</i>
Cropping intensity increased	Yes

Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	To some extent (farmer was preparing more land, employment may increase in future)
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was facing problems regarding shortage of electricity. He was demanding a WST for his land. The farmer planted Tomato, Onion and Coriander after the provision of this WC.
General Observations	<ul style="list-style-type: none"> The farmer had good knowledge about his land. Due to the provision of this WC, he was preparing more land for cultivation of Grapes and other Orchards.
Pictorial view of visit is given in picture 3.71.	

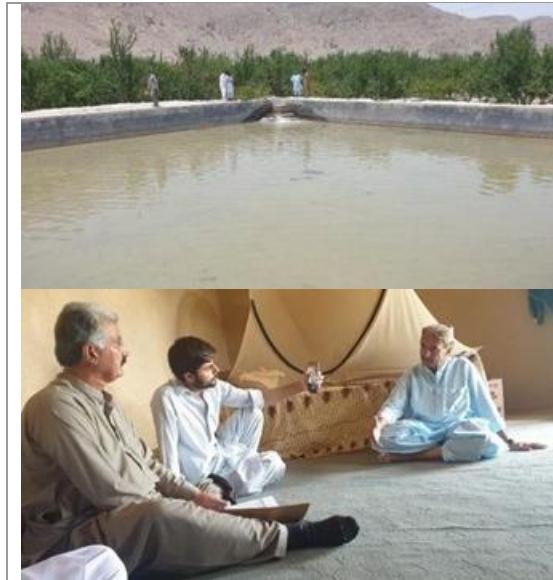


Picture 3.71: During Field Visit of Watercourse ME&IE Team Interviewing the Beneficiary

x. Field Visit of WST Salman Ahmed, in Gondain, Mastung, Balochistan on 20th July 2022

Scheme	Water Storage Tank
Farmer Name	Salman Ahmed
Name of village:	Gondain
Union council:	Jalab Gandan
Chairman WUA:	Salman Ahmed
District:	Mastung
Tehsil	Dasht
Coordinates	N 29.9001, E 67.0953
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60x60
Depth of WST:	4.75
Command area of water storage tank:	16 Acres
No of beneficiaries:	1 No.
Quality of work	Good

Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	To some extent
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer told the ME&IE team that due to the provision of this WST; he has increased his cultivable land. Before the intervention, the farmer had to irrigate his land every 7-8 days but after this intervention he irrigated the land after 15 days due to proper irrigation after the intervention. Electricity is available only for 6 hours a day. Farmer was requesting Solar Panels.
General Observations	<ul style="list-style-type: none"> The WST was properly maintained.



Picture 3.72: Field Team Interviewing Beneficiary during visit of WST

x. Field Visit of WST, Abdul Samad, in Pingow, Mastung, Balochistan on 20th July 2022

Scheme	Water Storage Tank
Farmer Name	Abdul Samad
Name of village:	Pingow
Union council:	Spezand
Chairman WUA:	Abdul Samad
District:	Mastung
Tehsil	Dasht
Coordinates	N 30.0046, E 67.0699
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.75"
Command area of water storage tank:	0 (It was not in use as not connected with water source yet)
No of beneficiaries:	0 (It was not in use as not connected with water source yet)
Quality of work	Good
Cropping intensity increased	<i>WST was not in use</i>

Crops yield increased	<i>WST was not in use</i>
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	<i>WST was not in use</i>
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	No
Overall feedback of Farmer / Beneficiary	<i>Farmer was not Available</i>
General Observations	<ul style="list-style-type: none"> The construction of the WST was good, but there was no water source connected to the WST till now and it was not in use. The Department is requested to look in to the matter
 	
<i>Picture 3.73: View of WST with unmanaged Outflow</i>	

xii. Field Visit of Watercourse Abdul Ghafar, in Drazinda, Loralai, Balochistan on 21st July 2022

Scheme:	Watercourse PVC
Name of Farmer:	Abdull Ghafar
Name of village:	Drazinda
Union council:	Kach Amakzai
Chairman WUA:	Abdull Ghafar
District:	Loarlai
Tehsil	Bori
Coordinates	30.513708
Source of irrigation:	68.271194
Total length of watercourse:	4000 Rft
Estimated length of lining:	1500 Rft
Command area of watercourse:	20 Acre
No of beneficiaries:	5 Nos.
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	<i>No such problem in this area</i>
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem at this site</i>
Reduction in water disputes/thefts	<i>No such problem at this site</i>
Poverty reduction through generation of employment.	Yes
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	Yes
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmers were satisfied with such intervention at his farm. Farmers need more such schemes in their area. This was a PVC based scheme as this farm

	<p>was located in a hilly area.</p> <ul style="list-style-type: none"> ● Farmers ought to be taken into confidence during schemes distribution process. ● Small farmers ought to be provided with a scheme. ● Good impacts have been noticed in terms of crop productions, yields etc.
General Observations	<ul style="list-style-type: none"> ● Filings related to scheme not found, therefor ME&IE Team could not validate or verified different indicators concerning scheme. ● WUA was not functional. ● Project is on track but needs much more improvements in some areas. ● Farmers need to be provided with the latest agricultural techniques to make these interventions more beneficial. ● Government ought to ensure agricultural inputs at subsidized rates keeping in view the state inflation rate. ● Farmers ought to be taken on board during the project implementation process.



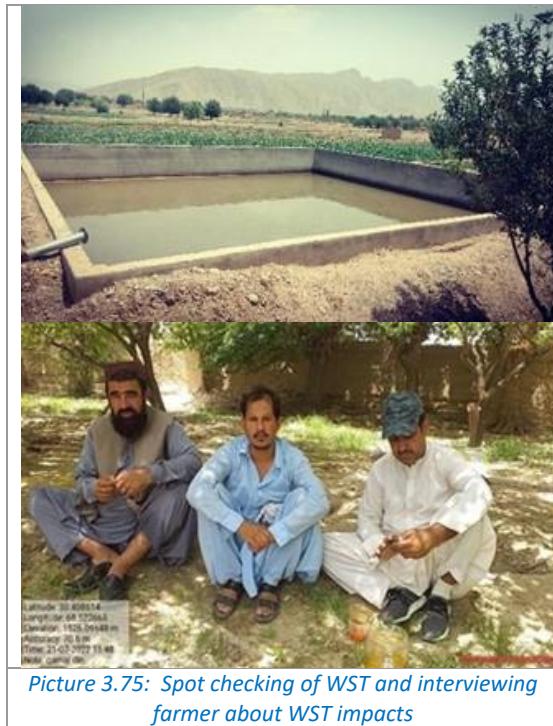
Picture 3.74: PVC scheme used for irrigating at orchard of farmer Abdul Ghaffar

xiii. Field Visit of ST Allah Uddin, in Shah Kareez, Loralai, on 21st July 2022

Scheme	Water Storage Tank
Farmer Name	Allah Uddin
Name of village:	Shah Kareez
Union council:	Shah Kareez
Chairman WUA:	Allah Uddin
District:	Loralai
Tehsil	Bori
Coordinates	30.4008142 68.5263137
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.5"
Command area of water storage tank:	18 Acres
No of beneficiaries:	5 Nos.
Quality of work	Satisfactory
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>

Poverty reduction through generation of employment.	Yes
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	Yes
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Small farmers need to be focused to extend the benefits of the project on a large scale. Farmer was found satisfied with this intervention and he need more such scheme in terms of irrigating his remaining parcels Government ought to ensure provision of agricultural inputs on subsidized rates keeping in view the existing inflation rate in the state.
General Observations	<ul style="list-style-type: none"> About 40% to 60% increase have been noticed in crop productions, yields, employments, byproducts etc. Files were not available, therefore, the ME & IE team could not validate different indicators regarding the scheme. WUA was not functional. Sign board was not displayed Backfilling was not done properly.

Field visit is shown in picture 3.75



xiv. Field Visit of WST Muzaqir Habib, in Zangiwala, Loralai, Balochistan on 22nd July 2022

Scheme	Water Storage Tank
Farmer Name	Muzaqir Habib
Name of village:	Zangiwala
Union council:	Zangiwala
Chairman WUA:	Muzaqir Habib
District:	Loralai
Tehsil	Bori
Coordinates	30.410125 68.6359764
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.5"
Command area of water storage tank:	50 Acres
No of beneficiaries:	6 Nos.
Quality of work	Satisfactory

Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	Yes
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	Yes
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was satisfied with the scheme. The farmer was demanding subsidized agricultural inputs and items.
General Observations	<ul style="list-style-type: none"> Projects have been proven beneficial for farmers regarding increased cultivated area. Scheme existed in an orchard comprising mostly almonds and remaining were pistachio, apricot, olive etc. Mostly the trickle system was observed on farms. Project impacts have been observed, especially better control over water supply. Good impacts have been noticed in terms of crop production. WUA was not functional.

	<ul style="list-style-type: none"> No signboard was displayed. OWFM should arrange technical and awareness sessions to the farmers
	<i>Picture 3.76: Spot check at Almond farm of Farmer Muzakir Habib.</i>

xv. Field Visit of WST Noor Ullah in Darghai, Loralai, Balochistan on 22nd July 2022

Scheme	Water Storage Tank
Farmer Name	Noor Ullah
Name of village:	Darghai
Union council:	Lahore
Chairman WUA:	Noor Ullah
District:	Loralai
Tehsil	Bori
Coordinates	30. 4050581 68. 7038235
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	50'x50'
Depth of WST:	4'.5"
Command area of water storage tank:	50 acres
No of beneficiaries:	6 Nos.
Quality of work	Satisfactory
Cropping intensity increased	Yes
Crops yield increased	Yes

Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	Yes
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	Yes
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was satisfied with the scheme in respect of its positive impacts and better control over his water. Farmers need more such interventions in the area. Facing electricity shortage which directly affects agricultural outcomes.
General Observations	<ul style="list-style-type: none"> Files related to scheme was not available, therefore ME&IE team could not verify and validate the scheme properly WUA was not functional. No signboard was displayed. Due to the high inflation rate in the country, the Government ought to ensure subsidized inputs and necessary items to farmers. The impacts due to such a scheme have been noticed ranging 50%-80% at his farm in

	<p>terms of crop production, yield, and employment.</p> <ul style="list-style-type: none"> Small farmers ought to be focused on scheme distributions to extend impacts on a large scale. <p>Field visit is shown in picture 3.77.</p>  <p><i>Picture 3.77: Spot checking of WST and Interview session with farmer Noor Ullah about the impacts of WST at his farm.</i></p>
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xvi. Field Visit of WST Molvi Abdul Jalil, in Darghai, Loralai, Balochistan on 21st July 2022

Scheme	Water Storage Tank
Farmer Name	Molvi Abdull Jalil
Name of village:	Darghai
Union council:	Lahore
Chairman WUA:	Molvi Abdull Jalil
District:	Loralai
Tehsil	Bori
Coordinates	30.4041572 68.7131345
Source of irrigation:	Tube Well

Shape of water storage tank:	Square
Size of water storage tank:	40'x40'
Depth of WST:	4'.5"
Command area of water storage tank:	25 Acres
No of beneficiaries:	4 Nos.
Quality of work	Satisfactory
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	<i>No such problem in this area</i>
Reduction in water disputes/thefts	<i>No such problem in this area</i>
Poverty reduction through generation of employment.	Yes
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	Yes
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> According to the farmer, such a scheme has proved beneficial for him as he got better control of his water in respect of irrigating his farm. Farmers were demanding more such intervention in upcoming years.
General Observations	<ul style="list-style-type: none"> Employment ratio has increased. Such projects play a vital role in boosting up agricultural activities that directly add to national GDP.



Picture 3.78: Interviewing farmer Molvi Abdul Jalil about WST and its impacts on his farming and orchard.

xvii. Field Visit of Watercourse Mohammad Bux, in Sakhi Mohammad Bux, Sohbat Pur, Balochistan on 22nd July 2022

Scheme:	Watercourse
Name of Farmer:	Mohammad Bux
Name of village:	Sakhi Mohammad Bux
Union council:	Noor Pur
Chairman WUA:	Mohammad Bux
District:	Sohbat Pur
Tehsil	Faridabad
Coordinates	28.462569 68.390117
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	454 Mtr
Estimated length of lining:	454 Mtr
Command area of watercourse:	350 Acre
No of beneficiaries:	80
Cost of Construction of WC:	2,825,815
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	There is no salinity in water
Cropping intensity increased	Yes, approximately 10 percent Increased
Crops yield increased	Yes

Equity in water distribution increased	<ul style="list-style-type: none"> Yes
Reduction in water disputes/thefts	<ul style="list-style-type: none"> There is no theft of water
Poverty reduction through generation of employment.	<ul style="list-style-type: none"> The former gets good income due to better production
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	<ul style="list-style-type: none"> Industrialization did not increase significantly
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Manpower usage also decreases with the time of farmer
General Observations	<ul style="list-style-type: none"> The farmer was very happy and the land was fertile properly. Requested for more schemes. Due to this scheme, the farmer irrigated his land for rice, crops and vegetables as well. TS has not issued WUA was not activated
Pictorial view of visit is given as picture 3.79.	
	
<p><i>Picture 3.79: ME&IE Team during Visit of WC Collecting Data from Beneficiary</i></p>	

xviii. Field Visit of Watercourse Khalil Ahmed, in Dirgi, Sohbat Pur, Balochistan on 23rd July 2022

Scheme:	Watercourse
Name of Farmer:	Khalil Ahmed
Name of village:	Dirghi
Union council:	Dirghi
Chairman WUA:	Khalil Ahmed

District:	Sohbat Pur
Tehsil	Sohbat Pur
Coordinates	28.482021 68.490901
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	603 Mtr
Estimated length of lining:	603 Mtr
Command area of watercourse:	640 Acre
No of beneficiaries:	17 Nos.
Cost of Construction of WC:	2,825,815
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	There is no salinity in water
Cropping intensity increased	Yes, approximately 10 percent Increased
Crops yield increased	Yes
Equity in water distribution increased	<ul style="list-style-type: none"> Yes, the distribution of water has increased substantially and water is provided to the crops as per requirement.
Reduction in water disputes/thefts	<ul style="list-style-type: none"> There was no theft of water
Poverty reduction through generation of employment.	<ul style="list-style-type: none"> The farmer gets good income due to better production
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	<ul style="list-style-type: none"> Industrialization did not increase significantly
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> It helps a lot in water delivery which does not waste time and water
General Observations	<ul style="list-style-type: none"> Mr. Khaleel Ahmed was very pleased and thankful to OFWM for this intervention as water flow is good and saves water as well. Farmer was

	<p>demanding more schemes as he had a huge quantity of fertile land.</p> <ul style="list-style-type: none"> • TS was not issued • WUA was not activated
	<i>Picture 3.80: Field Team Measuring Watercourse</i>

xix. Field Visit of Watercourse Shehzad in Mohammad Ali Khan, Sohbat Pur, Balochistan on 23rd July 2022

Scheme:	Watercourse
Name of Farmer:	Shehzad
Name of village:	Mohammad Ali Khan
Union council:	Ghurri
Chairman WUA:	Shehzad
District:	Sohbat Pur
Tehsil	Sohbat Pur
Coordinates	28.469913 68.432296
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	435 Mtr
Estimated length of lining:	435 Mtr
Command area of watercourse:	280 Acre
No of beneficiaries:	8 Nos.
Cost of Construction of WC:	2,825,815
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	There is no salinity in water
Cropping intensity increased	Yes, approximately 10 percent Increased Increase in yield has been observed due to availability of water to the crops as required
Crops yield increased	Yes

Equity in water distribution increased	<ul style="list-style-type: none"> • Yes, the distribution of water has increased substantially and water is provided to the crops as per requirement.
Reduction in water disputes/thefts	<ul style="list-style-type: none"> • There is no theft of water
Poverty reduction through generation of employment.	<ul style="list-style-type: none"> • Yes, due to the good yield of the crop the poverty of the farmers has reduced.
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	<ul style="list-style-type: none"> • Industrialization didn't increase due to recent inflation.
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> • The farmer feels a lot of comfort due to the facility of water delivery
General Observations	<p>The farmer was very pleased to receive such a nice scheme, good deviation of water to all his fields and they demand for the next scheme.</p> 

Picture 3.81: Meeting with Farmers about impact and checking spot WC village Dirgi

xx. Field Visit of Watercourse Abdul Rehman, in Village Haji Abdul Rehman, Naseerabad, Balochistan on 24th July 2022

Scheme:	Watercourse
Name of Farmer:	Abdul Rehman
Name of village:	Haji Abdul Rehman
Union council:	Quba Sher Khan Gharbi
Chairman WUA:	Abdul Rehman
District:	Naseerabad
Tehsil	Dera Murad Jamali
Coordinates	28.549598 68.183500
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	350 Mtr
Estimated length of lining:	350 Mtr
Command area of watercourse:	90 Acre
No of beneficiaries:	12
Cost of Construction of WC:	2,825,815
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	There is no salinity in water
Cropping intensity increased	Yes, increase in yield has been observed due to availability of water to the crops as required
Crops yield increased	Yes
Equity in water distribution increased	<ul style="list-style-type: none"> Yes, the distribution of water has increased substantially and water is provided to the crops as per requirement.
Reduction in water disputes/thefts	<ul style="list-style-type: none"> There is no theft of water
Poverty reduction through generation of employment.	<ul style="list-style-type: none"> Yes, Due to the good yield of the crop the poverty of the farmers has reduced.(could we tell the number reduction in poverty)

Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	<ul style="list-style-type: none"> Industrialization didn't increase due to recent inflation.
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer feels a lot of comfort due to the facility of water delivery
General Observations	<ul style="list-style-type: none"> The farmer was thankful to OFWM for this scheme TS has not issued WUA has not activated



Picture 3.82: Field Team Measuring Watercourse and Interviewing the Farmer

xxi. Field Visit of Watercourse Mohammad Safar in Village Jan Mohammad Jamali, Naseerabad, Balochistan on 24th July 2022

Scheme:	Watercourse
Name of Farmer:	Mohammad Safar
Name of village:	Jan Mohammad Jamali
Union council:	Quba Sher Khan Gharbi

Chairman WUA:	M Safar
District:	Naseerabad
Tehsil	Dera Murad Jamli
Coordinates	28.578077 68.147574
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	359 Mtr
Estimated length of lining:	359 Mtr
Command area of watercourse:	120 Acre
No of beneficiaries:	07
Cost of Construction of WC:	2,825,815
Quality of Work	Satisfactory
Reduction in Water Logging and salinity	<ul style="list-style-type: none"> There is no salinity in water
Cropping intensity increased	<ul style="list-style-type: none"> Yes
Crops yield increased	Yes
Equity in water distribution increased	Yes, the distribution of water has increased substantially and water is provided to the crops as per requirement.
Reduction in water disputes/thefts	<ul style="list-style-type: none"> There is no theft of water
Poverty reduction through generation of employment.	<ul style="list-style-type: none"> Yes, Due to the good yield of the crop the poverty of the formers has reduced
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	<ul style="list-style-type: none"> Industrialization didn't increase due to recent inflation.
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> It has become easier for the farmer to manage the water which helps to avoid unnecessary water loss Farmer was demanding more schemes under this programme
General Observations	<ul style="list-style-type: none"> TS has not issued

● WUA has not been activated.
Field visit is shown in picture 3.83.


Picture 3.83: Taking Water Flow Measurement with pigmy meter at WC Shehzad Ahmed

xxii. Field Visit of Watercourse Abdul Rehman in Village Haji Abdul Rehman, Naseerabad on 24th July 2022

Scheme	Water Storage Tank
Farmer Name	Abdul Rehman
Name of village:	Haji Abdul Rehman
Union council:	Quba Sher Khan Gharbi
Chairman WUA:	Abdul Rehman
District:	Naseerabad
Tehsil	Dera Murad Jamli
Coordinates	28.549881 68.183861
Source of irrigation:	Pat Feeder Canal
Shape of water storage tank:	Squire
Size of water storage tank:	56x56
Depth of WST:	4.5 Ft
Command area of water storage tank:	90 Acre
No of beneficiaries:	12 Nos.
Construction Cost of watercourse:	2,825,815

Quality of work	Satisfactory
Cropping intensity increased	<ul style="list-style-type: none"> ● Yes
Crops yield increased	<ul style="list-style-type: none"> ● Yes
Equity in water distribution increased	<ul style="list-style-type: none"> ● Yes, the distribution of water has increased substantially and water is provided to the crops as per requirement.
Reduction in water disputes/thefts	<ul style="list-style-type: none"> ● There is no theft of water
Poverty reduction through generation of employment.	<ul style="list-style-type: none"> ● Yes, due to the good yield of the crop the poverty of the formers has reduced
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	<ul style="list-style-type: none"> ● Industrialization didn't increase due to recent inflation.
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> ● It has become easier for the farmer to manage the water which helps to avoid unnecessary water loss ● Farmer was demanding more schemes under this programme
General Observations	<ul style="list-style-type: none"> ● TS has not issued WUA has not been activated.
Field visit is shown in picture 3.84.	
	
<p><i>Picture 3.84: Taking interview from farmer regarding impact of schemes and Spot Checking of WST</i></p>	

3.4 COORDINATION MEETINGS OF ME&IE CONSULTANTS

3.4.1 Meetings of ME&IE Consultants Punjab Zone with Stakeholders

ME&IE consultants remained in regular contact with OFWM department regarding data collection and gathering information required for field visits / monitoring. Consultants conducted meetings with relevant offices of the OFWM and other stakeholders. 4th BOM Meeting in NPC office was held on 4th July 2022. Draft minutes of meeting are given as **Annex-E**. Detail of other meetings conducted by consultants during the month under review is given below:

Date	July 25, 2022
Venue	Assistant Director (OFWM) Office District Kasur
Participants	
i.	Mr. Nadeem Jafri Assistant Director of Agriculture (OFWM)
ii.	Mr. Awais Jahangeer, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii.	Abd ur Raoof Saad Field Team Engineer ME&IE Consultants Lahore.
iv.	Muhammad Bilal Sohail Field Team Engineer ME&IE Consultants Lahore.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> ● Briefing on ME & IE Consultants activities regarding Mid-Line Survey /Monitoring by Field Team In-charge. ● Discussed Targets / Achievements of various intervention under NPIWC-II ● Discussed future activities of the department and other relevant issues. 	
	
<p><i>Picture 3.85: ME&IE Team with ADA OFWM Kasur, Dr. Nadeem Jafri regarding during Mid-Line Survey / Monitoring.</i></p>	

Date	July 19, 2022
Venue	Assistant Director (OFWM) Office Tehsil Depalpur District Okara
Participants	
i.	Abdul Hafeez Assistant Director of Agriculture (OFWM)
ii.	Mr. Awais Jahangeer, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii.	Abd ur Raoof Saad Field Team Engineer ME&IE Consultants Lahore.
iv.	Muhammad Bilal Sohail Field Team Engineer ME&IE Consultants Lahore.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Briefing on ME & IE Consultants activities regarding Mid-Line Survey /Monitoring by Field Team In-charge. Discussed Targets / Achievements of various intervention under NPIWC-II Discussed future activities of department and other relevant issues. 	
	
<p><i>Picture 3.86: ME&IE Team in Meeting with ADA OFWM Depalpur, Mr. Abdul Hafeez during Mid-Line Survey / Monitoring.</i></p>	

Date	July 20, 2022
Venue	Deputy Director (OFWM) Office District Okara
Participants	
i.	Mr. Saeed Alvi Deputy Director Agriculture (OFWM)
ii.	Mr. Awais Jahangeer, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii.	Abd ur Raoof Saad Field Team Engineer ME&IE Consultants Lahore.

iv.	Muhammad Bilal Sohail Field Team Engineer ME&IE Consultants Lahore
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Briefing on ME & IE Consultants activities regarding Mid-line Survey/Monitoring by Field Team In-charge. Review Progress / Achievement 	
	
<p><i>Picture 3.87: ME&IE Team with Deputy Director Agriculture OFWM, Mr. Saeed Alvi during Mid-Line Survey / Monitoring</i></p>	

Date	July 25 2022
Venue	Deputy Director (OFWM) Office District Gujranwala
Participants	
i.	Amir Saleem Mangat Deputy Director Agriculture (OFWM), District Gujranwala.
ii.	Mr. Muhammad Rizwan Suleman, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii.	Nauman Rasheed Field Team Engineer ME&IE Consultants Lahore.
iv.	Sohail Ahmad Field Team Engineer ME&IE Consultants Lahore
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Briefing on ME & IE Consultants activities regarding Mid-Line Survey /Monitoring by Field Team In-charge. Discussed Targets / Achievements of various intervention under NPIWC-II Discussed future activities of department and other relevant issues 	



Picture 3.88: ME&IE Team in meeting with Deputy Director Gujranwala, Amir Saleem Mangat regarding their Progress/Achievement/ Mid-Line Survey

Date	July 26, 2022
Venue	Assistant Director (OFWM) Office Tehsil Wazirabad, District Gujranwala

Participants

- i. Aftab Ahmad Assistant Director Agriculture (OFWM)
- ii. Mr. Muhammad Rizwan Suleman, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
- iii. Nauman Rasheed Field Team Engineer ME&IE Consultants Lahore.
- iv. Sohail Ahmad Field Team Engineer ME&IE Consultants Lahore.

Meeting Agenda/Points discussed:

- Briefing on ME & IE Consultants activities regarding Mid-Line Survey/Monitoring by Field Team In-charge.
- Review Progress / Achievement



Picture 3.89: ME&IE Team in Meeting with Assistant Director OFWM Wazirabad, Aftab Ahmad regarding Mid-Line Survey / Monitoring

Date	July 28, 2022
Venue	Village Garmula Virkan , Tehsil Noshera Virkan, District Gujranwala

Participants

- i. Tariq Mehmood Assistant Director Agriculture (OFWM), Tehsil Noshera Virkan, District Gujranwala
- ii. Mr. Muhammad Rizwan Suleman, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
- iii. Nauman Rasheed Field Team Engineer ME&IE Consultants Lahore.
- iv. Sohail Ahmad Field Team Engineer ME&IE Consultants Lahore.
- v. Chairman Water user Association

Meeting Agenda/Points discussed:

- Briefing on ME & IE Consultants activities regarding Mid-Line Survey/Monitoring by Field Team In-charge.
- Basic Data Collection from ADA Office.



Picture 3.90: Meeting with Assistant Director Agriculture (OFWM) Bhakkar Mr. Alam Sher regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

3.4.2 Meetings of ME&IE Consultants Balochistan Zone with Stakeholders

Date	19 July 2022
Venue	Office of the DDA, OFWM Killa Saifullah

Participants

- i. Mr. Abdul Khaliq Jogeza, DDA, OFWM, Agriculture Department, Govt. of Balochistan.
- ii. Mr. Molvi Rozi Khan
- iii. Mr. Mati Ullah Sub-Engineer, OFWM
- iv. Mr. Manzoor Ahmad Kasi ME&IE Expert, ME&IEC
- v. Mr. Qaisar Khan, ME&IE Officer, ME&IEC

Meeting Agenda/Points discussed:

- The work plan regarding Midline Survey shared by OFWM staff
- The protocols and required data regarding Midline Survey were discussed

- The DDA ensured to ME&IEC for entire support and coordination at all times.



Picture 3.91: Meeting in the office of DDA Dist. Killa Saifullah

Date	20 July 2022
Venue	Office of the DDA, OFWM, Mastung

Participants

- Mr. Faqir Muhammad, DDA, OFWM, Mastung
- Mr. Sher Ahmed, Sub-Engineer, OFWM
- Mr. Dad Muhammad, Sub-Engineer, OFWM
- Mr. Manzoor Ahmed Kasi, FTI/M&E Expert.
- Mr. Basit Khan, M&E Officer
- Mr. Hamza H. Qureshi, M&E Officer

Meeting Agenda/Points discussed:

- Beneficiary's lists F.Y 2020-2021 and 2021-2022
- Scheme Files
- Technical Sanctions



Picture 3.92: Meeting in the Office of the DDA OFWM, Mastung

Date	20/07/2022
Venue	Deputy Director OFWM Office Loralai

Participants

- Muhammad Anwar, DDA, OFWM.
- Abdul Hadi, Engineer OFWM

iii. Naseeb Jan FTI/M&E Expert

Meeting Agenda/Points discussed:

- Discussion held on midline survey activities.
- Discussions on overall monitoring activities to be done once planned.
- Discussed beneficiaries lists in detail.
- The Deputy Director appreciated and extended his maximum support to ME&IE team for such activities at his district.



Picture 3.93: Meeting in the office of DDA Dist. Loralai

Date	27 July 2022
Venue	Office of the DG, OFWM, Agriculture Department, Govt. of Balochistan, Rani Bagh, Sariab Road, Quetta.

Participants

- Mr. Abdul Wahab Kakar, Director General, OFWM, Balochistan.
- Mr. Bashir Agha, Director, PMU, National Programme, Balochistan
- Mr. Khalid Mehmood, DTL, NWMC, NESPAK, Balochistan
- Mr. Rizwan Ahmed, DTL, ME&IEC, G3EC, Balochistan

Meeting Agenda/Points discussed:

- Discussed overall progress of National Programme
- Discussed strategy for new works F.Y. 2022-23 (Different suggestions were given by all participants)
- The DTL, ME&IEC Consultants highlight the long pending issue regarding provisions of data for Dashboard. The DG gave necessary directives to concerned officials at the spot and assured that required data will be provided to ME&IEC as soon as possible.
- It was decided a coordination meeting of all stakeholders will be conducted every 2 months.



Picture 3.94: Meeting held in Office of Director General, OFWM, Balochistan

3.5 INTERNAL MEETINGS OF ME&IE CONSULTANTS

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

3.6 ICT ASSIGNMENT

The ICT Team remained engaged in different activities related to the ME&IE assignment including development of Android based

application, data collection for Dashboard and training of client staff on Dashboard / MIS for the project. During the Month of July 2022 activities completed by ICT Team are summarized below.

3.6.1 Development of Customized Android Based Applications

The ICT Technology Team of ME&IE Consultants NPIWC-II has developed Customized Android Based Applications for data collection. Data entry in this application is done directly by the field monitoring teams of all the zonal offices and is uploaded in the MIS system. The data is being observed and monitored by the ICT team of ME&IE Consultants. In this regard, customized Android Based Applications have been developed, tested, and installed to Small Dams and Irrigation staff of AJK, Water Management Staff of ICT zone and OFWM staff KP zone.

3.6.2 Data collection of interventions in MIS/GIS database

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

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

3.6.3 Implementation of MIS Dashboard

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

AJK Zone - Watercourses Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
MZD	32	97	73	0	202
Poonch	37	38	78	0	153
Mirpur	38	107	108	1	254
Overall	107	242	259	1	609

So far, Total 609 Watercourses data from AJK zone has been received and available live on Dashboard by which 359 Watercourse has been completed & 166 watercourses are under progress. Due to farmers' un-willingness 84 Work Orders have been cancelled till now. Detailed summary attached as **Annex-F**.

AJK Zone - Water Storage Tank Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
MZD	36	61	74	1	172
Poonch	15	46	140	1	202
Mirpur	2	16	65	0	83
Overall	53	123	279	2	457

457 Water Storage Tank data received from AJK zone and is available live on Dashboard by which 279 Water Storage Tank has been completed and 119 WSTs are under progress. Due to un-willingness of farmers there 59 WST work orders have been cancelled till now. Detailed summary attached as **Annex-G**.

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	Overall
Bajaur Agency	3	17	10	30
Bannu	72	37	0	109
Dera Ismail Khan	431	11	53	495
Hazara	83	57	35	175
Khyber Agency	6	13	0	19
Kohat	98	41	25	164
Kurram Agency	1	5	2	8
Malakand	177	169	47	393
Mardan	105	64	21	190
M. Agency	4	26	13	43
N.W Agency	2	3	0	5
Orakzai Agency	0	1	0	1
Peshawar	141	85	3	229
S.W Agency	3	12	0	15
Overall	1126	541	209	1876

KP zone currently 1876 total watercourses data live on Dashboard and by which 1798 schemes have been completed and 78 schemes are under progress. Detailed Summary attached as **Annex-H**.

KP Zone - Water Storage Tank Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Bajaur Agency	1	9	1	11
Bannu	12	18	0	30
Dera Ismail Khan	81	6	5	92
Hazara	28	43	11	82
Khyber Agency	1	9	0	10
Kohat	29	17	1	47
Kurram Agency	1	1	0	2
Malakand	75	92	15	182
Mardan	16	9	6	31
Mohmand Agency	1	36	4	41
Orakzai Agency	0	2	0	2
Peshawar	36	25	4	65
S.W Agency	0	15	0	15
Overall	281	282	47	610

KP zone currently 602 total watercourses data live on Dashboard and by which 587 schemes have been completed and 23 WSTs are under progress. Detailed Summary attached as **Annex-I**.

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 MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT

In the month of July 2022, field work is hampered due to heavy rains and flood. Baseline analysis monitoring was carried out and data was tabulated and analysis was carried out as Water cursive gender relationships and raises a number of social, cultural, formal and economic inquiries. The cultural and social setting defines control, position, status, rights and duties. It clarifies state of affair of women's access to land, water, education, health and employment compared to men. Roles of women and girls are loaded with tasks relative to water fetching, transport, storage and usage, though their role is recognized, women and youths are still not involved in managing and developing

these resources, because of societal limitations, limit their integration into decision-making bodies Like WUA. It is in this slightly complex context, marked by significant local and national culture and social norms. On Gender aspect analysis is given below:

Education level and Literacy rate is not very high in rural areas as compared to the urban areas but still in AJK the level of education is much higher than rest of the provinces, although government data claims higher ration as compare to our data collected from the fields. Below data clearly depicts that females' education standards which affects their living standards .out of 37 only five graduated i.e.2.22%. Ratio of middle 4.4%, matric ratio is 4.07. Which is quite alarming while doing comparison with government data. Literacy ratio is 30.7 %. So we can easily say that till primary girls are attending schools.

Education Level							
Zone/Unit	Primary	Middle	Matric	Intermediate	Graduate and above	Madrasa Education	Overall
Punjab	2	11	9	3	4	1	30
KP	1	0	0	0	2	0	3
AJK	0	1	2	1	0	0	4
Overall	3	12	11	4	6	1	37

Literacy Level			
Zone/Unit	Literate	Illiterate	Overall
Punjab	30	10	40
KP	3	35	38
AJK	4	1	5
Overall	37	46	83

Occupations

Pakistan population is more the 220 million and 51 percent is constituted by women but astonishing to see that in the project area, during base line it was astonishing to find that less than 10 percent are

involved in any work specially in farming Below data clearly shows that out of 83 females 11 are only linked with farming meaning 9.1%. 68 females are involved in house hold work 56.44% are involved in only in HH and not much contributing in income

generation activities. In government jobs ratio is 1.66 according to the respondent's data and only 1 in business. Policy makers should review and

develop skill enhancements programs, which enable women to be a productive citizen.

Occupation							
Zone/Unit	Farming	Govt/ Private job	Labor	Business	Household Work	Other	Overall
Punjab	8	2	0	0	30	0	40
KP	3	0	0	1	33	1	38
AJK	0	0	0	0	5	0	5
Overall	11	2	0	1	68	1	83

Land ownership

Owner ship question clearly depicts about the land holding, female farmers are not very open due to lack of education and cultural norms they have less knowledge in Punjab it is found that 35.5 of respondents owns in between 5 to 10 acres in

Punjab, 25 respondents answers 10 to 15. And in KPK 22.13 responded between 25 to 30 acres.

Small land holding also affecting growth and production, division of land between families further making things worse and affecting total income and reinvestment in agricultural activities.

Land Ownership (Acres)									
Zone/Unit	5-10	10-15	15-20	25-30	30-35	35-40	40-45	45-50	50 and above
Punjab	35.5	25	0	0	0	0	0	0	0
KP	0	12	0	22.13	0	0	0	0	0
AJK	0	0	0	0	0	0	0	0	0
Overall	35.5	37	0	22.13	0	0	0	0	0

Who cultivates your land?

Land cultivation again clearly depicts that all assets are owned by male family members and cultivation is male' duty This question is only answered by 13

respondents, out of which only one lady was found who cultivates the land, its 0.13% most of them 0.26% answered brothers. 9 responded husband out of 13, it means most of the respondents are married and knows that husband is cultivating.

Who Cultivates Your Land							
Zone/Unit	I myself	Father	Brother	Husband	Hari / Tenant	Do not know	Overall
Punjab	0	0	2	8	0	0	10
KP	1	0	0	1	1	0	3
AJK	0	0	0	0	0	0	0
Overall	1	0	2	9	1	0	13

Decision Making

As per cultural norms women are not joining in any decision making, they are only contributing in house hold chores. So we can easily say that women are not allowed to take any decision at their, mostly women are dependent on male family members Again decision making is a difficult question, 55

respondents answered rarely which is 45.65% as compare to 9.1% answered always and 17 said never.

Decision Making in Farming Activities				
Zone/Unit	Always	Rarely	Never	Overall
Punjab	8	25	7	40
KP	1	27	10	38
AJK	2	3	0	5
Overall	11	55	17	83

Project Information

38% percent of the respondents knows about the project this clearly depicts that only the beneficiaries know about the project, rest of the population are not aware about the components of the project, as in Punjab out of 40 only 18 know i.e.

14.94%, but in KPK its better then Punjab 24 people answered yes out of 38.i.e. 9.12%. In AJK its better than out 5. Four respondents know. To improve this information social mobilization process should be looked into and community awareness campaign should be highlighted in print and digital media.

NPIWC-II Project Information			
Zone/Unit	Yes	No	Overall
Punjab	18	22	40
KP	24	14	38
AJK	4	1	5
Overall	46	37	83

Marriage

Social and cultural norms of the project area clearly portray that early marriages are communal norm and culture ,63.5 answered yes overall 35/45

women in Punjab, 37/38 in KPK and in AJ&K 4/5 were found married during baseline. During base line different age groups answered the different questions. Early marriages due to local customs can easily be seen only 5.81% were found un married.

Are you currently married			
Zone/Unit	Yes	No	Overall
Punjab	35	5	40
KP	37	1	38
AJK	4	1	5
Overall	76	7	83

Age

Most of the respondents are in 41 to 50 age group i.e. 27 is equal to 22.41%. And 15.77 % in between

31 to 40 years' age bracket. 19.9% is 50 to 60 years .6.64% is among 20 to 30 age bracket. Data depicts that most of them are not working or taking part in irrigational activities if we analyses the above tables

Zone/Unit	20-30	31-40	41-50	51-60	60 and above	Overall
Punjab	2	10	14	14	0	40
KP	5	7	12	8	6	38
AJK	1	2	1	1	0	5
Overall	8	19	27	23	6	83

CHAPTER 4: QUARTERLY WORK PLAN- ACTIVITIES (APR 2022 TO JUNE 2022)

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

Pre Field Activities

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

Field Activities

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

ICT Assignment

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

Coordination

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

Deliverables

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

Document	Status
Draft Inception Report	Submitted
Final Inception Report	Submitted

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

Monthly Monitoring Report-Thirteenth (JANUARY 2022)	submitted within stipulated time
Monthly Monitoring Report-Fourteenth (FEBRUARY 2022)	submitted within stipulated time
Monthly Monitoring Report-Fifteen (MARCH 2022)	submitted within stipulated time
Quarterly Monitoring & Evaluation Report-First Quarter year 2022 (JANUARY – MARCH 2022)	submitted within stipulated time
Monthly Monitoring Report-Sixteen (APRIL 2022)	submitted within stipulated time
Monthly Monitoring Report-Seventeenth (May 2022)	submitted within stipulated time
Monthly Monitoring Report-EIGHteenth (June 2022)	Submitted within stipulated time
Quarterly Monitoring & Evaluation Report-2 nd Quarter year 2022 (APRIL – JUNE 2022)	submitted within stipulated time
Annual Monitoring & Evaluation Report (2 nd) Jul 2021-June 2022	Submitted within stipulated time
Monthly Monitoring Report-Nineteenth (July 2022)	Report in hand to be submitted within stipulated time

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

Matrix of Responsibilities

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

CHAPTER 5: ISSUES / BOTTLENECKS

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

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

ANNEXES A to I

ANNEX-A: TENTATIVE WORK PLAN

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

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

ANNEX - B: MATRIX OF RESPONSIBILITIES

MATRIX OF RESPONSIBILITIES

SR. NO.	DELIVERABLE / ACTIVITIES
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	
○	●	-	-	
○	○	●	-	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	
-	-	-	●	

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>b) They agree to contribute 40% of the cost</p> <p>c) Agree to first construct the tank with his/her own funds and then</p>	<p>a) 14,932 small farmers mobilized to construct water storage tanks for irrigation</p> <p>b) Agree to first construct the tank with his/her own funds and then</p>	<p>a) 14,932 WSTs constructed</p> <p>b) 14,932 WSTs operated and maintained</p>	<p>a) Water which was otherwise largely going to be wasted is saved</p> <p>b) Irrigation provided at critical stages of the crops</p> <p>c) Flexibility achieved for irrigation</p>	<p>a) More area irrigated</p> <p>b) Increased cropping intensities</p>	<p>a) Increased crop yields</p> <p>b) Increased total crop output quantum</p> <p>c) Increased farm income</p> <p>d) Increased farm employment</p>	<p>a) 2-5% sample of WSTs will be surveyed</p> <p>b) A data collection form will be designed to measure water saving due to WSTs</p> <p>c) The forms used for baseline and impact surveys in case of</p>	

		received subsidy at 40% on issuance of FCR					watercourses will also be used for WSTs d) Same data analysis will be carried out here as in case of watercourses.
C4: Provision of Land Leveling Units	a) Provision of 11,610 laser land leveling units to farmers and service providers on a cost sharing basis: 50% by farmer / service provider and 50% by the project.	a) 11,610 laser units provided to farmers / service providers; b) Farmers trained in using the units.	a) 11,610 farmers / service providers received PLL units; b) Farmers / service providers received training in using the units.	a) Land leveled on Farmers' / service providers' farms; b) Land leveled on fellow farmers on rent; c) Total 3.483million acres levelled by 11,610 units.	a) Water application efficiency increased at field level; b) Enhanced 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: MINUTES OF 4TH BOM MEETING HELD IN NPC OFFICE

July 05, 2022

Draft

**Subject: 4TH MEETING OF PROJECT BOARD OF MANAGEMENT (PBOM) OF ME&IE
CONSULTANTS UNDER THE PROJECTS TITLED “NPIWC-II”**

The Project Board of Management (PBOM) meeting was held on June 28, 2022 in the NPC office, Islamabad at 11.00 a.m. The following PBOM member attended the meeting:

- Eng. Muhammad Asif Kakar, In Chair
National Project Coordinator, NPIWC-II,
Ministry of National Food Security and Research
- Eng. Hafiz Abdul Rauf
CEO, EASE-PAK
- Dr. Usman Mustafa
Team Leader-ME&IE Consultants
- Eng. Abdul Hakeem Khan
Documentation Engineer,
National Water Management Consultant, Islamabad

Beside PBOM members following person also attended the meeting:

- Dr. Saiful Islam
DNC, FPMU (NPIWC-II)
Ministry of National Food Security and Research
- Dr. Tehmeena Iqbal
DNC, ME&IE Consultants
Ministry of National Food Security and Research
- Mr Muhammad Naeem
DNC, ME&IE Consultants
Ministry of National Food Security and Research
- Mr. Rizwan Saleem,
ICT Specialist, NPIWC-II Consultants
- Mr. Khurshid Gul
Account Officer, ME&IE Consultants

- Dr. Ikram Saeed
DTL, ME&IE Consultants (Nominated)

Eng. Muhammad Asif Kakar, NPC welcomed the participants in the 4th PBOM meeting. Hafiz Abdul Rauf recited a few verses from the holy Quran. The NPC and Dr. Iqbal showed their concern about the progress of the project. NPC further highlighted that he tried his best and secured the release of the budget. Consultants have received their respected share and now it is time to deliver.

Mr. Rizwan Saleem, ICT Specialist, NPIWC-II Consultants briefly presented the Dashboard. He also highlighted the updated data issue particularly in Punjab. He further mentioned that dashboard is a continue project beside it is already handed over to Kashmir and KP province along with the training of their respective staff. The NPC comprehended the presentation and ensured his full cooperation to address the issues / problems faced by the ICT team in implementation and validation of Dashboard.

In this connection Eng. Hafiz Abdul Rauf, CEO, EASE-PAK ensured the delivery of all targeted activities. Following decisions were made:

No.	Item	Discussion/Person Responsible	Deadline
1	Dashboard	Updating of dashboard and letter for dashboard to Secretary, Agriculture, GoPunjab, Mr. Rizwan Saleem, ICT Specialist	05/07/22
2	Second Baseline Survey	Second baseline survey report and mid line report of first baseline survey is due on June 2022. Dr. Usman Mustafa, TL, NPIWC-II	08/08/22
3	Sampling Frame	Submit the recent sampling frame of Baseline survey to NPC. Dr. Usman Mustafa, TL, NPIWC-II	07/07/22
4	HR Policy	NPC inquired about HR policy, Hafiz Abdul Rauf informed it is already prepared and submitted to NPC office long ago.	
5	Staff list	Recent updated project staff list be provided to NPC. Dr. Usman Mustafa, TL, NPIWC-II.	07/07/22
6	Staff Salary	All project staff salaries should be cleared and be deposited in their respected account on first day of each month. Financial Advisor, NPIWC-II. NPIWC-II.	05/07/22

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

ANNEX - F: 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	41	3	15	14	20	13	106
	Jhelum	18	0	6	0	14	5	43
	Neelum	23	12	13	5	0	0	53
Muzaffarabad Total		82	15	34	19	34	18	202
Poonch	Poonch	31	12	7	1	0	0	51
	Bagh	24	14	1	0	0	0	39
	Haveli	6	9	0	0	2	7	24
	Sudhnoti	19	15	4	0	1	0	39
Poonch Total		80	50	12	1	3	7	153
Mirpur	Mirpur	66	1	0	0	6	26	99
	Bhimber	99	0	0	0	0	0	99
	Kotli	32	18	5	0	1	0	56
Mirpur Total		197	19	5	0	7	26	254
Overall		359	84	51	20	44	51	609

ANNEX - G: 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	121	0	12	12	145
	Jhelum	11	0	13	3	27
Muzaffarabad Total		132	0	25	15	172
Poonch	Poonch	45	19	6	2	72
	Bagh	33	18	3	0	54
	Haveli	15	16	3	13	47
	Sudhnoti	11	2	6	10	29
Poonch Total		104	55	18	25	202
Mirpur	Mirpur	7	0	4	9	20
	Bhimber	11	0	0	20	31
	Kotli	25	4	3	0	32
Mirpur Total		43	4	7	29	83
Overall		279	59	50	69	457

ANNEX - H: 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	22	0	0	0	8	30
Bajaur Agency Total		22	0	0	0	8	30
Bannu	Bannu	53	0	0	0	0	53
Bannu	Lakki Marwat	56	0	0	0	0	56
Bannu	N.W Agency	109	0	0	0	0	109
Bannu Total		441	2	0	11	2	456
D.I. Khan	D.I. Khan	39	0	0	0	0	39
D.I. Khan	Tank	480	2	0	11	2	495
D.I. Khan Total		16	0	0	0	0	16
Hazara	Abbottabad	39	0	0	0	0	39
Hazara	Battagram	29	0	0	0	0	29
Hazara	Haripur	7	0	0	13	1	21
Hazara	Lower Kohistan	47	0	0	1	0	48
Hazara	Mansehra	11	0	0	0	0	11
Hazara	Torghar	9	0	0	0	0	9
Hazara	Upper Kohistan	2	0	0	0	0	2
Hazara Total		160	0	0	14	1	175
Khyber Agency	Khyber	19	0	0	0	0	19
Khyber Agency Total		19	0	0	0	0	19
Kohat	Hangu	42	0	0	0	0	42
Kohat	Karak	36	0	0	0	0	36
Kohat	Kohat	86	0	0	0	0	86
Kohat Total		164	0	0	0	0	164
Kurram Agency	Kurram	8	0	0	0	0	8
Kurram Agency Total		8	0	0	0	0	8
Malakand	Buner	65	0	0	1	0	66

KP - Watercourse Data Submission - Summary							
Division	District	Completed	Under Progress				Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Malakand	Chitral	41	0	0	0	1	42
Malakand	Lower Dir	45	0	0	1	1	47
Malakand	Malakand	45	0	0	0	2	47
Malakand	Shangla	29	0	0	1	0	30
Malakand	Swat	125	0	1	0	8	134
Malakand	Upper Dir	27	0	0	0	0	27
Malakand Total		377	0	1	3	12	393
Mardan	Mardan	87	0	0	0	0	87
Mardan	Swabi	83	0	0	3	17	103
Mardan Total		170	0	0	3	17	190
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	96	0	0	0	0	96
Peshawar	Nowshera	70	0	0	1	1	72
Peshawar	Peshawar	59	0	0	0	2	61
Peshawar Total		225	0	0	1	3	229
S.W Agency	S.W Agency	15	0	0	0	0	15
S.W Agency Total		15	0	0	0	0	15
N.W Agency	N.W Agency	5	0	0	0	0	5
N.W Agency Total		5	0	0	0	0	5
Overall		1798	2	1	32	43	1876

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

KP - WST Data Submission - Summary					
Division	District	Under Progress			Overall
		Completed	Work Order Issued	Work Order Pending	
Bajaur Agency	Bajaur	11	0	0	11
Bajaur Agency Total		11	0	0	11
Bannu	Bannu	4	0	0	4
Bannu	Lakki Marwat	18	0	0	18
Bannu	N.W Agency	8	0	0	8
Bannu Total		30	0	0	30
D.I. Khan	D.I. Khan	76	0	0	76
D.I. Khan	Tank	16	0	0	16
Dera Ismail Khan Total		92	0	0	92
Hazara	Abbottabad	9	0	1	10
Hazara	Battagram	25	1	0	26
Hazara	Haripur	13	0	1	14
Hazara	Kolai Pallas	2	2	0	4
Hazara	Lower Kohistan	0	0	1	1
Hazara	Mansehra	13	0	0	13
Hazara	Torghar	7	0	0	7
Hazara	Upper Kohistan	7	0	0	7
Hazara Total		76	3	3	82
Khyber Agency	Khyber	10	0	0	10
Khyber Agency Total		10	0	0	10
Kohat	Hangu	14	0	0	14
Kohat	Karak	29	0	0	29
Kohat	Kohat	4	0	0	4
Kohat Total		47	0	0	47
Kurram Agency	Kurram	2	0	0	2
Kurram Agency Total		2	0	0	2
Malakand	Buner	26	0	0	26

KP - WST Data Submission - Summary					
Division	District	Under Progress			Overall
		Completed	Work Order Issued	Work Order Pending	
Malakand	Chitral	6	0	0	6
Malakand	Dir Lower	7	0	0	7
Malakand	Dir Upper	14	0	0	14
Malakand	Malakand	12	0	3	15
Malakand	Shangla	17	0	0	17
Malakand	Swat	93	0	4	97
Malakand Total		175	0	7	182
Mardan	Mardan	16	0	1	17
Mardan	Swabi	9	0	5	14
Mardan Total		25	0	6	31
Mohmand Agency	Mohmand	41	0	0	41
Mohmand Agency Total		41	0	0	41
Orakzai Agency	Orakzai	2	0	0	2
Orakzai Agency Total		2	0	0	2
Peshawar	Charsadda	13	0	0	13
Peshawar	Nowshera	31	0	0	31
Peshawar	Peshawar	17	0	4	21
Peshawar Total		61	0	4	65
S.W Agency	S.W Agency	15	0	0	15
S.W Agency Total		15	0	0	15
Overall		587	3	20	610