



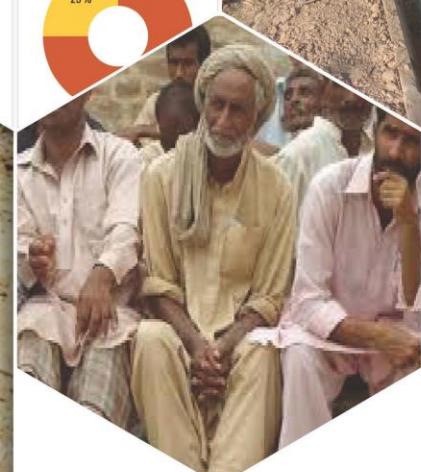
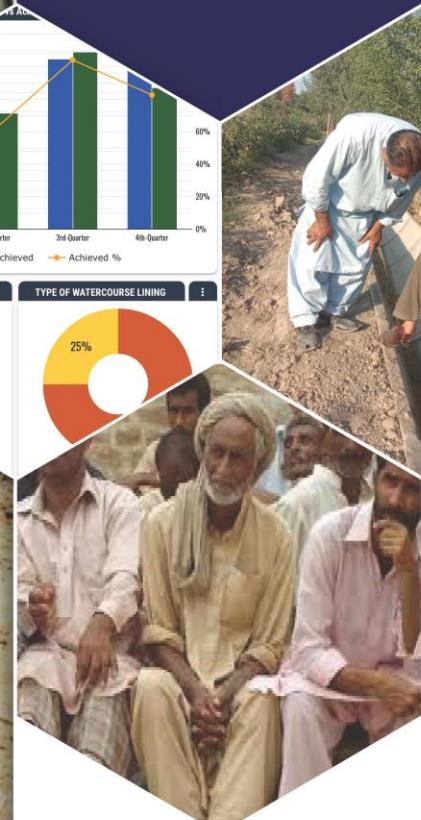
FEDERAL PROJECT MANAGEMENT UNIT  
FEDERAL WATER MANAGEMENT CELL  
MINISTRY OF NATIONAL  
FOOD SECURITY & RESEARCH  
ISLAMABAD - PAKISTAN

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

MONITORING, EVALUATION  
AND IMPACT EVALUATION  
CONSULTANTS

### QUARTERLY MONITORING & EVALUATION REPORT

JULY TO SEPTEMBER 2021





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

**Monitoring, Evaluation and Impact Evaluation (ME&IE) Consultants  
For  
National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)**

**QUARTERLY MONITORING AND EVALUATION REPORT  
JULY-SEPTEBER 2021**

**CONTENTS**

ACRONYMS.....	iv
EXECUTIVE SUMMARY .....	1
CHAPTER-1: INTRODUCTION .....	3
1.1    PROJECT PROFILE .....	3
1.2    PROJECT DESCRIPTION.....	3
1.2.1    Project Development Objectives .....	3
1.2.2    Project Objectives – General & Quantitative.....	3
1.2.3    Project Beneficiaries .....	4
1.2.4    Project Components .....	4
1.2.5    Project Targets .....	4
CHAPTER 2: SCOPE AND SERVICES OF ME&IE CONSULTANTS .....	6
2.1    OBJECTIVES .....	6
2.2    SCOPE OF THE SERVICES .....	6
2.3    MONITORING STRATEGY .....	7
2.4    FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS .....	9
CHAPTER 3: WORK PLAN OF THE CONSULTANTS FOR THIRD QUARTER .....	10
3.1    COMPLIANCE STATUS OF 3 <sup>RD</sup> QUARTERLY TENTATIVE WORK PLAN .....	10
3.2    WORK PLAN-ACTIVITIES OF THIRD QUARTER .....	10
3.2.1    Pre-Field Activities .....	10
3.2.2    Field Activities .....	10
3.2.3    ICT Assignment .....	10
3.2.4    Coordination .....	10
3.2.5    Deliverables .....	10
CHAPTER 4: ACTIVITIES DURING THE REPORTING QUARTER .....	11
4.1    INTRODUCTION.....	11

4.2	OBJECTIVE OF QM&ER .....	11
4.3	REPORTING QUARTER.....	11
4.4	REGULAR MONITORING OF INTERVENTIONS IN THE FIELD.....	11
4.4.1	Regular Monitoring of Interventions in the Field - ICT Zone .....	11
4.4.1.1	Planning for Regular Monitoring of Interventions in the Field .....	11
4.4.1.2	Schedule for Regular Monitoring.....	11
4.4.1.3	Team Composition .....	12
4.4.2	Regular Monitoring of Interventions in the Field - Punjab Zone .....	12
4.4.2.1	Planning for Regular Monitoring.....	12
4.4.2.2	Schedule for Regular Monitoring.....	12
4.4.3	Regular Monitoring of Interventions in the Field –KP Zone.....	14
4.4.3.1	Regular Monitoring of Interventions in the Field Balochistan Zone .....	15
4.4.3.2	Regular Monitoring / Spot Check, F.Y. 2020-21 .....	15
4.4.3.3	Regular Monitoring / Spot Check, F.Y. 2019-20 .....	15
4.4.3.4	Analysis of W/C (F.Y. 2020-21) Regular Monitoring / Spot Checking .....	16
4.5	DATA COLLECTION OF THE INTERVENTIONS IN THE FIELD .....	21
4.5.1	Monitoring and Data Collection - ICT Zone.....	21
4.5.1.1	Monitoring and Data Collection during the Month of July .....	21
4.5.1.2	Monitoring and Data Collection during the Month of August 2021 .....	25
4.5.1.3	Monitoring and Data Collection during the Month of September 2021 .....	33
4.5.2	Monitoring and Data Collection –Punjab Zone.....	36
4.5.2.1	Monitoring and Data Collection during the Month of July 2021 .....	36
4.5.2.2	Monitoring and Data Collection during the Month of August 2021 .....	46
4.5.2.3	Monitoring and Data Collection during the Month of September 2021 .....	50
4.5.3	Monitoring and Data Collection – KP Zone.....	50
4.5.3.1	Monitoring and Data Collection during the Month July 2021 .....	50
4.5.3.2	Monitoring and Data Collection during the Month of August 2021 .....	50
4.5.3.3	Monitoring and Data Collection during the Month of September 2021 .....	53
4.5.4	Monitoring and Data Collection - Balochistan Zone .....	53
4.5.4.1	Monitoring and Data Collection during the Month of July 2021 .....	55
4.5.4.2	Monitoring and Data Collection during the Month of August 2021 .....	65
4.5.4.3	Monitoring and Data Collection during the Month of September 2021 .....	82
4.6	ONLINE DATA ENTRY IN ANDROID BASED APPLICATION .....	83
4.7	MEETINGS OF ME&IE CONSULTANTS WITH STAKEHOLDERS REGARDING PROJECT PROGRESS / ISSUES .....	83
4.7.1	Meeting of ME&IE Team ICT Zone .....	84
4.7.2	Meetings of ME&IE Consultants Punjab Zone .....	86
4.7.3	Meetings of ME&IE Consultants KP Zone .....	90
4.7.4	Meetings of ME&IE Team Balochistan Zone .....	91
4.8	INTERNAL MEETINGS OF ME&IE CONSULTANTS .....	94
4.8.1	Joint Meeting / Workshop in National Office Islamabad .....	94
4.8.2	Internal Meetings of Zonal Office Punjab .....	94
4.8.3	Internal Meetings of Zonal Office KP .....	95
4.8.4	Internal Meetings of Zonal Office Quetta .....	97
4.9	MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT .....	98
4.9.1	Balochistan.....	99
4.9.2	Azad Jammu and Kashmir .....	101
4.9.3	Islamabad CT.....	102

4.9.4	Khyber Pakhtunkhwa .....	102
4.9.5	Punjab .....	102
4.10	ICT ASSIGNMENT .....	102
4.10.1	Development of web site of NPIWC-II .....	102
4.10.2	Data collection of interventions in MIS/GIS database .....	102
4.10.3	Designing of dashboard of Project Interventions .....	103
4.10.4	Implementation of MIS Dashboard in AJK .....	104
4.11	DELIVERABLES .....	106
4.12	MATRIX OF RESPONSIBILITIES.....	106
4.13	CASE STUDY ON THE INTERVENTION .....	106
<b>CHAPTER 5: ISSUES / BOTTLENECKS .....</b>		<b>110</b>

## LIST OF TABLES

<b>TABLE: -ES.1:</b>	Compliance Status of 3 <sup>rd</sup> Quarterly Tentative Work Plan.....	2
<b>TABLE-2.1:</b>	Monitoring Strategy for ME&IE Activities.....	7

## LIST OF FIGURES

<b>FIGURE-1.1:</b>	Pakistan Targets	5
<b>FIGURE-1.2:</b>	Zonal Targets	5
<b>FIGURE-4.1:</b>	Analysis of Rectangular Watercourses Monitored during the Baseline Survey.....	18
<b>FIGURE-4.2:</b>	Quality of Rectangular Watercourses (Plaster and Back Filling) .....	19
<b>FIGURE-4.3:</b>	Analysis of Parabolic Watercourses Monitored During the Baseline Survey.....	20

## LIST OF ANNEXES

<b>ANNEX-A:</b>	TENTATIVE WORK PLAN .....	113
<b>ANNEX-B:</b>	MATRIX OF RESPONSIBILITIES .....	115
<b>ANNEX-C:</b>	MONITORING LOG-FRAME .....	117
<b>ANNEX-D:</b>	DELIVERABLES/REPORTING REQUIREMENTS .....	123
<b>ANNEX-E:</b>	DATABASE TEMPLATE/FORM OF WC FOR DASHBOARD .....	124
<b>ANNEX-F:</b>	DATABASE TEMPLATE/FORM OF WST/WHS FOR DASHBOARD .....	126
<b>ANNEX-G:</b>	SUMMARY OF COMPLETED SCHEMES IN AJK AND DASHBOARD IMPLEMENTATION PROGRESS OF ME& IE CONSULTANTS .....	128

## ACRONYMS

ADA	Assistant Director Agriculture
AES	Agriculture Extension Services
AF	Acre-Feet
AJK	Azad Jammu & Kashmir
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
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 report in hand, "Quarterly Monitoring and Evaluation Report for the month of July 01, 2021 to September 30, 2021" is comprising five sections.

**Chapter-1** describes the project introduction in detail. 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, KP, Balochistan and Gilgit Baltistan, Azad Jammu & Kashmir as well as Islamabad Capital Territory (ICT). The proposed project Phase-II will be beneficial for the country.

The NPIWC-II comprises four components to be implemented in Punjab, KP, Balochistan, GB, AJK, 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** describes 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 planned to be followed by ME&IE Consultants is briefly described in the Table-2.1. The strategy aims to be finalized and implemented in close coordination with the client and active participation of the beneficiaries as well as the project stakeholders.

**Chapter -3** of this report covers the detail of ME&IE Consultants activities initiating during the Third Quarter 2021 (July 01, 2021 to September 30, 2021) are listed below. Time span detail is mentioned in the Tentative Work Plan. **Annex-A**.

This section also summarizes the compliance status of Quarterly Tentative Work Plan.

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

**Chapter-4** of this report covers the activities completed during the reporting period are summarized below:

- Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring
- Regular Monitoring of Interventions in The Field
- Data Collection of the Interventions in The Field
- Online Data Entry in Android Based Application.
- Baseline survey field visits
- Data entry, Data cleaning, Data processing & data Analysis
- Meetings of ME&IE Consultants with Stakeholders Regarding Project Progress / Issues
- Monitoring / Data Collection on Social and Gender Component
- Refinement of NPIWC-II web site
- Data collection of interventions in MIS/GIS database
- Refinement of dashboard of Project Interventions
- Data collection of interventions in MIS/GIS database
- Implementation of MIS Dashboard in AJK
- Case Study on the Intervention

**Chapter-5:** Non availability of Technical Sanctions of the watercourses required for baseline survey. Due to delay in approval of Monitoring Tools could not be able to move field teams on time (as per work plan) for the Baseline and Monitoring Surveys. Due to non-availability of data from NWMC (NESPAK) & respective Directorates and resources from Client, ME&IE Consultants have been facing constraints for timely initiating the activities.

Table: -ES.1: Compliance Status of 3<sup>rd</sup> Quarterly Tentative Work Plan

No.	Activities Planned for the Reporting Quarter		Status
<b>1</b>	<b>Pre-field Activities:</b>		
1.1	Functional Field Offices in Punjab, KP & Balochistan Zones	Complied	
<b>2</b>	<b>Field Activities:</b>		
2.1	Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring	Complied/continued for current year	
2.2	Training Session of field staff and Key staff on Survey Manual of MTs and Android Base System	Complied	
2.3	Training of Measurement of water flow-Pygmy current meter	Complied	
2.4	Determinants of Sample size at District/Tehsil levels with the assistance from ADA/DDA (OFWM)	Complied/continued for current year	
2.5	Baseline survey field visit	Phase-I Complied	
2.6	Data entry, Data cleaning, Data processing & data Analysis	Complied for BLS Phase-I	
2.7	Regular Monitoring	Complied//continued for current quarter	
<b>3</b>	<b>ICT Assignment:</b>		
3.1	Development of web site of NPIWC-II	Complied/Refinement under process	
3.2	Development of Android based Mobile Application	Complied	
3.3	Testing of Monitoring tools on Android based system	Complied	
3.4	Data collection of interventions in MIS/GIS database	Complied	
3.5	Designing of Dashboard of Project Interventions	Complied	
3.6	Implementation of Dashboard	Implementation of GIS Integrated MIS Dashboard is Under Progress	
<b>4</b>	<b>Coordination</b>		
4.1	Meeting of DTLs with respective DTL of NWMC	Meetings conducted on regular basis	
<b>5</b>	<b>Deliverables:</b>		
5.1	Monthly Monitoring Report (MMR)	6 <sup>th</sup> MMR (JUL 2021) 7 <sup>th</sup> MMR (JUL 2021) 8 <sup>th</sup> MMR (AUG 2021) 9 <sup>th</sup> MMR (SEPT 2021)	Submitted Submitted Submitted To be submitted on Stipulated time
5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	2 <sup>nd</sup> QM&ER (APR-JUN 2021) 3 <sup>rd</sup> QM&ER (JUL-SEPT 2021)	Submitted To be submitted on Stipulated time
5.3	Annual Monitoring and Evaluation Report	Submitted	
5.4	Baseline Survey Report Ph-1 (Draft)	Submitted	
5.5	Special Reports: Working Paper on Technology and Methodology for Implementation of Android Based Field Progress Data Collection and GIS Based Progress Monitoring Analytical Dashboard	Submitted	

## CHAPTER-1: INTRODUCTION

### 1.1 PROJECT PROFILE

<b>Project Name</b>	National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)
<b>Project Areas</b>	Punjab, KP, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir, and Islamabad Capital Territory (ICT)
<b>Sponsoring Agency</b>	Ministry of National Food Security & Research
<b>Executing Agencies (EAs)</b>	<ol style="list-style-type: none"> <li>1. Federal Project Management Unit (FPMU),</li> <li>2. DGA OFWM Punjab</li> <li>3. DGA OFWM KP</li> <li>4. DGA OFWM Balochistan</li> <li>5. Director Irrigation and Small Dams, AJK</li> <li>6. Director WM, GB</li> <li>7. Director Agriculture Extension Services (AES) ICT</li> </ol>
<b>Project Period</b>	5 Year (2019-2024)
<b>Total Project Cost</b>	154,542.355 million (Umbrella PC-1, including Sindh)
<b>ME&amp;IE Consultancy Period</b>	4 year
<b>ME&amp;IE Consultant:</b>	JV of G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering services (Pvt.) Ltd., Centre for Social Research and Development (CSRD) and ADA Consultants Inc. Canada
<b>ME&amp;IE Consultant Mobilized</b>	November 20, 2020

### 1.2 PROJECT DESCRIPTION

#### 1.2.1 Project Development Objectives

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

#### 1.2.2 Project Objectives – General & 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:

The quantitative objectives 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) Provision of 11,610 Laser Land Levelers at 50% 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 project beneficiaries 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 benefit due to Water Users' Associations (WUAs) in terms of cooperative management of irrigation water. Moreover, 14,932 will directly benefit 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 comprises four components.

**C1: ORGANIZATION OF WATER USERS ASSOCIATIONS:**

Establishment/ reactivation of Water Users Associations (WUAs) through community driven implementation approach.

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.

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:**

Construction of 14,932 Water Storage Tanks (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, Nallas 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 in large flow rates.

**C4: PROVISION OF LASER LAND LEVELING UNITS:**

Provision of 11,610 Laser Land Leveling units to the farmers. The component will strengthen LASER land leveling services in the country through provision of Laser Land Leveling Units to farmers/service providers on 50% subsidized rates.

**1.2.5 Project Targets**

Project aims at achieving the targets (Figure-1.1) for 5 years starting from year 2019-20 to 2023-24. The targets for each province/Zone (excluding Sindh) are given in below Figure-1.2.

**Project Targets:**

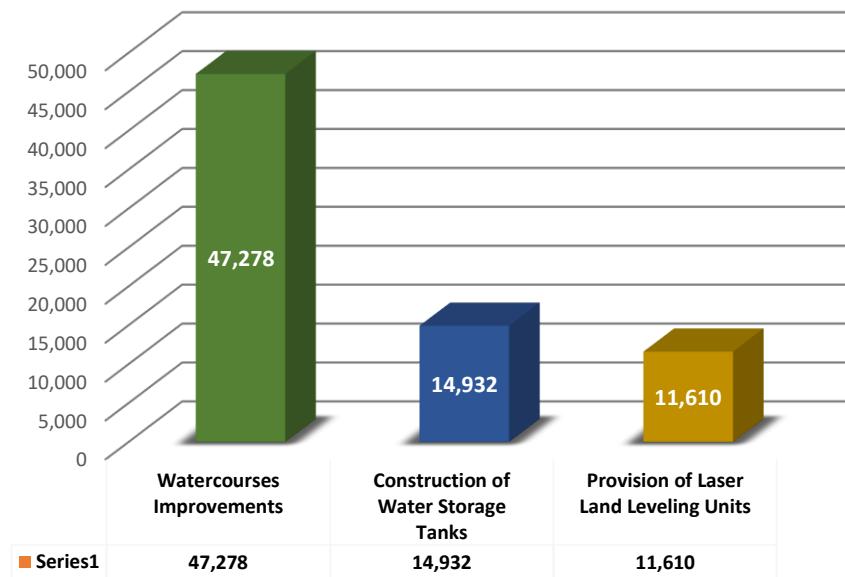


Figure-1.1: Pakistan Targets

**Zonal Targets:**

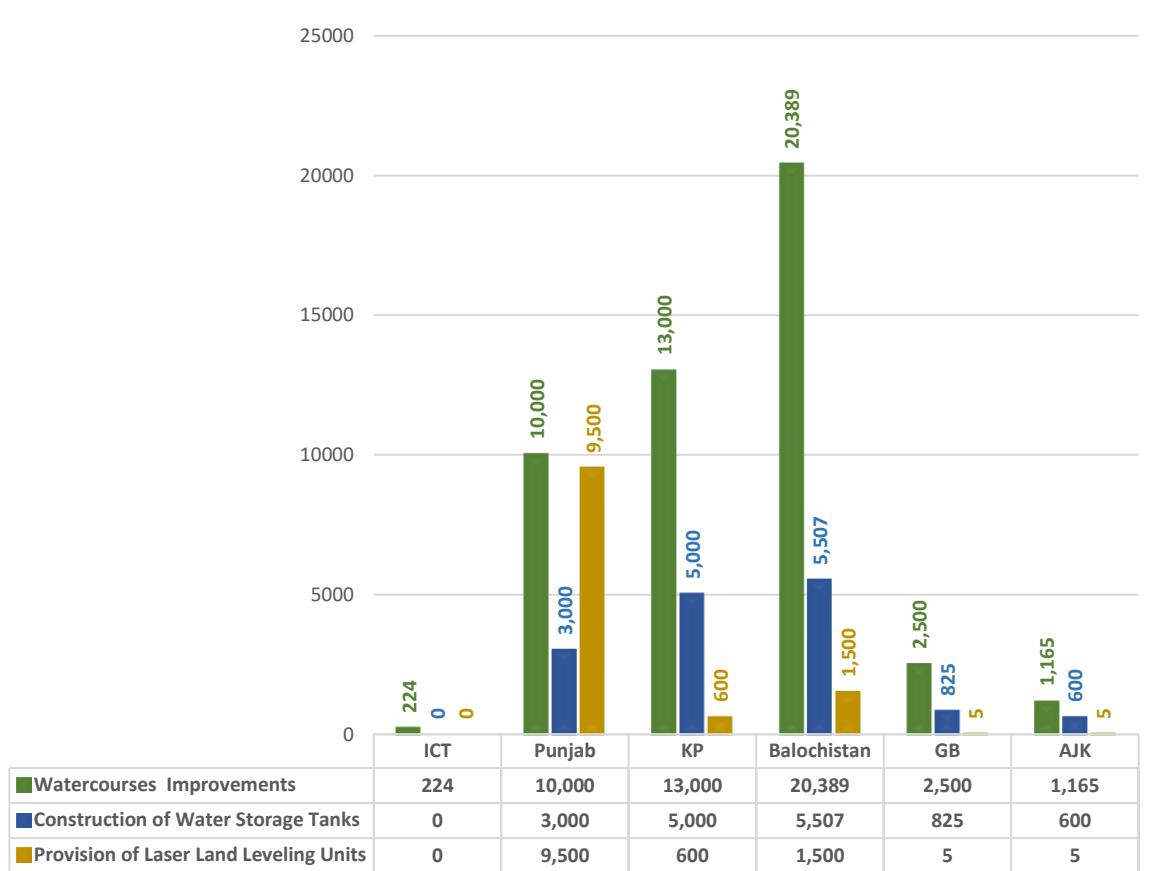


Figure-1.2: Zonal Targets

## CHAPTER 2: SCOPE AND SERVICES OF ME&IE CONSULTANTS

The ME&IE Consultants services are planned to be provided through a multi-disciplinary team of qualified professionals. All firms in the joint venture have rich experience in the field of monitoring and evaluations. 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 consultant will develop a State-of-the-Art Management Information System (MIS) with GIS focuses for NPIWC-II to monitor progress on project interventions and to carry out effective monitoring process. The MIS will help decision makers to make informed the decisions.

### 2.1 OBJECTIVES

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

### 2.2 SCOPE OF THE SERVICES

The ME&IE Consultants will be responsible for monitoring, evaluation and impact evaluation, and in this context will carry out the following activities:

- i) Undertake baseline, midline and end line 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-dation/up-gradation of water management GIS database.*
  - *Development of web-based GIS application as a dashboard interface for comprehensive representation of all spatial and tabular information: custom designed web GIS application be developed for large LED screens, should be self-operative and represent project data on multiple layouts of application interface.*
  - *Development of a MIS application as an integral part of web GIS to maintain information on facilities and services, applications, procedures, watercourses database, etc.*
  - *Development of a custom designed mobile application (Android) to capture on-site project progress, geo-tagged photos; should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the management.*
  - *Application should generate custom designed reports and analysis as per user-defined requirements.*
  - *Application should generate alerts (SMS, email, web-notifications) to the user on the non-conformance of project's key indicators; the application should have the provision to custom define alerts levels and desired notifications.*

### 2.3 MONITORING STRATEGY

The monitoring strategy planned to be followed by ME&IE Consultants is briefly described in the following Table-2.1. However, detailed methodology and procedures to carry out the Monitoring,

Evaluations and Impact Evaluations of the project interventions were explained in Chapter 6 of Inception Report. The strategy aims to be finalized and implemented in close coordination with the client and active participation of the beneficiaries as well as the project stakeholders.

**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 respective province/unit.	<ul style="list-style-type: none"> <li>Baseline and impact surveys will be carried out on sample basis.</li> <li>Data will be collected by field teams on pre-designed data collection tools through an android application on TABs.</li> <li>Baseline and impact surveys will be carried out in phases as target watercourses are not preselected.</li> <li>Baseline will be carried out before the intervention and the impact one year (two crop seasons) after the completion of the intervention.</li> <li>The midterm study will review the project progress at middle of the project implementation</li> <li>The endline study will assess the impact of the project interventions.</li> </ul>
2	Reporting	All core team members	<p>Following periodic reports will be prepared and submitted:</p> <ul style="list-style-type: none"> <li>Draft Inception Report 45 days after the agreement,</li> <li>Final Inception Report one week after the issuance of comments by the client on the draft,</li> <li>Monthly Monitoring Report on 10<sup>th</sup> of following month,</li> <li>Quarterly Monitoring Report on 10<sup>th</sup> of the first month of the following quarter,</li> <li>Annual Monitoring and Evaluation Report during first month of the following year,</li> <li>Baseline Survey Reports (in three phases),</li> <li>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.</li> <li>Impact Survey Reports (in phases) – two months after the data collection completion for the impact phase,</li> <li>Midline report in the middle of the assignment,</li> <li>Endline Report at the end of endline Survey,</li> <li>Draft Assignment completion Report at completion of the physical works,</li> <li>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,</li> <li>Special Reports, as and when asked by the client.</li> </ul>
3	Water saving assessment	Irrigation Agronomist, Field Team/ Engineers	<p><b>Water Saving on Watercourses:</b></p> <ul style="list-style-type: none"> <li>Water flow will be measured on sample watercourses selected for the baseline and impact surveys</li> <li>The flow will be measured at four points of the selected watercourses: close to water outlet, head reach, middle reach and tail reach.</li> </ul>

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
			<ul style="list-style-type: none"> <li>The measurements will be done through current meters.</li> <li>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.</li> </ul>
			<p><b>Water Savings on WSTs</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The assessment will be done either by readings on the pump gauge or periodic interviewing the farmer.</li> <li>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.</li> </ul> <p><b>Water savings due to Laser Land Leveling</b></p> <ul style="list-style-type: none"> <li>Water savings at field level will be assessed through farmers' interviews.</li> <li>The impact survey form will include questions to be asked from the farmers who got their land levelled:             <ul style="list-style-type: none"> <li>In how much time an acre was irrigated before watercourse improvement and land leveling</li> <li>In how much time an acre is irrigated after watercourse improvement with land leveling</li> </ul> </li> </ul> <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"> <li>WUAs is functional</li> <li>Holds regular meetings and keep record of them</li> <li>Makes decisions democratically</li> <li>The participation in the organization is voluntary</li> <li>It is financially and administratively sustainable</li> <li>Takes steps and ensures maintenance of watercourses, WSTs and laser land leveler</li> </ul>
5	Economic benefits assessment for agriculture	Team Leader, Socio- Economist and Agricultural Economist	<ul style="list-style-type: none"> <li>As indicated at serial No. 1, Agriculture data will be collected before (baseline) and after (impact) the watercourse improvement and WSTs construction.</li> <li>In both the surveys same forms will be used and same sampled farmers will be interviewed</li> <li>Data on variables such as crop yields, irrigated area, cropping pattern, cropping intensity, farm income and employment will be collected and analyzed</li> <li>The difference between before and after situations minus natural growth will be assumed as economic benefits to the agriculture</li> </ul>
6	Impact evaluation-on the economy	Team Leader, Agricultural Economist and Socio-Economic	<ul style="list-style-type: none"> <li>The results of the baseline and impact surveys will be used to quantify impact on the economy</li> <li>Additional food produced due to the project will be estimated. It is benefit towards food security</li> </ul>

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
		Expert	<ul style="list-style-type: none"> <li>Project costs and benefits will be compared in economic and financial terms to carry out economic and financial analysis.</li> <li>Parameters like IRR, NPV and BCR will be estimated.</li> </ul>
7	Impact evaluation-on the stakeholders	Team Leader, Agricultural Economist and Socio-Economic Expert	<ul style="list-style-type: none"> <li>Analysis as in serial 6 will be carried out with reference to various stakeholders, like community, government, farmers, etc.</li> </ul>
8	Spot checking	Team Leader, Deputy Team Leaders & Field teams/Engineers.	During the field visits for WUAs baselines impacts of Watercourses, WSTs and laser 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"> <li>The process data for all the interventions will be fed to the MIS/GIS database.</li> <li>Client's field staff and field teams of consultants will furnish data of their activities.</li> <li>The ME&amp;IE will assist in developing mobile application for this purpose</li> <li>From this data reports will be generated for process monitoring</li> <li>All interventions will be fully (100%) covered.</li> </ul>
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"> <li>The State-of-the-art MIS / Progress Monitoring Model will be developed for NPIWC-II.</li> <li>Customized forms will be developed to collect data from the implementing teams on-site for progress monitoring</li> <li>These forms will be made available to the teams on smart phones through an android application</li> <li>The teams will be adequately trained to use the application</li> <li>Data on physical and financial stages with dates will be fed to the system for process monitoring</li> <li>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</li> <li>The system will be maintained on GOOGLE server so that it is accessible by the management from anywhere in Pakistan and abroad</li> <li>Custom reports will be possible as the user demands / desires</li> <li>The results could be displayed on small as well as large screens.</li> </ul>
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 will be further enhanced and refined in consultation with the client as well as stakeholders.

They will also get improved as the project implementation progresses as in the light of real and on the ground situations.

## CHAPTER 3: WORK PLAN OF THE CONSULTANTS FOR THIRD QUARTER

### 3.1 COMPLIANCE STATUS OF 3<sup>RD</sup> QUARTERLY TENTATIVE WORK PLAN

The compliance status is summarized below.

### 3.2 WORK PLAN-ACTIVITIES OF THIRD QUARTER

The ME&IE activities initiating during the Third Quarter 2021 (July 1, 2021 to September 30, 2021) and their compliance status is summarized below. The Tentative Work Plan for the fourth Quarter (October 01, 2021 to December 31, 2021) is given as Annex-A.

#### 3.2.1 Pre-Field Activities

S#	Activities	Status
i	Functional Field Offices in Punjab, KP & Balochistan Zones	Complied, Refer chapter 4 for detail:

#### 3.2.2 Field Activities

S#	Activities	Status
i	Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring	Complied, Refer chapter 4 for detail:
ii	Training Session of field staff and Key staff on Survey Manual of MTs and Android Base System	Complied, Refer chapter 4 for detail:
iii	Training of Measurement of water flow-Pygmy current meter	Complied, Refer chapter 4 for detail:
iv	Determinants of Sample size at District/Tehsil levels with the assistance from ADA/DDA (OFWM)	Complied, Refer chapter 4 for detail:
v	Baseline survey field visit	Complied, Refer chapter 4 for detail:
vi	Data entry, Data cleaning, Data processing & data	Completed Refer chapter 4

vii	Analysis Regular Monitoring	for detail: Complied, Refer chapter 4 for detail:
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#### 3.2.3 ICT Assignment

S#	Assignment	Status
i	Development of web site of NPIWC-II	Complied, Refinement under process, Refer chapter 4 for detail:
ii	Development of Android based Mobile Application	Complied, Refer chapter 4 for detail:
iii	Testing of Monitoring tools on Android based system	Complied, Refer chapter 4 for detail:
iv	Data collection of interventions in MIS/GIS database	Complied, Refer chapter 4 for detail:
v	Designing of dashboard of Project Interventions	Complied, Implementation under process, Refer chapter 4 for detail:

#### 3.2.4 Coordination

S#	Activities	Status
i	Meeting of DTLs with respective DTL of NWMC	Meetings conducted on regular basis

#### 3.2.5 Deliverables

S#	Reports	Status
i	Monthly Monitoring Report (MMR)	Complied
ii	Quarterly Monitoring & Evaluation Report (QM&ER)	Complied
iii	Baseline Survey Report (Ph-1)	Submitted

## CHAPTER 4: ACTIVITIES DURING THE REPORTING QUARTER

### 4.1 INTRODUCTION

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

### 4.2 OBJECTIVE OF QM&ER

The Main objective of Quarterly Monitoring and Evaluation Report is to update the Client about the activities carrying out by the ME&IE Consultants during the reporting quarter. Reporting is an integral part of monitoring and evaluation framework.

### 4.3 REPORTING QUARTER

This Third Quarterly Monitoring & Evaluation Report (QM&ER) covers the period from July 01, 2021 to September 30, 2021.

The Third Quarterly Monitoring & Evaluation Report (QM&ER) has prepared under the guidance and supervision of Mr. Saif Ullah Ejaz Chaudhry, Director G3 Engineering Consultants authorized representative of ME&IE Consultants. The core team of NPIWC-II participated in the preparation of this Report in hand.

This Report provides the progress made in various activities relating to the accomplishment of Monitoring activities of project interventions e.g., Field Survey / Monitoring of the field interventions. This report also describes all activities to be carried out as per quarterly work plan.

### 4.4 REGULAR MONITORING OF INTERVENTIONS IN THE FIELD

After completion of Baseline Survey ME&IE consultants' survey teams started regular monitoring of Project Interventions in the field.

Teams started monitoring the field activities as per TORs of the assignment and gathering the all the required data through Monitoring Tools already developed. The data is uploaded to the android based software and is being compiled in the MIS system developed by the ICT Specialist.

All the zonal offices prepared work plan for the routine monitoring / survey activities and provided

further training to field survey teams for the regular monitoring of the project interventions in the field. The regular monitoring assignments are comprised of input-output and process as defined in the Annual Work Plan / Budget and tracking of the outcome's indicators. Regular routine monitoring will look at the extent to which the proposed project activities are being implemented as planned.

#### 4.4.1 Regular Monitoring of Interventions in the Field - ICT Zone

In ICT only watercourses are being installed under NPIWC-II and till now 20 watercourses have been constructed whereas In AJK watercourses as well as water storage tanks are being constructed under NPIWC-II.

Site selection of interventions in each District is 2-5 % of its target of financial years i.e., 2019-20 & 2020-21. The site selection was carried out with close Coordination/consultation of concerned DDA/ADA through randomization.

##### 4.4.1.1 Planning for Regular Monitoring of Interventions in the Field

Quarterly (July 2021 to September 2021) Monitoring Survey Sampling for ICT Zone is as under.

Division	Interventions	Target Population	Targeted Samples
ICT	Watercourses	69	4
	Water Storage Tanks	-	-
AJK	Watercourses	417	13
	Water Storage Tanks	240	7
Rawalpindi	Water Storage Tanks	220	7

##### 4.4.1.2 Schedule for Regular Monitoring

ICT Zone Field Team scheduled the visits for monitoring survey in 3 segments. The visits are planned for 10 days in 3 months i.e., July, August and September 2021. The tentative schedule of first segment of monitoring visits is as under:

Date	Division / Unit	Areas / Schemes
16 July 2021	Islamabad Capital Territory	Tarlai Kalan
		Pind Begwal
27 July 2021	Attock, Rawalpindi	Jumgah
		Sarwala
		Bafahad
		Bafahad
28 July 2021	Mirpur, AJK	Jari Kass
		Akbarabad
4 Aug. 2021	Bhimber, AJK	Katchi
		Machia
		Machora
10 Aug. 2021	Islamabad Capital Territory	Arrah
		Payout

During the reporting period field team of ICT Zone successfully achieved 13 targets including watercourses and water storage Tanks structures as detailed below.

Scheme	Targets achieved	Area
Watercourses	3	AJK
ICT	4	ICT
Water Storage Tanks	4	Attock / Rawalpindi
Water Harvesting Structures	2	Mirpure / AJK

#### 4.4.1.3 Team Composition

For ICT Zonal office there is only one Field Monitoring / Survey Team comprising of three members.

#### 4.4.2 Regular Monitoring of Interventions in the Field - Punjab Zone

The monitoring of activities of improvement of watercourses and construction of water storage tanks were carried out during the reporting period, as a part of regular features of ME&IE consultants.

#### 4.4.2.1 Planning for Regular Monitoring

The monitoring/baseline survey is to be conducted for the intervention of improvement of watercourses, Water User Associations and Water Storage Tanks. The survey will be conducted in 3 phases depending upon the number of units of each intervention targeted for each financial year. The planned baseline survey could be summarized as under:

- i. **Monitoring/Baseline Survey-I** - Based on sample from Target Interventions for the Year 2019-20 to 2020-21 (2 years) Cropping year Kharif 2020 and Rabi 2020-21
- ii. **Monitoring/Baseline Survey-II** - Based on sample from Target Intervention for the Year 2021-22 Cropping year Kharif 2021 and Rabi 2021-22
- iii. **Monitoring/Baseline Survey-III** - Based on sample from Target Intervention for the Year 2022-23 Cropping year Kharif 2022 and Rabi 2022.23

#### 4.4.2.2 Schedule for Regular Monitoring

The phase-I survey has been confined to more than 50% Divisions/Districts of Punjab zone as under:

Sub-Zone-1	Lahore and Sahiwal Division
Sub-Zone-2	Gujranwala Division
Sub-Zone-3	Multan and D.G Khan Division

The remaining Division/Districts will be covered in phase-II. In the phase-III remaining target of intervention in all division/districts will be covered in order to give due representation to each district i.e., 2-3 percent of the total targets archived of the project in each district. Regular and additional user of watercourses and water storage tanks are given in tables 4.1 to 4.7 below.

Table-4.1: List of Regular Water Courses: Field Team Sub zone – 2

Sr. No	Date	WC ID	Chairman Name	Chairman Number	Status	WC Type	Address	Financial year
1	17/7/2021	3315-L	Bashrat Ali	03214309721	FCR	Regular	Badar Ali, Tehsil Pindi Bhatiya, District Hafizabad	2020-21

Table-4.2: List of Additional Watercourses: Field Team Sub zone – I

Sr. No	Date	WC ID	Chairman Name	Chairman Number	Status	WC Type	Address	Financial year
1	16/7/2021	32150/L	Khalid Nawaz	03364748116	FCR Issued	Additional Lining	116/12L Chichwatni	2020-21
2	16/7/2021	25486/L	M Rafiq	03063916093	FCR Issued	Additional Lining	90-12L chichwatni	2020-21
3	16/7/2021	30470/R	Majid Hussain	03217196519	FCR Issued	Additional Lining	110/12R Chichwatni	2020-21
4	17/7/2021	28240/R	Ghulam Shabir	03205656987	FCR Issued	Additional Lining	129/9L Sahiwal	2020-21
5	17/7/2021	87112/L	Masood Ahmed	03009693509	FCR Issued	Additional Lining	142/9L Sahiwal	2020-21
6	17/7/2021	28240/R	Ghulam Shabir	03205656987	FCR Issued	Additional Lining	129/9L Sahiwal	2020-21

Table-4.3: List of Additional Watercourses: Field Team Sub zone – II

Sr. No	Date	WC ID	Chairman Name	Chairman Number	Status	WC Type	Address	Financial year
1	15/7/2021	6990-R	Akhter Ali	03006128874	FCR Issued	Additional	Sunderene, Tehsil & District Hafizabad	2020-21
2	15/7/2021	655-L	Rana Shaukat Ali	03217461406	FCR	Additional	Saroop Wala Tehsil & District Hafizabad	2020-21
3	15/7/2021	8210-L	Muhammad Rizwan Abbas	03315646464	FCR	Additional	Thatha Noor shah Tehsil & District Hafizabad	2020-21
4	16/7/2021	36672-L	Zulqarnain Haider	03002051512	FCR	Additional	Dhobra, Tehsil Pindi Bhatiya, District Hafizabad	2020-21
5	16/7/2021	4256-L	Khuda Baksh	03005448857	FCR	Additional	Kassesy Tehsil Pindi Bhatiya, District Hafizabad	2020-21
6	16/7/2021	41350-L	Imran Khan	03416181456	FCR	Additional	Hardoratta, Tehsil Pindi Bhatiya, District Hafizabad	2020-21
7	17/7/2021	15404-R	Nauman Ali	03404339422	FCR	Additional	Nawan Manika, Tehsil Pindi Bhatiya, District Hafizabad	2020-21

Table-4.4: List of Additional Watercourses: Field Team Sub zone-3

Sr. No	Date	WC ID	Chairman Name	Chairman Number	Status	WC Type	Address	Financial Year
1	15-07-2021	7894/L	Muhammad Iqbal	0301-7543695	ICR-II	Additional	Kherabad, Qadirpur Raan 38, Multan Saddar Multan	2020-21
2	15-07-2021	41440/L	Altaf Hussain	0306-7337531	ICR-II	Additional	2-Terpai, 131 Chatta, Multan Saddar Multan	2020-21
3	16-07-2021	106200/TR	Toqueer Ahmed	0300-8539575	FCR	Additional	Raja Ram, Shujabad, Multan	2020-21
4	16-07-2021	139544/R	Sarfraz Ahmed	0300-	FCR	Additional	That Ghaluwan, Shujabad,	2020-21

			Khan	6373711			Multan	
5	17-07-2021	43000/R	Muhammad Ismail	0302-7306302	FCR	Additional	Qasba Maral, Multan Saddar, Multan	2020-21
6	17-07-2021	27100/L	Umer Farooq	0300-6349137	FCR	Additional	Basti Balochan, Khokran, Multan Saddar, Multan	2020-21

Table-4.5: List of Water Storage Tank Monitoring During July 2021-Subzone-1

Date	WST Type	Owner / Beneficiary Name	Address	Beneficiary Number	Area Owned (Acre)	Status	Financial year
17/7/2021	Trapezoidal	Younas Pervaz Gill	Chak No 148/9L Tehsil District Sahiwal	03003327191	20 Acre	FCR	2020-21

Table-4.6: List of Water Storage Tank Monitoring During July 2021-Subzone-2

17/7/2021	Square	Iftikhar Ahmad	Village Bahuman Tehsil Pindi Bhattian District Hafizabad	03496283679	5.45	FCR	2020-21
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Table-4.7: List of Water Storage Tank Monitored During July 2021-Subzone-3

16/7/2021	Trapezoidal	Amir Sohail	Chak 6 Faiz, Moza Matti Tal Tehsil Multan Saddar District Multan	0300-3546000	37	FCR	2020-21
16/7/2021	Trapezoidal	Muhammad Hamid Nawaz	Chak 131A, Mubarak Pur Tehsil Jahanian District Khanawal	0300-6343430	12	FCR	2020-21

The number of units monitored in Punjab zone during reporting period is given in **Table 4.8** below.

Table-4.8: No. of Units of the Interventions Monitored during August 2021

Sr. No.	District	No. of Watercourses for Monitoring			No. of Water Storage Tanks	No. of Beneficiaries of WST
		Additional	Regular	Total		
1	Sub Zone 1	1	0	1	3	3
2	Sub Zone 2	2	0	2	4	4
3	Sub Zone 3	2	1	3	4	4
<b>G. Total Punjab</b>		<b>5</b>	<b>1</b>	<b>6</b>	<b>11</b>	<b>11</b>

#### 4.4.3 Regular Monitoring of Interventions in the Field –KP Zone

KP ME&IE Consultants' field team conducted monitoring / survey visits of WCs and WSTs in 6 (Six) districts of KP in the second round of monitoring and baseline survey. These districts include Peshawar, Nowshera, Mardan, Kohat, Abbottabad, and Mansehra. Samples were drawn from the list of WCs/WSTs for which Technical Sanctions have been

issued. Two survey teams were deputed to these districts. The survey started from 2<sup>nd</sup> of August 2021. The two teams conducted the survey five days a week till 18<sup>th</sup> of August 2021. Details of monitoring / survey visits are given below.

S. No.	Name of District	Component		Total
		WC	WST	
1.	Peshawar	03	01	04
2.	Nowshera	07	03	10

S. No.	Name of District	Component		Total
		WC	WST	
3.	Mardan	03	--	03
4.	Kohat	02	--	02
5.	Abbotabad	01	--	01
6.	Mansehra	01	--	01
	<b>Total</b>	<b>17</b>	<b>04</b>	<b>21</b>

#### 4.4.3.1 Regular Monitoring of Interventions in the Field Balochistan Zone

The ME&IE Consultants, Balochistan Zone carried out several activities during the reporting period i.e., July 01, 2021 to September 30, 2021. The activities include regular monitoring / spot checking and data collection. The activities performed by the Balochistan Zone team are listed below:

- i. Updated Field Progress of Regular Monitoring / Spot Check accomplished by ME&IEC, Balochistan
- ii. Analysis of watercourses F.Y. 2020-21 (Regular Monitoring/Spot Checking)
- iii. The ME&IE Consultants arranged 03 days' workshop on Baseline Data, MTs and 06 months Workplan at National Office, Islamabad. All DTLs and Core Team members were participated. NPIWC officials and Project Consultants.
- iv. Training/Workshop on Baseline Survey (Phase-II) and overall Project.
- v. Case Study.
- vi. Conducted the Regular Monitoring / Spot Checking of F.Y. 2019-20 and F.Y. 2020-21
- vii. Attended Monthly Progress Review meetings, chaired by DG, OFWM, Balochistan.
- viii. Attended different meeting with Core Team Members on Zoom.
- ix. Meetings with OFWM officials and other stakeholders at Provincial Level.
- x. Meetings with Deputy Directors / other Staff of OFWM at district level.

#### 4.4.3.2 Regular Monitoring / Spot Check, F.Y. 2020-21

In first phase, Field Teams monitored the schemes of F.Y. 2020-21. The ME&IEC visited 09 districts of Balochistan to monitor the sites of F.Y. 2020-21. The total targets of Watercourses were 141. As per

sample size (5%), ME&EIC had to monitor to 7 sites, however, we increased the sample size and monitored 11 sites instead of 7 to cover maximum watercourses and to get more authentic monitoring findings. The target of Water Storage Tanks was 603 and as per sampling size (5%) ME&IEC had to monitor to 30 sites, while ME&IEC has monitored total 21 sites yet, the rest of sites will be monitored in upcoming months.

The updated detail of monitored Watercourses and Water Storage Tanks under F.Y. 2020-21 is as under:

Sr. #	Districts	WC	WST	Total
1	Killa Abdullah	1	1	2
2	Loralai	1	2	3
3	Killa Saifullah	2	1	3
4	Pishin	0	4	4
5	Quetta	0	4	4
6	Naseerabad	2	4	6
7	Sohbatpur	3	0	3
8	Mastung	1	2	3
9	Kalat	1	3	4
<b>Total Monitored Sites</b>		<b>11</b>	<b>21</b>	<b>32</b>
<b>Total Targets</b>		<b>141</b>	<b>603</b>	<b>744</b>
<b>Sampling (5%)</b>		<b>7</b>	<b>30</b>	<b>37</b>
<b>Difference</b>		<b>4</b>	<b>-9</b>	<b>-5</b>

#### 4.4.3.3 Regular Monitoring / Spot Check, F.Y. 2019-20

In second phase monitored the sites of F.Y. 2019-20. The total target of Watercourses and Water Storage Tanks were 1891 and 411 respectively. As per sample size (5%), ME&IEC had to monitor to 95 Watercourses and 21 Water Storage Tanks. The ME&IEC monitored 32 Watercourses 18 Water Storage Tanks till to date. The remaining 63 Watercourses and 03 Water Storage Tanks will be monitored in upcoming months.

The detail of monitored sites of F.Y. 2019-20 is mentioned below:

Sr. #	Districts	WC	WST	Total
1	Jaffarabad	3	0	3
2	Naseerabad	3	0	3
3	Zhob	2	1	3
4	Sherani	2	2	4

Sr. #	Districts	WC	WST	Total
5	Musa Khail	1	1	2
6	Duki	2	1	3
7	Noshki	2	1	3
8	Ziarat	3	0	3
9	Mastung	2	1	3
10	Kalat	2	1	3
11	Khuzdar	2	1	3
12	Pishin	2	1	3
13	Killa Abdullah	2	1	3
14	Quetta	3	1	4
15	Kachi	1	2	3
16	Sibi	0	4	4
<b>Total Monitored Sites</b>		<b>32</b>	<b>18</b>	<b>50</b>
<b>Total Targets</b>		<b>1891</b>	<b>411</b>	<b>2302</b>
<b>Sampling (5%)</b>		<b>95</b>	<b>21</b>	<b>115</b>
<b>Difference</b>		<b>-63</b>	<b>-3</b>	<b>-65</b>

The Balochistan is the largest province covering 44% of total area of Pakistan.

The province of Balochistan, the least populated province of Pakistan and the largest province by area, is divided into 35 districts and 07 divisions.

The ME&IEC-Balochistan visited 18 districts out of 35 districts (51%) till to date to monitor the Regular Monitoring / Spot Check.

The list of visited districts are under.

Sr. #	Name of Districts Visited
1	Duki
2	Jaffarabad
3	Kachi
4	Kalat
5	Khuzdar
6	Killa Abdullah
7	Killa Saifullah
8	Loralai
9	Mastung
10	Musa Khail
11	Naseerabad
12	Noshki
13	Pishin
14	Quetta
15	Sherani
16	Sohbatpur
17	Zhob
18	Ziarat

#### 4.4.3.4 Analysis of W/C (F.Y. 2020-21) Regular Monitoring / Spot Checking

The Balochistan field teams monitored 11 watercourses on sample basis in first Baseline Survey. During the baseline field survey, the teams also performed activities of regular monitoring / spot checking. The purpose of this activity was to monitor the quality of work and check the status of work either it is per design/specification or not.

Watercourse improvement consists of:

- Earthen improvement involving complete demolishing of community channel and rebuilding according to engineering design with clean compacted soil.
- Installation of necessary water control structures i.e., naccas, culverts, buffalo wallows, drop structures, siphon/aqueducts etc.
- Lining- the most important part of watercourse improvement carried out in reaches prone to maximum water losses.

There were two types of watercourses monitored during the baseline survey i.e., 05 Rectangular and 06 Parabolic.

The field team checked different type of indicators and found that maximum works has been done as per design/specification. The field teams were monitored 05 rectangular watercourses in different districts / tehsils. The overall works found as per design / specification.

The removal of vegetation, Proper compaction of soil, thickness of wall, depth of watercourse, thickness of bed was found 100% okay. The water supply was adequate 100%. However, aligning, lining, free board height and back collar mortar need to be improvement. The results of analysis undertaken are presented graphically in **Fig. 4.1**, which shows the % of different items checked during the field visits.

The quality of rectangular watercourses was found Good (25%), Satisfactory (75%) and not satisfactory (0%). It shows overall quality of work is as per mark. No work found where quality was unsatisfactory. However, the percentage of satisfactory i.e., 75% need to be more attention. Quality of rectangular watercourses is explained graphically in **Fig. 4.2**

The results of 06 monitored parabolic watercourses indicate that water supply was adequate 100%, further lining, length, filing of joints, slop and back filling were 100% as per des design / specification. The quality of work was also 100% satisfactory; however, removal of vegetation was found 50% which need to be attention. Overall analysis is given in graphical form in **Fig. 4.3**.

The overall analysis results of all intervention have been given in Baseline Report.

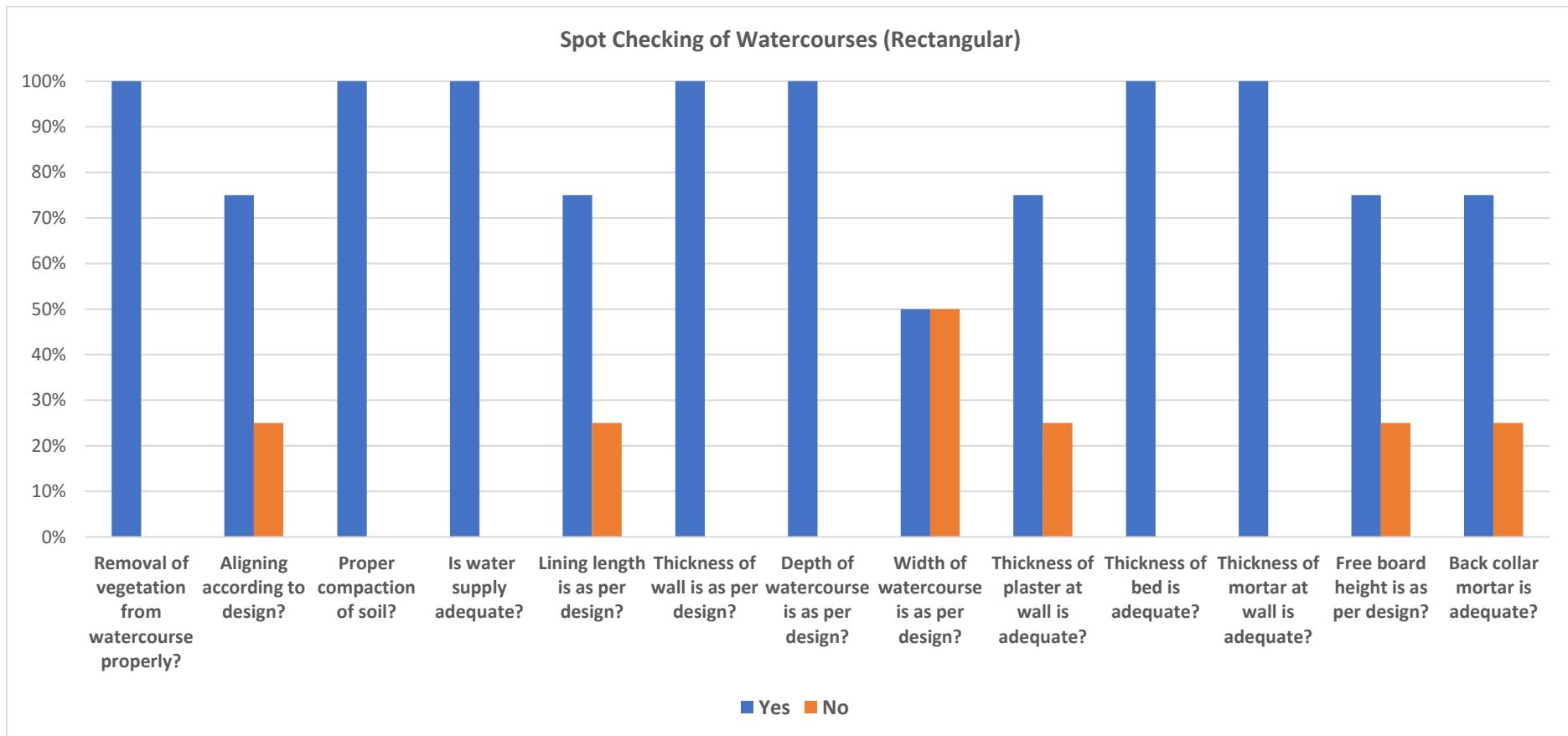


Figure 4.4: Analysis of Rectangular Watercourses Monitored during the Baseline Survey:

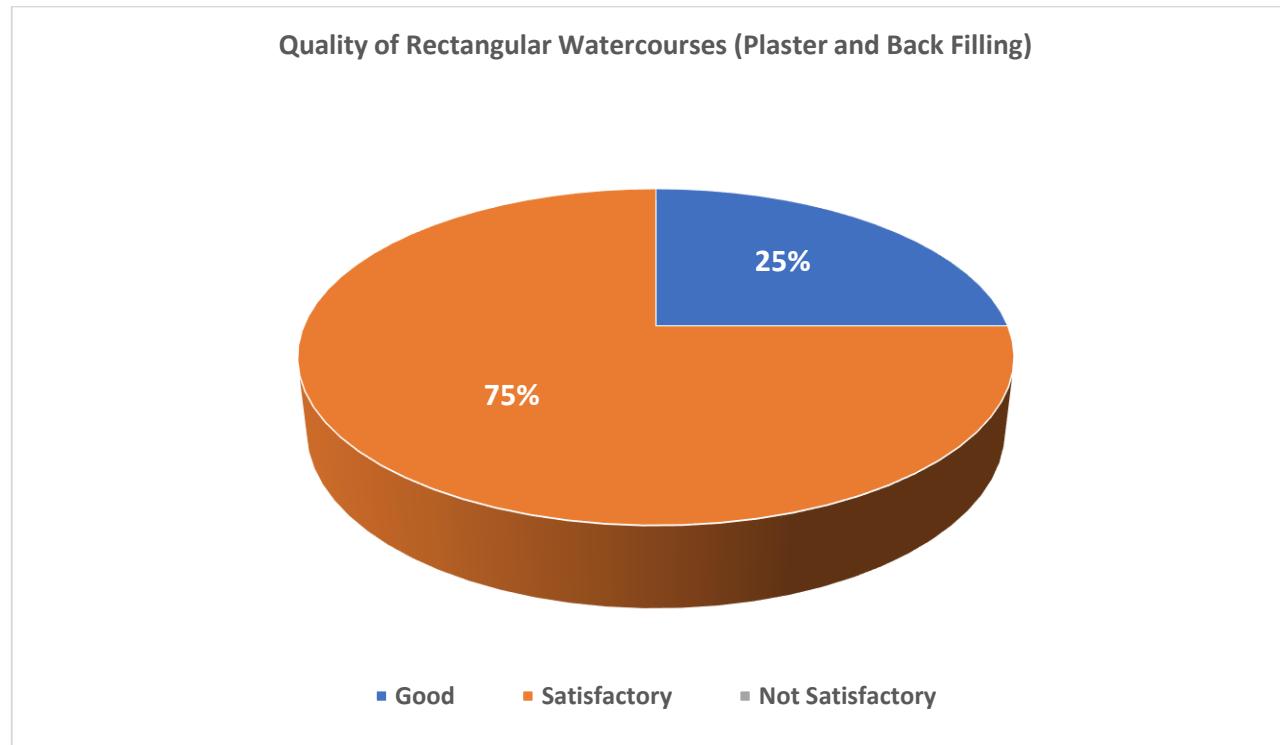


Figure 4.5: Quality of Rectangular Watercourses (Plaster and Back Filling)

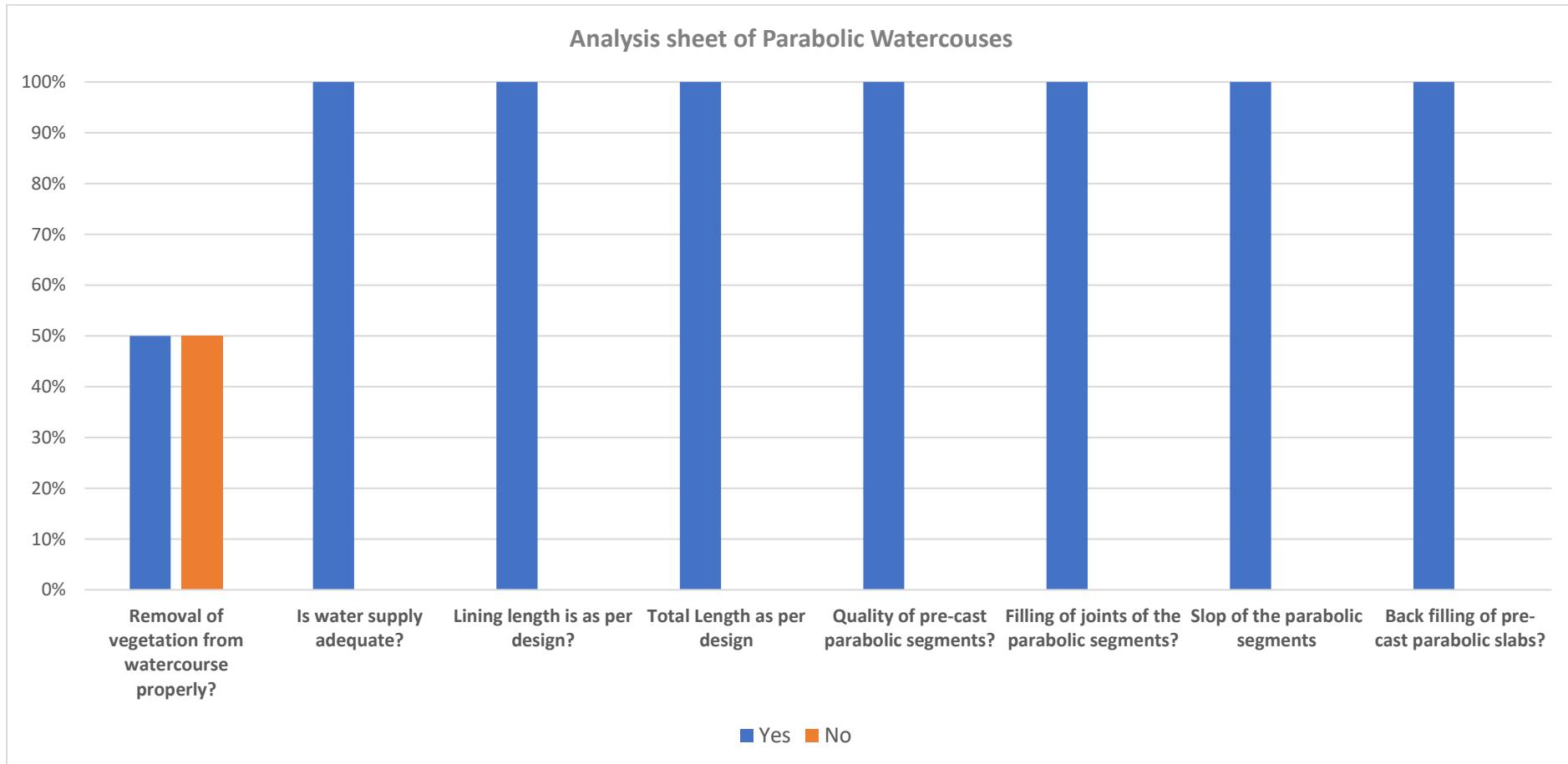


Figure 4.6: Analysis of Parabolic Watercourses Monitored During the Baseline Survey

#### 4.5 DATA COLLECTION OF THE INTERVENTIONS IN THE FIELD

As per plan ME&IE Zonal Teams started regular monitoring of activities on project interventions. All the zonal offices conducted trainings of Field Teams for monitoring and data collection in the field. Teams were already designed and deputed as per baseline survey. Detail of monitoring activities of all the zonal offices is given below.

##### 4.5.1 Monitoring and Data Collection - ICT Zone

ICT Zone Field Team visited the interventions, coordinated with the respective OFWM departments for documents and official details. Officials from OFWM department accompanied ME&IE consultants' the team for surveys. Field Team visited and surveyed the watercourses and water storage tanks for baseline and monitoring surveys according to the schedule.

###### 4.5.1.1 Monitoring and Data Collection during the Month of July

###### 1) Field Visit Date: 16 July 2021

Field Team of ICT visited the village "Tarlai Kalan" situated in Islamabad for ME&IE Consultants' monitoring and baseline survey. Underground pipeline is being installed. The beneficiary is a new owner of this land, and he was a contractor by profession. Team thoroughly surveyed the location and took measurements. Following are the details of visit:

Details of WC at Tarlai Kalan	
Province/Unit	ICT
District	ICT
Tehsil	Tarlai Kalan
Village	Tarlai Kalan
Name of Watercourse	Omer Ali Khan – Tarlai Kalan
Coordinates	N 33.6365023 , E 73.1384257
No. of beneficiaries	1
Culturable Command Area (CCA)	20 Kanals
Name of Owner	Omer Ali Khan
Total Number of Water Users	1
Cropping Pattern	Leechee, Oranges, Grapefruits, Plum, Peach, Olives

Type of watercourse	PVC 3"
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	28.32 LPS
Main Source of water	Dug well
Additional Source of water	Bore
Length of watercourse	340 Meters
Date of Technical Sanction	15-07-2020
Sanctioned Cost	Rs. 757,799/-



Measuring Length of PVC 3" Dia Pipeline

Field Team of ICT visited the village "Pind Begwal" situated in Islamabad for monitoring and baseline survey. Underground pipeline is being installed. By profession, the landowner is a Lawyer in Supreme Court. Team thoroughly surveyed the location and took measurements of which observations are as follow:

Details of WC at Pind Begwal	
Province/Unit	ICT
District	ICT
Tehsil	Pind Begwal
Village	Pind Begwal
Name of Watercourse	Pind Begwal – Ch. Khanzada Khan
Coordinates	N 33.7117241 , E 73.2586318
No. of beneficiaries	1
Culturable Command Area (CCA)	20 Kanals
Name of Owner	Ch. Khanzada Khan
Total Number of Water Users	1

<b>Cropping Pattern</b>	-
<b>Type of watercourse</b>	PVC 3"
<b>Water Logging &amp; Salinity</b>	No
<b>Warabandi System</b>	No
<b>Designed Discharge</b>	28.32 LPS
<b>Main Source of water</b>	Tubewell
<b>Additional Source of water</b>	No
<b>Length of watercourse</b>	340 Meters
<b>Date of Technical Sanction</b>	20-06-2020
<b>Sanctioned Cost</b>	Rs. 851,951/-



Measuring the Length of PVC3" Dia Pipeline

## 2) Field Visit Date: 27 July 2021

Field Team of ICT & AJK visited the village "Sarwala" situated in Attock District for monitoring and baseline survey. Water storage tanks made up of concrete and bricks are constructed here. Survey Field Teams was unable to meet the beneficiary but thoroughly surveyed the location and observations are as follow:

<b>Details of WST at Sarwala</b>	
<b>Province</b>	Punjab
<b>Division/Unit</b>	Rawalpindi
<b>District</b>	Attock
<b>Tehsil</b>	Attock
<b>Village</b>	Sarwala
<b>Name of Water Storage Tank</b>	Sarwala - Malik Rizwan
<b>Coordinates</b>	N 33.800216 , E 72.325604
<b>No. of beneficiaries</b>	1
<b>Culturable Command</b>	6 Acres

<b>Area (CCA)</b>	
<b>Name of Owner</b>	Malik Rizwan
<b>Total Number of Water Users</b>	1
<b>Cropping Pattern</b>	Citrus
<b>Type of Water Storage Tank</b>	RCC
<b>Water Logging &amp; Salinity</b>	No
<b>Warabandi System</b>	No
<b>Designed Discharge</b>	4.1 LPS
<b>Main Source of water</b>	Tubewell / Bore
<b>Additional Source of water</b>	No
<b>Sanctioned Size of Water Storage Tank</b>	25 ft x 25 ft x 5 ft
<b>Measured Size of Water Storage Tank</b>	24.7 ft x 24.9 ft x 5.6 ft
<b>Date of Technical Sanction</b>	04-01-2021
<b>Sanctioned Cost</b>	Rs. 402,133/-
<b>Government's Share (60%)</b>	Rs. 241,280/-
<b>Farmer's Share (40%)</b>	Rs. 160,853/-



Monitoring Visit to Sarwala, Attock

Field Team of ICT & AJK visited the village "Jamgah" situated in Attock District for monitoring and baseline survey. Water storage tanks made up of concrete and bricks are constructed here. Teams were unable to meet the beneficiary but thoroughly surveyed the location and observations are as follow:

<b>Details of WST at Jamgah</b>	
<b>Province</b>	Punjab
<b>Division/Unit</b>	Rawalpindi
<b>District</b>	Attock
<b>Tehsil</b>	Attock
<b>Village</b>	Jamgah
<b>Name of Water Storage</b>	Jamgah – Nisar Bibi

<b>Tank</b>	
<b>Coordinates</b>	N 33.8325831, E 72.3731739
<b>No. of beneficiaries</b>	1
<b>Culturable Command Area (CCA)</b>	14.33 Acres
<b>Name of Owner</b>	Nisar Bibi
<b>Total Number of Water Users</b>	1
<b>Cropping Pattern</b>	Vegetables, Wheat
<b>Type of Water Storage Tank</b>	RCC
<b>Water Logging &amp; Salinity</b>	No
<b>Warabandi System</b>	No
<b>Designed Discharge</b>	7.32 LPS
<b>Main Source of water</b>	Tubewell / Bore
<b>Additional Source of water</b>	No
<b>Sanctioned Size of Water Storage Tank</b>	30 ft x 30 ft x 5 ft
<b>Measured Size of Water Storage Tank</b>	32.5 ft x 31.4 ft x 9 ft
<b>Date of Technical Sanction</b>	19-08-2020
<b>Sanctioned Cost</b>	Rs. 500,000/-
<b>Government's Share (60%)</b>	Rs. 300,000/-
<b>Farmer's Share (40%)</b>	Rs. 200,000/-



Monitoring Visit to Jamgah, Attock

Field Team of ICT & AJK visited the village "Bafahad" situated in Attock District for monitoring and baseline survey. Water storage tanks made up of concrete and bricks are constructed here. Tea was unable to meet the beneficiary but thoroughly surveyed the location and observations are as follow:

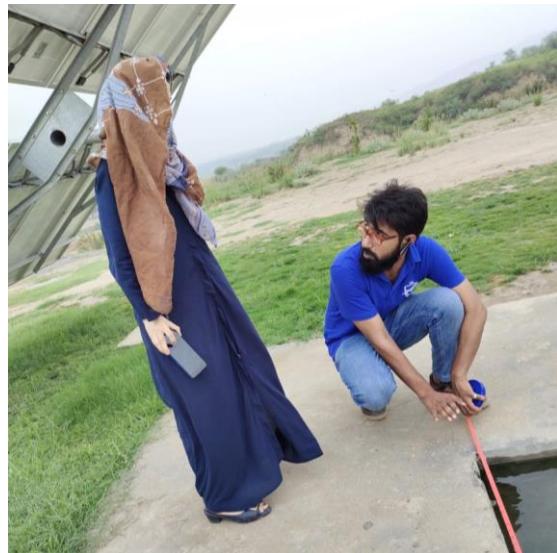
<b>Details of WST at Bafahad</b>	
<b>Province</b>	Punjab
<b>Division/Unit</b>	Rawalpindi
<b>District</b>	Attock
<b>Tehsil</b>	Hassan Abdal
<b>Village</b>	Bafahad
<b>Name of Water Storage Tank</b>	Bafahad – Asid Ali Khan
<b>Coordinates</b>	N 33.864265 , E 72.6810624
<b>No. of beneficiaries</b>	1
<b>Culturable Command Area (CCA)</b>	16.10 Acres
<b>Name of Owner</b>	Asid Ali Khan
<b>Total Number of Water Users</b>	1
<b>Cropping Pattern</b>	Citrus
<b>Type of Water Storage Tank</b>	RCC
<b>Water Logging &amp; Salinity</b>	No
<b>Warabandi System</b>	No
<b>Designed Discharge</b>	9.887 LPS
<b>Main Source of water</b>	Tubewell / Bore
<b>Additional Source of water</b>	No
<b>Sanctioned Size of Water Storage Tank</b>	30 ft x 30 ft x 5 ft
<b>Measured Size of Water Storage Tank</b>	56 ft x 25.9 ft x 5.2 ft
<b>Date of Technical Sanction</b>	22-03-2021
<b>Sanctioned Cost</b>	Rs. 500,000/-
<b>Government's Share (60%)</b>	Rs. 300,000/-
<b>Farmer's Share (40%)</b>	Rs. 200,000/-



Monitoring Visit to Bafahad, Hassan Abdal

Field Team of ICT & AJK visited the village "Bafahad" situated in Attock District for ME&IE Consultants' monitoring and baseline survey. Water storage tanks made up of concrete and bricks are constructed here. Team was unable to meet the beneficiary but thoroughly surveyed the location and observations are as follow. Following are the details of visit:

Details of WST at Bafahad	
Province	Punjab
Division/Unit	Rawalpindi
District	Attock
Tehsil	Hassan Abdal
Village	Bafahad
Name of Water Storage Tank	Bafahad – Saqib Javed
Coordinates	N 33.8602821, E 72.6824752
No. of beneficiaries	1
Culturable Command Area (CCA)	10 Acres
Name of Owner	Saqib Javed
Total Number of Water Users	1
Cropping Pattern	Citrus
Type of Water Storage Tank	RCC
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	5.2 LPS
Main Source of water	Tubewell / Bore
Additional Source of water	No
Sanctioned Size of Water Storage Tank	25 ft x 25 ft x 5 ft
Measured Size of Water Storage Tank	24.9 ft x 24.5 ft x 5.8 ft
Date of Technical Sanction	22-03-2021
Sanctioned Cost	Rs. 402,133/-
Government's Share (60%)	Rs. 241,280/-
Farmer's Share (40%)	Rs. 160,853/-



Taking imensions of WST at Bafahad, Hasan Abdal

### 3) Field Visit Date: 28 July 2021

Field Team of ICT & AJK visited the village "Jari Kass" situated in Mirpur District for ME&IE Consultants' monitoring and baseline survey. Water Harvesting Structure is constructed of clay and stone. Team was unable to meet the beneficiary but conducted a thorough survey of the location and observations made are as under:

Details of WHS at Jari Kass	
Province	Azad Jammu & Kashmir
Division/Unit	Mirpur
District	Mirpur
Tehsil	Mirpur
Village	Jari Kass
Name of Water Harvesting Structure	Jari Kass – Raja Muhammad Munir
Coordinates	N 33.1026696, E 73.8527942
No. of beneficiaries	3
Culturable Command Area (CCA)	100 Kanals
Name of WUA Chairman	Raja Muhammad Munir
Total Number of Water Users	3
Cropping Pattern	Citrus Fruits (Oranges, Lemons, Guawa), Mango, Fodder, Wheat, Millet
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	-
Main Source of water	Bore
Additional Source of water	No

<b>Specification of Dam</b>	Clay Dam + Stone Pitching
<b>Size of Earth Dam in documents</b>	10 ft x 20 ft x 12 ft
<b>Measured Size of Earth Dam</b>	10.6 ft x 20.5 ft x 16.2 ft
<b>Date of Technical Sanction</b>	07-06-2021
<b>Sanctioned Cost</b>	Rs. 846,488/-
<b>Government's Share (80%)</b>	Rs. 677,190/-
<b>Farmer's Share (40%)</b>	Rs. 169,298/-

<b>Cropping Pattern</b>	-
<b>Type of watercourse</b>	PCPS
<b>Water Logging &amp; Salinity</b>	No
<b>Warabandi System</b>	No
<b>Designed Discharge</b>	42.5 LPS
<b>Main Source of water</b>	Bore
<b>Additional Source of water</b>	No
<b>Sanctioned Length of Watercourse</b>	810 ft
<b>Measured Length of Watercourse</b>	816 ft
<b>Date of Technical Sanction</b>	20-05-2021
<b>Sanctioned Cost</b>	Rs. 503,290/-
<b>Government's Share (80%)</b>	Rs. 402,632/-
<b>Farmer's Share (40%)</b>	Rs. 100,658/-



Measuring Dimensions of Earthen Dam of WHS at Jari Kas Mirpur

Field Team of ICT visited the village "Akbarabad" situated in Mirpur for ME&IE Consultants' monitoring and baseline survey. PCPS type watercourse is installed there. Team thoroughly surveyed the location and observations are as follow. Following are the details of visit:

Details of WC at Akbarabad	
<b>Province</b>	Azad Jammu & Kashmir
<b>Division</b>	Mirpur
<b>District</b>	Mirpur
<b>Tehsil</b>	Mirpur
<b>Village</b>	Akbarabad
<b>Name of Watercourse</b>	Akbarabad – Muhammad Aslam
<b>Coordinates</b>	N 32.9698486, E 73.8132382
<b>No. of beneficiaries</b>	3
<b>Culturable Command Area (CCA)</b>	60 Kanals
<b>Name of Owner</b>	Muhammad Aslam
<b>Total Number of Water Users</b>	3



Taking Dimensions of W/C at Akbarabad, Mirpur

#### 4.5.1.2 Monitoring and Data Collection during the Month of August 2021

##### 1) Field Visit Date 4<sup>th</sup> August 2021,

###### Description:

The field team of ICT visited the village "Katchi" situated in Bhimber District. PCPS type watercourse is installed there. Team thoroughly surveyed the location. Following are the details of monitoring visit.

General Details of WC at Katchi	
Province/Unit	Azad Jammu & Kashmir
Division	Mirpur
District	Bhimber
Tehsil	Bhimber
Village	Katchi
Name of Watercourse	Katchi-2
Coordinates	N 33.0055203, E 73.8418388
No. of beneficiaries	3
Culturable Command Area (CCA)	57 Kanals
Total Number of Water Users	3
Name of Chairman	Muhammad Islam
Cropping Pattern	Kharif (Sorghum, Maize, Millet), Rabi (Wheat)
Type of watercourse	PCPS

Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	42.5 LPS
Main Source of water	Tube-well
Additional Source of water	No
Date of Technical Sanction	18-03-2020
Sanctioned Cost	Rs. 322,005/-
Government's Share (80%)	Rs. 257,604/-
Farmer's Share (20%)	Rs. 64,401/-

#### Tenurial status, Education & Family members:

The family is operating the whole farm and is also tenants as well. Family is well-educated.

Tenurial status, Education & Family members						
Sr. No.	Farmer name	Age	Tenurial Status	Education	Family members	Location on Watercourse
1.	M Islam	55	Owner cum Tenant	Literate	8 (3 F, 5 M)	Head
2.	Qamar Shahzad	31	Owner cum Tenant	Matric	8 (3 F, 5 M)	Middle
3.	Haseeb Ullah	24	Owner cum Tenant	M.com	8 (3 F, 5 M)	Tail

#### Crops Details:

The beneficiaries are growing Maize, Sorghum, Millet, and Wheat. The complete details are as follow:

Crop details & Yield										
Name	Area Operated (Kanal)	Tenurial Status	Kharif Crops		Yield (40 Kg)		Rabi Crops		Yield (40 Kg)	
			Area (Kanal)	Crop	Per Kanal	Per Acre	Area (Kanal)	Crop	Per Kanal	Per Acre
Muhammad Islam	26	Owner cum Tenant	16 10	Maize Sorghum	4.75 4.5	38 36	26	Wheat	3.5	28
Qamar Shahzad	25	Owner cum Tenant	10 15	Maize Millet	4.75 4.375	38 35	25	Wheat	3.75	30
Haseeb Ullah	6	Owner cum Tenant	25	Maize	4.75	38	6	Wheat	3.5	28

### Social Structure & Gender:

Female participation has been seen in this land and females take full part in farming and decisions.

Social Structure & Gender									
Name	Age	Marital Status	Education	Occupation	Heard about NPIWC-2	Participate in Decision-making?	Land Owned	WUA Member	
Nasreen Bibi	53	Married	Literate	Farming	Yes	Yes	No	No	

### Measurements of Watercourse:

A watercourse is constructed. The length was measured using a measuring wheel and official documents were consulted for sanctioned specifications. The details and measurements of watercourse are as follow:

Measurement of WC	
Type of Watercourse	PCPS
Length of Parabolic Segment	3 Feet
Freeboard	0.22 Feet
Total Length of Watercourse (Documented)	374 Meters
Measured Total Length of Watercourse	322 Meters
Sanctioned Lining Length of Watercourse	187.5 Meters
Measured Lining Length of Watercourse	Meters

### Observations & Findings:

- The water source is a Tube-well.
- Beneficiaries have livestock also.
- There are 3 beneficiaries having 57 Kanals of land.
- Most of the farmers are educated.
- Female participation has been seen.
- The Final Completion Report has been issued.
- The tube-well installed is double pump type.
- According to the beneficiary, fields are irrigated more quickly after the lining of the watercourse. He said that the time taken by the fields to get irrigated is 50 % less than before.
- This watercourse belongs to 1 family.
- The beneficiary also availed a government's scheme of Installation of Solar Tube-wells.

- The measurements of the Watercourse were taken, and they are little different from the design.
- The OFWM team of Bhimber is very cooperative and supportive.

### 2) Field Visited Date: 4 August 2021

#### Description:

The Field Team of ICT visited the village "Machia" situated in Bhimber District for ME&IE Consultants' monitoring and baseline survey. PCPS type watercourse is installed there. Team thoroughly surveyed the location and observations are as follows. Following are the details of visit:

General Details of WC at Machia	
Province	Azad Jammu & Kashmir
Division	Mirpur
District	Bhimber
Tehsil	Bhimber
Village	Machia
Name of Watercourse	Machia-2
Coordinates	N 32.9561907, E 74.0567329
No. of beneficiaries	3
Culturable Command Area (CCA)	50 Kanals
Name of Chairman	Iftikhar Ahmad
Total Number of Water Users	3
Cropping Pattern	-
Type of watercourse	PCPS
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	28.32 LPS
Main Source of water	Tube-well
Additional Source of water	No

Date of Technical Sanction	01-10-2020
Sanctioned Cost	Rs. 409,944/-
Government's Share (80%)	Rs. 327,955/-
Farmer's Share (20%)	Rs. 819,89/-

The beneficiaries have hired a whole family permanently at their land. Family is educated here and mostly settled in Dubai.

Tenurial status, Education & Family members						
Sr. No.	Farmer name	Age	Tenurial Status	Education	Family members	Location on Watercourse
1.	Iftikhar Ahmad	55	Owner	Literate	6 (1 F, 5 M)	Head
2.	Muhammad Saleem	52	Owner	Graduate	6 (2 F, 4 M)	Middle
3.	Ijaz Ahmad	42	Owner	Graduate	4 (2 F, 2 M)	Tail

#### Crops Details:

The beneficiaries are growing Millet, Fodder and Wheat. They were growing fodders for their livestock. The complete details are as follow:

Crop details & Yield										
Name	Area Operated (Kanal)	Tenurial Status	Kharif Crops		Yield (40 Kg)		Rabi Crops		Yield (40 Kg)	
			Area (Kanal)	Crop	Per Kanal	Per Acre	Area (Kanal)	Crop	Per Kanal	Per Acre
Iftikhar Ahmad	20	Owner	18 2	Millet Fodder	3.5 3	22 24	18 2	Wheat Fodder	3.5 3	28 24

#### Social Structure & Gender:

Female participation has been seen in this land and females take full part in farming and decisions.

Social Structure & Gender									
Name	Age	Marital Status	Education	Occupation	Heard about NPIWC-2	Participate in Decision-making	Land Owned	WUA Member	
Razia BiBi	42	Married	Illiterate	Farming	Yes	Yes	No	No	

#### Measurements of Watercourse:

The length of constructed watercourse was measured using a measuring wheel and official documents were consulted for sanctioned specifications. The details and measurements of watercourse are as follow:

Measured Total Length of Watercourse	336 Meters
Sanctioned Lining Length of Watercourse	304.8 Meters
Measured Lining Length of Watercourse	336 Meters

Measurement of WC	
Type of Watercourse	PCPS
Length of Parabolic Segment	4 Feet
Freeboard	0.22 Feet
Total Length of Watercourse (Documented)	304.8 Meters

#### Observations & Findings:

- The water source is a Tube-well.
- There are 3 beneficiaries having 50 Kanals of land.
- All the beneficiaries are brothers. Iftikhar Ahmad takes care of the whole land. The other two beneficiaries are settled in Dubai.

- They have livestock like 7 buffalos, 6 cows and 4 goats.
- The Final Completion Report has been issued.
- Cracks were seen in the parabolic segments.
- The segments were not back-filled properly.
- The beneficiary has Permanent Hired Labors including a female and 3 males (a whole family).
- The cropping pattern in the area of Bhimber was almost the same.
- The measurements of Watercourse were taken and observed that the length of WC is more than the sanctioned length.
- The OFWM team of Bhimber is very cooperative and supportive.

### 3) Field Visit Date: 4 August 2021

#### Description:

The Field Team of ICT & AJK visited the village "Machora" situated in Bhimber District for monitoring and baseline survey. Water Harvesting Structure made up of clay and stone is constructed here. Team could not meet the beneficiary due his unavailability but a thorough survey was conducted of location and observations made are as follows.

General Details of Machora	
Province	Azad Jammu & Kashmir
Division/Unit	Mirpur
District	Bhimber
Tehsil	Bhimber
Village	Machora

Name of Water Harvesting Structure	Machora
Coordinates	N 32.9542551, E 74.1371224
No. of beneficiaries	12
Culturable Command Area (CCA)	306 Kanals
Name of WUA Chairman	Sarfraz Ali
Total Number of Water Users	12
Cropping Pattern	Kharif (Millet), Rabi (Wheat), Fodder
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	-
Main Source of water	Rainwater
Additional Source of water	No
Date of Technical Sanction	11-11-2020
Sanctioned Cost	Rs. 897,077/-
Government's Share (80%)	Rs. 717,662/-
Farmer's Share (20%)	Rs. 179,415/-

#### Tenurial status, Education & Family members:

The beneficiaries themselves operated their lands as tenants. People are very well-educated and cooperative in Machora. They are very fond of farming and agriculture.

Tenurial status, Education & Family members						
Sr. No.	Farmer name	Age	Tenurial Status	Education	Family members	Location on Watercourse
1.	Sarfraz Ali	57	Owner cum Tenant	B.A.	5 (1 F, 4 M)	Tail
2.	M. Rafiq	55	Owner cum Tenant	Matric	8 (4 F, 4 M)	Middle
3.	Liaqat Ali	48	Owner cum Tenant	B.A.	7 (4 F, 4 M)	Head
4.	Abdul Waqas	25	Owner cum Tenant	B.A.	6 (1 F, 4 M)	Middle
5.	M. Khursheed	65	Owner cum Tenant	Matric	6 (5F, 1M)	Head
6.	Abdul Sattar	38	Owner cum Tenant	Intermediate	6 (2 F, 4 M)	Tail

#### Crops Details:

The beneficiaries are growing Millet and Wheat. They are growing very little fodder just for their livestock. The complete details are as follow:

Crop details & Yield										
Name	Area Operated (Kanal)	Tenurial Status	Kharif Crops		Yield (40 Kg)		Rabi Crops		Yield (40 Kg)	
			Area (Kanal)	Crop	Per Kanal	Per Acre	Area (Kanal)	Crop	Per Kanal	Per Acre
Sarfraz Ali	25	Owner	25	Millet	4.75	38	26	Wheat	4	32
M Rafiq	20	Owner	20	Millet	5	40	25	Wheat	3.75	30
Liaqat Ali	30	Owner	30	Millet	4.75	38	6	Wheat	3.5	28
Abdul Waqas	20	Owner	20	Millet	4	32	20	Wheat	4	32
M. Khursheed	30	Owner	30	Millet	3.5	28	30	Wheat	3.75	30
Abdul Sattar	30	Owner	30	Millet	3.5	28	30	Wheat	3.5	28

#### Social Structure & Gender:

Female participation has been seen in this land and females take less part in farming and decisions.

Social Structure & Gender									
Name	Age	Marital Status	Education	Occupation	Heard about NPIWC-2	Participate in Decision-making?	Land Owned	WUA Member	
Azmar Bibi	45	Married	Matric	Housewife	Yes	Rarely	No	No	

#### Water Harvesting Structure:

A water harvesting structure is constructed. It is made up of clay and then stone pitching is done. It is trapezoidal in shape. WHS is constructed of concrete and stone pitching:

#### Observations & Findings:

- The water source is rains
- This WHS belongs to a whole family.
- Beneficiaries are well-educated.
- The farmers have a great number of livestock including buffalos, cows, and goats.
- Female participation is less.
- The male members of the family work together, they also help each other while working in harvesting season. All the farmers along with their families help each other in harvesting the crops that's why they don't have any permanent hired labour.
- All the beneficiaries have almost the same crops.
- The beneficiaries of WHS showed intention to submit an application for the construction of a watercourse in their area to get water from this water harvesting structure.
- Only 2 WHS are constructed in Bhimber District and 1 in Mirpur District.

#### 4) Field Visit Date: 10<sup>th</sup> August 2021

##### Description:

The Field Team of ICT visited the village "Arrah" situated in Islamabad for ME&IE Consultants' monitoring and baseline survey. Underground pipeline is being installed. The beneficiary owns massive land, and he is a political personality. Team thoroughly surveyed the location and observations are as follow:

General Details of Arrah	
Province/Unit	ICT
District	ICT
Tehsil	-
Village	Arrah
Name of Watercourse	Zahid Hussain – Arrah
Coordinates	N 33.6298725, E 73.244946
No. of beneficiaries	1
Culturable Command Area (CCA)	40 Kanals
Name of Owner	Zahid Hussain
Total Number of Water Users	1
Cropping Pattern	Kharif (Maize, Sorghum, Millet) Rabi (Wheat, Mustard)

Type of watercourse	PVC 3"
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	8 LPS
Main Source of water	Mini Dam
Additional Source of water	No
Date of Technical Sanction	-

Sanctioned Cost	Rs. 1,402,491/-
Government's Share (75%)	Rs. 1,051,868/-
Farmer's Share (25%)	Rs. 350,623/-

#### Tenurial status, Education & Family members:

The beneficiary is the owner of large land. Under the scheme, there is only 40 Kanals of land. He has permanently hired labors. The details are as follow:

#### Tenurial status, Education & Family members

Sr. No.	Farmer name	Age	Tenurial Status	Education	Family members		Location on Watercourse
1.	Zahid Hussain	75	Owner	Middle	8	(3 F, 5 M)	Head

#### Crops Details:

The beneficiary is growing many crops, fruits, and vegetables. On the land under scheme, he is growing Maize, Sorghum, Millet, Wheat and Mustard. The complete details are as follow:

Crop details & Yield										
Name	Area Operated (Kanal)	Tenurial Status	Kharif Crops		Yield (40 Kg)		Rabi Crops		Yield (40 Kg)	
			Area (Kanal)	Crop	Per Kanal	Per Acre	Area (Kanal)	Crop	Per Kanal	Per Acre
Zahid Hussain	40	Owner	20 10 10	Maize Sorghum Millet	4.75 4.5 2.75	37 35 22	20 20	Wheat Mustard	3.5 2.5	27 20

#### Measurements of Installed Pipeline:

The PVC pipe of 3 inches has been used at Arrah. Also, GI Pipe (80 mm) and sluice valve (75 mm) is used. The details and measurements of watercourse are as follow:

Measurement of WC	
Sanctioned Length of Watercourse	650 Meters
Measured Length of Watercourse	696 Meters

#### Measurements of Water Storage Tank:

A water storage tank is being constructed along with the pipelines. It is circular in shape. Water is pumped up from the dam and stored in the WST, then it is distributed along the field via distribution channels. The beneficiary also owns 1 more water storage tank.

#### Observations & Findings:

- The WC, WST & Land is owned by a single person i.e., Zahid Hussain.
- The concept of WUA is unknown to the beneficiary.
- Landowner is well-established and he and his brothers own a large land i.e., more than 400 Kanals.
- He grows different vegetables (potato, tomato, bitter gourd) and fruits (pear, plum, Loquat, apple, oranges).
- He also has livestock.
- The water source is a Mini Dam which stores rainwater.
- The watercourse is completed and FCR has been issued
- There are WSTs along with the WCs in ICT. But according to PC-1, ICT consists of only WCs.
- Length of WC was more than the sanctioned length and beneficiary himself

paid the expense for the construction of extra length.

**Challenges:**

- Due to the rainy season, there is massive unnecessary vegetation on the land, and team faced difficulty in measurements.
- The OFWM staff is not sharing the data / documents with ME&IE field team for verification of data like date of TS, sanctioned cost, designed discharge, sanctioned length of pipeline, size of WST etc. We need the documents of OFWM for the authentic and verified data.

5) **Field Visit Date:** 10<sup>th</sup> August 2021

**Description:**

The Field Team of ICT visited the village "Payount" situated in Islamabad for monitoring and baseline survey. Underground pipeline is being installed. The main beneficiary is settled in Dubai and his nephew is taking care of fields. Team thoroughly surveyed the location and observations are as follow:

<b>Culturable Command Area (CCA)</b>	25 Kanals
<b>Name of Owner</b>	Muhammad Hakeem Khan
<b>Total Number of Water Users</b>	1
<b>Cropping Pattern</b>	Kharif (Maize, Millet) Rabi (Wheat, Mustard)
<b>Type of watercourse</b>	PVC 3"
<b>Water Logging &amp; Salinity</b>	No
<b>Warabandi System</b>	No
<b>Designed Discharge</b>	8 LPS
<b>Main Source of water</b>	Naala
<b>Additional Source of water</b>	No
<b>Date of Technical Sanction</b>	-
<b>Sanctioned Cost</b>	Rs. 1,330,671/-
<b>Government's Share (75%)</b>	Rs. 995,004/-
<b>Farmer's Share (25%)</b>	Rs. 332,668/-

**Tenurial status, Education & Family members:**

He is settled in Dubai and his nephew takes care of the land. Under the scheme, there are 25 Kanals of land. He has permanently hired labors. The details are as follow:

<b>General Details of Payount</b>	
<b>Province/Unit</b>	ICT
<b>District</b>	ICT
<b>Tehsil</b>	-
<b>Village</b>	Payount
<b>Name of Watercourse</b>	M. Hakeem Khan – Payount
<b>Coordinates</b>	N 33.6928138, E 73.3218476
<b>No. of beneficiaries</b>	1

<b>Tenurial status, Education &amp; Family members</b>						
<b>Sr. No.</b>	<b>Farmer name</b>	<b>Age</b>	<b>Tenurial Status</b>	<b>Education</b>	<b>Family members</b>	<b>Location on Watercourse</b>
1.	Muhammad Hakeem Khan	63	Owner	Intermediate	7 (1 F, 6 M)	Head

**Crops Details:**

The beneficiary is a new owner of this land and has not started the cultivation yet. He plans to grow Maize, Millet, Wheat and Mustard. He has more land in the same village, but it is not under this intervention. The complete details are as follow:

Crop details & Yield										
Name	Area Operated (Kanal)	Tenurial Status	Kharif Crops		Yield (40 Kg)		Rabi Crops		Yield (40 Kg)	
			Area (Kanal)	Crop	Per Kanal	Per Acre	Area (Kanal)	Crop	Per Kanal	Per Acre
Muhammad Hakeem Khan	25	Owner	15 10	Maize Millet	3.75 2.5	30 20	20 5	Wheat Mustard	3.125 2.25	25 18

#### Social Structure & Gender:

Less female's participation is seen in this land and females rarely take part in decision making but are not involved in farming.

Social Structure & Gender									
Name	Age	Marital Status	Education	Occupation	Heard about NPIWC-2	Participate in Decision-making?	Land Owned	WUA Member	
Mumtaz Bibi	52	Married	Primary	Housewife	Yes	Rarely	No	No	

#### Measurements of Installed Pipeline:

The PVC pipe of 3 inches has been used at Payount. Also, GI Pipe (80 mm) and sluice valve (75 mm) is used. The details and measurements of watercourse are as follow:

Measurement of WC		
Sanctioned Length of Watercourse		560 Meters
Measured Length of Watercourse		-

- Landowner is settled in Dubai and his nephew Mr. Zahid Khan takes care of land.
- The total land owned by him is 70 Kanals but only 25 Kanals are under this intervention.
- The beneficiary is a new owner of this land.
- He also owns livestock i.e., cattle and poultry.
- The water source is Naala.
- The land topography is uneven.
- The watercourse is not completed yet and ICR-II has been issued
- There are WSTs along with the WCs in ICT. But according to PC-1, ICT consists of only WCs.

#### Measurements of Water Storage Tank:

A water storage tank is being constructed with the pipelines. Water is pumped up Nala and stored in the WST, then it is distributed along the field via distribution channels. The details and measurements of water storage tank are as follow:

Measurement of WST		
Type of WST		Concrete
Sanctioned Size of Water Storage Tank		28 ft x 28 ft x 4 ft
Measured Size of Water Storage Tank		30 ft x 25 ft x 4 ft

#### Observations & Findings:

- The WC, WST & Land is owned by a single person i.e., Muhammad Hakeem Khan.
- The concept of WUA is unknown to the beneficiary.

#### 4.5.1.3 Monitoring and Data Collection during the Month of September 2021

##### ICT Zone ME&IE Team Visit to AJK Project areas with NPC & his Team

NPC scheduled his 3 days visit to AJK project areas from 6 September 2021 to 8 September 2021. NPC asked ME&IE Consultants ICT Zone to join NPC and his team for this visit. ME&IE Consultant ICT Zone accompanied NPC for this visit as per schedule given below.

S#	Watercourse Name	Date of Visit
1	Mera Dupatta	6 <sup>th</sup> September
2	Nowshera WC	
3	Nalla Palla Karshen Patika	7 <sup>th</sup> September
4	Nalla Jura –Charhi	
5	Lawat Khuwaja seri – Tarha	8 <sup>th</sup> September

6	Nalla Kanoor – Khuwaja Seri Lawat	
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#### Detail of Field Visit with NPC

Following were the participants of visit from NPC office

- i. Mr. Tahir Anwar NPC
- ii. Dr. Tehmina Iqbal Dy. Director Coordination and
- iii. Mr. Saiful-Islam Deputy NPC

ME&IE Consultants ICT Zone team accompanied NPC and his team for these 3 days field visit to AJK project areas. Following ME&IE consultants including field team participated in the visit to facilitate NPC.

- Prof. Dr. Muhammad Abdul Quddus – Team Leader,
- Mr. Rizwan Saleem – ICT Specialist,
- Mr. Muhammad Bilal – Field Team Incharge and
- Mr. Ebadat Rahman – Data Supervisor participated in the facilitation visit of NPC.

#### Detail of visits is as under.

##### 1) Field Visit Date: 6<sup>th</sup> September 2021

Sr. No	Village	WC Name	Chairman WUA
1.	Garhi Dupatta	Mera Dupatta	Raja Nazeer Khan
2.	Nowshera	Nowshera WC	Saud Illyas

#### Visit of Nowshera Watercourse

The team along with NPC visited Nowshera watercourse in Village Garhi Dopatta and met the farmers of this watercourse. Representatives of farmers including Raja Abbas Khan, Raja Mukhtiar and others received the delegation and welcomed. During introduction, farmers requested that they wish to get additional support from the line department in rehabilitation of the katcha work, which was deteriorated during the 2005 earthquake. They told that middle katcha portion of the watercourse was sunken into depression, thus irrigation water does not reach to end users. They further told that currently they are able to irrigate only 20% area with this watercourse. However, they can make it 100% if Line Department helps in rehabilitation of sunken watercourse.

According to official documents, total length of Nowshera watercourse is 2.7 km and the lining length was 3280 feet with 59 beneficiaries holding 1268 Kanal area. It was told by officials that almost 37% lining was completed while 13% lining was under process.

On query, farmers told to NPC that they keep watercourse clean, however due to rice irrigation, they are not doing it for the last 2 – 3 months. They further told that they have carried out cleaning activity on lined section and some of the earthen portion of watercourse for improved delivery of water.

NPC advised the ME&IE consultants to visit the lined area and check the status. ME&IE consultants visited the lined area and found that there was no grass and shrubs on the lined section. However, there were some maintenance issues. Farmers told that due to land sliding, stones drop on the lining structure and damages the lined portion especially free board. Earthen area adjacent to lined area was cleaned at bottom but still there was grass on inspection path of the earthen watercourse.

NPC advised the monitoring consultants to collect the information regarding the financial inputs from farmers (collection of amount is in bank or with President of WUA) for cleaning of watercourses. He asked that this information may be collected in each visit, so it could be accessed that how much a WUA is active in operation and maintenance activities of the watercourse.



Loose rocky material sliding in Nowshera Watercourse



Nowshera W/C Inspection path covered with Shrubs

After the inspection of Nowshera watercourse team moved to Mera Dupatta the next watercourse under schedule

On watercourse Mera Dupatta, Raja Nazeer Khan Chairman water user association received the delegation and showed his watercourse. He told that he is very much satisfied with lining of this watercourse and he is getting good yield after the lining as sufficient water becomes available due to lining of watercourse.

NPC personally visited this watercourse and the area being irrigated through this watercourse. He was satisfied with the motivation level of Raja Nazeer Khan who had actively maintained his watercourse. It was told by the department that the total length of this water course is 10000 feet, where 2000 feet was lined previously and 2300 feet was lined during NPIW-II program. A total of area of 423 Kanal was irrigated by this watercourse. Cropping pattern of this watercourse was also same i.e. Rice, Wheat and Maize.



Meeting with Farmers at Mera Dupatta



View of Mera Dupatta Watercourse

## 2) Field Visit Date: 7<sup>th</sup> September 2021

Sr. No	Village	WC Name	Chairman Name
1.	Patika	Nalla Palla Karshan	M. Naseer
2.	Charhi	Nalla Jurah	Shehzad Ahmad

During second day visit on 7 September 2021 NPC along with consultants and line department visited watercourse Nalla Palla Karshan at Patika village of Muzaffarabad district. Secretary WUA Mr. Azhar Iqbal welcomed the visiting team due to the absence of Chairman WUA. He took the team to the watercourse for visit. He told that all the crops being seen in the area was due to availability of sufficient water after lining of watercourse. He told that this watercourse was damaged 14 years back during earth quake and due to non-supply of adequate water farmers were not able to grow vegetable and other crops due to insufficient available water irrigation. He told that previously they used to grow rice, wheat and maize in the area, however, now they are growing other crops and vegetables also. He further added other farmers are also satisfied with this intervention and now they can get full potential crops due to improved availability of water as during last 14 years they were not able to grow rice with full potential, rather they only used to grow it for seedlings.

It was told by the line department that the total culturable command area of this watercourse is 300 Kanal with 38 beneficiaries and total length of the watercourse is 1.8 km while lining length is 2200 feet only.

Team was moved for visit to another watercourse Karshan Rahman Abad from uphill area. Farmers

told that all the vegetation being seen at downhill are due to the improvement of Karshan Rahman Abad watercourse. As this watercourse was not in the in the visit schedule so line department did not bring its data with them at site. Upon return from Neelum Valley, this data was demanded by the relevant AD, who told that he will share it in WhatsApp which is still awaited.



View of Nalla Palla watercourse



NPC in Discussion with Farmers about Crops

#### Visit to Nalla Jura Charhi

This watercourse is situated in village Charhi and its total length is 3600 feet while length of lined portion is 1600 feet only. The total command area of this watercourse is 201 kanals with 17 farming beneficiaries.

Upon reaching to this watercourse, President WUA Shahzad Ahmad requested NPC to inaugurate the water channel. NPC along with DG Irrigation and other officials inaugurated the watercourse with a "Dua-e-Khair". After that NPC visited the watercourse and advised the President to fill the sides of the watercourse with suitable filling material so the free board of the watercourse may

not damage due to runoff rain water. It was noticed that the Maize and Wheat are the major crops of the area. DG Irrigation suggested farmers to go for variation in cropping pattern with the help of Agricultural Department.



NPC Inaugurating Nalla Jura Watercourse

#### 4.5.2 Monitoring and Data Collection –Punjab Zone

Details of field visits and monitoring / survey of interventions during the month of July are given below.

##### 4.5.2.1 Monitoring and Data Collection during the Month of July 2021

###### Watercourses Sub-Zone - 1

###### 1) Field Visit Date: 16 July 2021

Watercourse ID:	25486/L
Name of village:	90/12L
Village council:	UC-82
Chairman WUA:	M Rafiq
Cell No.	03063916093
Tehsil & District:	Chichawatni
Source of irrigation:	Canal + Tube well
Total length of watercourse:	3852
Estimated length of lining:	141
Command area of watercourse:	
No of beneficiaries:	67
Starting date:	10/10/2020

<b>Completion date:</b>	
<b>Construction cost of WC:</b>	59,36.398



Controlled Structure of Parabolic Watercourse

## 2) Field Visit Date: 16 July 2021

<b>Watercourse ID:</b>	28240/L
<b>Name of village:</b>	129/9L
<b>Village council:</b>	UC 39
<b>Chairman WUA:</b>	Ghulam Shabir
<b>Cell No.</b>	03205656987
<b>Tehsil &amp; District:</b>	/ Sahiwal
<b>Source of irrigation:</b>	Canal + Tube well
<b>Total length of watercourse:</b>	4266
<b>Estimated length of lining:</b>	846
<b>Command area of watercourse:</b>	345
<b>No of beneficiaries:</b>	25
<b>Starting date:</b>	02/01/2020
<b>Completion date:</b>	Completed
<b>Construction cost of WC:</b>	2,180,566



28240/L View of Proper Earth filling of Sides of Watercourse

## 3) Field visit Date: 17 July 2021

<b>Watercourse ID:</b>	6300/L
<b>Name of village:</b>	138/9L
<b>Village council:</b>	UC 22
<b>Chairman WUA:</b>	Allah Ditta
<b>Cell No.</b>	03467038967
<b>Tehsil &amp; District:</b>	Sahiwal / Sahiwal
<b>Source of irrigation:</b>	Canal + Tube well
<b>Total length of watercourse:</b>	2910
<b>Estimated length of lining:</b>	10
<b>Command area of watercourse:</b>	216
<b>No of beneficiaries:</b>	24
<b>Starting date:</b>	26/11/2019
<b>Completion date:</b>	Completed
<b>Construction cost of WC:</b>	763889



6300/L View of Lined Curvy Water Course



Measuring Lining Length of W/C with Measuring Wheel

#### 4) Field Visit Date 17 July 2021

Watercourse ID:	32150/L
Name of village:	116/12L
Village council:	
Chairman WUA:	Khalid Nawaz
Cell No.	03364748116
Tehsil & District:	Chichawanti / Sahiwal
Source of irrigation:	Canal + Tube well
Total length of watercourse:	5160
Estimated length of lining:	1220
Command area of watercourse:	423
No of beneficiaries:	20
Starting date:	14-05-2020
Completion date:	Completed
Construction cost of WC:	2385997

#### Watercourses Sub-Zone-2

##### 1) Field Visit Date: 15 July 2021

Watercourse ID:	6990-R
Name of village:	Sunderana
Village council:	Kalay ki Mandi
Chairman WUA:	Akhter Ali
Cell No.	03006128874
Tehsil & District:	Hafizabad
Source of irrigation:	Canal + Tube well
Total length of watercourse:	3366
Estimated length of lining:	1280
Command area of watercourse:	302
No of beneficiaries:	16
Starting date:	14/10/20
Present Status	Completed
Construction cost of WC:	20,29,425



Inspection of control structure at W/C No 6990-R

2) Field Visit Date: 15 July 2021

Watercourse ID:	655-L
Name of village:	Saroop Wala
Village council:	Shah Jamal
Chairman WUA:	Rana Shaukat Ali
Cell No.	03217461406
Tehsil & District:	Hafizabad
Source of irrigation:	Canal + Tube well
Total length of watercourse:	912
Estimated length of lining:	456
Command area of watercourse:	127
No of beneficiaries:	10
Starting date:	16/6/2021
Present Status	Completed
Construction cost of WC:	39,8583

3) Field Visit Date: 16 July 2021

Watercourse ID:	36672-L
Name of village:	Dhobra
Village council:	Bhobra
Chairman WUA:	Zulqarnain Haider
Cell No.	03002051512
Tehsil & District:	Hafizabad
Source of irrigation:	Canal + Tube well
Total length of watercourse:	3762
Estimated length of lining:	827
Command area of watercourse:	266
No of beneficiaries:	20
Starting date:	26/10/2020
Present Status	Completed
Construction cost of WC:	1,77,1242



Improper backfilling at Water Course No 36672-L



Construction at the End of Lined Portion W/C No 655-L



Inspection of Joint at W/C No 4256-R



Measuring W/C by measuring wheel W/C No 41350-TL

4) Field Visit Date: 16 July 2021

Watercourse ID:	41350-TL
Name of village:	Hardoratta
Village council:	Kot sarwar
Chairman WUA:	Imran Khan
Cell No.	03416181466
Tehsil & District:	Hafizabad
Source of irrigation:	Canal + Tube well
Total length of watercourse:	2508
Estimated length of lining:	947
Command area of watercourse:	270
No of beneficiaries:	44
Starting date:	28/03/2020
Present Status	Completed
Construction cost of WC:	15,48,269

5) Field Visit Date: 17 July 2021

Watercourse ID:	3315-L
Name of village:	Badar Ali
Village council:	Badar Ali
Chairman WUA:	Basharat Ali
Cell No.	03214309721
Tehsil & District:	Hafizabad
Source of irrigation:	Canal + Tube well
Total length of watercourse:	1320
Estimated length of lining:	858
Command area of watercourse:	157
No of beneficiaries:	17
Starting date:	15/2/2021
Present Status	Completed
Construction cost of WC:	2,00,6417



Taking Coordinates at Mogha W/C 3315-TL



Weeds/Bushes indicate improper maintenance of W/C

#### 6) Field Visit Date: 17 July 2021

Watercourse ID:	15404-R
Name of village:	Nawan Manika
Village council:	Nawan Manika
Chairman WUA:	Nauman Ali
Cell No.	03404339422
Tehsil & District:	Hafizabad
Source of irrigation:	Canal + Tube well
Total length of watercourse:	3114
Estimated length of lining:	227
Command area of watercourse:	257
No of beneficiaries:	41
Starting date:	24/2/2021
Present Status	Completed
Construction cost of WC:	442291

#### Watercourses Sub-Zone-3

##### 1) Field Visit Date: 15 July 2021

Watercourse ID:	7894/L
Name of village:	Kherabad
Union council:	Qadirpur Raan 38
Chairman WUA:	Muhammad Iqbal
Tehsil & District:	Multan Saddar, Multan
Source of irrigation:	Canal+Tube Well
Total length of watercourse:	3543 m
Estimated length of lining:	900 m
Command area of watercourse:	289 Acres
No of beneficiaries:	22
Starting date:	04-01-2021
Completion date:	Under Process
Cost of Construction of WC:	Rs.1606570/-



View of Well-maintained WC 7894L



Grass Grown on W/C 41440 L

## 2) Field Visit on 15-7-2021

<b>Watercourse ID:</b>	41440/L
<b>Name of village:</b>	2-Terpai
<b>Union council:</b>	131 Chatta
<b>Chairman WUA:</b>	Altaf Hussain
<b>Cell No.</b>	0306-7337531
<b>Tehsil &amp; District:</b>	Multan Saddar, Multan
<b>Source of irrigation:</b>	Canal+Tube Well
<b>Total length of watercourse:</b>	7246 m
<b>Estimated length of lining:</b>	930 m
<b>Command area of watercourse:</b>	450 Acres
<b>No of beneficiaries:</b>	7
<b>Starting date:</b>	08-08-2020
<b>Completion date:</b>	Under Process
<b>Cost of Construction of WC:</b>	Rs.2498821/-

## 3) Field Visit Date: 16 July 2021

<b>Watercourse ID:</b>	106200/TR
<b>Name of village:</b>	Raja Ram
<b>Village council:</b>	Raja Ram
<b>Chairman WUA:</b>	Toqueer Ahmed
<b>Cell No.</b>	0300-8539575
<b>Tehsil &amp; District:</b>	Shujabad, Multan
<b>Source of irrigation:</b>	Canal+Tube Well
<b>Total length of watercourse:</b>	5263 m
<b>Estimated length of lining:</b>	844 m
<b>Command area of watercourse:</b>	682 Acres
<b>No of beneficiaries:</b>	36
<b>Starting date:</b>	04-12-2019
<b>Completion date:</b>	-
<b>Construction cost of WC:</b>	Rs.2433817/-



Improper Cleaning of W/C 106200 L



Holes show Improper Compaction of Backfilling

5) Field Visit Date: 17 July 2021

Watercourse ID:	43000/R
Name of village:	Qasba Maral
Village council:	Qasba Maral
Chairman WUA:	Muhammad Ismail
Cell No.	0302-7306302
Tehsil & District:	Multan Saddar, Multan
Source of irrigation:	Canal+Tube Well
Total length of watercourse:	10576 m
Estimated length of lining:	1214 m
Command area of watercourse:	1101 Acres
No of beneficiaries:	49
Starting date:	08-05-2020
Completion date:	18-02-2021
Construction cost of WC:	Rs.3431684/-

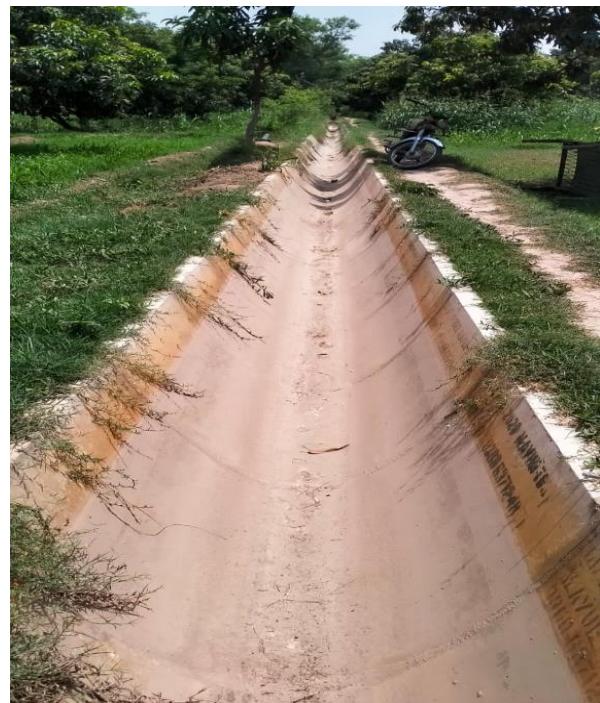


Grass entering into Watercourse - Needs Cleaning of W/C

Water Storage Tank	
<b>Name of village:</b>	148/9L
<b>Union council:</b>	UC-29
<b>Beneficiaries Name</b>	Pervez Asraf Gill
<b>Tehsil &amp; District:</b>	Sahiwal
<b>Source of irrigation:</b>	Canal + Tube well
<b>Shape of water storage tank:</b>	Rectangular
<b>Size of water storage tank:</b>	60x51 51.45
<b>Depth of WST:</b>	5.5 feet
<b>Command area of water storage tank:</b>	20 Acre
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	28/5/2020
<b>Completion date:</b>	Completed

6) Field Visit Date: 17 July 2021

<b>Watercourse ID:</b>	27100/L
<b>Name of village:</b>	Basti Balochan
<b>Village council:</b>	Khokran
<b>Chairman WUA:</b>	Umer Farooq
<b>Cell No.</b>	0300-6349137
<b>Tehsil &amp; District:</b>	Multan Saddar, Multan
<b>Source of irrigation:</b>	Canal+Tube Well
<b>Total length of watercourse:</b>	4000 m
<b>Estimated length of lining:</b>	946 m
<b>Command area of watercourse:</b>	270 Acres
<b>No of beneficiaries:</b>	5
<b>Starting date:</b>	13-06-2020
<b>Completion date:</b>	26-04-2021
<b>Construction cost of WC:</b>	Rs.2499353/-



View of Parabolic W/C – Needs removal of Weeds

#### Water Storage Tanks Sub-Zone-1

1) Field Visit Date: 17 July 2021



View of Waterfilled Water Storage Tank

#### Water Storage Tanks Sub-Zone-2

1) Field Visit on 17-7-2021

Water Storage Tank	
<b>Name of village:</b>	Bahuman
<b>Union council:</b>	UC – 32
<b>Beneficiaries Name</b>	Iftikhar Ahmed
<b>Tehsil &amp; District:</b>	Pindi Bhattian Hafizabad

<b>Source of irrigation:</b>	Tube well
<b>Shape of water storage tank:</b>	Trapezidal
<b>Size of water storage tank:</b>	33/33
<b>Depth of WST:</b>	6 feet
<b>Command area of water storage tank:</b>	5.45
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	1/3/2020
<b>Construction Cost of water storage tank:</b>	N/A



View of WST- Hamid Nawaz



Taking Coordinates at Water Storage Tank

### Water Storage Tanks Sub-Zone-3

#### 1) Field visit on 16-7-2021

Water Storage Tank	
<b>Name of village:</b>	131-A
<b>Union council:</b>	Mubarak Pur
<b>Chairman WUA:</b>	Muhammad Hamid Nawaz
<b>Tehsil &amp; District:</b>	Jahania, Khanewal
<b>Source of irrigation:</b>	Canal+Tubewell
<b>Shape of water storage tank:</b>	Trapezoidal
<b>Size of water storage tank:</b>	40.6 x 24.2 m
<b>Depth of WST:</b>	1.89 m
<b>Command area of water storage tank:</b>	12.00 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	05-05-2020
<b>Completion date:</b>	N/A

### Water Storage Tanks - Rawalpindi Division

#### 1) Field Visit On 27-07-2021

Water Storage Tank	
<b>Name of village:</b>	Sarwala
<b>Union council:</b>	
<b>Beneficiary Name</b>	Malik Rizwan
<b>Tehsil &amp; District:</b>	Attock/Attock
<b>Source of irrigation:</b>	Tubewell+Bore
<b>Shape of water storage tank:</b>	
<b>Size of water storage tank:</b>	25ft x 25ft x 5ft
<b>Depth of WST:</b>	5.6 ft
<b>Command area of water storage tank:</b>	6 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	04-01-2021
<b>Completion date:</b>	

#### 2) Field Visit Date: 27 July 2021

Water Storage Tank	
<b>Name of village:</b>	Jamagh
<b>Union council:</b>	
<b>Beneficiary Name</b>	Nisar Bibi
<b>Tehsil &amp; District:</b>	Attock/Attock
<b>Source of irrigation:</b>	Tubewell+Bore
<b>Shape of water storage tank:</b>	

<b>Size of water storage tank:</b>	30ft x 30ft x 5ft
<b>Depth of WST:</b>	9 ft
<b>Command area of water storage tank:</b>	14.33 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	19-08-2021
<b>Completion date:</b>	

### 3) Field Visit Date: 27 July 2021

<b>Water Storage Tank</b>	
<b>Name of village:</b>	Bafahad
<b>Union council:</b>	
<b>Beneficiary Name</b>	Saqib Javed
<b>Tehsil &amp; District:</b>	Hassan Abdal/Attock
<b>Source of irrigation:</b>	Tubewell+Bore
<b>Shape of water storage tank:</b>	
<b>Size of water storage tank:</b>	24.9ft x 24.5ft x 5.8ft
<b>Depth of WST:</b>	5.8ft
<b>Command area of water storage tank:</b>	10 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	22-03-2021
<b>Completion date:</b>	

### 4) Field Visit Date: 27 July 2021

<b>Water Storage Tank</b>	
<b>Name of village:</b>	Bafahad
<b>Union council:</b>	
<b>Beneficiary Name</b>	Saqib Javed
<b>Tehsil &amp; District:</b>	Hassan Abdal/Attock
<b>Source of irrigation:</b>	Tubewell+Bore
<b>Shape of water storage tank:</b>	
<b>Size of water storage tank:</b>	24.9ft x 24.5ft x 5.8ft
<b>Depth of WST:</b>	5.8ft
<b>Command area of water storage tank:</b>	10 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	22-03-2021
<b>Completion date:</b>	

#### 4.5.2.2 Monitoring and Data Collection during the Month of August 2021

Monitoring activities in Punjab Zone were generally related to watercourses and water storage tank interventions.

Brief profile of water course monitored is shown along with some photographs of water courses site and brief description of water storage tanks along with glimpses of pictures is also given below.

##### Picture Showing Monitoring Watercourses Sites

###### Sub Zone 1



Taking Coordinates - Outlet W/C No. 18759/L Safdarabad

###### Sub Zone 2



Collection of Coordinates at Mogha Point

**Sub Zone 3**



View of W/C No. 26597/L Tehsil Multan



View of WST (Ch Arif Husain Virk)



Measuring Length WC No. 10200/L Tehsil Shujabad

**Water Storage Tank**

<b>WST Owner:</b>	Shah Jahan
<b>Name of village:</b>	<b>Paidy Wali</b>
<b>Union council:</b>	25
<b>Tehsil &amp; District:</b>	Nankana Sahib
<b>Source of irrigation:</b>	Canal+Tube-well
<b>Shape of water storage tank:</b>	Rectangular
<b>Size of water storage tank:</b>	Under Process
<b>Command area of water storage tank:</b>	12.5
<b>No of beneficiaries:</b>	1



Underconstruction WST (Shah Jahan)

**Monitoring of Water Storage Tanks**

<b>Water Storage Tank</b>	
<b>WST Owner:</b>	Ch Arif husain Virk
<b>Name of village:</b>	Mirza Virkan
<b>Union council:</b>	Mubarak Pur
<b>Tehsil &amp; District:</b>	Shiekhupura
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Trapezoidal
<b>Size of water storage tank:</b>	89.95 x 89.95
<b>Depth of WST:</b>	6.068
<b>Command area of water storage tank:</b>	6.6
<b>No of beneficiaries:</b>	1

<b>Water Storage Tank</b>	
<b>WST Owner:</b>	Fiaz Ahmad
<b>Name of village:</b>	<b>Kassoki</b>
<b>Union council:</b>	Kassoki
<b>Tehsil &amp; District:</b>	Hafiz Abad
<b>Source of irrigation:</b>	Tube-well+Canal
<b>Shape of water storage tank:</b>	Rectangular

<b>Size of water storage tank:</b>	15 x 25
<b>Depth of WST:</b>	5
<b>Command area of water storage tank:</b>	19



Under Construction WST of Fiaz Ahmad

<b>Tehsil &amp; District:</b>	Mandi Baha Uddin
<b>Source of irrigation:</b>	Canal +Tube-well
<b>Shape of water storage tank:</b>	Rectangular
<b>Size of water storage tank:</b>	23.75 x 40
<b>Depth of WST:</b>	5
<b>Command area of water storage tank:</b>	9 Acre
<b>No of beneficiaries:</b>	1



Measuring Dimensions of WST (Zubaida Bibi)

<b>Water Storage Tank</b>	
<b>WST Owner:</b>	Khalid Parwaiz
<b>Name of village:</b>	Fattu Wal
<b>Union council:</b>	Bheruwal
<b>Tehsil &amp; District:</b>	Mandi Baha Uddin
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Rectangular
<b>Size of water storage tank:</b>	31.16 x 31
<b>Depth of WST:</b>	5
<b>Command area of water storage tank:</b>	5
<b>No of beneficiaries:</b>	1



Field Team Visits WST (Khalid Parwaiz)

<b>Water Storage Tank</b>	
<b>WST Owner:</b>	Gazanfar
<b>Name of village:</b>	119-RB Bhulair
<b>Union council:</b>	UC-5 Bhulair
<b>Tehsil &amp; District:</b>	Hafiz Abad
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Trapezoidal
<b>Size of water storage tank:</b>	32 x 31
<b>Depth of WST:</b>	5
<b>Command area of water storage tank:</b>	17.16 Acre
<b>No of beneficiaries:</b>	1



View of WST (Gazanfar)

<b>Water Storage Tank</b>	
<b>WST Owner:</b>	Zubaida bibi
<b>Name of village:</b>	Kadhar Garbi
<b>Union council:</b>	Kot Hast Khan

Water Storage Tank	
<b>WST Owner:</b>	Muhammad Irfan
<b>Name of village:</b>	Rasool pur
<b>Union council:</b>	Karam Ali Wala
<b>Tehsil &amp; District:</b>	Jalal Pur Peer Wala
<b>Source of irrigation:</b>	Canal+Tube-well
<b>Shape of water storage tank:</b>	Trapezoidal
<b>Size of water storage tank:</b>	92 x 88.5
<b>Depth of WST:</b>	7.5
<b>Command area of water storage tank:</b>	15
<b>No of beneficiaries:</b>	1



View of WST (Muhammad Afzal)



Monitoring of WST (Muhammad Irfan)

Water Storage Tank	
<b>WST Owner:</b>	Muhammad Afzal
<b>Name of village:</b>	Mochi Panuaan
<b>Union council:</b>	Ananyat Pur
<b>Tehsil &amp; District:</b>	Jalalpur Pir wala
<b>Source of irrigation:</b>	Non-perennial Canal Tube-well
<b>Shape of water storage tank:</b>	Trapezoidal
<b>Size of water storage tank:</b>	82.6x82.6
<b>Depth of WST:</b>	7.2
<b>Command area of water storage tank:</b>	15
<b>No of beneficiaries:</b>	1

Water Storage Tank	
<b>WST Owner:</b>	Khawaja Maqbool Mustafa
<b>Name of village:</b>	Kayyan Pur
<b>Union council:</b>	Kayyan Pur
<b>Tehsil &amp; District:</b>	Multan Sadar
<b>Source of irrigation:</b>	Perennial Canal + Tube-well
<b>Shape of water storage tank:</b>	Geo membrane
<b>Size of water storage tank:</b>	105x85
<b>Depth of WST:</b>	7.38
<b>Command area of water storage tank:</b>	5 Acre
<b>No of beneficiaries:</b>	1



A Geo Membrane WST (Khawaja Maqbool Mustafa)

Water Storage Tank	
<b>WST Owner:</b>	M. Afzal
<b>Name of village:</b>	Rasulpur
<b>Union council:</b>	Rasulpur
<b>Tehsil &amp; District:</b>	Shujabad / Multan
<b>Source of irrigation:</b>	Non-Perennial + Tube well

<b>Shape of water storage tank:</b>	Trapezoidal
<b>Size of water storage tank:</b>	90.1 x 75
<b>Depth of WST:</b>	6.1
<b>Command area of water storage tank:</b>	4 Acre
<b>No of beneficiaries:</b>	1



WST in Sandy Area (M. Afzal)

#### 4.5.2.3 Monitoring and Data Collection during the Month of September 2021

During the month of September 2021 field activities included regular monitoring of watercourses, water storage tank remained slow comparatively. However, learning from the field experience ME&IE Consultants worked on improving the strategy of field working and reviewing the monitoring tools for upcoming field activities. DTL visited Directorate of Agriculture OFWM Punjab Lahore and as a result of this working ME&IE consultants improved strategy for the baseline survey phase-II.

#### 4.5.3 Monitoring and Data Collection – KP Zone

##### 4.5.3.1 Monitoring and Data Collection during the Month July 2021

Due to unavailability of Data from Client, KP Zonal office field teams could not start the regular monitoring of the Project Interventions. However, ME&IE consultants conducted meeting with client office for acquisition of data.

##### 4.5.3.2 Monitoring and Data Collection during the Month of August 2021

Detail of monitoring visit by KP Zone survey teams is given below.

1) **Field Visit Date:** 02 Aug 2021  
**Team Visit:** Team – 1

Details of the WC/WST	
<b>Name of Watercourse/WST</b>	159000/L WC
<b>Type of watercourse/WST</b>	Parabolic
<b>Category of water course</b>	Additional
<b>Culturable Command Area (CCA) Acres</b>	250
<b>Coordinates</b>	33.9254589, 71.7281103
<b>Sanctioned Length of Watercourse</b>	1406
<b>Measured Length of Watercourse</b>	1406
<b>No. of beneficiaries</b>	15
<b>District</b>	Peshawar
<b>Tehsil</b>	Peshawar
<b>Village</b>	Umar Miana
<b>Cropping pattern Rabi and Kharif</b>	Rabi: Wheat, Vegetable Kharif: Maize, Orchard
<b>Water Logging &amp; Salinity</b>	0
<b>Warabandi System</b>	Pakka
<b>Designed Discharge</b>	90
<b>Main Source of water</b>	Canal
<b>Additional Source of water</b>	No
<b>Date of Technical Sanction</b>	02 Feb 2020
<b>Sanctioned Cost</b>	2,907,958
<b>Demographic information</b>	
<b>Name</b>	Adalat Khan
<b>Age</b>	50
<b>Family size</b>	6
<b>Education</b>	Matric
<b>Tenurial status</b>	Owner cum Tenant
<b>Area owned</b>	7.5
<b>Cultivable land</b>	7.5
<b>Fallow land</b>	0

S. No.	Beneficiary Farmers' Name
1	Adalat Khan
2	habib Rehman
3	Anwar Khan
4	Darwesh Khan
5	Naseer Khan
6	Zaka Ullah

• **Observations and Findings:**

Back filling is in very bad condition which can damage the water course. The farmers were complaining of shortage of water.

2) **Field Visit Date:** 06 August 2021

**Team Visit:** Team.3 (District Peshawar)

**Description:**

Details of the WC/WST:	
<b>Name of Watercourse</b>	70000/L Hazar Khwani Branch
<b>Type of watercourse/WST</b>	Parabolic
<b>Category of water course</b>	Additional Lining
<b>Culturable Command Area (CCA) Acres</b>	500
<b>Coordinates</b>	33.9555919 71.6885428
<b>Sanctioned Length of Watercourse</b>	700
<b>Measured Length of Watercourse</b>	592
<b>No. of beneficiaries</b>	80
<b>District</b>	Peshawar
<b>Tehsil</b>	Peshawar
<b>Village</b>	Urmari Miana
<b>Cropping pattern Rabi and Kharif</b>	Rabi: Wheat, Vegetables, Fodder Kharif: Orchard, Maize, Vegetables
<b>Water Logging &amp; Salinity</b>	Nil
<b>Warabandi System</b>	Pakka
<b>Designed Discharge</b>	3 Lps
<b>Main Source of water</b>	Canal
<b>Additional Source of water</b>	Nil
<b>Date of Technical Sanction</b>	02/02/2020
<b>Sanctioned Cost</b>	Rs.2845164/-
<b>Demographic information</b>	
<b>Name</b>	Muhammad Naseer
<b>Age</b>	42
<b>Family size</b>	5
<b>Education</b>	Matric
<b>Tenurial status</b>	Owner
<b>Area owned</b>	12 Acres
<b>Cultivable land</b>	12 Acres
<b>Fallow land</b>	Nil

• **Observations and Findings:**

1. Back filling was not proper.
2. Some of the Segments were broken and scratched.
3. No inspection path and the Watercourse covered with vegetation.
4. Water quality was bad. It had a bad smell. It was sewerage water mixed with canal water.

**Water Storage Tank ID:** 48602/WGC

3) **Field Visit Date:** 04 Aug 2021

**Team Visit:** Team 1

**Description:**

Details of the WC/WST	
<b>Name of Watercourse/WST</b>	48602/WGC
<b>Type of watercourse/WST</b>	Parabolic
<b>Category of water course</b>	Additional
<b>Culturable Command Area (CCA) Acres</b>	332
<b>Coordinates</b>	34.0163054, 71.4606344
<b>Sanctioned Length of Watercourse</b>	1110
<b>Measured Length of Watercourse</b>	1110
<b>No. of beneficiaries</b>	10
<b>District</b>	Peshawar
<b>Tehsil</b>	Peshawar
<b>Village</b>	Palosi
<b>Cropping pattern Rabi and Kharif</b>	Rabi: Wheat Kharif: Maize
<b>Water Logging &amp; Salinity</b>	0
<b>Warabandi System</b>	Pakka
<b>Designed Discharge</b>	32
<b>Main Source of water</b>	Canal
<b>Additional Source of water</b>	0
<b>Date of Technical Sanction</b>	13 Feb 2020
<b>Sanctioned Cost</b>	2,563,355
<b>Demographic information</b>	
<b>Name</b>	Ilyas Khan

**Observations and Findings:**

The water course is inside the Agriculture University Peshawar and the WMO Mr Abdul Rahim from OFWM Peshawar has informed us that there is no farmer available. Due to non-availability of farmers only monitoring has been done. Besides our team struggle we were unable to meet Ilyas khan the chairman of WUA so there is no data available regarding the chairman. It is a parabolic water course but as per document from OFWM 28,886 bricks@109.90 per break were used in the construction of the water course.

**4) Field Visit Date:** 03 Aug 2021

**Team Visit:** Team 1

**Description:**

Details of the WC/WST	
Name of Watercourse/WST	Aqeel Afzal WST
Type of watercourse/WST	Bricks
Category of water course	New
Culturable Command Area (CCA) Acres	15
Coordinates	33.8752619, 71.6798746
Sanctioned Length of Watercourse	N/A
Measured Length of Watercourse	N/A
No. of beneficiaries	7
District	Peshawar
Tehsil	Peshawar
Village	Ghari Chandan
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetable Kharif: Maize, Vig
Water Logging & Salinity	0
Warabandi System	Pakka
Designed Discharge	10
Main Source of water	Tube-well
Additional Source of water	N/A
Date of Technical Sanction	19 Apr 2021
Sanctioned Cost	4,31,104
Demographic information	
Name	Ashraf u ddin
Age	42
Family size	10
Education	Illiterate

Tenurial status	Owner
Area owned	23
Cultivable land	12
Fallow land	0

**Observations and Findings:**

Water storage was recently completed and is in good condition. The farmers were also demanding water course lining.

**5) Field Visit Date:** 05 Aug 2021

**Team Visit:** KP Team 1

**Description:**

Details of the WC/WST	
Name of	3900/R
Watercourse/WST	
Type of watercourse/WST	Parabolic
Category of water course	New
Culturable Command Area (CCA) Acres	251
Coordinates	33.9547078, 71.8231448
Sanctioned Length of Watercourse	837
Measured Length of Watercourse	837
No. of beneficiaries	13
District	Nowshera
Tehsil	Pabbi
Village	Shabara
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Sugarcane
Water Logging & Salinity	0
Warabandi System	Pakka
Designed Discharge	80
Main Source of water	Canal
Additional Source of water	0
Date of Technical Sanction	12 Feb 2020
Sanctioned Cost	1,580,000
Demographic information	
Name	Arshad Khan
Age	55
Family size	16
Education	Middle
Tenurial status	Owner cum Tenant

Area owned	35
Cultivable land	35
Fallow land	0

**Observations and Findings:**

The vegetation needs to be cut down. The water user association was not active. Other than the chairman of WUA no one was aware of the association.

6) **Field Visit Date:** 05 Aug 2021

**Team Visit:** KP Team 1

**Description:**

Details of the WC/WST	
Name of Watercourse/WST	Abdullah TW WC
Type of watercourse/WST	Parabolic
Category of water course	New
Culturable Command Area (CCA) Acres	45
Coordinates	33.8745848, 71.80769
Sanctioned Length of Watercourse	290
Measured Length of Watercourse	290
No. of beneficiaries	12
District	Nowshera
Tehsil	Pabbi
Village	Dag Ismail Khel
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetable Kharif: Orchard
Water Logging & Salinity	0
Warabandi System	N/A
Designed Discharge	9
Main Source of water	Tube-well
Additional Source of water	0
Date of Technical Sanction	17 Apr 2020
Sanctioned Cost	400,000
Demographic information	
Name	Fahad Hussain
Age	54
Family size	5
Education	Inter
Tenurial status	Owner
Area owned	6
Cultivable land	6

Fallow land	0
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**Observations and Findings:**

Abdullah water course is a solar water course and is maintained properly however the WUA members need to be active; they were not at the moment.

**Water Storage Tank ID:** Sartaj TW WC

**Date:** 09 Aug 2021

**Team Visit:** Team 1

**Description:**

Details of the WC/WST	
Name of Watercourse/WST	Sartaj TW WC
Type of watercourse/WST	Parabolic
Category of WST	New
Culturable Command Area (CCA) Acres	30
Coordinates	34.0870998, 71.93536

#### 4.5.3.3 Monitoring and Data Collection during the Month of September 2021

Monitoring and data collection in the field remained slow. ME&IE consultants conducted meetings and workshops to discuss the experience and results during Baseline survey Phase-I. In the light of these workshops and meeting consultants will improve the strategy for monitoring and data collection during the Baseline Survey Phase-II.

#### 4.5.4 Monitoring and Data Collection - Balochistan Zone

After fully operational the ME&IE Consultants, Balochistan have started Regular Routine Monitoring from the month of July 2021. The regular monitoring assignment are comprised input-output and process as defined in the Annual Work Plan / Budget and tracking of the outcome's indicators. Regular routine monitoring will look at the extent to which the proposed project activities are being implemented as planned.

The routine monitoring consists of a brief analysis of the results; calculating achievement rates and establishing trends, relevant findings that may help or constraint the future data collection activities in the established periods and, if appropriate, propose

specific solutions assessing the advantages and disadvantages of each.

#### Planning for Regular Monitoring / Spot Checking

The Balochistan team planned to start Regular Monitoring / Sport Checking of F.Y. 2019-20 and 2020-21 phase wise. In first phase Balochistan Field Team focused to schemes of NPIWC-II, F.Y. 2019-20. In second phase F.Y. 2020-21 will be covered in upcoming months. The schemes of 2019-20 were started in 2019 and completed in mid of 2020 as per record of OFWM. This programme was initiated in all 33 districts of Balochistan. The OFWM initiated 1819 Watercourses including PVC Pipe, RCC Pipe and Rehabilitation, 20 years old watercourses and 411 Water Storage Tanks of 04 different sizes as per need i.e., 60x60, 50x50, 40x40 and 30x30 with depth of 4'.5".

The Balochistan field teams assigned 15 districts out of 33 (45%) for regular monitoring. Each Team assigned 05 districts and 15 sites. The total targets of F.Y. 2019-20 was 2280 after taking sample size for purpose of regular monitoring, total 45 sites (2%) selected randomly. As the ME&IE Consultants are taking sample sizes phase wise, the rest of districts will be covered in next phases.

#### Schedule for Monitoring:

After taking sample size and district selection, ME&IE Consultants, Balochistan make a schedule for field visit as mentioned below:

Districts	WC	PVC Pipe	WST	Total	Dates
<b>Team-1</b>					
Jaffarabad	1	1	1	3	28/07/2021
Naseerabad	1	1	1	3	29/07/2021
Jhal Maghi	1	1	1	3	30/07/2021
Dear Bugti	1	1	1	3	02/08/2021
Kachi	1	1	1	3	03/08/2021
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>	
<b>Team-2</b>					
Zhob	1	1	1	3	28/07/2021
Sherani	1	1	1	3	29/07/2021
Musa Khail	1	1	1	3	30/07/2021
Duki	1	1	1	3	31/07/2021
Barkhan	1	1	1	3	02/08/2021
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>	

Districts	WC	PVC Pipe	WST	Total	Dates
<b>Team-3</b>					
Noshki	1	1	1	3	28/07/2021
Ziarat	1	1	1	3	29/07/2021
Harnai	1	1	1	3	30/07/2021
Kharan	1	1	1	3	02/08/2021
Chagai	1	1	1	3	03/08/2021
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>	
<b>G. Total</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>45</b>	

#### Team Composition:

The Balochistan Field Team was comprised on 03 teams as listed below:

##### Team – 1

1. Mr. Tariq Khoso, M&E Expert
2. Mr. Saleem Abro, M&E Expert

##### Team – 2

1. Mr. Naseeb Jan, M&E Expert
2. Mr. Qaisar Tareen, M&E Officer

##### Team -3

1. Mr. Manzoor Kasi, M&E Expert
2. Mr. Hamza Qureshi, M&E Officer
3. Ms. Mahgul Baloch, M&E Officer

The field teams 1 & 2 started the regular monitoring from 29<sup>th</sup> July and covered 06 district with 18 sites. The team 3 started field activities from 29<sup>th</sup> July and covered 02 district with 06 sites in the reporting month. The rest of districts and sites will be covered in the month of August 2021.

The summary sheet of visited sites team, district and scheme wise is mentioned below:

Team - 1					
Districts	Dates	WC	PVC / RCC Pipe	WST	Total
Jaffara-bad	29/07/2021	3	0	0	3
Naseera-bad	30/07/2021	3	0	0	3
<b>Total</b>		<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>

**Team - 2**

Districts	Dates	WC	PVC / RCC Pipe	WST	Total
Zhob	29/07/2021	1	1	1	3
Sherani	&	1	1	2	4
Musa Khail	30/07/2021	1	0	1	2
Duki	31/07/2021	1	1	1	3
	Total	4	3	5	12

**Team - 3**

Districts	Dates	WC	PVC / RCC Pipe	WST	Total
Noshki	28/07/2021	1	1	1	3
Ziarat	29/07/2021	1	2	0	3
	Total	2	3	1	6

**4.5.4.1 Monitoring and Data Collection during the Month of July 2021**

**Field Visits of Team-1**

**Team – 1: Monitored by Tariq Khosa, M&E Expert and Mr. Saleem Ahmed, M&E Officer**

**1) Field Visit Date – 29 July 2021**

<b>Scheme:</b>	Watercourse
<b>Name of Farmer:</b>	Abdul Rehman
<b>Name of village:</b>	Abdul Rehman
<b>Union council:</b>	Bedar Beroon
<b>Chairman WUA:</b>	Abdul Rehman
<b>District:</b>	Naseerabad
<b>Tehsil</b>	Dera Murad Jamali
<b>Source of irrigation:</b>	Canal
<b>Total length of watercourse:</b>	1150 ft
<b>Estimated length of lining:</b>	1150 ft
<b>Command area of watercourse:</b>	32 Acre
<b>No of beneficiaries:</b>	10
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	2,825,815/=
<b>Quality of Work</b>	Average
<b>Observations</b>	<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM</li> </ul>

staff.
• The ME&IE Consultants felt great difficulties in monitoring due to non-available of files
<b>Farmer Feedback / Impact</b>
• Water loses decreased about 30%
• Cropping intensity increased by 15 to 20 %
• Water reaching timing to farms from source decreased 80% (Before provision of WC water took 4 hours in reaching to farms, now it took 30 minutes)
• Saving of electivity
• Reduced tube well repairing expenses.



Measuring the Watercourse

**2) Field Visit Date – 29 July 2021**

<b>Scheme</b>	Watercourse
<b>Name of Farmer:</b>	Asad Khan
<b>Name of village:</b>	Asad Khan
<b>Union council:</b>	Bedar Beroon
<b>Chairman WUA:</b>	Asad Khan
<b>District:</b>	Naseerabad
<b>Tehsil</b>	Dera Murad Jamali
<b>Source of irrigation:</b>	Canal
<b>Total length of watercourse:</b>	1150 ft (100 ft additional WC is being under constructed by the farmer through his own expenses)

<b>Estimated length of lining:</b>	1150 ft
<b>Command area of watercourse:</b>	70 Acre
<b>No of beneficiaries:</b>	12
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	2,825,815/=
<b>Quality of Work</b>	Good
<b>Observations</b>	<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>
<b>Farmer Feedback / Impact</b>	<ul style="list-style-type: none"> <li>Water loses decreased 30%</li> <li>Cropping intensity increased by 15 to 20 %</li> <li>Water conveyance timing decreased 80% (Before provided the WC water took 4 hours in reaching which now reached in 30 minutes</li> </ul>



Farmers constructing 100 ft additional W/C at their own cost

### 3) Field Visit Date – 30 July 2021

<b>Scheme:</b>	Watercourse
<b>Name of Farmer</b>	Mohib Ali
<b>Name of village:</b>	Mohib Ali Kanrani
<b>Union council:</b>	Ramzay Pur
<b>Chairman WUA:</b>	Mohib Ali
<b>District:</b>	Jaffarabad
<b>Tehsil</b>	Jhat Pat
<b>Source of irrigation:</b>	Canal

<b>Total length of watercourse:</b>	1300 ft (150 ft has been added WC by farmer through his own expenses)
<b>Estimated length of lining:</b>	1150 ft
<b>Command area of watercourse:</b>	60 Acre
<b>No of beneficiaries:</b>	2
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	2,825,815/=
<b>Quality of Work</b>	Good
<b>Observations</b>	<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> <li>150 feet WC added by farmer with his own expenses.</li> </ul>
<b>Farmer Feedback / Impact</b>	<ul style="list-style-type: none"> <li>Water loses decreased 40%</li> <li>Cropping intensity increased by 15 to 20 %</li> <li>Water conveyance timing decreased 80% (Before provided the WC water took 4 hours in reaching to farm which now reached in 30 minutes)</li> <li>Farmer was happy with scheme and demanding more WC.</li> </ul>



Meeting with OFWM Staff and Farmers

### 4) Field Visit Date – 30 July 2021

<b>Scheme:</b>	Watercourse
<b>Farmer Name</b>	Asad Khan Badini
<b>Name of village:</b>	Ghulam Jan Badini
<b>Union council:</b>	Ramzay Pur
<b>Chairman WUA:</b>	Asad Khan
<b>District:</b>	Jaffar abad

<b>Tehsil</b>	Jhat Pat
<b>Source of irrigation:</b>	Canal
<b>Total length of watercourse:</b>	1150 ft
<b>Estimated length of lining:</b>	1150 ft
<b>Command area of watercourse:</b>	60 Acre
<b>No of beneficiaries:</b>	8
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	2,825,815/=
<b>Quality of Work</b>	Average
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Water loses decreased 40%</li> <li>Cropping intensity increased by 10 to 15 %</li> <li>Water conveyance timing decreased 80% (Before provided the WC water took 4 hours in reaching to farm which now reached in 30 minutes)</li> <li>Farmer was happy with scheme and demanding more WC.</li> </ul>	



Taking Measurement of Lined W/C

### Field Visits of Team-2

Team – 2: Monitored by Naseeb Jan, M&E Expert and Mr. Qaisar Tareen, M&E Officer

#### 1) Field Visit Date – 29 July 2021

<b>Scheme</b>	Water Storage Tanks
<b>Name of Farmer</b>	Haji Akram
<b>Name of village:</b>	Awarha Badenzai
<b>Union council:</b>	Badenzai
<b>Chairman WUA:</b>	Haji Akram
<b>District:</b>	Zhob
<b>Tehsil</b>	Zhob
<b>Source of irrigation:</b>	Tube well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	40x40 ft
<b>Depth of WST:</b>	4.5 ft
<b>Command area of water storage tank:</b>	5 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	Not Shared
<b>Completion date:</b>	Not Shared
<b>Construction Cost of watercourse:</b>	Not Shared
<b>Quality of Work</b>	Satisfactory
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Water saving around 50%</li> <li>Cultivated area increased about 3 to 4 Acre</li> </ul>	



Taking Measurements of Water Storage Tank

2) Field Visit Date – 29 July 2021

<b>Scheme</b>	Watercourse (PVC Pipe)
<b>Name of Farmer</b>	Fareed Khan
<b>Name of village:</b>	Apozai
<b>Union council:</b>	Apozai
<b>Chairman WUA:</b>	Fareed Khan
<b>District:</b>	Zhob
<b>Tehsil</b>	Zhob
<b>Source of irrigation:</b>	Tube well
<b>Total length of watercourse:</b>	3000 ft.
<b>Estimated length of lining:</b>	1000 ft.
<b>Command area of watercourse:</b>	52 Acres
<b>No of beneficiaries:</b>	5
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Not satisfactory
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> <li>It was observed the PVC pipe was not installed properly</li> <li>The farmer was not taking care the scheme, The OFWM staff look into the matter</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Water saving around 20%</li> <li>Cultivated area increased about 5 Acre as the land of upper side is now cultivated by this scheme (PVC Pipe).</li> </ul>	



Measuring Watercourse

3) Field Visit Date – 29 July 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Malik Mir Adam
<b>Name of village:</b>	Khan Alam
<b>Union council:</b>	Kapip
<b>Chairman WUA:</b>	Malak Mir Adam
<b>District:</b>	Sherani
<b>Tehsil</b>	Sherani
<b>Source of irrigation:</b>	Tube well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	60x60 ft
<b>Depth of WST:</b>	4.5 ft
<b>Command area of water storage tank:</b>	8 Acres
<b>No of beneficiaries:</b>	4
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Construction Cost of watercourse:</b>	Not available
<b>Quality of work</b>	Not satisfactory
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>	

- Construction of WST was not up to the mark

**Farmer Feedback / Impact**

- Water saving around 40%
- Cultivated area increased about 10 Acre



Taking Coordinates of Water Storage Tank



Measuring Length of PVC Pipe – DD Sheerani is with the Team

**4) Field Visit Date – 29 July, 2021**

Scheme	Watercourse
<b>Name of Farmer</b>	Muhammad Shah
<b>Name of village:</b>	Khan Alam
<b>Union council:</b>	Kapip
<b>Chairman WUA:</b>	Muhammad Shah
<b>District:</b>	Sherani
<b>Tehsil</b>	Sherani
<b>Source of irrigation:</b>	Tube well
<b>Total length of watercourse:</b>	1000 ft.
<b>Estimated length of lining:</b>	1000 ft.
<b>Command area of watercourse:</b>	8 Acres
<b>No of beneficiaries:</b>	3
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Satisfactory
<b>Observations</b>	<ul style="list-style-type: none"> <li>• Files of scheme were not available with OFWM staff.</li> <li>• The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>
<b>Farmer Feedback / Impact</b>	<ul style="list-style-type: none"> <li>• Water saving around 50%</li> <li>• Cultivated area increased about 10 Acre</li> </ul>

**5) Field Visit Date – 30 July, 2021**

Scheme	Watercourse
<b>Name of Farmer</b>	Rehamat Shah
<b>Name of village:</b>	Asuband
<b>Union council:</b>	Manikhwah
<b>Chairman WUA:</b>	Rahmat Shah
<b>District:</b>	Sherani
<b>Tehsil</b>	Sherani
<b>Source of irrigation:</b>	Tube well
<b>Total length of watercourse:</b>	4000 ft.
<b>Estimated length of lining:</b>	1000 ft.
<b>Command area of watercourse:</b>	8 Acres
<b>No of beneficiaries:</b>	5
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Not satisfactory
<b>Observations</b>	<ul style="list-style-type: none"> <li>• Files of scheme were not available with OFWM staff.</li> <li>• The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>

<ul style="list-style-type: none"> <li>It was observed that WC constructed without proper feasibility/design as it was constructed on way which was using for the transportation, now due to transportation WC has been damaged badly.</li> </ul> <p><b>Farmer Feedback / Impact</b></p> <ul style="list-style-type: none"> <li>After this scheme farmer get cultivated barren land.</li> </ul>
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Picture showing Damaged Watercourse

<b>Completion date:</b>	Not available
<b>Construction Cost of watercourse:</b>	Not available
<b>Quality of work</b>	Not satisfactory
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Water saving around 50%</li> <li>Cultivated area increased about 15 Acre</li> </ul>	



Well-maintained Water Storage

## 6) Field Visit Date – 30 July 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Dawood Khan
<b>Name of village:</b>	Toyi Sar
<b>Union council:</b>	Toyi Sar
<b>Chairman WUA:</b>	Dawood Khan
<b>District:</b>	Musakhail
<b>Tehsil</b>	Toyi Sar
<b>Source of irrigation:</b>	Tube well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	60x60
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	60 Acres
<b>No of beneficiaries:</b>	2
<b>Starting date:</b>	Not available

## 7) Field Visit Date – 30 July 2021

<b>Scheme</b>	Watercourse
<b>Name of Farmer</b>	Abdul Rahim
<b>Name of village:</b>	Town
<b>Union council:</b>	Town
<b>Chairman WUA:</b>	Abdul Rahim
<b>District:</b>	Musakhail
<b>Tehsil</b>	Musakhail
<b>Source of irrigation:</b>	Tube well
<b>Total length of watercourse:</b>	2000 ft.
<b>Estimated length of lining:</b>	800 ft.
<b>Command area of watercourse:</b>	2 Acres
<b>No of beneficiaries:</b>	7
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available

<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Not satisfactory
<b>Observations</b>	
• Files of scheme were not available with OFWM staff.	
• The ME&IE Consultants felt great difficulties in monitoring due to non-available of files	
• It was observed the sewerage water is passing through WC	
<b>Farmer Feedback / Impact</b>	
• Cultivated area increase about 3 Acre	



Measuring W/C during Spot Checking

#### 8) Field Visit Date – 31 July 2021

<b>Scheme</b>	Water Storage Tank
<b>Name of Farmer</b>	Rehmat Ullah
<b>Name of village:</b>	Saddo Karez
<b>Union council:</b>	Thal Chotyali
<b>Chairman WUA:</b>	Rehmat Ullah
<b>District:</b>	Dukki
<b>Tehsil</b>	Dukki
<b>Source of irrigation:</b>	Tube well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	60x60
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	30 Acres
<b>No of beneficiaries:</b>	4

<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Construction Cost of watercourse:</b>	Not available
<b>Quality of work</b>	Good
<b>Observations</b>	
• Files of scheme were not available with OFWM staff.	
• The ME&IE Consultants felt great difficulties in monitoring due to non-available of files	
<b>Farmer Feedback / Impact</b>	
• Water saving around 50%	
• Cultivated area increased about 10 Acre	



Taking Measurements of Water Storage Tank

#### 9) Field Visit Date – 31 July 2021

<b>Scheme</b>	Watercourse
<b>Name of Farmer</b>	Abdul Raziq
<b>Name of village:</b>	Nimaki
<b>Union council:</b>	Moza
<b>Chairman WUA:</b>	Abdul Raziq
<b>District:</b>	Dukki
<b>Tehsil</b>	Dukki
<b>Source of irrigation:</b>	Tube well
<b>Total length of watercourse:</b>	3500 ft.

<b>Estimated length of lining:</b>	1200 ft.	<b>Total length of watercourse:</b>	4700 ft.
<b>Command area of watercourse:</b>	30 Acres	<b>Estimated length of lining:</b>	3000 ft.
<b>No of beneficiaries:</b>	4	<b>Command area of watercourse:</b>	250 Acres
<b>Starting date:</b>	Not available	<b>No of beneficiaries:</b>	4
<b>Completion date:</b>	Not available	<b>Starting date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available	<b>Completion date:</b>	Not available
<b>Quality of work</b>	Satisfactory	<b>Cost of Construction of WC:</b>	Not available
<b>Observations</b>		<b>Quality of work</b>	Satisfactory
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>		<b>Observations</b>	
<b>Farmer Feedback / Impact</b> <ul style="list-style-type: none"> <li>Water saving around 50%</li> <li>Cultivated area increased about 5 Acre. Now the barren land now being irrigated through this scheme.</li> </ul>		<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>	
<b>Farmer Feedback / Impact</b>		<ul style="list-style-type: none"> <li>Water saving around 50%</li> <li>Cultivated area increased about 10 Acre. Now the barren land now being irrigated through this scheme.</li> </ul>	



## Visit of Watercourse – at Village Namaki

## 10) Field Visit Date – 31 July 2021

<b>Scheme</b>	Watercourse (PVC Pipe)
<b>Name of Farmer</b>	Ahsan Ullah
<b>Name of village:</b>	Manzaki
<b>Union council:</b>	Gharbi Luni
<b>Chairman WUA:</b>	Ahsan Ullah
<b>District:</b>	Dukki
<b>Tehsil</b>	Dukki
<b>Source of irrigation:</b>	Tube well



## Location of PVC Watercourse

## Field Visits of Team-3

**Team-3: Monitored by Manzoor Kasi, M&E Expert,  
Mr. Hamza Qureshi, M&E Officer and Mah Gul,  
M&E Officer**

## 1) Field Visit Date – 29 July 2021

<b>Scheme</b>	Water Storage Tank
<b>Name of Farmer</b>	Habib Ur Rehman
<b>Name of village:</b>	Jamaldini
<b>Union council:</b>	Jamaldini
<b>Chairman WUA:</b>	Habib-Ur-Rehman

<b>District:</b>	Nushki
<b>Tehsil</b>	Nushki
<b>Source of irrigation:</b>	Tube well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	60x60 ft.
<b>Depth of WST:</b>	4.5 ft.
<b>Command area of water storage tank:</b>	50 Acres
<b>No of beneficiaries:</b>	10
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Construction Cost of water storage tank:</b>	Not available
<b>Quality of work</b>	Good
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> <li>Electricity problem</li> <li>Solar System is more feasible for this area.</li> <li>WC is not feasible due to heavy sand in this area</li> <li>PVC Pipe is feasible for this area.</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Cultivated area has been increase by 5 to 7 acres.</li> </ul>	



View of Habib-ur-Rehman Water Storage Tank

## 2) Field Visit Date – 29 July 2021

<b>Scheme</b>	Watercourse
<b>Name of Farmer</b>	Shahnawaz Khan
<b>Name of village:</b>	Batto
<b>Union council:</b>	Ahmedwaal
<b>Chairman WUA:</b>	Shahnawaz Khan
<b>District:</b>	Nuhski
<b>Tehsil</b>	Nushki
<b>Source of irrigation:</b>	Tube Well
<b>Total length of watercourse:</b>	1160.4 Meters 4000 ft.
<b>Estimated length of lining:</b>	610.4 Meter 2002.72 ft.
<b>Command area of watercourse:</b>	40 Acres
<b>No of beneficiaries:</b>	10
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Good
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> <li>Electricity problem</li> <li>Solar System is more feasible for this area.</li> <li>WC is not feasible due to heavy sand in this area</li> <li>PVC Pipe is feasible for this area.</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Cultivated area has been increased up to 2 acres.</li> <li>Now the farmer growing Cotton as Cash Crop due to this intervention.</li> <li>Grapes are also growing due to availability of added water.</li> </ul>	



RCC Culvert of Newly Constructed W/C (L) - View of Old W/C (R)



3) Field Visit Date – 29 July 2021

<b>Scheme</b>	Watercourse
<b>Name of Farmer</b>	Ameer Hamza
<b>Name of village:</b>	Batto Landi
<b>Union council:</b>	Ahmedwaal
<b>Chairman WUA:</b>	Ameer Hamza
<b>District:</b>	Nuhski
<b>Tehsil</b>	Nushki
<b>Source of irrigation:</b>	Tube Well
<b>Total length of watercourse:</b>	609.57 Meters 2000 ft.
<b>Estimated length of lining:</b>	609.57 Meter 2000 ft.
<b>Command area of watercourse:</b>	45 Acres
<b>No of beneficiaries:</b>	10
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Satisfactory
<b>Observations</b>	<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> <li>Due to PVC water conveyance system improved lot</li> <li>Loses of water reduced up to 20%</li> <li>Load Shading of 20 hours are being observed.</li> <li>Low voltage causes of heavy damages of machinery.</li> </ul>
<b>Farmer Feedback / Impact</b>	<ul style="list-style-type: none"> <li>Cultivated area increased 2 acres</li> <li>Melon are being cultivated by farmer</li> </ul>



ME&IE Field Team with Farmers during visit of PVC Pipe W/C

4) Field Visit Date – 30 July 2021

<b>Scheme</b>	Watercourse
<b>Name of Farmer</b>	Shah Muhammad
<b>Name of village:</b>	Sasnak
<b>Union council:</b>	Manna
<b>Chairman WUA:</b>	Shah Muhammad
<b>District:</b>	Ziarat
<b>Tehsil</b>	Manna
<b>Source of irrigation:</b>	Tube Well
<b>Total length of watercourse:</b>	304.78 Meters 1000 ft.
<b>Estimated length of lining:</b>	304.78 Meter 1000 ft.
<b>Command area of watercourse:</b>	4 Acres
<b>No of beneficiaries:</b>	3
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Satisfactory
<b>Observations</b>	<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> </ul>
<b>Farmer Feedback / Impact</b>	<ul style="list-style-type: none"> <li>Water loses reduced 20%, now getting water in proper due to PVC Pipe.</li> </ul>





ME&IE Field Team Collecting Data at W/C Shah Muhammad



PVC Watercourse in Picture

## 5) Field Visit Date – 30 July 2021

<b>Scheme</b>	Watercourse
<b>Name of Farmer</b>	Raaz Muhammad
<b>Name of village:</b>	Zandra
<b>Union council:</b>	Zandra
<b>Chairman WUA:</b>	Raaz Muhammad
<b>District:</b>	Ziarat
<b>Tehsil</b>	Ziarat
<b>Source of irrigation:</b>	Tube Well
<b>Total length of watercourse:</b>	304.78 Meters 1000 ft.
<b>Estimated length of lining:</b>	304.78 Meter 1000 ft.
<b>Command area of watercourse:</b>	5 Acres
<b>No of beneficiaries:</b>	1
<b>Starting date:</b>	Not available
<b>Completion date:</b>	Not available
<b>Cost of Construction of WC:</b>	Not available
<b>Quality of work</b>	Satisfactory
<b>Observations</b>	
<ul style="list-style-type: none"> <li>Files of scheme were not available with OFWM staff.</li> <li>The ME&amp;IE Consultants felt great difficulties in monitoring due to non-available of files</li> <li>The farmer was requesting to revise the share of farmer from 25% to 10%.</li> </ul>	
<b>Farmer Feedback / Impact</b>	
<ul style="list-style-type: none"> <li>Water loses reduced 20%, now getting water in proper due to PVC Pipe.</li> </ul>	

### 4.5.4.2 Monitoring and Data Collection during the Month of August 2021

The regular monitoring / spot check to be conducted in different phasis. The Balochistan field teams monitored 03 districts i.e., Loralai, Killa Saifullah and Sohbat Pur in June 2021. In July 2021 field teams were monitored 08 districts i.e., Jaffarabad, Naseerabad, Zhob, Sherani, Musakhail, Duki, Noshki and Ziarat. During the current months field team assigned further 08 districts i.e., Mastung, Kalat, Khuzdar, Pishin, Killa Abdullah, Quetta, Kachi and Sibi. Up to August 2021 Balochistan field teams have been monitored the Watercourse and Water storage tanks of 19 districts, covered 58% districts of Balochistan.

#### Field Visits Schedule:

The field teams conducted the field activities as per schedule mentioned below:

Teams	Districts	WC	PVC Pipe	WST	Total	Dates
Team - 1	Mastung	1	1	1	3	24/08/2021
	Kalat	1	1	1	3	25/08/2021
	Khuzdar	1	1	1	3	26/08/2021
	<b>Total</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>9</b>	
Team - 2	Pishin	2	0	1	3	25/08/2021
	Killa Abdullah	2	0	1	3	26/08/2021
	<b>Total</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>6</b>	
Team - 3	Quetta	2	1	1	4	24/08/2021
	Kachi	1	0	2	3	25/08/2021
	Sibi	0	0	4	4	26/08/2021
	<b>Total</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>11</b>	
	<b>G. Total</b>	<b>10</b>	<b>4</b>	<b>12</b>	<b>26</b>	

**Team Composition:**

The Balochistan Zone assigned three Field Teams for field survey / monitoring as listed below

**Team – 1**

3. Mr. Tariq Khoso, M&E Expert
4. Mr. Saleem Abro, M&E Expert

**Team – 2**

3. Mr. Naseeb Jan, M&E Expert
4. Mr. Qaisar Tareen, M&E Officer

**Team -3**

4. Mr. Manzoor Kasi, M&E Expert
5. Mr. Hamza Qureshi, M&E Officer
6. Ms. Mahgul Baloch, M&E Officer

The field teams-1 started regular monitoring from 24<sup>th</sup> August 2021 and covered 03 districts with 09 sites. The team-2 started field activities from 25<sup>th</sup> August 2021 and covered 02 districts with 06 sites. Team-3 started field activities from 26<sup>th</sup> August 2021 and covered 03 districts with 11 sites.

The summary sheet of sites visited by survey teams districts and scheme-wise is mentioned below:

**Team -1**

Districts	WC	PVC Pipe	WST	Total
Mastung	1	1	1	3
Kalat	1	1	1	3
Khuzdar	1	1	1	3
<b>Total</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>9</b>

**Team - 2**

Districts	WC	PVC Pipe	WST	Total
Pishin	2	0	1	3
Killa Abdullah	2	0	1	3
<b>Total</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>6</b>

**Team -3**

Districts	WC	PVC Pipe	WST	Total
Quetta	2	1	1	4
Kachi	1	0	2	3
Sibi	0	0	4	4
<b>Total</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>11</b>

**Team – 1: Monitored by Tariq Khosa, M&E Expert and Mr. Saleem Ahmed, M&E Officer**

**1) Field Visit Date – 24 August 2021**

<b>Scheme:</b>	Watercourse
<b>Name of Farmer:</b>	Mohammad Alim
<b>Name of village:</b>	Killi khandwa
<b>Union council:</b>	Mobi
<b>Chairman WUA:</b>	Mohammad Alim
<b>District:</b>	Mastung
<b>Tehsil</b>	Mastung
<b>Coordinates</b>	29.9017708 668254901
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	2150
<b>Estimated length of lining:</b>	2152
<b>Command area of watercourse:</b>	70
<b>No of beneficiaries:</b>	6
<b>Starting date:</b>	
<b>Completion date:</b>	24-08-2020
<b>Cost of Construction of WC:</b>	1,548,697/=
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	Yes
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>• Increased cropping of vegetables and cotton.</li> <li>• Heavy Load shading was affecting agriculture.</li> </ul>

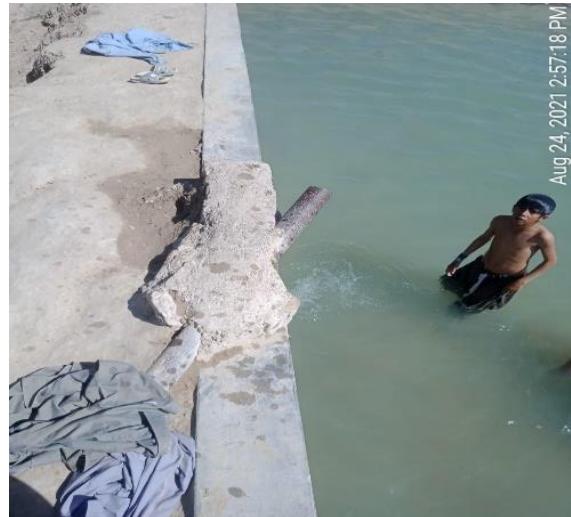


View of Muhammad Aleem Watercourse

## 2) Field Visit Date – 24 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Rehmat Khan
<b>Name of village:</b>	Pir Kanoo
<b>Union council:</b>	Pir Kanoo
<b>Chairman WUA:</b>	Rehmat
<b>District:</b>	Mastung
<b>Tehsil</b>	Mastung
<b>Coordinates</b>	29.7870443 66.8499555
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	50x50
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	50 Acre
<b>No of beneficiaries:</b>	3
<b>Completion date:</b>	15/08/2020
<b>Construction Cost of watercourse:</b>	1,285,462/=
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes

<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Increased cropping of vegetables and cotton.</li> <li>Heavy Load shading was affecting agriculture.</li> </ul>



View of Rehmat Khan Water Storage

## 3) Field Visit Date – 24 August 2021

<b>Scheme:</b>	PVC Pipe
<b>Name of Farmer:</b>	Rehmat Khan
<b>Name of village:</b>	Pir Kanoo
<b>Union council:</b>	Pir Kanoo
<b>Chairman WUA:</b>	Rehmat Khan
<b>District:</b>	Mastung
<b>Tehsil</b>	Mastung
<b>Coordinates</b>	29.7901301 66.8486889
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	3006
<b>Estimated length of lining:</b>	3000
<b>Command area of watercourse:</b>	20 Acre
<b>No of beneficiaries:</b>	3

<b>Completion date:</b>	20-9-2020
<b>Cost of Construction of WC:</b>	856,000/=
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	NA
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Increased cropping of vegetables and cotton.</li> <li>Heavy Load shading was affecting agriculture.</li> </ul>



Aug 25, 2021 2:56:46 PM

Measuring PCV Pipe Watercourse

#### 4) Field Visit Date – 25 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Saleem
<b>Name of village:</b>	Malangzai
<b>Union council:</b>	Mehmood Gohram
<b>Chairman WUA:</b>	Saleem
<b>District:</b>	Kalat
<b>Tehsil</b>	Mangochar
<b>Coordinates</b>	29.3637443 66.6238931
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	50x50
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	70 Acre
<b>No of beneficiaries:</b>	3
<b>Completion date:</b>	06/08/2020
<b>Construction Cost of watercourse:</b>	1,245,810/=
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Increased cropping of vegetables and cotton.</li> <li>Heavy Load shading was affecting agriculture.</li> </ul>



Aug 25, 2021 12:17:12PM

ME&IE Team with beneficiaries of Saleem Water Storage Tank

### 5) Field Visit Date – 25 August 2021

<b>Scheme:</b>	Watercourse
<b>Name of Farmer:</b>	Mir Mohammad
<b>Name of village:</b>	Chotank
<b>Union council:</b>	Mehmood Gohram
<b>Chairman WUA:</b>	Mir Mohammad
<b>District:</b>	Kalat
<b>Tehsil</b>	Mangochar
<b>Coordinates</b>	29.3662006 66.6663364
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	2202
<b>Estimated length of lining:</b>	2000
<b>Command area of watercourse:</b>	20
<b>No of beneficiaries:</b>	1
<b>Completion date:</b>	26-8-2020
<b>Cost of Construction of WC:</b>	1,240,238/=
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	Yes
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast</b>	No

<b>Structures Industry and other related industries' production is picking up.</b>	
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Increased cropping of vegetables and cotton.</li> </ul> <p>Heavy Load shading was affecting agriculture.</p>



Aug 25, 2021 1:18:26 PM

Measuring of Watercourse

### 6) Field Visit Date – 25 August 2021

<b>Scheme:</b>	PVC Pipe
<b>Name of Farmer:</b>	Abdul Qayoum
<b>Name of village:</b>	Dabar
<b>Union council:</b>	Mehmood Gohram
<b>Chairman WUA:</b>	Abdul Qayoum
<b>District:</b>	Kalat
<b>Tehsil</b>	Mangochar
<b>Coordinates</b>	29.3775393 66.5861018
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	3842
<b>Estimated length of lining:</b>	3000
<b>Command area of watercourse:</b>	25
<b>No of beneficiaries:</b>	6
<b>Starting date:</b>	Not available
<b>Completion date:</b>	26-08-2020
<b>Cost of Construction of WC:</b>	868,764/25
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	Yes
<b>Cropping intensity increased</b>	Yes

Crops yield increased	Yes
Equity in water distribution increased	Yes
Reduction in water disputes/thefts	Yes
Poverty reduction through generation of employment.	Yes
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"> <li>Increased cropping of vegetables and cotton.</li> <li>Heavy Load shading was affecting agriculture.</li> </ul>



View of PVC Pipe Watercourse

#### 7) Field Visit Date – 26 August 2021

Scheme:	PVC Pipe
Name of Farmer:	Noor Din
Name of village:	Khadni
Union council:	Peshi Kappar
Chairman WUA:	Noor din
District:	Kalat
Tehsil	Wadh
Source of irrigation:	Tube-well
Total length of watercourse:	2000 Ft
Estimated length of lining:	1300 ft
Command area of watercourse:	18 acres
No of beneficiaries:	1
Starting date:	Not available

Completion date:	15/June/2020
Cost of Construction of WC:	312,466/=
Quality of Work	Good
Reduction in Water Logging and salinity	Yes
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	Yes
Reduction in water disputes/thefts	Yes
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"> <li>Increased cropping of vegetables and cotton.</li> <li>Heavy Load shading was affecting agriculture.</li> </ul>



Location of Noor Din PVC Watercourse

#### 8) Field Visit Date – 26 August 2021

Scheme:	Watercourse
Name of Farmer:	Arshad Aziz
Name of village:	Noghay
Union council:	Noghay
Chairman WUA:	Arshad Aziz
District:	Khuzdar
Tehsil	Khuzdar
Source of irrigation:	Tube-well
Total length of watercourse:	350 meters

<b>Estimated length of lining:</b>	243.8 meters
<b>Command area of watercourse:</b>	16 acres
<b>No of beneficiaries:</b>	6
<b>Starting date:</b>	
<b>Completion date:</b>	30/June/2020
<b>Cost of Construction of WC:</b>	853545 Rupees
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	Yes
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Water Saving Increased</li> <li>Conveyance loss decreased in their Land</li> <li>Facing difficulties due to road breakdown and electricity shortage. Almost 16-20 hours load Shedding.</li> </ul>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>Capacity building campaigns for Framers are must.</li> </ul>



ME&IE Field Tam taking Measurement of Watercourse

## 9) Field Visit Date – 26 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Abdul Razzaq
<b>Name of village:</b>	Khandi
<b>Union council:</b>	Peshi Kappar
<b>Chairman WUA:</b>	Abdul Razzaq
<b>District:</b>	Khuzdar
<b>Tehsil</b>	wadh
<b>Coordinates</b>	29.7870443 66.8499555
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	60x60
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	50 Acre
<b>No of beneficiaries:</b>	3
<b>Starting date:</b>	Not available
<b>Completion date:</b>	15/08/2020
<b>Construction Cost of watercourse:</b>	615235
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes

<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	Yes
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Increased cropping of vegetables and cotton.</li> </ul> <p>Heavy Load shading was affecting agriculture.</p>



Aug 26, 2021 2:57:52 PM

ME&IE Field Team Measuring of Water Storage Tank

#### General Observations:

- The farmer was quite happy with the projects. The project had contributed enough in increasing their income and yield.
- The farmer was demanding for additional watercourse, PVC pipes and water storage tanks. As they had a large barren land.
- Farmers had demanding water storage tanks
- Heavy Load Shading of 16 to 20 hours per day was badly affected the farms activities.
- Due to absence of proper roads, accessibility of farmers to the market and city area took a lot of time and expense in terms of transportation.
- In most of the areas the lined portion of watercourses provided in this project was insufficient as compared to their total land holdings.
- ME&IE teams could not check the schemes as per design/specification as the files were in

the Quetta Office of NWMC as per statement of OFWM staff

- Capacity building campaigns for Farmers should be conducted.

#### 10) Field Visit Date – 25 August 2021

<b>Scheme:</b>	Water Course
<b>Name of Farmer:</b>	Mohammad Anwar
<b>Name of village:</b>	Murghakai
<b>Union council:</b>	Khanozai
<b>Chairman WUA:</b>	Mohammad Anwar
<b>District:</b>	Pishin
<b>Tehsil</b>	Karezat
<b>Coordinates</b>	30.5921569 67.3138279
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	1000Rft
<b>Estimated length of lining:</b>	1000Rft
<b>Command area of watercourse:</b>	11
<b>No of beneficiaries:</b>	4
<b>Cost of Construction of WC:</b>	829211
<b>Quality of Work</b>	Satisfactory
<b>Reduction in Water Logging and salinity</b>	Not observed in this District
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	Yes
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Farmer was happy with the Scheme,</li> </ul>
<b>General Observations</b>	Some variations found in design, such as: nacca, Culverts, Siphon, Drop Structure, Washing Bay etc.



Taking Measurements of Watercourse

### 11) Field Visit Date – 25 August 2021

<b>Scheme:</b>	Watercourse
<b>Name of Farmer:</b>	Mohammad Munawar
<b>Name of village:</b>	Mandi
<b>Union council:</b>	Khanozai
<b>Chairman WUA:</b>	Mohammad Munawar
<b>District:</b>	Pishin
<b>Tehsil</b>	Karezat
<b>Coordinates</b>	30.6010758 67.3055723
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	2040.16 Rft
<b>Estimated length of lining:</b>	2000 Rft
<b>Command area of watercourse:</b>	22 Acre
<b>No of beneficiaries:</b>	4
<b>Cost of Construction of WC:</b>	15,47,293
<b>Quality of Work</b>	Satisfactory
<b>Reduction in Water Logging and salinity</b>	Not Observed in this District
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Not Observed in this District
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	Yes

<b>Overall feedback of Farmer / Beneficiary</b>	Farmers were found happy with scheme and need more such intervention in streamlining agricultural activities.
<b>General Observations</b>	Some variations found in design, such as: nacca, Culverts, Siphon, Drop Structure, Washing Bay etc.



ME&IE Team Taking Measurements of Watercourse

### 12) Field Visit Date – 25 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Haji Alam Khan
<b>Name of village:</b>	Sorai
<b>Union council:</b>	Margha Zakriazai
<b>Chairman WUA:</b>	Haji Alam Khan
<b>District:</b>	Pishin
<b>Tehsil</b>	Karezat
<b>Coordinates</b>	30.6643355 67.3879452
<b>Source of irrigation:</b>	Tube-well
<b>Shape of WST:</b>	Square
<b>Size of WST:</b>	30x30
<b>Depth of WST:</b>	4.5
<b>Command area of WST:</b>	22 Acres
<b>No of beneficiaries:</b>	3
<b>Starting date:</b>	Unknown
<b>Completion date:</b>	Unknown
<b>Construction Cost of WST:</b>	70,87,00

<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	Yes
<b>Overall feedback of Farmer / Beneficiary</b>	farmers are facing difficulties in irrigating their Farms due to the problems of electricity. And are in need of more Schemes.
<b>General Observations</b>	Work was completed, But the WUA doesn't exist.



Newly Constructed Water Storage Tank Haji Alam Khan

**Team – 2: Monitored by Naseeb Jan M&E Expert and Qaisar Khan M&E Officer**

**1) Field Visit Date – 26 August 2021**

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Abdul Khaliq
<b>Name of village:</b>	Momin Pir Alizai
<b>Union council:</b>	Jungle Pir Alizai
<b>Chairman WUA:</b>	Abdul Khaliq
<b>District:</b>	Killa Abdullah

<b>Tehsil</b>	Killa Abdullah
<b>Coordinates</b>	30.616776 66.6875713
<b>Source of irrigation:</b>	Tube-well
<b>Shape of WST:</b>	Square
<b>Size of WST:</b>	60.5x60.5
<b>Depth of WST:</b>	4.5
<b>Command area of WST:</b>	130 Acre
<b>No of beneficiaries:</b>	4
<b>Construction Cost of WST:</b>	1594000
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	Yes
<b>Overall feedback of Farmer / Beneficiary</b>	He has a vast agricultural area, so this WST is not enough for irrigating his farm and due to kacah WC most of water is wasting.
<b>General Observations</b>	Found some variations in dimension



Taking Measurements and Coordinates of WST



Taking Measurements and Coordinates of WST

2) Field Visit Date – 26 August 2021

<b>Scheme:</b>	Watercourse
<b>Name of Farmer:</b>	Sana Ullah
<b>Name of village:</b>	Paizi Syedaan
<b>Union council:</b>	Habibzai 2
<b>Chairman WUA:</b>	Sana Ullah
<b>District:</b>	Kila Abdullah
<b>Tehsil</b>	Kila Abdullah
<b>Coordinates</b>	30.6586643 66.6889817
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	2000 Rft
<b>Estimated length of lining:</b>	2000 Rft
<b>Command area of watercourse:</b>	45 Acre
<b>No of beneficiaries:</b>	5
<b>Cost of Construction of WC:</b>	1,560,580/=
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	Yes
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	Yes

<b>Overall feedback of Farmer / Beneficiary</b>	Farmer was satisfied with scheme but the given length of WC was not enough in irrigating his vast agricultural area.
<b>General Observations</b>	All the specifications of WC were fulfilled and work was very good.



Taking Measurements Watercourse

Team – 3: Monitored by Manzoor Kasi, M&E Expert and Mah Gul Noor & Hamza Hassan Qureshi M&E Officer

1) Field Visit Date – 24 August 2021

<b>Scheme:</b>	Watercourse PVC 4" (3" provided as per farmer's need)
<b>Name of Farmer:</b>	Zubair Ahmed
<b>Name of village:</b>	Khaliqabad
<b>Union council:</b>	Mian Ghundi
<b>Chairman WUA:</b>	Zubair Ahmed
<b>District:</b>	Quetta
<b>Tehsil</b>	Chiltan
<b>Coordinates</b>	N 30.0477288, E 66.96516
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	774.0 Meters
<b>Estimated length of lining:</b>	609.57 Meters
<b>Command area of watercourse:</b>	20 Acres
<b>No of beneficiaries:</b>	6
<b>Cost of Construction of WC:</b>	853,126.18
<b>Quality of Work</b>	Satisfactory

<b>Reduction in Water Logging and salinity</b>	No Waterlogging or salinity in this area.
<b>Cropping intensity increased</b>	Yes 5 Acres Increased
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Water Saving Increased</li> <li>Conveyance loss decreased in their Land</li> <li>Increased cropping of vegetables.</li> <li>Heavy Load Shading observed of 18 hours per day</li> </ul>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>Capacity building campaigns for Framers are must.</li> <li>Farmers should be instructed to maintain the joints of PVC pipes to avoid leakages.</li> </ul>



View of PVC Watercourse – Leakage of Water at Joint

## 2) Field Visit Date – 24 August 2021

<b>Scheme:</b>	Watercourse 20 Years Old
<b>Name of Farmer:</b>	Abdul Raziq
<b>Name of village:</b>	Mian Ghundi
<b>Union council:</b>	Mian Ghundi
<b>Chairman WUA:</b>	Abdul Raziq
<b>District:</b>	Quetta
<b>Tehsil</b>	Chiltan
<b>Coordinates</b>	N 30.047355, E66.964991
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	498.4 Meters
<b>Estimated length of lining:</b>	304.78 Meters
<b>Command area of watercourse:</b>	20 Acres
<b>No of beneficiaries:</b>	6
<b>Cost of Construction of WC:</b>	830,195.87
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	No Waterlogging or salinity in this area.
<b>Cropping intensity increased</b>	3 Acres Increased
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	Farmer was not Available
<b>General Observations</b>	<ul style="list-style-type: none"> <li>Watercourse of 10 years old should also be rehabilitated in this Program.</li> </ul>



Taking Measurements of Watercourse

and other related industries' production is picking up.	
Overall feedback of Farmer / Beneficiary	Farmer was not Available
General Observations	<ul style="list-style-type: none"> <li>Watercourse was not properly maintained by the farmer due to which, back filling in various points was missing.</li> </ul>



ME&IE Team at Visit of Watercourse

### 3) Field Visit Date – 24 August 2021

<b>Scheme:</b>	Watercourse Regular (New)
<b>Name of Farmer:</b>	Abdul Malik
<b>Name of village:</b>	Khaliqabad
<b>Union council:</b>	Mian Ghundi
<b>Chairman WUA:</b>	Abdul Malik
<b>District:</b>	Quetta
<b>Tehsil</b>	Chiltan
<b>Coordinates</b>	N 30.045974, E 66.965212
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	1828.71 Meters
<b>Estimated length of lining:</b>	609.57 Meters
<b>Command area of watercourse:</b>	20 Acres
<b>No of beneficiaries:</b>	6
<b>Cost of Construction of WC:</b>	1,548,697.85
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	No Waterlogging or salinity in this area.
<b>Cropping intensity increased</b>	6 Acres Increased
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry</b>	No

### 4) Field Visit Date – 24 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Ghulam Mustafa Shahwani
<b>Name of village:</b>	Muhammad Umer
<b>Union council:</b>	Mian Ghundi
<b>Chairman WUA:</b>	Ghulam Mustafa Shahwani
<b>District:</b>	Quetta
<b>Tehsil</b>	Chiltan
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	50x50 ft.
<b>Depth of WST:</b>	4.5 ft.
<b>Command area of water storage tank:</b>	6 Acres
<b>No of beneficiaries:</b>	1

<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	6 Acres increased
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Water Saving Increased.</li> <li>Income Increased</li> <li>Cropping increased</li> </ul>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>He was well aware about farming and was demanding a Watercourse.</li> </ul>



ME&IE Field Team in Meeting with Beneficiaries of Water St. Tank

## 5) Field Visit Date – 25 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Imran Khan
<b>Name of village:</b>	Koth Raisani

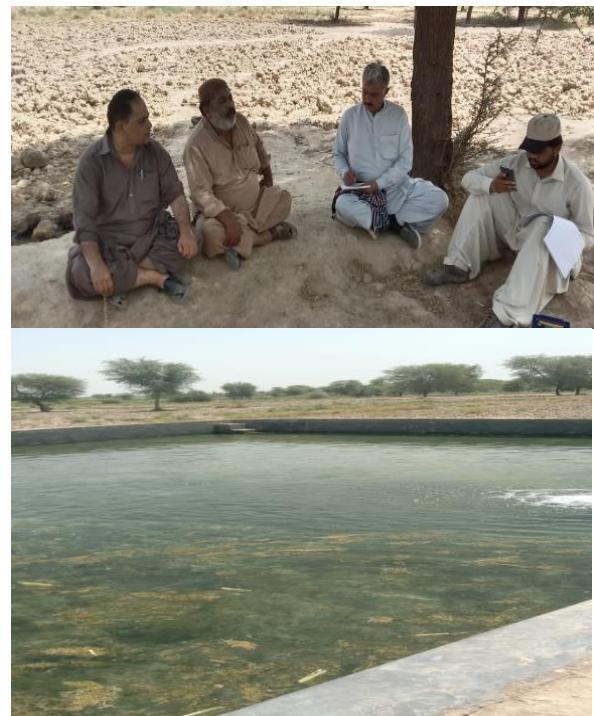
<b>Union council:</b>	Chotai
<b>Chairman WUA:</b>	Imran Khan
<b>District:</b>	Kachhi
<b>Tehsil</b>	Dhadar
<b>Coordinates</b>	N 29.46365, E67.61178
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	40x40
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	20 Acres
<b>No of beneficiaries:</b>	5
<b>Quality of work</b>	Satisfactory
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	No
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<i>Farmer was not Available</i>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>Back Filling of WST was not properly done.</li> </ul>



Field Team with DDA OFWM Kachhi at Water Storage Tank

## 6) Field Visit Date – 25 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Muhammad Mushtaq
<b>Name of village:</b>	Moza Kamoi
<b>Union council:</b>	Koth Raisani
<b>Chairman WUA:</b>	Muhammad Mushtaq
<b>District:</b>	Kachhi
<b>Tehsil</b>	Dhadar
<b>Coordinates</b>	N 29.47675, E 67.63038
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	40x40
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	13 Acres
<b>No of beneficiaries:</b>	4
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Yes
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Farmer was demanding a lined WC for his Land.</li> </ul>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>Farmers needed guidance about cropping patterns and Pesticides.</li> <li>Improved variety of seeds should also be available and provided to the farmers according to the climate and soil of area.</li> </ul>



ME&IE Team with Beneficiaries of Water St. Tank

## 7) Field Visit Date – 25 August 2021

<b>Scheme:</b>	Watercourse Regular (New)
<b>Name of Farmer:</b>	Rabia Maqbool
<b>Name of village:</b>	Mashkaf
<b>Union council:</b>	Mashkaf
<b>Chairman WUA:</b>	Rabia Maqbool
<b>District:</b>	Kachhi
<b>Tehsil</b>	Dhadar
<b>Coordinates</b>	N 29.50783, E 67.67387
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	609.57 Meters
<b>Estimated length of lining:</b>	609.57 Meters
<b>Command area of watercourse:</b>	80 Acres
<b>No of beneficiaries:</b>	6
<b>Quality of Work</b>	Good
<b>Reduction in Water Logging and salinity</b>	No Waterlogging or salinity in this area.
<b>Cropping intensity increased</b>	Yes 5 Acres Increased
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction</b>	Yes

through generation of employment.	
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"> <li>The scheme was of 2000 rft in documents, but the field team observed that there were 2 more schemes/WCs connected with this watercourse without mentioning any identification of where a scheme is starting or completing. The field team felt great difficulties in measuring the scheme. The OFWM looked into the matter.</li> </ul>



Measuring Watercourse

#### 8) Field Visit Date – 26 August 2021

<b>Scheme:</b>	Watercourse Regular (New)
<b>Name of Farmer:</b>	Saud Bugti
<b>Name of village:</b>	Gullu Sheher
<b>Union council:</b>	Kurrik
<b>Chairman WUA:</b>	Saud Bugti
<b>District:</b>	Sibbi
<b>Tehsil</b>	Sibbi
<b>Coordinates</b>	N 29.61887, E 67.89665
<b>Source of irrigation:</b>	Tube-well
<b>Total length of watercourse:</b>	709.7 Meters
<b>Estimated length of</b>	609.57 Meters

<b>lining:</b>	
<b>Command area of watercourse:</b>	80 Acres
<b>No of beneficiaries:</b>	15
<b>Quality of Work</b>	Satisfactory
<b>Reduction in Water Logging and salinity</b>	No Waterlogging or salinity in this area.
<b>Cropping intensity increased</b>	20 Acres Increased
<b>Crops yield increased</b>	Yes
<b>Equity in water distribution increased</b>	Yes
<b>Reduction in water disputes/thefts</b>	Yes
<b>Poverty reduction through generation of employment.</b>	Yes
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Need Soil testing center, seed availability, cotton ginning factory.</li> <li>Capacity building are needed</li> <li>Awareness about pesticides by the Department should be provided.</li> </ul>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>Joints of Pre-cast Parabolic Segments was not maintained</li> </ul>



Watercourse at Village Gullu Sheher

9) Field Visit Date – 26 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Saud Bugti
<b>Name of village:</b>	Gullu Sheher
<b>Union council:</b>	Gullu Sheher
<b>Chairman WUA:</b>	Saud Bugti
<b>District:</b>	Sibbi
<b>Tehsil</b>	Sibbi
<b>Coordinates</b>	N 29.61851, E 67.89615
<b>Source of irrigation:</b>	No source Connected
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	50x50
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	0 Acres*
<b>No of beneficiaries:</b>	0*
<b>Quality of work</b>	Poor
<b>Overall feedback of Farmer / Beneficiary</b>	<ul style="list-style-type: none"> <li>Farmer did not respond about this scheme.</li> </ul>
<b>General Observations</b>	<ul style="list-style-type: none"> <li>*The WST was not functional; it was not connected to any source of water.</li> <li>*There was no back filling at any side of WST.</li> <li>*Bed was in poor condition.</li> <li>*There was a huge crack starting from one Side of WST.</li> </ul>



Cracks in Bed of Water Storage Tank - Saud Bugti

10) Field Visit Date – 26<sup>th</sup> August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Mazar Khan
<b>Name of village:</b>	Luni
<b>Union council:</b>	Luni
<b>Chairman WUA:</b>	Mazar Khan
<b>District:</b>	Sibbi
<b>Tehsil</b>	Sibbi
<b>Coordinates</b>	N 29.64574, E 67.95129
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	40x40
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	10 Acres
<b>No of beneficiaries:</b>	4
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Farmer was not available
<b>Crops yield increased</b>	Farmer was not available
<b>Equity in water distribution increased</b>	Farmer was not available
<b>Reduction in water disputes/thefts</b>	Farmer was not available
<b>Poverty reduction through generation of employment.</b>	Farmer was not available
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of Farmer / Beneficiary</b>	Farmer was not available
<b>General Observations</b>	<ul style="list-style-type: none"> <li>WST was in a good condition, back filling and maintenance was done properly.</li> <li>Due to Katcha WC, water losses observed.</li> </ul>



Measuring Water St. Tank – Water discharged I Kacha W/C

### 11) Field Visit Date – 26 August 2021

<b>Scheme</b>	Water Storage Tank
<b>Farmer Name</b>	Abdul Haroon Rasheed
<b>Name of village:</b>	Luni
<b>Union council:</b>	Luni
<b>Chairman WUA:</b>	Abdul Haroon Rasheed
<b>District:</b>	Sibi
<b>Tehsil</b>	Sibi
<b>Coordinates</b>	N 29.65000, E 67.95028
<b>Source of irrigation:</b>	Tube-well
<b>Shape of water storage tank:</b>	Square
<b>Size of water storage tank:</b>	40x40
<b>Depth of WST:</b>	4.5
<b>Command area of water storage tank:</b>	8 Acres
<b>No of beneficiaries:</b>	2
<b>Quality of work</b>	Good
<b>Cropping intensity increased</b>	Farmer was not available
<b>Crops yield increased</b>	Farmer was not available
<b>Equity in water distribution increased</b>	Farmer was not available
<b>Reduction in water disputes/thefts</b>	Farmer was not available
<b>Poverty reduction through generation of employment.</b>	Farmer was not available
<b>Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.</b>	No
<b>Overall feedback of</b>	Farmer was not

<b>Farmer / Beneficiary</b>	available
<b>General Observations</b>	<ul style="list-style-type: none"> <li>WST was well maintained and back filling was done properly.</li> </ul>



Water Storage Tank – Abdul Haroon Rasheed

#### 4.5.4.3 Monitoring and Data Collection during the Month of September 2021

The ME&IE Consultants, Balochistan conducted several activities during the month of September 2021. The activities done by the Balochistan team are listed below:

- Updated Field Progress of Regular Monitoring / Spot Check accomplished by ME&IEC, Balochistan
- Case Study.
- Training/Workshop on Baseline Survey (Phase-II) and overall Project.
- Meetings with OFWM officials and other stakeholders at Provincial Level.
- Meetings with Deputy Directors / other Staff of OFWM at district level.

#### Regular Monitoring / Spot Check, F.Y. 2020-21

The updated detail of monitored Watercourses and Water Storage Tanks under F.Y. 2020-21 is as under:

Sr. #	Districts	WC	WST	Total
1	Killa Abdullah	1	1	2
2	Loralai	1	2	3
3	Killa Saifullah	2	1	3
4	Pishin	0	4	4
5	Quetta	0	4	4
6	Naseerabad	2	4	6

Sr. #	Districts	WC	WST	Total
7	Sohbatpur	3	0	3
8	Mastung	1	2	3
9	Kalat	1	3	4
<b>Total Monitored Sites</b>	<b>11</b>	<b>21</b>	<b>32</b>	
<b>Total Targets</b>	<b>141</b>	<b>603</b>	<b>744</b>	
<b>Sampling (5%)</b>	<b>7</b>	<b>30</b>	<b>37</b>	
<b>Difference</b>	<b>4</b>	<b>-9</b>	<b>-5</b>	

#### Regular Monitoring / Spot Check, F.Y. 2019-20

In second phase we monitored the sites of F.Y. 2019-20. The total target of Watercourses and Water Storage Tanks were 1891 and 411 respectively. As per sample size (5%), ME&IEC had to monitor to 95 Watercourses and 21 Water Storage Tanks. The ME&IEC monitored 32 Watercourses 18 Water Storage Tanks till to date. The remaining 63 Watercourses and 03 Water Storage Tanks will be monitored in upcoming months.

The detail of monitored sites of F.Y. 2019-20 is mentioned below:

Sr. #	Districts	WC	WST	Total
1	Jaffarabad	3	0	3
2	Naseerabad	3	0	3
3	Zhob	2	1	3
4	Sherani	2	2	4
5	Musa Khail	1	1	2
6	Duki	2	1	3
7	Noshki	2	1	3
8	Ziarat	3	0	3
9	Mastung	2	1	3
10	Kalat	2	1	3
11	Khuzdar	2	1	3
12	Pishin	2	1	3
13	Killa Abdullah	2	1	3
14	Quetta	3	1	4
15	Kachi	1	2	3
16	Sibi	0	4	4
<b>Total Monitored Sites</b>	<b>32</b>	<b>18</b>	<b>50</b>	
<b>Total Targets</b>	<b>1891</b>	<b>411</b>	<b>2302</b>	
<b>Sampling (5%)</b>	<b>95</b>	<b>21</b>	<b>115</b>	
<b>Difference</b>	<b>-63</b>	<b>-3</b>	<b>-65</b>	

The Balochistan is the largest province covering 44% of total area of Pakistan.

The province of Balochistan, the least populated province of Pakistan and the largest province by area, is divided into 35 districts and 07 divisions.

The ME&IEC-Balochistan visited 18 districts out of 35 districts (51%) till to date to monitor the Regular Monitoring / Spot Check.

The list of visited districts is as under:

Sr. #	Name of Districts Visited
1	Duki
2	Jaffarabad
3	Kachi
4	Kalat
5	Khuzdar
6	Killa Abdullah
7	Killa Saifullah
8	Loralai
9	Mastung
10	Musa Khail
11	Naseerabad
12	Noshki
13	Pishin
14	Quetta
15	Sherani
16	Sohbatpur
17	Zhob
18	Ziarat

#### 4.6 ONLINE DATA ENTRY IN ANDROID BASED APPLICATION

Data collected during the reporting period is carried out through Android Based Application developed by ICT Specialist of ME&IE Consultants NPIWC-II.

Data entry is 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 Expert of ME&IE Consultants.

#### 4.7 MEETINGS OF ME&IE CONSULTANTS WITH STAKEHOLDERS REGARDING PROJECT PROGRESS / ISSUES

ME&IE Consultants conducted a number of meetings with clients including Irrigations / Agriculture Departments and other stakeholders of the project.

#### 4.7.1 Meeting of ME&IE Team ICT Zone

Date	27 July 2021, 11:00 AM
Venue	OFWM Department, Attock
<b>Participants</b>	
i.	Mr. Sajjad Shah, Deputy Director WM
ii.	Mr. Muhammad Idrees, Assistant Director WM
iii.	Hafiz Waqas, WM Supervisor
iv.	Mr. Ebadat-ur-Rehman, FTI (ICT & AJK)
v.	Miss Sana Gull, ME&IE Officer
vi.	Miss Maryam Iqbal, ME&IE Officer
<b>Meeting Agenda:</b> A meeting was held with the Deputy Director Water Management of Attock District at OFWM Department, Attock. The meeting agenda is as follow:	
i.	FTI Ebadat-ur-Rehman explained the purpose of Monitoring Surveys.
ii.	Team got the files of targeted watercourses and filled the required basic data.
iii.	Mr. Sajjad Shah explained the technical aspects and other general details of WSTs being constructed in Attock District under NPIWC-II.
iv.	Mr. Sajjad Shah asked Assistant Director of Tehsil Attock to accompany the field team for the successful monitoring visits.



Field Team in Meeting with D.D. OFWM, Attock

Date	28 July 2021, 01:45 PM
Venue	Department of Irrigation and Small Dams, Mirpur
<b>Participants</b>	
i.	Mr. Javed Qamar, Deputy Director WM
ii.	Mr. Mohammad Ali, WMO
iii.	Mr. Ebadat-Ur-Rehman, FTI (ICT & AJK)
iv.	Miss Sana Gull, ME&IE Officer
v.	Miss Maryam Iqbal, ME&IE Officer
<b>Meeting Agenda:</b> A meeting was held with the Deputy Director Water Management of Mirpur District at Department of Irrigation & Small Dams,	

Mirpur. The meeting agenda is as follow:

- FTI Ebadat-ur-Rehman explained the purpose of Monitoring Surveys.
- Mr. Mohammad Ali explained the technical aspects and other general details of WHS & WCs being constructed in Mirpur District under NPIWC-II.
- Team got the files of targeted watercourses and filled the required basic data.

After the meeting, the field team surveyed 1 Water Harvesting Structure and 1 Watercourse at tehsil Mirpur.



Field Team in Meeting with D.D. OFWM, Mirpur

Date	7 September 2021
Venue	Office of Project Director AJK, Mr. Bashrat Hussain Durrani
<b>Participants</b>	
i.	Mr. Basharat Hussain Durrani - Project Director
ii.	Mr. Tahir Anwar - NPC
iii.	Dr. Tehmina Iqbal Dy. Director Coordination
iv.	Mr. Saiful-Islam Deputy NPC
v.	Prof. Dr. Muhammad Abdul Quddus – Team Leader ME&IE Consultants,
vi.	Mr. Rizwan Saleem – ICT Specialist ME&IE Consultant
vii.	Mr. Ebadat-ur-Rehman Data Supervisor ME&IE Consultant
viii.	Mr. Iftekhar Arain DTL NESPAK
ix.	Mr. Murtaza Chattha FTI NESPAK
x.	Mr. Nasir Abbas Field Engineer NESPAK
<b>Meeting Agenda:</b>	
NPC conducted 3 days visit AJK project areas from 6 September 2021 to 8 September 2021. ME&IE Consultants ICT Zone accompanied NPC during his visit to AJK. Discuss visit of AJK Project Sites.	

<b>Date</b>	7 September 2021
<b>Venue</b>	Office of D.G. Irrigation AJK, Engr. Shafiq-ur-Rehman Dar
<b>Participants</b>	
i.	Engr. Shafiq-ur-Rehman Dar – DG Irrigation AJK
ii.	Mr. Basharat Hussain Durrani - Project Director
iii.	Mr. Tahir Anwar - NPC
iv.	Dr. Tehmina Iqbal Dy. Director Coordination
v.	Mr. Saiful-Islam Deputy NPC
vi.	Prof. Dr. Muhammad Abdul Quddus – Team Leader ME&IE Consultants,
vii.	Mr. Rizwan Saleem – ICT Specialist ME&IE Consultant
<b>Meeting Agenda:</b>	
Discussions held with DG Irrigation on field visit of NPC, his Team and ME&IE Consultants.	



NPC, TL and DNPC in meeting with Secretary Food & Irrigation AJK

<b>Date</b>	7 September 2021
<b>Venue</b>	Office of Secretary Food and Agriculture AJK, Dr. Muhammad Bashir Butt
<b>Participants</b>	
i.	Dr. Muhammad Bashir Butt, Secretary Food and Agriculture
ii.	Mr. Basharat Hussain Durrani - Project Director
iii.	Mr. Tahir Anwar - NPC
iv.	Dr. Tehmina Iqbal Dy. Director Coordination
v.	Mr. Saiful-Islam Deputy NPC
vi.	Prof. Dr. Muhammad Abdul Quddus – Team Leader ME&IE Consultants,
vii.	Mr. Rizwan Saleem – ICT Specialist ME&IE Consultant
<b>Meeting Agenda:</b>	
After formal introduction of the participants to Secretary Food and Agriculture following points were discussed by NPC with Secretary.	
<ol style="list-style-type: none"> <li>1. NPC requested Secretary to help out NPC in the compliance so that activities may continue smoothly.</li> <li>2. Secretary Food &amp; Agriculture extend his support to NPC for smooth continuity of the interventions. Further discussed points were as follows:           <ul style="list-style-type: none"> <li>• Data being shared from line departments is not consistent and it is desired that data may be shared timely.</li> <li>• The data format should be fixed in such a way that wrong entry should not be allowed.</li> <li>• Unspent amount should be utilized accordingly.</li> </ul> </li> </ol>	



NESPAK Staff in meeting with Secretary Food & Irrigation AJK

### Meeting of ME&IE Team ICT Zone with Farmers of Nowshera Watercourse

NPC met the farming community of Nowshera Watercourse and discussed their problems. The community requested NPC that they must aid the community in fixing the depressed watercourse through any structure, so water can reach the end users. According to community, they were not able to fix this issue. NPC asked DG Irrigation to look into the matter.

DG Irrigation and Team Leader ME&IE discussed with the farmers about their land holdings and cropping pattern. It was found that most of the farmers used to cultivate rice, maize and wheat crops in their area. They told that maize does not require irrigation water because it receives sufficient water from rain fall which is good for its growth. DG Irrigation further suggested to farmers to reach to Agricultural research office and ask for new crops, vegetables and fruits varieties to plant in the area for better earning. During discussion with beneficiaries the NPC suggested the farmers to

collect some funds in their accounts with specific interval of time so they can utilize this amount for the maintenance of watercourse.



OTeam Leader ME&IE in discussion with Farmers

#### Meeting of ME&IE Team ICT Zone with Farmers of Nalla Palla and Karshan Rahman Abad

After visit and meetings monitoring team held a group discussion farmers, where local farmers invited Mr. Aziz Ali a Tehsil level progressive farmer, to discuss the about of the area. The following discussions were held with farmers' group. Discussion started with the Recitation of Holy Quran by Mr. Aziz Ali.

- Mr. Aziz Ali thanked the Line Department and NPC for all the development works being completed in the area. He also thanked Govt. of Pakistan and AJK for the projects executed for the benefit of the local population.
- DG Irrigation during discussion asked the farmers to explain if they have any issue with the behavior of Department or if there is any person who asked any kind of money for this work.
- He asked the farmers to diversify their cropping pattern and change the existing cropping pattern with vegetables, fruits and other beneficial crops. He suggested farmers to contact Agricultural Department for information and guidance to diversify the cropping pattern in the area. He suggested farmers to grow trees on the hill, where agricultural practices are not performed. It will also help to improve the environment and farmers can earn from selling of wood.
- NPC Mr. Tahir Anwar discussed different components of the project for AJK and asked community to remain in touch with Line

Departments to get maximum advantages and benefits of the project. He advised farmers to take care of these interventions to get long lasting benefits. He cleared the community that Govt. can give support to community in construction of such intervention only once, while it is the responsibility of community to maintain it in good condition. For this purpose, he suggested community to raise mutual funds on regular basis for operation and maintenance of these interventions.



NPC addressing to farmers at Nalla Palla



DG Irrigation addressing farmers at Nalla Palla

#### 4.7.2 Meetings of ME&IE Consultants Punjab Zone

Date	8 July 2021
Venue	Director General (DG) Agriculture (OFWM) Office 21 Davis Road Lahore
<b>Participants</b>	
i.	Mr. Tahir Mehmood- Assistant Director (OFWM) (Technical) D.G OFWM, Office, Lahore.
ii.	Mr. Muhammad Yousaf Bhatti Deputy Team Leader, ME&IE Consultants, Punjab Zone, Lahore.

iii. Mr. Awais Jahangeer Field Team In-Charge, ME&IE Consultants, Punjab Zone, Lahore.
<b>Meeting Agenda:</b>
<ul style="list-style-type: none"> <li>• Field Activities so far carried over</li> <li>• Plan for Three months (July- September 2021)</li> </ul>



ME&IE Consultants in meeting with AD Tech. Punjab OFWM

<b>Date</b>	29 July 2021
<b>Venue</b>	Director (Agri) OFWM Lahore Division, Thokar Naiz Baig, 13Km Multan Road, Lahore
<b>Participants</b>	
i.	Mr. Tariq Maqbol Director Agriculture, OFWM, Lahore Division, Lahore.
ii.	Mr. Azhar Mehmood Agri. Engineer/ Assistant Director OFWM, Lahore Division, Lahore.
iii.	Mr. Muhammad Yousaf Bhatti Deputy Team Leader, ME&IE consultants Punjab Zone, Lahore.
iv.	Syed. Shahzaib Gillani Supporting Staff Member, ME&IE Consultants, Punjab Zone, Lahore
<b>Meeting Agenda:</b>	
<ul style="list-style-type: none"> <li>• Briefing on ME&amp;IE consultant Field activities in general and of Lahore Division in particular.</li> <li>• Three-month field visits plan in Lahore Division.</li> </ul>	



ME&IE Consultants in meeting with Director Agriculture Lahore

<b>Date</b>	August 27, 2021
<b>Venue</b>	Directorate of Agriculture (OFWM) Office Gujranwala
<b>Participant</b>	
1.	Dr. Gulam Abbas Tatla Director Agriculture (OFWM), Gujranwala Division
2.	Hafiz Mujeeb ur Rehman Deputy Director Agriculture (OFWM), Lahore Division.
3.	Amir Saleem Manghat Deputy Director Agriculture (OFWM) Gujranwala
4.	Aaftab Ahmad Assistant Director (Agri) OFWM Wazirabad
5.	Muhammad Yousuf Bhatti, Deputy Team Leader ME&IE Consultants Punjab Zone, Lahore
6.	Mr. Muhammad Rizwan Suleman, Field Team Incharge (Sub Zone -2) ME&IE Consultants Lahore.
<b>Meeting Agenda</b>	
<ul style="list-style-type: none"> <li>• Briefing on ME&amp;IE Consultants given by Deputy team leader and discussed with participants particularly in field activities.</li> <li>• Review of the OFWM activities given by Director OFWM, Gujranwala and discussed future activities of departments and other relevant issues.</li> <li>• The Director informed that improvement of water courses activities in Gujranwala particularly rice area, are on peak in between the period "after the harvesting of rice and sowing of wheat". He advised that for the purpose of measurement of water flow in water courses ME&amp;IE consultants should consider the schedule of closure of canals.</li> <li>• The OFWM director and ME&amp;IE consultants assured and extended each other full cooperation in future for smooth working of the field activities.</li> </ul>	



ME&IE Consultants in meeting with Director Agri. Gujranwala

More detail of meetings/ Coordination with OFWM Departments / Field Officers is given in below tables.

**Punjab Field Team Subzone – 1**

Sr. No	Name	Designation	District	Tehsil	Contact Number
1	Abdul Hakeem	ADA	Sahiwal	Cheecha watni	0300-9692974
2	Aqeel Sultan	Supervisor	Sahiwal	Sahiwal	0302-5007291
3	Ateeq ur Rehman	Supervisor	Sahiwal	Sahiwal	0300-4527221
4	Kazim Sattar	WMO	Sahiwal	Sahiwal	0312-6930551
5	Muhammad Amir	Supervisor	Sahiwal	Sahiwal	0300-6019326
6	Shan Akram	Supervisor	Sahiwal	Sahiwal	0307-6932894

**Punjab Field Team Subzone – 2**

Sr No	Name	Designation	District	Tehsil	Contact Number
1	Waheed Uz Zaman	Deputy Director Agriculture OFWM	Hafizabad	Hafizabad	0333-6758700
2	Zafar Iqbal	Assistant Director Agriculture OFWM	Hafizabad	Hafizabad	0305-8872152
3	Muhammad Sajad	Sub-Engineer	Hafizabad	Hafizabad	0303-4716217
4	Abuzar Saleem	Assistant Director Agriculture OFWM	Hafizabad	Pindi Bhattian	0300-6607013
5	Ishfaq Ahmad	Water Management Officer	Hafizabad	Pindi Bhattian	0300-7936853
6	Muhammad Zaman	Sub-Engineer	Hafizabad	Pindi Bhattian	0304-6809026
7	Muhammad Qamar	Sub-Engineer	Hafizabad	Pindi Bhattian	0300-4029312
8	Imran Shokat	Sub-Engineer	Hafizabad	Pindi Bhattian	0345-6284570
9	Hafiz Usman	Sub-Engineer	Hafizabad	Pindi Bhattian	0332-6609325

**Punjab Field Team Subzone – 2**

Sr. No	Name	Designation	District	Tehsil	Contact Number
1	Ijaz Ahmed	Deputy District Agri Multan	Multan	Multan	03007727650
2	Qaiser	In charge Development NPIWC-II Project	Multan	Multan	03004582847
3	Muhammad Arshad	Supervisor	Multan	Shujabad	03003579736
4	Munawar Hussain	Supervisor	Multan	Multan	03015898809
5	Saeed Gardezi	Supervisor	Multan	Multan	

<b>Date</b>	September 16, 2021
<b>Venue</b>	Office of Deputy Director Agriculture (OFWM) Lahore 13-km Multan Road Thokar Niaz Baig
<b>Participants</b>	
1.	Hafiz. Majeeb Ur Rehman Deputy Director Agriculture (OFWM)
2.	Mr. Muhammad Yousaf Bhatti Deputy Team Leader ME&IE Consultants, Punjab Office Lahore.
3.	Mr. Awais Jahangeer Field Team In charge, ME&IE Consultants
<b>Meeting Agenda:</b>	
<ul style="list-style-type: none"> <li>Briefing on ME&amp;IE Consultants activities given by Deputy Team leader and discussed with participants.</li> <li>Review of the OFWM activities given by Deputy</li> </ul>	

Director (Agri) OFWM, Lahore and discussed future activities of department.
<ul style="list-style-type: none"> <li>The Deputy Director Agriculture (OFWM) further informed that agriculture sector in Lahore District, is moving towards urbanization commercialization and agriculture itself is diminishing. The generally exist area of NPIWC is on border areas whereas reverse minor system prevails.</li> </ul>
<ul style="list-style-type: none"> <li>The Deputy Director and ME&amp;IE Consultants assured and extended each other full cooperation in future for smooth working of the field operations.</li> </ul>



Meeting with Deputy Director Agri. OFWM, Lahore District

<b>Date</b>	<b>September 16, 2021</b>
<b>Venue</b>	Office of Assistant Director (Agriculture) OFWM Lahore Cantt Judicial Colony Multan Road Lahore
<b>Participants</b>	
<ol style="list-style-type: none"> <li>1. Aurangzeb Badar Assistant Director Agriculture OFWM, Lahore Cantt.</li> <li>2. Mr. Muhammad Yousaf Bhatti Deputy Team Leader ME&amp;IE Consultant, Punjab Office Lahore (NPIWC-II)</li> <li>3. Awais Jahangeer Field Team In charge, ME&amp;IE Consultants.</li> </ol>	
<b>Meeting Agenda:</b>	
<ul style="list-style-type: none"> <li>• Briefing on ME&amp;IE Consultants given by Deputy team leader and discussed the field operations of ME&amp;IE Consultants.</li> <li>• The Assistant Director (Agriculture) OFWM, explained that practically no distinction was made between Lahore Cantt and Lahore Sadar Tehsils.</li> <li>• He further shared the data of interventions particularly Watercourse's for improvements in Lahore Cantt (Tehsil) area, with Mr. Awais Jahangeer, respective subzone – 1 Field Team In-charge.</li> <li>• They assured to extend full cooperation in future, in Field operation of the project.</li> </ul>	



Meeting with AD Agri. OFWM, Lahore Cantt, and sharing

<b>Date</b>	<b>September,21.2021</b>
<b>Venue</b>	Directorate of Agriculture (OFWM) Faisalabad
<b>Participants</b>	
<ol style="list-style-type: none"> <li>1- Dr. Muhammad Asif, Director Agriculture (OFWM) Faisalabad.</li> <li>2- Muhammad Yousaf Bhatti, Deputy Team Leader NPIWC-II Punjab Zone, Lahore.</li> <li>3- Mr. Awais Jahangeer, Field Team In-charge Subzone-1, Lahore.</li> <li>4- Mr. Asim Rafiq DDA (OFWM) Faisalabad</li> <li>5- Mr. Hamid Ullah Sharif DDA (OFWM) Chiniot.</li> <li>6- Mam. Farhana Jamil DDA (OFWM) T.T. Singh.</li> <li>7- Mr. Zia ul Haq ADA (OFWM) Faisalabad.</li> <li>8- Mr. Rafique Baber ADA (OFWM) Samundari.</li> <li>9- Mr. Maqsood Alam ADA (OFWM) Jaranwala.</li> <li>10- Mr. Zafar Iqbal ADA (OFWM) Chak Jhumra.</li> <li>11- Mr. Imran ADA (OFWM) Tandlianwala.</li> <li>12- Khurshid Ahmed Mufti ADA (OFWM) Chiniot.</li> <li>13- Mr. Muhammad Usman ADA (OFWM) Bhowana.</li> <li>14- Mr. Tariq Mehmood ADA (OFWM) Jhang.</li> <li>15- Mr. Sadiq Anjum A.P. Sial. ADA (OFWM)</li> <li>16- Mr. Ahmad Raza ADA (OFWM) Kamalia.</li> <li>17- Mr. Muhammad Shoaib ADA (OFWM) Gojra.</li> </ol>	
Mr. Irfan Ahmad Regional Manger PMU, Faisalabad/ Lahore was also present in the meeting	
<b>Meeting Agenda:</b>	
<ol style="list-style-type: none"> <li>1. Dr. Asif Director (Agriculture) OFWM gave a brief introduction of everybody present in the meeting.</li> <li>2. Mr. Muhammad Yousaf Bhatti Introduced himself. Then his field team member. He further briefed on ME&amp;IE consultant activities.</li> <li>3. The participant showed their great concerns over the ME&amp;IE consultants' activities and asked so many questions.</li> <li>4. Mr. Yousaf Bhatti and his fellow participant Mr. Awais, fully shared the information on the field activities. They further explained the field activities to be carried out during 2021-22, in Faisalabad Division. Mr. Awais committed to inform the field program well in advance.</li> <li>5. The meeting was very productive and successful in achieving its main objective.</li> <li>6. The participants assured each other to have close coordination and cooperation in future.</li> </ol>	



Meeting with DD Agri. (OFWM) Faisalabad Division

Date	September,22.2021
Venue	Office of the Chairman of irrigation & Drainage Department University of Agriculture, Faisalabad
<b>Participants</b>	
<ol style="list-style-type: none"> <li>1. Dr. Adnan Shaid Chairman Irrigation &amp; Drainage Department</li> <li>2. Muhammad Yousaf Bhatti Dy. Team Leader, Lahore</li> <li>3. Mr. Awais Jahangeer Field Team In-charge.</li> <li>4. Mr. Hussain Qaisr Lecturer</li> </ol>	
<b>Meeting Agenda:</b>	
<ul style="list-style-type: none"> <li>• The purpose of meeting was to exchange the views on measurement of flow of water in watercourses with different tools/equipment.</li> <li>• The Chairman and his colleague, fully corporative and made our visit to various equipment's.</li> <li>• They also shared the data/material on such issues.</li> <li>• They further assured to corporate without field team, whenever they visit to their department in that connection.</li> </ul>	



Meeting with Chairman Irrigation & Drainage Department

#### 4.7.3 Meetings of ME&IE Consultants KP Zone

<b>Date</b>	12 July, 2021
<b>Venue</b>	Directorate of OFWM KP
<b>Participants</b>	
<ol style="list-style-type: none"> <li>1. Mr. Naseebur Rehman, Director OFWM KP</li> <li>2. Dr. Rabnawaz, District Director/ Coordinator NPIWC Peshawar</li> <li>3. Dr. Humayun, DTL KP Zone ME&amp;IE consultants</li> <li>4. Mr. Muhammad Bilal, Member ME&amp;IE consultants Team</li> </ol>	
<b>Meeting Agenda:</b>	
Request for the district wise data of the water courses and water storage tanks completed under the NPIWC during the year 2020-21	
Under the Agenda item completed WCs and WSTs were discussed in detail. The findings are reported as below.	
The DTL KP zone expressed concern over the delay in providing to the Director OFWM. In response Dr. Rabnawaz, District Director/ Coordinator NPIWC Peshawar addressed our concern and directed the concerned district directors to expedite the process of supplying of the required data to the ME&IE consultants.	
Follow-Up Actions:	
It was communicated that the proposed date will be collected by Dr. Rabnawaz (District Director) from all the district of KP and will be communicated as and when compiled by the concerned district directors of OFWM department.	

<b>Date</b>	July 30, 2021.
<b>Venue</b>	PMU office University Town Peshawar
<b>Participants</b>	
<ol style="list-style-type: none"> <li>1. Mr. Asad Dy Coordinator PMU Peshawar</li> <li>2. Mr. Saeedur Rehman PMU Peshawar</li> <li>3. Dr. Humayun Khan DTL KP zone</li> <li>4. Mr. Muhammad Bilal, Member ME&amp;IE consultant Team</li> </ol>	
<b>Meeting Agenda:</b>	
To get acquaintance regarding Field Issues	
The DTL KP zone shared different issues facing the ME&IE consultants regarding the data collection from different quarters. The team requested the PMU officials for sharing the minutes of General Review Meetings of the PMU so that to get acquaintance with issues they face during monitoring of the schemes.	



Meeting with Director OFWM and District Director / Coordinator NPIWC Peshawar

#### 4.7.4 Meetings of ME&IE Team Balochistan Zone

Date	July 13, 2021
Venue	OFWM Office, Sherani
Participants	
1. Mr. Muhammad Essa, Deputy Director, OFWM, Sherani 2. Mr. Naseeb Jan, ME&IE Consultants, Zhob	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> <li>The M&amp;E Expert, ME&amp;IE Consultants shared the tentative work plan of regular monitoring with OFWM staff.</li> <li>The M&amp;E Expert, ME&amp;IE Consultants shared the Baseline Tentative Work Plan with DD, OFWM and briefed him about Baseline/Benchmark activities/concept.</li> <li>The OFWM extend their full support at field for ME&amp;IE Consultants.</li> </ul>	



ME&IE Field Staff in meeting with DD OFWM Sherani

Date	July 14, 2021
Venue	OFWM Office, Zhob
Participants	
1. Mr. Habib Ullah Khan, WMO, OFWM, Zhob 2. Mr. Umar Khan, WMO, OFWM, Zhob 3. Mr. Naseeb Jan, ME&IE Consultants, Zhob	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> <li>The M&amp;E Expert, ME&amp;IE Consultants shared the tentative work plan of regular monitoring with OFWM staff.</li> <li>The OFWM extend their full support at field for ME&amp;IE Consultants.</li> </ul>	



Meeting with Mr. Habib Ullah and Umar Khan WMOs OFWM Zhob

Date	July 26, 2021
Venue	Meeting held at Project Consultants Office, Arbab Karam Khan Road, Quetta.
Participants	
i. Mr. Khalid Mahmood, DTL, Project Consultants, NESPAK, Quetta ii. Mr. Rizwan Ahmed, DTL, ME&IE Consultants, G3EC, Quetta	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> <li>The both DTLs discussed the file works of all interventions of F.Y. 2019-20 and 2020-21.</li> <li>The DTL, NESPAK to DTL, ME&amp;IE Consultants the file works of F.Y. 2020-21 are under process by OFWM</li> <li>The DTL, NESPAK also told to DTL, ME&amp;IE Consultants that project consultants are making ensure that OFWM staff should complete the file works before visit of Project Consultants.</li> </ul>	

Date	9 <sup>th</sup> August 2021
Venue	Office of DG, OFWM at Rani Bagh, Sariab Road, Quetta.
Participants	
1.	Mr. Ali Raza Jamali, Director General, OFWM, Agriculture Deptt, Balochistan, Quetta
2.	All Deputy Directors, OFWM, Balochistan
3.	Mr. Behram Malghani, Agriculture Officer, OFWM, Balochistan
4.	Mr. Yasir, Agriculture Officer, OFWM, Balochistan
5.	Mr. Khalid Mehmood, DTL, NWMC, Balochistan
6.	Mr. Rizwan Ahmed, DTL, ME&IE Consultants, Balochistan
Meeting Agenda/Points discussed:	
1.	All DDs presented the progress of their districts.
2.	The DG, OFWM appreciated the work progress of some DDs and ask to Mr. Behram to issue appreciation letter to them.
3.	The work progress of some DDs was not as per mark or behind the schedule. The DG, OFWM ask to Mr. Behram to issue show cause notices to all those DDs.
4.	The DTL, NWMC told to form that in future NWMC will not visit/validate any site till provision of complete file by the department.
5.	The DTL, ME&IE Consultants shared the updated progress and told to DG and DDs issues regarding non-availability of proper/complete files, owing to this reason monitoring works are suffering. The DTL also raised the issue of TS (FY 2019-20 and 2020-21) which are not yet issued while works of FY 2019-20 have been completed and FY 2020-21 are near to completion.
6.	The DG, OFWM directed to all DDs to prepare TS of F.Y. 2019-20 within two days and get approved.



Meeting with DG, OFWM Office, Sariab Road, Quetta.

Date	24 <sup>th</sup> August, 2021
Venue	Office of DDA, OFWM Quetta.
Participants	
1.	Noor Ahmed, DDA OFWM Quetta
2.	Manzoor Kasi, M&E Expert
3.	Mah Gul Noor, M&E Officer
4.	Hamza Hassan Qureshi, M&E Officer
Meeting Agenda/Points discussed:	
•	Discussed the issues faced during sites visits due to incomplete file works.



Meeting with DDA OFWM Quetta

Date	24 <sup>th</sup> August, 2021
Venue	Office of NWMC Consultants, Marri Street, Arbab Karam Khan Road, Quetta.
Participants	
1.	Rehmatullah Khan, Senior Field Engineer
2.	Manzoor Kasi, M&E Expert
3.	Mah Gul Noor, M&E Officer
4.	Hamza Hassan Qureshi, M&E Officer
Meeting Agenda/Points discussed:	
I.	Checked the files of visited Schemes.
II.	Discussed about the Validation of Files and Schemes.
Date	25 <sup>th</sup> August, 2021
Venue	Office of DDA OFWM Office, Kachhi.
Participants	
1.	Shahid Jamali, DDA OFWM Kachhi
2.	Dost Muhammad, Field Engineer (NWMC Consultants) Kachhi
3.	Manzoor Kasi, M&E Expert
4.	Mah Gul Noor, M&E Officer
5.	Hamza Hassan Qureshi, M&E Officer
Meeting Agenda/Points discussed:	
I.	Checked the files of visited Schemes
II.	Discussed the progress and issued of visited

sites by ME&IE Consultants	
Date	26 <sup>th</sup> August, 2021
Venue	DDA OFWM Office, Sibi.
Participants	
I.	Dr. Fazal Ahmed, DDA OFWM Sibbi
II.	Muhammad Javaid, Site Engineer, Sibbi
III.	Muhammad Shahid, Field Engineer, Sibbi
IV.	Manzoor Kasi, M&E Expert
V.	Mah Gul Noor, M&E Officer
VI.	Hamza Hassan Qureshi, M&E Officer
Meeting Agenda/Points discussed:	
i.	Checked the files of visited schemes
ii.	Discussed the progress and issued of visited sites by ME&IE Consultants



Meeting with DDA, OFWM, Kachi

Date	24 <sup>th</sup> August 2021
Venue	Office of DDA, OFWM, Mastung
Participants	
1.	Mr. Shams, Assistant Director, OFWM, Mastung
2.	Tariq Khoso, M&E Expert, ME&IE Consultants
3.	Saleem Abro, M&E Officer, ME&IE Consultants
Meeting Agenda/Points discussed:	
I.	Shared the progress and issued of visited sites.
II.	Checked the files of visited Schemes.



Meeting with OFWM Staff at DD Office, Mastung

Date	13 <sup>th</sup> September, 2021
Venue	Office of Deputy Director, OFWM, Zhob.
Participants	
1.	Mr. Muhammad Umar, WMO, OFWM, District Zhob.
2.	Mr. Naseeb Jan, M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	
i.	The M&E Expert shared the problems which faced during the regular/spot check field monitoring of F.Y. 2019-20 and 2020-21 due to non-availability of files.
ii.	The upcoming/new sites for the F.Y. 2021-22 were discussed.
iii.	The M&E Expert, ME&IEC discussed the field visits about baseline survey (phase-2), expected in Oct. 2021.



M&E Expert in meeting with WMO, OFWM, District Zhob

#### 4.8 INTERNAL MEETINGS OF ME&IE CONSULTANTS

##### 4.8.1 Joint Meeting / Workshop in National Office Islamabad

Date	30 August 2021 to 1 September 2021
Venue	National Office Islamabad
Participants	
1)	Dr. Abdul Quddus Team Leader, National Office Islamabad
2)	Dr. Usman Mustafa, Team leader, Water conservation Project KP
3)	Dr. Humayun Khan DTL KP Zone Peshawar
4)	Mr. Muhammad Yousaf Bhatti DTL Punjab Zone
5)	Mr. Rizwan Ahmad DTL Baluchistan Zone
6)	Mr. Rizwan Saleem Team Leader IT,

Islamabad.
7) Mr. Imran Zafer
8) Mr. Shumail, IT Manager, Lahore Office.
Meeting Agenda/Points discussed:z

##### Discussion on Field Survey / Data Collection by the Survey Teams

A meeting / workshop was called by the Team Leader ME&IE Consultants in the National Office Islamabad from August 30 to September 1, 2021. Detail discussion was held on the field survey activities being carried out by field teams and further recommendations were also discussed for further improvement of the activities.

##### 4.8.2 Internal Meetings of Zonal Office Punjab

Date	27 September 2021
Venue	Punjab Office Lahore
Participants	
Team Leader and all the field teams of Lahore Zonal Officer	
Meeting Agenda/Points discussed:	
An internal meeting of ME&IE Consultants with DTL with field In-charge and members are held off and on as per need for better understanding of the field activities. Under the experience gained during Baseline Survey Phase-I. Unfortunately it could not be organized. However on 27 September 2021 Dr. Muhammad Abdul Qaddus Team Leader, managed this meeting and advised the field team to work hard on learning and understanding of the monitoring tools.	



Team Leader Charing the Meeting in Zonal Office Lahore

#### 4.8.3 Internal Meetings of Zonal Office KP

Date	August 2, 2021.
Venue	Zoom Meeting with National Team Leader of ME&IE Consultants
Participants	
1)	Dr. Humayun Khan DTL KP Zone
2)	Mr. Muhammad Yousaf Bhatti DTL Punjab Zone
3)	Mr. Rizwan Ahmad DTL Baluchistan Zone
4)	DTL Islamabad Zone
Meeting Agenda/Points discussed:	
To discuss issues faced by the DTLs of different provinces.	
Agenda items that are issues faced by the DTLs were discussed in detail. The findings are reported as below.	
The KP and Balochistan DTLs showed great concern over the non-availability of financial logistic support for smooth running of office and field activities. The National team leader assured the DTLs that the matter will be taken up with the management and all genuine demand shall be met on priority basis.	
Date	August 12, 2021. Meeting/ Visit of the Team Leader
Venue	DTL KP Zone office, Peshawar
Participants	
1)	Dr. Abdul Quddus Team Leader, National Office Islamabad
2)	Dr. Usman Mustafa, Team leader, Water conservation Project KP
3)	Dr. Humayun Khan DTL KP Zone Peshawar
4)	Mr. Afzal Hayat, Sectoral Specialist, Water conservation Project KP, Peshawar
Meeting Agenda/Points discussed:	
<b>To get acquaintance regarding Field Issues</b>	
Dr. Abdul Quddus TL ME&IE Consultants and DR. Usman Mustafa Team Leader Water Conservation Project KP Peshawar paid a visit and discussed general issues with the DTL Peshawar. The Team Leader also met with the FTIs and all other field team members and gave guidance regarding the collection of data for the project.	

Date	August 12, 2021 – NPC Visit to KP Zone Office Peshawar
Venue	DTL KP Zone Peshawar Office
Participants	
1)	Mr. Muhammad Tahir Anwar NPC
2)	Rana Usman, Procurement Support Manager to NPC
3)	Dr. Humayun Khan DTL KP Zone Peshawar
4)	KP office Team
Meeting Agenda/Points discussed:	
<b>Visit of NPC to KP Zone Peshawar Office</b>	
NPC visited KPC Zonal office Peshawar and checked me the consultants' staff in the KP Zone office. The DTL explained the office position and provided the staff list to him. NPC met all the staff of ME&IE consultants and discussed the issues and their solution	

Date	September 17, 2021
Venue	KP Zonal Office, Peshawar
Participants	
1.	Dr. Humayun Khan DTL KP Zone
2.	Sahibzada Alamgir Khan Ex-Director OFWM, Peshawar
3.	Mehrab Jan Khan, Provincial Project Coordinator PMU KP
Meeting Agenda/Points discussed:	
Meeting with Ex-Director OFWM and Provincial Project coordinator PMU, KP	
The DTL welcomed the honorable guests for accepting the invitation and visiting the ME&IE Consultants Zonal office Peshawar. The meeting was held in a cordial manner and general discussions were held regarding the ME&IE Consultants activities taking place and the training for the team member were discussed and agreed to offer their services whenever required by the KP Zonal office.	



DTL KP Zone in meeting with Ex-Director OFWM, Peshawar

Date	20 September 2021
Venue	Zoom Meeting
<b>Participants</b>	
5.	Dr. Abdul Quddus, TL, National Office Islamabad
6.	Dr. Humayun Khan DTL KP Zone
7.	Mr. Muhammad Yousaf Bhatti DTL Punjab Zone
8.	Mr. Rizwan Ahmad DTL Baluchistan Zone
<b>Meeting Agenda/Points discussed:</b>	
<b>Conducting Workshop at Zonal Offices</b>	
Agenda of the meeting was to address the issues raised by the IT Team of the ME&IE consultants.	
The National team leader directed all the DTLs to arrange a workshop for the field team members to provide them extensive training before launching the Baseline Survey Phase-II.	
<b>Action Taken</b>	
Workshop was arranged in the zonal office Peshawar on September 24-25, 2021.	

Date	24 & 25 September 2021
Venue	Zonal Office Peshawar
<b>Participants</b>	
<b>Resource Persons:</b>	
1.	Dr. Abdul Quddus Team Leader ME&IE Consultants
2.	Dr. Humayun Khan Dy. Team Leader KP Zone, Peshawar
<b>Participants of the workshop</b>	
1.	Mr. Inamullah FTI

2. Mr. Mumtaz Ullah FTI
3. Hussain Mr. Mehmoodul Hasen FTI
4. Mr. Arsalan FTE
5. Mr. Fawad FTE
6. Mr. Matloob FTE
7. Mr. Abdul Rauf Saad FTE
8. Mr. Farhan FTE
9. Mr. Aftab Ahmad FTE

#### Meeting Agenda/Points discussed:

In compliance with the workshop in the National office Islamabad, a two days' workshop/meeting was arranged in the KP Zonal office Peshawar on September 24-25, 2021 for training of the field teams.

#### Proceedings of the workshop

##### 1<sup>st</sup> day, September 24, 2021:

The Workshop started with the recitation from the Holy Quran by Matloob Hussain, Field Team Engineer.

The DTL KP Zone gave opening remarks with the brief objective of the project and the purpose of the workshop. The need of arranging of the workshop was explained in the light of the workshop held on August 30-31 and September 1, 2021.

DR. Abdul Quddus, Team Leader (Resource Person) delivered detailed lecture on different aspects of the NPIWC – II, ME&IE consultants, and expectations of the clients from the consulting firm. He explained all the concept mentioned in MTs; including per acre cost of production, per acre yield, cropping pattern, crop rotation, inputs required for different cost etc. Method of conducting the survey and monitoring of water courses and water storage tanks were explained in detail. The participants were given opportunity to raise their concern about issues they faced in the field during the survey. Detail deliberations were made during the workshop. The Team Leader responded to all the questions raised during the session.

##### 2<sup>nd</sup> day, September 25, 2021:

2<sup>nd</sup> day of the workshop was specifically meant for understanding of the MTs for conducting the field survey. DTL KP Zone distributed the MTs among the team members and explained in detail each and every question given in the MTs. Then all the participants of the workshop were distributed in three groups headed by the FTIs. The FTIs along with their teams interviewed each other and where any confusion found, was noted. This exercise remained

for about three hours. All the three teams noted the confusions they found in the MTs. The DTL explained and cleared all the confusion of the participants.

At the end the DTL concluded the session and thanked all the participants for their patience.



Team Leader in meeting with KP Zone Team during Training

#### 4.8.4 Internal Meetings of Zonal Office Quetta

Date	July 09, 2021
Venue	Zoom meeting.
Participants	
i.	Engr. Hafiz Abdul Rouf, CEO-EASE-PAK
ii.	Dr. Muhammad Abdul Quddus Team Leader
iii.	Muhammad Yousaf Bhatti Dy. Team Leader
iv.	Dr. Sarwar Zahid. Dy. Team Leader, IST
v.	Rizwan Ahmed, Dy. Team Leader, Balochistan
vi.	Mr. Bilal, Acting DTL, KPK
vii.	Rizwan Saleem, Dy. Team Leader, Quetta
Meeting Agenda/Points discussed:	
•	It was discussed the TORs particularly the Scope of Work of the ME&IE Consultants.
•	The mandate of ME&IE Consultants during monitoring of all interventions.
•	All participants give their opinion on above as per Consultant's TORs

Date	July 24, 2021
Venue	Zoom meeting.
Participants	
i.	Dr. Muhammad Abdul Quddus Team Leader
ii.	Muhammad Yousaf Bhatti Dy. Team Leader
iii.	Dr. Sarwar Zahid. Dy. Team Leader, IST
iv.	Rizwan Ahmed, Dy. Team Leader, Balochistan
v.	Mr. Bilal, Acting DTL, KPK.

#### Meeting Agenda/Points discussed:

- Discuss and share the Work Plan of Regular Monitoring with TL
- The strategy regarding Regular Monitoring / Spot Checking discussed in detail, all DTLs submitted their point of view and shared field problems.
- All DTL given the instructions from TL to make a comprehensive work plan, team wise and submit to TL for concurrence.

Date	July 26, 2021
Venue	Meeting at Zonal Office, Quetta.

#### Participants

- DTL, Balochistan
- ME&IE Experts
- ME&IE Officers

#### Meeting Agenda/Points discussed:

- The forum discussed the Work Plan of Regular Monitoring of 15 districts of Balochistan in compliance of Team Leader instructions.
- The ME&IE field teams get finalized sample size randomly for regular monitoring / spot checking.
- The issues regarding field activities were also discussed



Internal Meeting of ME&IE Consultants Zonal office Quetta

Date	8 September, 2021
Venue	Zonal Office, Quetta (343/3, Chiltan Road, Quetta Cantt)
Participants	
1)	Hafiz Abdul Rauf Sahib, Member, PBOM (In chair)
2)	Mr. Rizwan Ahmed, DTL, Quetta
3)	Mr. Manzoor Kasi, M&E Expert
4)	Mr. Hamza, M&E Officer,
5)	Mr. Qaisar Khan, M&E Officer,
6)	Mr. Saleem Ahmed, M&E Officer,

- 7) Ms. Mahgul Noor, M&E Officer,
- 8) Syed Ibrar Hussain, OM
- 9) Mr. Mubeen, Accountant
- 10) Mr. Adnan Bashir, Computer Operator

**Meeting Agenda/Points discussed:**

- i. The Member, BPOM briefed by DTL about project progress.
- ii. First Baseline Field Survey of 09 districts has been done in the first phase, now the report is under preparation at the end of the National Office.
- iii. The Balochistan field teams have monitored 03 districts i.e., Loralai, Killa Saifullah and Sohbat Pur in June 2021. In July 2021 field teams were monitored in 08 districts i.e., Jaffarabad, Naseerabad, Zhob, Sherani, Musakhail, Duki, Noshki and Ziarat. In the month of August 2021 field team monitored further 08 districts i.e., Mastung, Kalat, Khuzdar, Pishin, Killa Abdullah, Quetta, Kachi and Sibi. Till to date, Balochistan field teams have monitored the project activities of 19 districts, covering 58% districts of Balochistan.
- iv. Several workshops/trainings were conducted for field staff regarding baseline survey and regular monitoring at Zonal Office, Quetta.
- v. The issues regarding incomplete files/data at the end of OFWM & NWMC was also discussed.
- vi. The Member, BPOM advice to support staff to enhance their project knowledge for productive outputs.
- vii. The ME&IEC staff shared administrative problems with Member BPOM, The Member BPOM heeded all the individuals and took decisions at the spot.
- viii. The ME&IEC staff is advised by the Member, BPOM to work as a team and perform unsurpassed for the success of the project.
- ix. The ME&IEC staff briefed that performance of all provincial staff are being observed at the National Level, therefore, all staff should focus on their TORs and be vigilant in submission of all deliverables timely.
- x. The Member, BPOM checked the office operational system and gave some fruitful advice for more improvement.
- xi. The Member, BPOM advises ME&IEC field staff to make reporting as per objective of the projects.
- xii. The Member, BPOM also advised DTL and ME&IEC field staff to report impact of the

project and analysis of the data as per ME&IEC TORs.

- xiii. The DTL advised by Member BPOM plan a refresher on revised MTs before starting the second phase of Baseline.



H. Abdul Rauf MBOM in meeting with ME&IE Team in Zonal Office Quetta

Date	20 <sup>th</sup> September 2021
Venue	Zoom Meeting (Chaired by Team Leader, ME&IEC)
<b>Participants</b>	
i.	Mr. Shams, Assistant Director, OFWM, Mastung
ii.	Mr. Rizwan Ahmed, DTL, Quetta
iii.	Dr. Humayun Khan, DTL, Peshawar
iv.	Muhammad Yousaf Bhatti, DTL, Punjab
<b>Meeting Agenda/Points discussed:</b>	
i.	The schedule for Training/Workshop regarding Baseline Survey (Phase-2) were discussed.
ii.	The TL shared his schedule and advice to DTLs to adjust the dates accordingly.
iii.	All DTLs revised the training schedule and shared with TL.
iv.	All DTLs given suggestions by TL regarding trainings/workshop.

#### 4.9 MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT

Women empowerment has become vital issue on the development agenda. Importance of irrigational activities in agricultural sector cannot be denied. Keeping in view the objectives of the **NPIWC-II monitoring and evaluation consultants**, it was expected to get a clear and vivid picture from field about women participation and empowerment in agricultural based activities through monitoring and

evaluation's. It is predictable that to achieve the increased agricultural productivity and decreasing poverty through National food security goals, women participation is very important as women play important role in building an enable environment for the wellbeing of their family and society.

Water related matters affect gender relations and raises several social, traditional, institutional, and economic queries. Roles of women and girls are linked with tasks relative to water fetching, storage and usage. Yet their role as users is acknowledged, women and youths are still not involved in managing and emerging these assets, because social limitations limit their integration into decision-making organizations.

In this quarter lot of activities were undertaken by field teams, gender specialist visited National office Islamabad and worked under the guidance of project coordinator and team leader. Brain storming session on women participation was held with AJK and Islamabad team, analysis of the data collected was reviewed and way forward was discussed with Authorized Representative of JV Saif ullah Ejaz Ch to undertake case studies of gender (woman and men separately) for impact assessment.

**Case studies** will be prepared 25 in each province/unit, detailed process steps will be finalized in next quarter after structuring processes. This will enable to measure the impact of program .it will also enable all stake holders that how program activities contribute toward achieving **Sustainable development goals**.

The case studies are intended to offer all stake holders an opportunity to unpack and understand the role of gender differences in driving agriculture and effects of irrigational outcomes, how program impacted, identify the program also promotes gender equality and women's empowerment. The case studies are not meant to be perfect examples of how gender differences are identified and managed, but are meant as a learning tool intended to:

- Provide insight into specific areas where gender differences exist.
- This will enable to access impact of program socially and economically.

- Examine challenges and emerging lessons about integrating gender across programming and policy.

Data clearly depicts lack of participation of women in program activities, which is alarming as more than 50 percent population cannot be excluded, so measure's should be taken to involve women in program activities, social mobilization process should be looked into, strong Media campaign should be initiated and it is recommended focus group discussion should also be taken into consideration. Analyses of base line also shows that trend is same throughout the country of non-participation. Reasons are cultural barriers, lack of education and knowledge regarding irrigational activities. Furthermore, at community level dispute resolution mechanism should be developed with OFWM staff at community level.

Teams of Zonal office share observation regarding low participation in project activities which are narrated below.

#### 4.9.1 Balochistan

The women's role in Balochistan's agriculture sector is limited due to Tribal customs. In most of districts they are not allowed to work at farms, The women participation in North Zone (Quetta, Pishin, Killa Saifullah, Zhob, Loralai, Killa Abdullah, Sherani and Dukki) is almost nil at farm's level due to cultural barriers, however they do activities at their home i.e. storage of crops and livestock etc.

The women's participation in Naseerabad and Khuzdar Divisions have been seen on large scale with following activities:

- Seed cleaning
- Threshing
- Grain cleaning
- Livestock
- Crop production
- Drying and storage of crops
- Medicinal plants for treating many ailments in Khuzdar and Kalat districts

#### General Observations:

- It was observed with great concern that interviewed females doesn't know about WUA.
- The participation of females was very limited.

- The females were not consulted in making decision.
- Lack of educational institutions.
- Females doesn't know about NPIWC-II and Water User Association.
- Women are not consulted in making decisions about household matters, spending income, and in farming.
- Team was not allowed to take a picture due to tribal customs

During the reporting period Team-3 of Balochistan Zone was assigned to collect data regarding Social and Gender from different districts of Balochistan. Team collected data from district Noshki and Ziarat by covering North and South Zones both. The detail of visits and data collected is given below:

### 1) Field Visit Date –29 July 2021

District: Noshki  
 Tehsil: Noshki  
 UC: Ahmad Waal  
 Village: Battu Landi  
 Monitored by: Mis Mahgul, M&E Officer

<b>Farmer's Name:</b>	Ameer Hamza
<b>Scheme</b>	Watercourse
<b>Name of Respondent:</b>	Rasheeda
<b>Age of Respondent:</b>	28
<b>Level of Education:</b>	Illiterate
<b>Occupation:</b>	Agriculture
<b>Single/Married:</b>	Married
<b>Do you Own piece of Agricultural Land?</b>	No
<b>Owner/Tenant:</b>	Tenant
<b>Do you Participate in farming activities?</b>	Yes
<b>Do you face Problem in irrigation water?</b>	No
<b>Are you Consulted in farming decisions?</b>	Never
<b>Are you consulted in spending income at your household?</b>	Never
<b>Are you consulted in making household decisions?</b>	Never
<b>What household activities are performed by you?</b>	Cooking, looking after elders, washing clothes and dishes, cleaning of house, caring of children, bringing drinking water, bringing

	fire wood
<b>Have you heard about NPIWC-II project?</b>	No
<b>Do you know about water user Association?</b>	No
<b>Do you wash clothes at washing pad at watercourse?</b>	It was PVC Pipe scheme. There is not washing pad as per design.
<b>Are culverts sufficient for crossing at watercourse?</b>	It was PVC Pipe scheme. There is not washing pad as per design.

#### Comments:

- There is no educational institution.
- There are no health facilities in enclose, they travel about to 17 kms on bumpy road to reach any hospital.
- She doesn't know about NPIWC-II and Water User Association.
- She doesn't consult in making decisions about household matters, spending income, and in farming.
- She worked at farms with his family male members.
- Her others female family members are also worked on farms.
- The females not having knowledge about hygiene.
- They not allowed taking a picture due to tribal customs.

### 2) Field Visit Date –30<sup>th</sup> July 2021

District: Ziarat  
 Tehsil: Ziarat  
 UC: Manna  
 Village: Sasnak  
 Monitored by: Mis Mahgul, M&E Officer

<b>Farmer's Name:</b>	Abdul Ghafar
<b>Scheme</b>	WST
<b>Name of Respondent:</b>	Hameeda
<b>Age of Respondent:</b>	35
<b>Level of Education:</b>	Intermediate
<b>Occupation:</b>	Lady Health Worker
<b>Single/Married:</b>	Single
<b>Do you Own piece of Agricultural Land?</b>	Don't Know
<b>Owner/Tenant:</b>	The owner of land were her brothers
<b>Do you Participate in farming activities?</b>	No

<b>Do you face Problem in irrigation water?</b>	Not known
<b>Are you Consulted in farming decisions?</b>	Never
<b>Are you consulted in spending income at your household?</b>	Never
<b>Are you consulted in making household decisions?</b>	Never
<b>What household activities are performed by you?</b>	Cooking, looking after elders, washing clothes and dishes, cleaning of house
<b>Have you heard about NPIWC-II project?</b>	No
<b>Do you know about water user Association?</b>	No
<b>Do you wash clothes at washing pad at watercourse?</b>	No
<b>Are culverts sufficient for crossing at watercourse?</b>	No
Comments:	<ul style="list-style-type: none"> <li>• There is no educational institution.</li> <li>• The females are not allowed to work in Farms.</li> <li>• She doesn't know about NPIWC-II and Water User Association.</li> <li>• She doesn't consult in making decisions about household matters, spending income, and in farming.</li> <li>• They not allowed taking a picture due to tribal customs.</li> </ul>

### 3) Field Visit Date –30<sup>th</sup> July 2021

District: Ziarat  
Tehsil: Ziarat  
UC: Manna  
Village: Sasnak  
Monitored by: Mis Mahgul, M&E Officer

<b>Name of Farmer:</b>	Abdul Ghafar
<b>Scheme</b>	WST
<b>Name of Respondent:</b>	Razia
<b>Age of Respondent:</b>	29
<b>Level of Education:</b>	Middle
<b>Occupation:</b>	Housekeeping
<b>Single/Married:</b>	Married
<b>Do you Own piece of Agricultural Land?</b>	Not Known
<b>Owner/Tenant:</b>	Her husband is owner of land

<b>Do you Participate in farming activities?</b>	No
<b>Do you face Problem in irrigation water?</b>	Not known
<b>Are you Consulted in farming decisions?</b>	Never
<b>Are you consulted in spending income at your household?</b>	Never
<b>Are you consulted in making household decisions?</b>	Never
<b>What household activities are performed by you?</b>	Cooking, looking after elders, washing clothes and dishes, cleaning of house, caring of children
<b>Have you heard about NPIWC-II project?</b>	No
<b>Do you know about water user Association?</b>	No
<b>Do you wash clothes at washing pad at watercourse?</b>	No
<b>Are culverts sufficient for crossing at watercourse?</b>	No
Comments:	<ul style="list-style-type: none"> <li>• There is no educational institution.</li> <li>• The females are not allowed to work in Farms.</li> <li>• She doesn't know about NPIWC-II and Water User Association.</li> <li>• She doesn't consult in making decisions about household matters, spending income, and in farming.</li> <li>• They did not allow taking a picture due to tribal customs.</li> </ul>

#### 4.9.2 Azad Jammu and Kashmir

Team visited AJK they found a very amicable environment for females in AJK. Team found people very cooperative in responding the questionnaire.

- Education level is much higher which facilitates them in answering the questions.
- Knowledge and participation in agriculture activates was found good.
- Most of the females were housewives indulge in house hold work like cooking meals, washing utensils, washing clothes and looking after their children. Some of the females were actively participating in agricultural practices.

- They had a lot of knowledge regarding agricultural practices but none of them were the owner of the land most of them were working on their husband's land.
- In decision making related to agriculture and crops, according to them sometimes they were asked about their opinions, but final decision is of men.
- While decisions regarding household activities and expenses they were involved fully.
- Most of the females interviewed were not aware of the NPIWC II project they hardly knew about the project and the WUA organization.
- There were no washing bays at any watercourse in AJK so they were not using any washing bays to wash the cloths.

#### 4.9.3 Islamabad CT

- Team visited in capital of Pakistan along with on farm water management staff unfortunately unable to the female farmers of that area as due to farm houses agriculture pattern and hired labor.
- Women were not actively participating in and agriculture or irrigational activities Female participation in ICT is not seen.
- Land is mostly in the name of their father or husband,

#### 4.9.4 Khyber Pakhtunkhwa

During the month of July, eighteen sites were visited in the monitoring survey by the field teams in different districts of the province. Similarly, during the month of August 2021, twenty-one sites were visited in the 2nd round of survey by the field teams in different districts of the province. The observations are as under.

- Community response was found very encouraging among the owner cultivators who can afford to bear the farmers' share of cost of construction of water course and water storage tanks.
- Not a single woman was contacted because the rural women were never found in the irrigational (OFWM) activities in these sites. Thus, in this regard their participation may be considered as zero.
- The information reported by their male members regarding female participation that, they were involved in other farm activities mostly inside and rarely outside the house

- boundaries. These activities include grazing of animals, milking of animals, watering of animals, cleaning of animal sheds, drying of animal dung, cleaning of grains, picking of vegetables, fruits, etc. The reason could be cultural constraints in these areas, where it is not considered good to allow the females to work outside the house. Moreover, mechanization could be another factor for this response.
- Even no such data is available at the OFWM department at provincial level. Only three female WMO having degrees in Water Management, are stationed at the Provincial Directorate Office who are assigned duties at the office.
- No women WUA was found neither at farm level.

#### 4.9.5 Punjab

During the month of July 2021, twenty-four sites were visited by the field teams in different districts of the province. Similarly, during the month of August 2021, seventeen sites were visited by the field teams in different districts of the province. No women were contacted.

During water tanks monitoring visits two women were found in the field and they were the owner of Water Storage Tanks.

### 4.10 ICT ASSIGNMENT

#### 4.10.1 Development of web site of NPIWC-II

The development of Website for NPIWC Phase-II was started by the month of February 2021. The following activities have been completed: -

- Held meetings with the Stakeholders to identify the project website requirements
- Website layout structure prepared
- Design & Development of website completed.

The Revision/up-dation of the Project website has been presented to NPC office and got approval on all changes. Currently all changes have been incorporated accordingly as per requirements of the Client.

The final Beta version was demonstrated to NPC in his office by August 2021. The minor refinement suggested by the Client is under process.

#### 4.10.2 Data collection of interventions in MIS/GIS database

The activity regarding data collection of Interventions in MIS/GIS database has been completed.

#### 4.10.3 Designing of dashboard of Project Interventions

The designing/development of the MIS/GIS system followed the software engineering methods. Thus, user requirements elicitation, requirements analysis, system design, system implementation and maintenance were done in a circular fashion. Thereafter, evaluation will be done to test the efficacy, effectiveness, and efficiency of the management information system in the real environment. In the system development, both structured system analysis, design, object-oriented analysis, and design approaches will be used.

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

The GIS based MIS will provide the means of:

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

It is proposed that the Management Information System (MIS) for NPIWC be implemented using a phased approach although due to Agile Software Development Methodology few activities will interrelate between phases. The following 2 phases are considered:

#### Phase-I – MIS Development Requirement & GAP Analysis – (Completed)

The ME&IE Consultants performed Requirement Analysis to review the project processes.

A thorough assessment of any existing IT infrastructure.  
a. *Perform needs assessment of the current IT capacity of individual stakeholder's and identify*

- any infrastructure gaps and recommend necessary upgrades in IT infrastructure.*
- b. *Identify hardware and network infrastructure requirements and specification at the core, access, and distribution layers along with endpoint*
- c. *Determine the technical parameters of the solution based on the following:*
  - i. *Network topology, diagrams, and specifications of hardware of the proposed solution*
  - ii. *Bandwidth requirement based on the total number of anticipated users with a redundancy plan*

#### GIS Integrated MIS Development – (Completed & Delivered)

*Based on the requirements gathered, develop an application framework that includes user management, access control, security, and workflow for publishing information. This application framework should be based on Modular Architecture to enable modules to be added in the future and be able to share data with other applications. Test the application framework with the real users and gather feedback on the system.*

*Based on the feedback received from the testing by the real users, finalize the web-based/ mobile-friendly application.*

#### MIS / Android Application Deployment and Testing (Beta Run) - (Completed)

The ME&IE Consultant deployed the MIS at the designated web server and handed over the documented source code. The ME&IE Consultant also conducted functional and operational testing. A User Acceptance Test (UAT) is to be carried out (either as part of the deployment or after).

#### Digitize and Migrate the Data – (Under Progress)

*During this time, a lot of data has been generated, it can be in digital form or may be in hard copy form. The ME&IE Consultant has to digitize the hard copy data and has to migrate the complete data in the respective database forms.*

Designing and Development of Dashboard of Project interventions have been completed. The final presentation of Web-Based PMIS, integrated with GIS

and M&E system was presented to NPC office and received the approvals.

#### Implementation of GIS Integrated MIS Dashboard - Under Progress

##### Operational and User Manual

Based on the feedback received from the testing by the real users, finalize and prepare operational documentation and user manuals for orienting the users. Make the user manual as a help file to the online application so that the user can refer to the manual as and when needed.

Submission of a comprehensive Operation and User Manual followed by handing over of the completed MIS. The ME&IE Consultant will submit a Soft and Hard Copy of the Operation and User Manual for the operation of the overall MIS. This manual will also be available online for users from their logins, the online manual should be properly indexed and searchable as web pages on a secured area.

##### Training and Capacity Building

Training and Capacity Building of staff on MIS and Android Application is an essential and final part of this assignment. Training modules will have to be designed for multiple groups of users as per their needs and requirements. Potential user groups could be the following:

- NPC – FPMU
- Provincial DGs (OFWM) -PMU
  - Regional Directors (OFWM)
  - Deputy Directors (OFWM)
  - Field Teams (OFWM)
- Project Consultants
- ME&IE Consultants

A comprehensive document of the training plan has to compile for this phase. As each user group has different requirements for training as mentioned below:

**NPC – FPMU** — National Project Coordinator and Federal Project Management Unit's need the insight of overall national level progress and impact reports. This group will not submit any primary data. Android application training will not be delivered to the users of this group.

Despite multiple communications between Client and ME&IE Consultants, the nominations/ names from Client for training are pending.

**Provincial DGs (OFWM) – PMU** — Provincial DGs and their Project Management Unit's need the insight of their respective provincial level progress and impact reports. This group will not submit any primary data. Android application training will not be delivered to the users of this group.

**Regional Directors (OFWM)** — Regional Directors under their Provincial hierarchy requires the insight of their regional level progress and impact reports. This group will submit any primary data through the Android Application.

**Deputy Directors (OFWM)** — Deputy Directors under their Provincial hierarchy requires the insight of their District level progress and impact reports. This group will submit any primary data through the Android Application.

**Field Teams (OFWM)** — Field Teams are the basic source of primary data collection from the fields against all activities. Major data will be collected and submitted to MIS through this group. This group does not require access to MIS and its training as well.

**Project Consultants** — Project Consultants requires the MIS access and training and the Android application training as well to access and submit the data generated by Project Consultant like certifications.

Although PCs provided the names for training, but ME&IE Consultants are of the view that PCs needs to revisit their nominations.

**ME&IEC** — Monitoring Evaluation and Impact Evaluation Consultants provided the Android Application trainings to its field staff as well and will submit the Baseline, Endline data and Progress Monitoring and Impact Reports.

#### 4.10.4 Implementation of MIS Dashboard in AJK

Based on three stages of Implementation Process, GIS & Information System Department of ME&IE Consultant designed the methodology of implementation process

- Stage I - Digitize and Migrate The Data
- Stage II – Meetings with All Stakeholders And Shortlist The Nominations
- Stage III - Training and Capacity Building

These stages are elaborated in section 4.10.3.

During the field visit of AJK from 5th to 8th September 2021 under the leadership of NPC, The Team Leader and ICT/Technology Specialist represented the ME&IE Consultants in the meetings of NPC with Secretary Agriculture AJK, DG Irrigation and Project Director (NPIWC-II) AJK. In these meetings, along with all improvement of work discussions, Mr. Rizwan Saleem ICT/Technology Specialist with the consultation of the Authorized Representative of JV proposed NPC to start the implementation of Dashboard from AJK as an implementation model, later which can be adopted as a model during the MIS Dashboard implementation to other provinces/units with a Small-to-large Approach. The NPC agreed with this proposal and directed Mr. Basharat Hussain Durrani (PD) to cooperate with the ICT team of ME&IE consultants.

Therefore, on the directions of Authorized Representative of JV, a seven-members ICT team led by ICT/Technology Specialist started their assignment from their visit to Muzaffarabad AJK from 14th September 2021 and completed the major phase till 30th September 2021. The objective of this visit was to digitize the project interventions data like; watercourses and water storage tanks/water harvesting structures. In this regard, all official files were obtained from Irrigation & small dams department for making database of all interventions and scanning of departmental data/files of interventions (i.e., watercourses and water storage tanks / water harvesting structures) of all 10 districts of AJK for implementation of Dashboard in AJK unit.

The team held a number of meetings with Mr. Basharat Hussain Durrani (Project Director I&SD AJK) and NWMC representatives Mr. Murtaza Chattha (FTI NESPAK) for consultation to develop and finalize the template/form for the database of Dashboard. Multiple versions were discussed and ultimately finalized database template/forms for WC and WST/WHS with conscience and took the approval from PD. The database forms/templates of WC and WST/WHS are placed at Annex-E&F respectively. Later, ICT Team of ME&IE started coordination and acquisition of data from all divisions/districts of AJK. Deputy Directors of all 3 divisions along with Assistant Directors of all 10 districts cooperated and started providing official files of all interventions to ICT team in their camp office at Mir Continental hotel Muzaffarabad.

After study/assessment of files the data deficiencies/missing data was conveyed to ADs. To facilitate the department and to fulfil the backlog of the last 2 years,

the ICT team of ME&IE Consultants voluntarily took the responsibility of data entry on the approved forms and scanning of relevant files of all interventions to accommodate the implementation of Dashboard.

The ICT team will further start working on validation of data, they will cross check the database data with compared to scanned data. In the compliance of PC-1, the observations were noted on process deficiencies, gaps, and bottlenecks. A detailed comprehensive field trip report along these observations and gap analysis will be submitted to the NPC office during the running month, which is currently under preparation.

ICT team also visited WC and WST/WHS schemes in Neelum for physical identification and assessment of structures.

The summary of completed schemes under NPIWC-II in AJK and the data collection status of ME & IE Consultants is placed at Annex-G. The activities of MIS database are depicted in below figures.



Surprise visit of Authorized Representative of JV to monitor working of ICT Team in Muzaffarabad Camp Office



Meeting in the office of Mr. Basharat Hussain Durrani (Project Director I&SD AJK)



ICT team in meeting with Mr. G. Murtaza Chattha (FTI NWMC)

#### 4.11 DELIVERABLES

The detail of deliverables of ME&IE Consultants with the timelines are 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
Baseline Survey Report (Draft)	Submitted
Monthly Monitoring Report-Ninth (SEPTEMBER 2021)	To be submitted within stipulated time
Quarterly Monitoring & Evaluation Report-Third (JULY - SEPTEMBER 2021)	To be submitted within stipulated time
Special Reports:	
<ul style="list-style-type: none"> <li>Working Paper on Technology and Methodology for Implementation of Android Based Field Progress Data Collection and GIS Based Progress Monitoring Analytical Dashboard</li> </ul>	Submitted

Deliverables/Reporting Requirements is placed at Annex-C.

#### 4.12 MATRIX OF RESPONSIBILITIES

Matrix of Responsibilities is placed at Annex-B.

#### 4.13 CASE STUDY ON THE INTERVENTION

A case study conducted by Balochistan team was conducted which is given below.

**The case study “Grapes processed to “Monakka” in District Pishin.**



**Manakka**

Balochistan is the main pocket for grape production. The area under grape in Balochistan is about 3400 hectares with the production of about **34300 tonnes**. Most growing areas of grape in Balochistan are Quetta, Kalat, Mastung, Pishin, Zairat, Loralai, Kanak, Khuzdar etc. Raw grapes are 81% water, 18% carbohydrates, 1% protein, and have negligible fat.

During the current month ME&IEC worked on case study that how Agriculture's Farm Incomes could be increased and utilization of agriculture processed product in Balochistan.

This study was carried out in Pishin district, which is known as the main grapes producing area of Balochistan. Monakka are simply dried grapes produced from grapes mostly produced in Pishin district of northern upland Balochistan. Ripened grapes are either marketed in the fresh form to different markets or transformed to raisins to increase its shelf life. Two types of grapes drying common in the area; when the drying process is done in the sun shine after pre-drying treatment the end product is locally called as Monakka, while when drying process is done in a shady and well-ventilated room without any treatment the end

product is locally called as Kishmish, they both are collectively called as raisins.

The ME&IEC field team visited the agriculture farm of Haji Mohammad Sadiq Tareen. He had 250-acre Cultivable Command Area, in which 40 acres were being used for cultivating grapes. Total thirty (30) labors were working in all process. The resources which were in used i.e., baskets, water, kiln, Sulfur and a mud coated land for drying raisins.

#### Process:

- i. First collect the ripe grapes from branches and remove the grapes from stems.
- ii. The grapes put in to small baskets.
- iii. The filled grapes baskets dipped in to kiln for 5 to 10 seconds which already filled by boiled sulfur.
- iv. After process through boiled sulfur, it dipped in to cold water for 5 to 10 seconds.
- v. After above process, all grapes spread on mud coated land to dry in sun light which takes 5-7 days to turns grapes in to Monakka.
- vi. In last, they collect the Monakka and put into bags for sale in markets.



Fresh grapes collected from farm for further process



ME&IEC Field Team at grape's farm



Grapes are being dipped in to kiln for 5 to 10 seconds.



Grapes are spread on mud coated land to dry in sunlight for 5 to 7 days



Different stages of Monakka during drying



The Monakka are ready to sell in Market

The study results revealed that 3000 kg of fresh grapes are required to produce 1000 kg of Monakka with grape raisins ratio of 3:1. Similarly for making 1000 kg Kishmish, 3500 kg of fresh Kishmishi or Sunderkhani grapes are required with a ratio of 3.5:1. Overall average yields of Munakka and Kishmish produced from one-acre grapes were, 1528 and 1148 kg, respectively in the study area.

***The study results showed that drying of grapes is a good source of income generation in the grapes growing area.***

The difference in total revenue is showing in below table:

Place	Total Cultivated Area (40 Acre)	Per Acre Production (KGs)	Total Production (KGs)	Rate (Rs.)	Total Revenue (Rs.)
On Farm	Grapes	4584	83,360	75	13,752,000
	Monakka	1528	61,120	550	33,616,000
<b>Difference</b>					<b>19,864,000</b>
Local Market (Balochistan)	Grapes	4584	183,360	150	27,504,000
	Monakka	1528	61,120	1280	78,233,600
<b>Difference</b>					<b>50,729,600</b>

The grapes are also used for making jam, grape juice, jelly, grape seed extract, vinegar, and grape seed oil, or dried as raisins. There are many types of grapes including green, red, black, yellow and pink. They grow in clusters and come in seeded and seedless varieties.

Another usage of grapes is to make raisins, which produced commercially by "drying harvested grape berries". For a grape berry to dry, water inside the grape must be removed completely from the interior of the cells onto the surface of the grape where the water droplets can evaporate. When grapes come to raisins, Raisins have essential nutrients like vitamins and minerals. All these help in fighting with free radicals in our system, stabilizing them, and preventing them from causing oxidative damage to our cells including the white blood cells that form the backbone of our immune system.

There are so many crops, fruit and vegetable in Balochistan which produced several types of processed products which need to proper guidance for its use to increase their income. Ultimately this increase in income will impact on GDP of Pakistan. Agriculture has huge contribution toward GDP of Pakistan economy. Increase in GDP shows the developing progress of the economy. By promoting the processed products in agriculture sector, the GDP can be increased. Employment contributes to GDP; it is as with the increase in employment through processed product industries the per capita income will increase which results to increase in GDP rate of the economy. The 3rd largest sector of contributing to GDP is agriculture.

**Bottlenecks:**

Water, not land, is usually the main factor limiting agricultural productivity and growth of farm incomes. Low quality inputs, poor marketing practices, and limited access to extension services and market information also constrain agricultural productivity.

**Suggestions:**

1. Establishment of by- product industry
2. Establishment of small crushing mills of agriculture wastes all over Balochistan
3. Initiate the projects like Farm to Market Road
4. Procurement of training
5. Arrangement of incentives in the form of credit or subsidies
6. Encouragement of market competition
7. Formulation of demand-driven strategies to markets premises

**Work done by:**

- Mr. Manzoor Kasi, M&E Expert
- Mr. Qaisar Khan, M&E Officer
- Mr. Hamza, M&E Officer
- Ms. Mah Gul Noor, M&E Officer

## CHAPTER 5: ISSUES / BOTTLENECKS

The ME&IE Consultants have been facing following constraints for timely initiating the activities:

- Non availability of Technical Sanctions of the watercourses required for baseline survey
- Due to delay in approval of Monitoring Tools could not be able to move field teams on time (as per work plan) for the Baseline and Monitoring Surveys
- Non-availability of complete up-to-date inventory / data of all interventions from the Client, Provincial Agricultural Departments & NWMC (NESPAK) till to date.
- 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.

# ANNEXES A to G

## ANNEX-A: TENTATIVE WORK PLAN

## ANNEX-A: TENTATIVE WORK PLAN

TENTATIVE WORK PLANNED FOR 4th QUARTER (October To December 2021)												Legend	
No.	ACTIVITIES	3 Months-Year 2021 (Weeks)											
		October				November				December			
		WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4
<b>1</b>	<b>Field Activities</b>												
1.1	Regular Monitoring of Interventions in the Field	↓	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	↓
1.2	Data collection of the interventions in the field	↓	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	↓
1.3	Baseline Survey stage - 2		↓	-----	-----	-----	↓	-----					
1.4	Online data entry in android based application	↓	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	↓
<b>2</b>	<b>ICT Assignment</b>												
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	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	↓
<b>3</b>	<b>Coordination</b>												
3.1	Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3.2	Meeting of DTLs with respective DTL of PC & concerned OFWM Departments	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>4</b>	<b>Deliverable</b>												
4.1	Monthly Monitoring Report	↓	-----	↓	-----	↓	-----	↓	-----	↓	-----	↓	-----
4.2	Quarterly Monitoring Report		-----	↓	-----		-----		-----		-----		-----
4.3	Baseline Survey Report stage - 2					↓	-----	-----	↓	-----	-----	-----	↓

## ANNEX-B: MATRIX OF RESPONSIBILITIES

### MATRIX OF RESPONSIBILITIES

SR. NO.	DELIVERABLE / ACTIVITIES	LEGEND			
		● Primary Responsibility	○ Secondary Responsibility	○ Assistance	ME&IE Consultants
NPC-FPMU	Agriculture	Dept. (OEWMA)	Project Consultants	ME&IE Consultants	
1	<b>Provision of Pre-requisite data of project components for starting of Field Activities:</b> <ul style="list-style-type: none"> <li>• Organization of Water Users Associations,</li> <li>• Watercourses Improvement,</li> <li>• Water Storage Tanks,</li> <li>• Laser Land Levelers,</li> </ul>	○	●	-	-
2	<b>Certification of operational documents of the project,</b> <ul style="list-style-type: none"> <li>• Design, cost estimates, completion reports of watercourses,</li> <li>• Design, cost estimates, completion reports of water storage tanks,</li> </ul>	○	○	●	-
3	Undertake baseline, midline and endline surveys of the project activities/interventions in all the project areas.	-	-	-	●
4	Develop monitoring strategy, framework and Result Based Monitoring (RBM) indicators,	-	-	-	●
5	Assessing the water saving per annum on watercourse and water storage tanks as well as aggregate due to the project interventions.	-	-	-	●
6	Assessing the improvement in water availability due to provision of conveyance system.	-	-	-	●
7	Assessing the economic benefits to the agriculture in terms of increase in yield, irrigated area, cropping pattern, cropping intensity, farm income and employment in command area of watercourses and water storage tanks.	-	-	-	●
8	Assessing the extent of community mobilization, financial and administrative sustainability of Water Users' Associations and ensuring the maintenance of watercourses, water storage tanks and laser land levelers.	-	-	-	●
9	Economic Impact of project interventions.	-	-	-	●
10	Carryout impact evaluation of the project investment on the economy and stakeholders.	-	-	-	●
11	Preparation of Monthly, Quarterly and Annual Monitoring, Evaluation and Validation Reports of the project activities.	-	-	-	●
12	Develop a website containing information of facilities and services, applications, procedures, watercourses, water storage tanks, and laser levelers database etc. (Maintaining website should be the responsibility of project staff).	-	-	-	●
13	Provide technical support for the development of a custom-designed mobile application (Android) to capture on-site project progress, geo tagged photos; should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the	-	-	-	●

## ANNEX-C: MONITORING LOG-FRAME

### Annex-C: Monitoring Log-frame

Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
C1: Organization of Water Users' Associations (WUAs)	Reactivation of existing / organization of water users' associations. Ensuring one on each target watercourse. Total WUAs ensured 47,278.	a) Community mobilization at 47,278 watercourses	a) Total 47,278 WUAs reactivated / established/registered	a) Right of way of 47,278 watercourses available b) Skilled and unskilled labour required for watercourse improvement available c) Construction material for civil works of watercourses procured d) Alternate arrangement for water conveyance during construction made e) Watercourse improved	a) Disputes among the water users settled b) Farmers' branched improved c) Water allocation made amicably d) Maintenance of watercourses, WST and laser units done e) Cooperation among farmers increased	a) 47,278 watercourses improved and 15 percentage points conveyance losses reduced b) Litigation among farmers reduced	a) The functioning of the WUAs will be established through sample interview surveys of WUAs members twice during the project period
C2: Watercourses Improvements	Improvement of 47,278	a) Establishment of 47,278	a) 47,278 WCAs established;	a) Conveyance losses for	a) Increase in cropping	a) Increase in farm income;	a) The water flow measurements

	<p>watercourses on cost sharing basis: 40% farmers in terms of labour, and 60% funded by project.</p>	<p>Water users' associations (WUAs);</p> <p>b) Registration of 47,278 WUAs;</p> <p>c) Improvement and realignment of earthen section of 47,278 watercourses;</p> <p>d) Lining of up to 50% length of 47,278 watercourse either by:</p> <ul style="list-style-type: none"> <li>• Precast concrete parabolic lining (PCPL) segments, or</li> <li>• Rectangular brick masonry, or any other method as approved by the project</li> </ul>	<p>b) 47,278 WCAs registered;</p> <p>c) 47,278 watercourses improved and lined;</p>	<p>improved watercourses decreased by about 15 percentage points.</p> <p>b) 1.654 million households benefited from the activity;</p> <p>c) 11.347 million acres served with improved watercourses</p>	<p>intensity on improved watercourses by 5-24%;</p> <p>b) Increase in crop yields.</p> <p>c) Increase in irrigated area</p> <p>d) Increase in agriculture output per unit of water by about 37%</p>	<p>b) Increase in employment for farm labour;</p> <p>c) Reduction in poverty;</p> <p>d) Enhanced food security for the country.</p>	<p>will be carried out at before and after watercourse improvement on 2-5% sample basis;</p> <p>b) Agriculture survey before and after watercourse improvement on 2-5% sample basis;</p> <p>c) The survey will determine:</p> <ul style="list-style-type: none"> <li>• Cropping pattern before and after the improvement;</li> <li>• Cropping intensities before and after improvement;</li> <li>• Before and after crop yields;</li> <li>• Before and</li> </ul>
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								after employment; d) The difference between before and after will be considered the result of the intervention after netting out the contribution of the growth pattern of the crop sector otherwise.
C3: Construction of Water Storage Tanks (WSTs)	a) Construction of 14,932 water storage tanks	a) 14,932 small farmers mobilized to construct water storage tanks for irrigation b) They agree to contribute 40% of the cost c) Agree to first construct the tank with his/her own funds and then	a) 14,932 WSTs constructed b) 14,932 WSTs operated and maintained	a) Water which was otherwise largely going to be wasted is saved b) Irrigation provided at critical stages of the crops c) Flexibility achieved for irrigation	a) More area irrigated b) Increased cropping intensities	a) Increased crop yields b) Increased total crop output quantum c) Increased farm income d) Increased farm employment	a) 2-5% sample of WSTs will be surveyed b) A data collection form will be designed to measure water saving due to WSTs c) The forms used for baseline and impact surveys in case of watercourses	

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

								delivery c) The unit will be verified d) Area treated during the year will be collected e) Farmers' feedback collected on quality of the unit, quality of the after-sale service, etc.
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## ANNEX-D: DELIVERABLES/REPORTING REQUIREMENTS

## 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 <sup>th</sup> 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 <sup>th</sup> 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: DATABASE TEMPLATE/FORM OF WC FOR DASHBOARD

Zone/ Unit	Division	District	Tehsil	Category of WC Improvement	Previous Improvement Scheme Name	Previous Lining Length (ft.)	Type of Lining	Watercourse Scheme Name	UC	Village	Type of Irrigation Source (Canal Command Area & Non-Canal Command Area)
1	2	3	4	5	6	7	8	9	10	11	12

Type of Canal (Perennial & Non-Perennial Canal)	Canal	Branch	Distributary	Minor	Nallah	River	Tube Well	Other Source	Financial Year	Coordinate - Latitude	Coordinate - Longitude	Picture of Watercourse - Before Lining	Watercourse Location on Canal/Minor
13	14	15	16	17	18	19	20	21	22	23	24	25	26

WUA Registration No.	WUA Registration Date	Name of WUA President	CNIC No. of WUA President	Total Number of Shareholders	Male - Watercourse Association Members	Female - Watercourse Association Members	Total Watercourse Association Members	Gross Command Area (GCA) - (Acres)
27	28	29	30	31	32	33	34	35

Cultural Command Area (CCA) - (Kanal)	Cultural Command Area (CCA) - (Acres)	Total Length of Watercourse - (Feet)	Total Length of Watercourse - (Meter)	Sanctioned Lining Length of Watercourse (Feet)	Sanctioned Lining Length of Watercourse (Meter)	Design Discharge (Cusec)	Design Discharge (LPS)
36	37	38	39	40	41	42	43

Sanctioned Amount of T.S. - (Rs.)	Issuance Date of T.S.	Govt. Share	Community Share	Revised T.S Amount (Rs.)	Revised T.S Date	Amount of ICR-I Released - (Rs.)	Date of ICR-I Released	Amount of ICR-II Released - (Rs.)	Date of ICR-II Released	Amount of Final Released - (Rs.)
44	45	46	47	48	49	50	51	52	53	54

Date of Final Released	Commencement Date	Completion Date	Executed Lining Length (Feet)	Executed Lining Length (Meter)	Verified Amount	Verified Govt Share	Status
55	56	57	58	59	60	61	62

**ANNEX-F: DATABASE TEMPLATE/FORM OF WST/WHS FOR DASHBOARD**

Zone/ Unit	Division	District	Tehsil	Type of Structure	Type of Lining	WST/WHS Name	UC	Village	Type of Irrigation Source (Canal Command Area & Non- Canal Command Area)	Type of Canal (Perennial & Non- Perennial Canal)	Canal	Branch	Distributary	Minor	Nallah
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

River	Tube Well	Other Source	Financial Year	Coordinate - Latitude	Coordinate - Longitude	WUA Registration No.	WUA Registration Date	Name of WUA President	CNIC No. of WUA President	Total Number of Shareholders	Male - Watercourse Association Members
17	18	19	20	21	22	23	24	25	26	27	28

Female - Watercourse Association Members	Total Watercourse Association Members	Gross Command Area (GCA) - (Acres)	Cultural Command Area (CCA) - (Kanal)	Cultural Command Area (CCA) - (Acres)	WHS Catchment Area	WHS/WST Length-01 (Feet)	WHS/WST Length-02 (Feet)	WHS/WST Width-01 (Feet)	WHS/WST Width-02 (Feet)	WHS/WST Depth (Feet)
29	30	31	32	33	34	35	36	37	38	39

Storage Capacity (cft)	Storage Capacity (Gallon)	Design Discharge (Cusec)	Design Discharge (LPS)	Sanctioned Amount of T.S. (Rs.)	Issuance Date of T.S.	Govt. Share	Community Share	Revised T.S Amount (Rs.)	Revised T.S Date	Amount Released - (Rs.)	Date of Release
40	41	42	43	44	45	46	47	48	49	50	51

Commencement Date	Completion Date	WHS/WST Executed Length-01 (Feet)	WHS/WST Executed Length-02 (Feet)	WHS/WST Executed Width-01 (Feet)	WHS/WST Executed Width-02 (Feet)	WHS/WST Executed Depth (Feet)	Verified Total Amount	Verified Govt Share	Status
52	53	54	55	56	57	58	59	60	61

**ANNEX-G:**  
**SUMMARY OF COMPLETED SCHEMES IN AJK AND**  
**DASHBOARD IMPLEMENTATION PROGRESS OF ME& IE CONSULTANTS**

Division	District	Target 2019-20		Completed 2019-20		Target 2020-21		Completed 2020-21		Total	
		WC	WHS/WT	WC	WHS/WT	WC	WHS/WT	WC	WHS/WT	WC	WHS/WT
Muzaffarabad	Mzd	30	25	15	14	45	25	11	46	26	60
	Neelum	25	15	0	0	20	15	2	0	2	0
	Jehlum	10	10	0		10	10	1	3	1	3
Poonch	Poonch/ Rawalakot	10	15	5	8	15	15	17	18	22	26
	Bagh	20	10	6	3	20	10	9	14	15	17
	Haveli	10	10	0	0	10	10	2	1	2	1
	Sudhnoti	10	5	4	2	15	5	9	6	13	8
Mirpur	Mirpur	30	10	4	0	32	10	42	3	46	3
	Bhimber	30	10	1	1	40	10	45	1	46	2
	Kotli	15	10	9	2	20	10	13	14	22	16
Total		190	120	44	30	227	120	151	106	195	136
Grand Total											

DASHBOARD-PROGRESS											
Data entered		Scan		Total							
WC	WHS/WT	WC	WHS/WT	WC	WHS/WT	WC	WHS/WT	WC	WHS/WT	WC	WHS/WT
76	94	76	94	76	95						
42	0	42	0	42	0						
23	8	23	8	23	8						
25	29	25	29	25	29						
23	20	23	20	23	20						
7	2	7	2	7	2						
20	12	20	12	20	12						
51	1	51	1	51	1						
68	4	68	4	68	4						
33	14	33	14	33	14						
368	184	368	184	368	184						
Total	552	Total	552	Total	552						