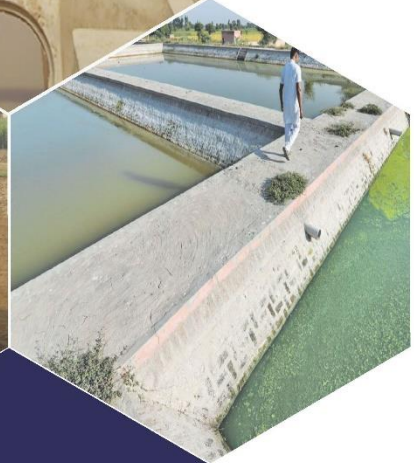




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FEDERAL WATER MANAGEMENT CELL
MINISTRY OF NATIONAL
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ISLAMABAD - PAKISTAN

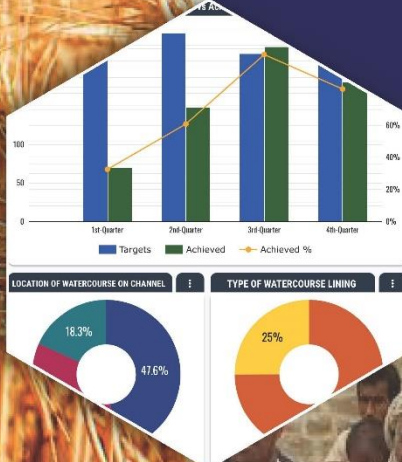
NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN PHASE-II: (NPIWC-II)

MONITORING, EVALUATION
AND IMPACT EVALUATION
CONSULTANTS



MONTHLY MONITORING REPORT

MARCH 2022



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



In Association with S&S Associates



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

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

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

MONTHLY MONITORING REPORT
MARCH 2022

CONTENTS

ACRONYMS	iii
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	5
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	6
2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS	10
CHAPTER 3: MONTHLY MONITORING REPORT	11
3.1 INTRODUCTION	11
3.2 OBJECTIVE OF MONTHLY MONITORING REPORT	11
3.3 REPORTING PERIOD	11
CHAPTER 4: ACTIVITIES DURING THE REPORTING PERIOD	12
4.1 FINALIZATION OF MONITORING TOOLS (MTS) FOR 2 ND PHASE BASELINE SURVEY	12
4.2 REGULAR MONITORING / FIELD VISITS BY ME&IE CONSULTANTS	12
4.2.1 Regular Monitoring / Field Visits by Zonal Office ICT	12
4.2.2 Regular Monitoring / Field Visits by Zonal Office Punjab	12
4.2.2.1 Site Visits / Monitoring	12
4.2.2.2 Meetings of ME&IE Consultants Punjab Zone with Stakeholders	21

4.2.3	Regular Monitoring / Field Visits by Zonal Office KP	23
4.2.4	Regular Monitoring / Field Visits by Zonal Office Balochistan	23
4.2.4.1	Updated Progress of ME&IE Consultants by March 2022.	23
4.2.4.2	Baseline Field Survey, Phase-II – Balochistan.	24
4.2.4.3	Sites visits detail:.....	27
4.2.4.4	Meetings of ME&IE Consultants with Client & Stakeholders	41
4.3	INTERNAL MEETINGS OF ME&IE CONSULTANTS	44
4.1	ICT ASSIGNMENT	45
4.1.1	Development of Customized Android Based Applications	45
4.1.1	Data collection of interventions in MIS/GIS database	45
4.1.2	Implementation of MIS Dashboard	45
4.1.3	Training and Capacity Building.....	47
4.2	MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT.....	47
4.2.1	Case Study of Intervention in Punjab.....	48
CHAPTER 5: WORK PLAN-ACTIVITIES OF THE CURRENT QUARTER.....		50
CHAPTER 6: ISSUES / BOTTLENECKS		52

LIST OF TABLES

Table: -ES-1: Compliance Status of Tentative Work Plan during Reporting Period.....	2
Table 2.1: Monitoring Strategy for ME&IE Activities	7

LIST OF FIGURES

Figure 1.1 Pakistan Targets.....	5
Figure 1.2: Zonal Target.....	5

LIST OF ANNEXURES

ANNEX - A: TENTATIVE QUARTERLY WORK PLAN (JAN. TO MAR 2022)	55
ANNEX - B: MATRIX OF RESPONSIBILITIES.....	56
ANNEX - C: MONITORING LOG-FRAME	58
ANNEX - D: DELIVERABLES/REPORTING REQUIREMENTS	64
ANNEX - E: WATERCOURSE DATA COLLECTION SUMMARY - AJK	65
ANNEX - F: WATER STORAGE TANK DATA SUMMARY - AJK	66
ANNEX - G: WATERCOURSES DATA SUMMARY - KP.....	67
ANNEX - H: WATER STORAGE TANK DATA – KP	69
ANNEX - I: PICTORIAL VIEWS OF DASHBOARD TRAININGS IN KP	70

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
FPMU	Federal Project Management Unit
FWMC	Federal Water Management Cell
GAP	Gender Action Plan
GB	Gilgit Baltistan
G3EC	G3 Engineering Consultants
GIS	Geographic Information System
HEIS	High Efficiency Irrigation System
IAS	Implementing Agencies
ICR	Interim Completion Report
ICT	Islamabad Capital Territory
IRR	Internal Rate of Return
ICT	Information & Communication Technology
JV	Joint Venture
KP	Khyber Pakhtunkhwa
LLL	Laser Land Leveler
LPS	Liter Per Second
M&E	Monitoring and Evaluation
MAF	Million Acre Feet
ME&IE	Monitoring, Evaluation and Impact Evaluation
MIS	Management Information System
MNFSR	Ministry of National Food Security and Research
MMR	Monthly Monitoring Report
MT	Monitoring Template
MTE	Mid-Term Evaluation
NESPAK	National Engineering Services Pakistan

NPC	National Project Coordinator
NPIWC	National Program for Improvement of Watercourses
NPV	Net Present Value
NWMC	National Water Management Consultants
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, “Monthly Monitoring Report for the month of March 2022” comprises of six chapters.

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 of 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 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 covers the details about the Monthly Monitoring Report. This Monthly Monitoring Report (MMR) covers the period from 1st March 2022 to 31st March 2022.

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

- Preparation for the 2nd Phase of Baseline Survey
- Finalization of Questionnaires in the light of experience of 1st Baseline Survey
- Training of Field Staff for 2nd Phase of Baseline Survey
- Preparation of baseline survey field visits plan
- Start of the 2nd Phase of Baseline Survey
- Regular Monitoring of Interventions in the Field
- Data Collection of the Interventions in the Field
- Data acquisition from Client, Data entry, Data cleaning, Data processing and analysis
- Meetings of ME&IE Consultants with Stakeholders about Project Progress / Issues
- Data collection of interventions in MIS/GIS database
- Implementation of Dashboard of Project Interventions
- Success Story - Case Study on the Project Interventions

Chapter-5 of this report covers the details of ME&IE Consultants’ activities initiated for the Quarter (January 1, 2022, to March 31, 2022) are listed below:

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

Time span detail for 1st Quarter of year 2022 is mentioned in the Tentative Work Plan. **Annex-A.**

Chapter-6: of this MMR describes issues / problems faced by the consultants during the reporting period of the assignment.

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

No.	Activities Planned for the Reporting Quarter		Status
1	Pre-Field Activities		
1.1	Improvement of Monitoring Tools		Complied
1.2	Preparation for 2 nd Phase Baseline Survey		Complied
1.3	Training of Field Staff for 2 nd Baseline Survey		Complied
2	Field Activities:		
2.1	Regular Monitoring of Interventions in the Field		Complied
2.2	Data collection of the interventions in the field		Complied
2.3	Baseline Survey Phase-2		Revised MTs, Training Field Staff, Pretesting of MTs in the field
2.4	Online data entry in android-based application		Complied
3	ICT Assignment:		
3.1	Work on Development of Website of NPIWC-II		Complied
3.2	Monitoring online data collection and Data entry		Complied
3.3	Monitoring Android based Mobile Application under implementation by field staff.		Complied
3.4	Data collection of interventions in MIS/GIS database		Complied
3.5	Dashboard for Project Interventions		Complied
4	Coordination		
4.1	Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues		Meetings conducted on regular basis
4.2	Meeting of DTLs with respective DTL of NWMC		Meetings conducted on regular basis
5	Deliverables:		
5.1	Monthly Monitoring Report (MMR)	12 th MMR (Dec 2021)	Submitted
		13 th MMR (Jan 2022)	Submitted
		14 th MMR (Feb 2022)	Submitted
		15 th MMR (Mar. 2022)	To be submitted in stipulated time
5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER Oct-Dec 2021	Submitted
		QM&ER Jan-Mar 2022	Will be submitted in stipulated time
5.3	Baseline Survey Report Ph-2 (Draft)		Data collecting in field in progress. Report will be submitted in stipulated time

CHAPTER-1: INTRODUCTION

1.1 PROJECT PROFILE

Project Name	National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)
Project Areas	Punjab, KP, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir, and Islamabad Capital Territory (ICT)
Sponsoring Agency	Ministry of National Food Security & Research
Executing Agencies (EAs)	1. Federal Project Management Unit (FPMU), 2. DGA OFWM Punjab 3. DG OFWM KP 4. DGA OFWM Balochistan 5. Director Irrigation and Small Dams, AJK 6. Director WM, GB 7. Director Agriculture Extension Services (AES) ICT
Project Period	5 Year (2019-2024)
Total Project Cost	154,542.355 million (Umbrella PC-1, including Sindh)
ME&IE Consultancy Period	4 year
ME&IE Consultant:	JV of G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering services (Pvt.) Ltd., Centre for Social Research and Development (CSR) and ADA Consultants Inc. Canada
ME&IE Consultant Mobilized	November 20, 2020

1.2 PROJECT DESCRIPTION

1.2.1 Project Development Objectives

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

1.2.2 Project Objectives – General & Quantitative

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:

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

2) Quantitative Objectives:

The quantitative objectives of the Project are as under:

Project outputs

- 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.
- 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).
- Construction of 14,932 water storage tanks with 60% subsidy.
- 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

- Reduction in Water Logging and salinity in project areas to the extent of 10%.
- 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, Nallahs etc.
 - Rainfall runoff over agricultural catchment during rainy season
 - Tube-wells and dug wells of low flows
 - Tail-waters from agricultural fields
- iv) Regulate the flows so that it can be used efficiently when needed at large flow rates.

C4: PROVISION OF LASER LAND LEVELING UNITS:

Provision of 11,610 Laser Land Leveling 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 below **Figure-1.2**.

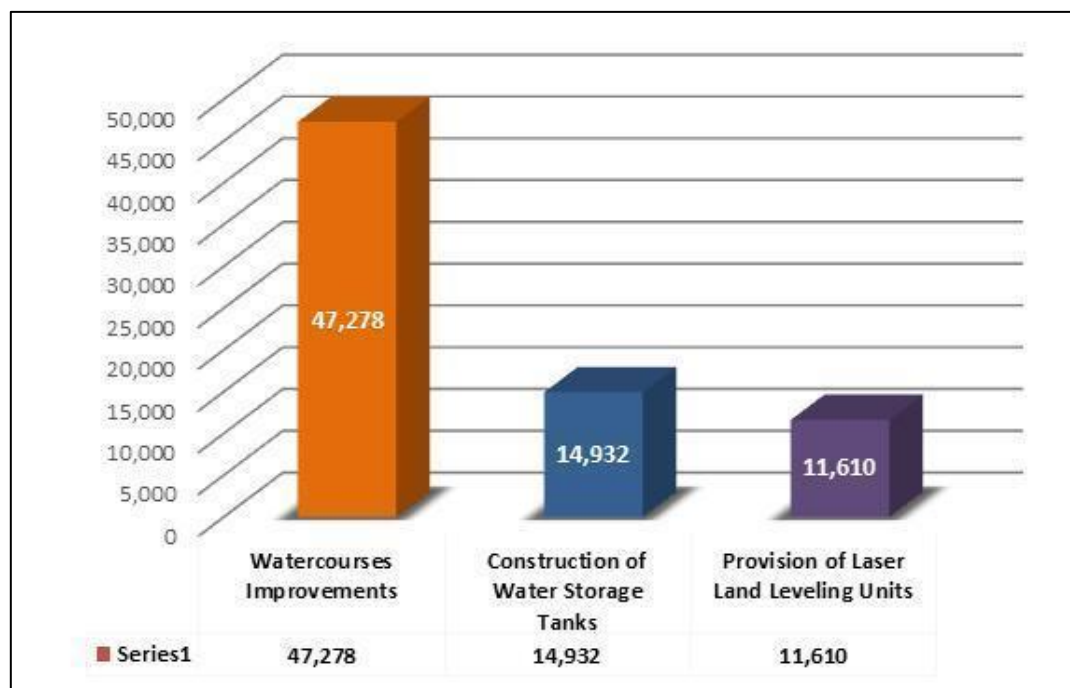


Figure 1.1 Pakistan Targets

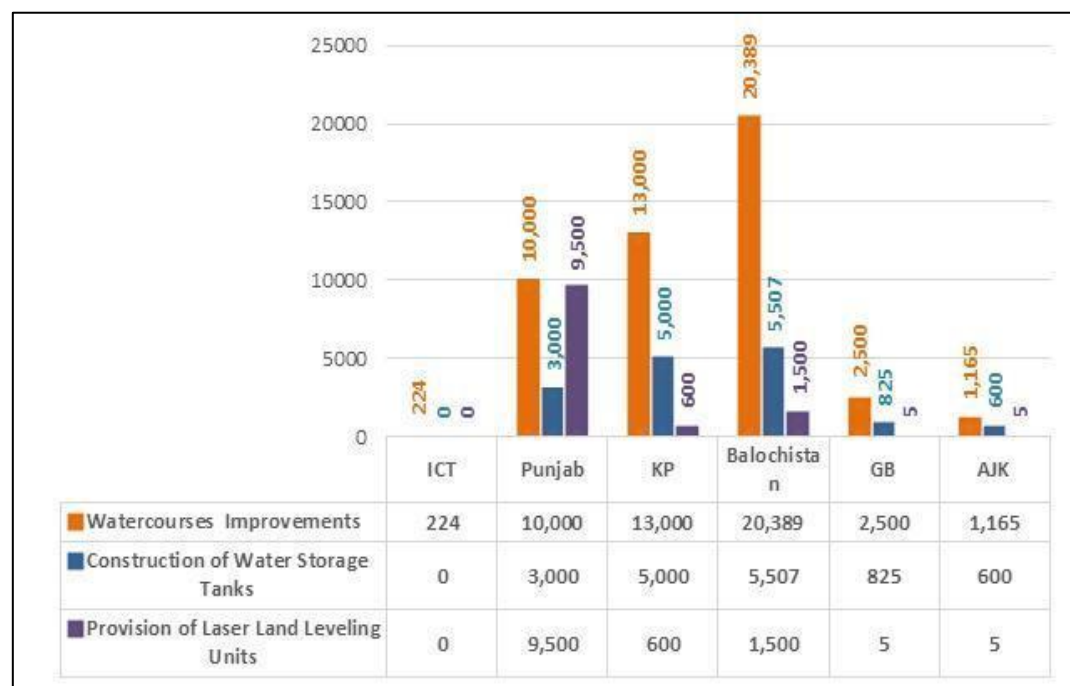


Figure 1.2: Zonal Target

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 an 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 endline surveys for the project activities / interventions in all the project areas,
- ii) Develop monitoring strategy, framework and Result-Based Monitoring (RBM) indicators,
- iii) Preparation of monthly, quarterly and annual monitoring, evaluation and validation reports of the project activities,
- iv) Assessing the water saving per annum on watercourses, water storage tanks and field levels as well as aggregate due to the project interventions,
- v) Assessing the improvement in water availability due to the provision of conveyance system,
- vi) Assessing the economic benefits to the agriculture in terms of changes in yields, irrigated area, cropping pattern, cropping intensity, farm income and employment in command area of watercourses and water storage tanks,
- vii) Assessing the extent of community mobilization, financial and administrative sustainability of water users' associations and ensuring the maintenance of watercourses, water storage tanks and laser land Levelers,
- viii) Economic impact of project interventions,

- ix) Carry out the impact evaluation of the project intervention on the economy and stakeholders,
- x) Develop a website containing information on facilities and services, applications, procedures, watercourses, water storage tanks and laser Levelers database, etc. (while the project staff will maintain the website),
- xi) Provide technical support for the development of a custom-designed mobile application (Android Based) to capture on-site project progress and geo-tagged photos. It should be synchronized with the central MIS/GIS database and application for instant reporting and feedback to the management. The said requirement is based on the following functional features:

- Development of a GIS database with all spatial layers related to activities being undertaken under the project
- Give technical assistance for up-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 the respective province/unit.	<ul style="list-style-type: none"> Baseline and impact surveys will be carried out on sample basis. Data will be collected by field teams on pre-designed data collection tools through an android application on TABs. Baseline and impact surveys will be carried out in phases as target watercourses are not preselected. Baseline will be carried out before the intervention and the impact one year (two crop seasons) after the completion of the intervention. The midterm study will review the project progress at middle of the project implementation The endline study will assess the impact of the project interventions.
2	Reporting	All core team members	<p>Following periodic reports will be prepared and submitted:</p> <ul style="list-style-type: none"> Draft Inception Report 45 days after the agreement, Final Inception Report one week after the issuance of comments by the client on the draft, Monthly Monitoring Report on 10th of following month, Quarterly Monitoring Report on 10th of the first month of the following quarter, Annual Monitoring and Evaluation Report during first month of the following year, Baseline Survey Reports (in three phases), First Phase Baseline Survey report will be submitted within the four months after the start of the assignment i.e., Submission of final inception report/Beginning of field activities. Impact Survey Reports (in phases) – two months after the data collection completion for the impact phase, Midline report in the middle of the assignment, Endline Report at the end of endline Survey, Draft Assignment Completion Report at completion of the physical works, Final Assignment Completion Report at completion of works and financial transactions. It will also include the full economic benefit of the project (NPIWC-II) on agriculture sector as well as on the GDP of Pakistan, Special Reports, as and when asked by the client.
3	Water saving assessment	Irrigation Agronomist, Field Team/ Engineers	<p>Water Saving on Watercourses:</p> <ul style="list-style-type: none"> Water flow will be measured on sample watercourses selected for the baseline and impact surveys The flow will be measured at four points of the selected watercourses: close to water outlet, head reach, middle reach and tail reach. The measurements will be done through current meters. Based on water savings on sample watercourses, total water

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

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

2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS

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

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

CHAPTER 3: MONTHLY MONITORING REPORT

3.1 INTRODUCTION

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

3.2 OBJECTIVE OF MONTHLY MONITORING REPORT

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

3.3 REPORTING PERIOD

This Fifteenth Monthly Monitoring Report (MMR) covers the period from 1st March 2022 to 31st March 2022.

The Report In-hand provides the progress made in various activities relating to the accomplishment of Monitoring activities of project interventions e.g., field monitoring activities, ICT assignments etc. This report also describes all activities to be carried out as per quarterly work plan.

CHAPTER 4: ACTIVITIES DURING THE REPORTING PERIOD

During the reporting month Consultants carried out different field as well as in-house activities related to ME&IE.

4.1 FINALIZATION OF MONITORING TOOLS (MTS) FOR 2ND PHASE BASELINE SURVEY

The ME&IE Consultants conducted multiple sessions of discussions on the improvement of MTs. The revision / improvement of the MTs was carried out in the light of Client's comments received on 1st Baseline Survey Report and lessons learnt by the consultants during activities during 1st Phase of Baseline Survey. MTs were distributed to stakeholders for review and comments. After finalization, the MTs were pre-tested in the field. Finalized / Refined Monitoring Tools were submitted to Client for Comments/Approval.

4.2 REGULAR MONITORING / FIELD VISITS BY ME&IE CONSULTANTS

Detail of regular monitoring / field visits by field teams of zonal offices during the monitoring month is given below:

4.2.1 Regular Monitoring / Field Visits by Zonal Office ICT

After refinement / finalization of Monitoring Tools, the Field team of ICT Zone has gone through refreshing training for data collection on Android Based Application. Field team is formulating its visit plans accordingly.

4.2.2 Regular Monitoring / Field Visits by Zonal Office Punjab

During the period under review, data were collected on the undermentioned aspects of an intervention.

- Brief profile of the intervention of Watercourse Improvement
- Interaction with beneficiaries
- Brief Profile of Water Storage Tanks Visited
- ME & IE Consultant Field Teams Observations

Detail of field visits and data collection is given below:

4.2.2.1 Site Visits / Monitoring

i) Visit of Watercourse No. 168000/R on 2 March 2022

Date of Visit	Mar 02, 2022	
Watercourse No	16800/R	
Type of Watercourse	Additional Lining	
Chak No/Village	Hardo sohl Hindu	
District and Tehsil	Shiekhupura / Muridke	
Name of Distributary	Muridke	
Type of Moga	Pipe Outlet	
Measured Discharge Before Improvement	Head	65 LPS (Liter per Second)
	Middle	33 LPS
	Tail	20 LPS
Sanctioned Discharge	29 LPS	
Tube well Discharge (if any)	36 LPS	
Designed Discharge	65 LPS	
Gross Command Area	330 Acres	
Culturable Command area	270 Acres	
Total No of water users	16	
Estimated lining Length	665 meters	



Figure 4.1: Site Visit at 16800 R Watercourse along with ADA Mr. Zaffar Munir and Beneficiaries



Figure 4.2: ME&IE Team Interviewing the Farmer-ADA Zaffar Munir is also with Team

Interview of Beneficiaries of Watercourse 16800 R						
Name of Farmer	Location of WC	Area (Acres)				Status
		Owned	Rented	Rented Out	Operated Area	
Haji Afzal Khan	Head	40	-	-	40	ICR-1
Azhar Hussain	Head	0	20	-	20	
Muhammad Gulfam	Middle	05	0		05	
Imran Ali	Middle	05	5.5	-	10.5	
Liaquat Hussain	Tail	19	-	-	19	
Abdul Majeed	Tail	03	8	-	11	

ii) Visit of W/C No. 20460/R on 2 March 2022

Date of Visit	Mar 02, 2022	
Watercourse No	20460/R	
Type of Watercourse	Additional Lining	
Chak No/Village	Ghuchli Virkan	
District and Tehsil	Shiekhupura / Muridke	
Name of Distributary	Muridke	
Type of Moga	Pipe Outlet	
Measured Discharge Before Improvement	Head	103 LPS (Liter per Second)
	Middle	74 LPS
	Tail	50 LPS
Sanctioned Discharge	39 LPS	
Tube well Discharge (if any)	66 LPS	
Designed Discharge	105 LPS	
Gross Command Area	380 Acres	
Culturable Command area	358 Acres	
Total No of water users	19	

Estimated lining Length	1815 meter
-------------------------	------------



Figure 4.3: Site Visit of 20460 R Watercourse along with ADA and Beneficiaries.



Figure 4.4: ME&IE Team Interviewing Farmer at W/C 20460 R

Interview of Beneficiaries of Watercourse 20460 R						
Name Farmer	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Abdul Majeed	Head	12	12	-	24	ICR-1
Mohsin Ali	Head	13	02	-	15	
Khalid Mahmood	Middle	15	-	-	15	
Karamat Ali	Middle	60	-	-	2.5	
Iftikhar Ahmad	Tail	3	8	-	11	
Khawar Saleem	Tail	13	02	-	15	

iii) Visit of Watercourse No. 17617/R on 03 March 2022

Date of Visit	March, 03, 2022	
Watercourse No	17617/R	
Type of Watercourse	Additional	
Chak No/Village	24-RB Abdullah Pur Kalan	
District and Tehsil	Sheikhupura , Safdarabad	
Name of Distributary	Khurrianwala	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	40.37 LPS
	Middle	30 LPS
	Tail	20 LPS
Sanctioned Discharge	29.16 LPS	
Tube well Discharge (if any)	28.31 LPS	
Designed Discharge	70 LPS	
Culturable Command area	361 acres	
Total No of water users	50	
Estimated lining Length	1292 meter	



Figure 4.5: Inspection of WC alongwith WC Beneficiaries



Figure 4.6: Interviewing beneficiary of watercourse

Beneficiaries Interviewed at W/C 17617/R						
Name of Farmer	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Zahid Ali	Head	2.5	4	-	6.5	ICR-1
Taj Din	Head	2	3	-	5	
Muhammad Jameel	Middle	33	-	-	33	
Imtiaz Ali	Middle	29	-	-	29	
Muhammad Afzal	Tail	4	-	-	4	
Farooq Shahnawaz	Tail	4	8	-	12	

iv) Visit of Watercourse No. 36265/R on 3 March 2022

Date of the Visit	3-3-2022	
Watercourse No	36265/R	
Type of Watercourse	Additional	
Chak No/Village	Mateela	
District and Tehsil	District Sargodha Tehsil Kot Momin	
Name of Distributary	Kerana	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	65LPS
	Middle	55LPS
	Tail	40LPS
Sanctioned Discharge	56LPS	
Tube well Discharge (if any)	25LPS	
Designed Discharge	90 LPS	
Gross Command Area	Acres	

Culturable Command area	586Acres
Total No of water users	9
Estimated lining Length	1390 m



Figure 4.7: ME&IE Team in discussion with beneficiary of WC

Interviewed of beneficiaries of W/C 36265/R						
Name of Farmer	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Noor Ahmad	Head	7	15	-	22	FCR
Muhammad Mumtaz	Head	10	-	-	10	
Rauf Ahmad	Middle	13	-	-		
Zahoor Ahmad	Middle	13	-	-	13	
Fateh Muhammad	Tail	2.5	-	-	2.5	
Ghazanfar Ali	Tail	36	-	-	36	



Figure 4.8: General Discussion with Farmers about water saving Perception & Farmers sharing their Point of View

v) Visit of Watercourse No. 49050/R on 3 March 2022

Date of the Visit	3-3-2022	
Watercourse No	49050/R	
Type of Watercourse	Additional	
Chak No/Village	65/SB	
District and Tehsil	Kot Momin	
Name of Distributary	Hujjan	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	95LPS
	Middle	80 LPS
	Tail	70 LPS
Sanctioned Discharge	54 LPS	
Tube well Discharge (if any)	41 LPS	

Designed Discharge	95 LPS
Gross Command Area	Acres
Culturable Command area	Acres
Total No of water users	25
Estimated lining Length	1385 m



Figure 4.9: inspection of watercourse along with beneficiaries

Interview of Beneficiary of Watercourse 49050/R						
Name	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Mushtaq Ahmad	Head	6	04	-	10	FC R
Anwar Baig	Middle	10	-	-	10	
Malik Masir Khan	Middle	9.5	-	-	9.5	
Muhammad Ijaz	Tail	5	6	-	11	
Malik Ghulam Haidar	Tail	10	2	-	12	
Mushtaq Ahmad	Head	6	04	-	10	

vi) Visit of Water Storage Tank (Muir Ahmed)
on 3 March 2022

WST Owner:	Munir Ahmad
Name of village:	49/NB
Tehsil & District:	Sillahwali, Sargodha
Source of irrigation:	Canal
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	68 x 40 ft ²
Depth of WST:	5 feet
Command area of water storage tank:	6 Acre
No of beneficiaries:	1
Name of the Orchard	Guava



Figure 4.10: View of Water storage tank



Figure 4.11: ME&IE Team Interviewing Farmer regarding benefits of WST

vii) Visit of Watercourse (Arshad Ahmed Gorya)
on 3 March 2022

WST Owner:	Arshad Ahmad Goraya
Name of village:	49 / SB
Tehsil & District:	Sillahwali, Sargodha
Source of irrigation:	Canal + Tube well

The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	54 x 52 ft ²
Depth of WST:	5 Feet
Command area of water storage tank:	12.5 Acre
No of beneficiaries:	1
Name of the Orchard	Citrus



Figure 4.12: View of Water storage tank



Figure 4.13: ME&IE Team Interviewing beneficiaries of WST

viii) Visit of Watercourse No. 56900-L on 4
March 2022

Date of the Visit	4-3-2022	
Watercourse No	56900-L	
Type of Watercourse	Additional	
Chak No/Village	59NB	
District and Tehsil	Sargodha	
Name of Distributery	Lak	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	68LPS
	Middle	48LPS

	Tail	35 LPS
Sanctioned Discharge	60 LPS	
Tube well Discharge (if any)	32 LPS	
Designed Discharge	LPS	
Gross Command Area	Acres	
Culturable Command area	610Acres	
Total No of water users	28	
Estimated lining Length	1717 m	



Figure 4.14: ME&IE Team Monitoring W/C alongwith AD OFWM Sargodha, Dr. Umer Hayat Bhatti and Chairman WUA



Figure 4.15: ME&IE Team Interviewing Farmers during Data Collection

Interview of Beneficiaries at W/C 56900-L						
Name of Farmers	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Ghulam Shabbir	Head	1.5	3	-	4.5	FCR
Muhammad Nawaz	Head	2.5	-	-	2.5	
Muhammad Yaqoob	Middle	8	-	-	8	
Muhammad Arshad	Middle	5	-	-	5	
Mian Khan	Tail	25	-	-	25	
Muhammad Iqbal	Tail	25	-	-	25	

ix) Visit of Watercourse No. 185762/L on 5 March 2022

Date of the Visit	5-3-2022	
Watercourse No	185762/L	
Type of Watercourse	Additional	
Chak No/Village	132-SB	
District and Tehsil	Sillawali	
Name of Distributery	Kirana	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	65LPS
	Middle	55LPS

	Tail	40LPS
Sanctioned Discharge	56LPS	
Tube well Discharge (if any)	25LPS	
Designed Discharge	90 LPS	
Gross Command Area	Acres	
Culturable Command area	586Acres	
Total No of water users	9	
Estimated lining Length	1390 m	



Figure 4.16: ME&IE Team in discussion with Farmers



Figure 4.17: Sign Board showing Detail of W/C Construction

Interview of Farmers at W/C 185762/L						
Name of Farmers	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Haji Maqbool	Head	3	-	-	3	FCR
Muhammad Akram	Head	6	-	-	6	
Muhammad Nadeem Bhatti	Middle	8	-	-	8	
Zaheer Ahmad	Middle	16.5	-	-	16.5	
Sardar Muhammad	Tail	4	-	-	4	
Ijaz Ahmad	Tail	5	-	-	5	

x) Visit of Watercourse No. 935/R on 04 March 2022

Date of Visit	March 04, 2022	
Watercourse No	935/R	
Type of Watercourse	Additional	
Chak No/Village	Kot Pindi Das	
District and Tehsil	Sheikhupura, Sharaqpur	
Financial Year	2020-21	
Name of Distributary	Qila Star Shah	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	62 LPS
	Middle	45 LPS
	Tail	29 LPS
Sanctioned Discharge	40 LPS	
Tube well Discharge (if any)	30 LPS	
Designed Discharge	70 LPS	
Gross Command Area	390 acres	
Culturable Command area	373 acres	
Total No of water users	20	
Estimated lining Length	830 meters	



Figure 4.18: View of additional watercourse



Figure 4.19: ME&IE Team Interviewing Beneficiary of W/C

Detail of Interviewed of Beneficiaries of Watercourse 935/R						
Name of Farmer	Location on WC	Area/Acres				Status
		Owned	Rented In	Rented Out	Operated Area	
Muhammad Irfan	Head	4	-	-	4	ICR-1
Muhammad Arshad	Head	7	-	-	7	
Muhammad Mukhtar	Middle	-	3	-	3	
Muhammad Javid	Middle	05	-	-	05	
Muhammad Saleem	Tail	05	-	-	05	
Muhammad Akram	Tail	60	-	40	20	

xi) Visit of Watercourse No. 182920/L on 04 March 2022

Date of Visit	March, 04 2022	
Watercourse No	182920/L	
Type of Watercourse	Additional	
Chak No/Village	Kot Pindi Das	
District and Tehsil	Sheikhupura, Feroze wala	
Name of Distributary	Muridke	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	50 LPS
	Middle	40 LPS
	Tail	30 LPS
Sanctioned Discharge	34 LPS	
Tube well Discharge (if any)	28 LPS	
Designed Discharge	80 LPS	
Gross Command Area	340 acres	
Culturable Command area	315 acres	
Total No of water users	09	
Estimated lining Length	935 meters	

4.2.2.2 Meetings of ME&IE Consultants Punjab Zone with Stakeholders

Field staff of ME&IE consultants' remained in regular coordination with field staff of OFWM throughout the period under review. Coordination at Deputy Director/Assistant Director at District and tehsils levels facilitated the consultants for smooth operation of Monitoring and Baseline Survey in accomplishing the objective of the project. Detail of meetings held during the reporting month is given below:

i) Meeting with ADA OFWM Jaranwala on Mar 2, 2022

Date:	Mar 2, 2022
Venue:	Office of the Assistant Director (OFWM) Office Tehsil Muridke
Participants:	
i)	Awais Jahangeer Field Team In-charge, ME&IE Expert/ Socio Expert-1
ii)	Muhammad Zubair Field Team In-charge, ME&IE Expert/ Socio Expert-3
iii)	Shahid Khalil Rana, Field Engineer /ME&IE Officers/Socio Officer-1

Meeting Agenda:

- Briefing on ME & IE Consultants activities regarding Baseline Survey/Monitoring by Field Team In-charge.
- Basic data Collection from ADA Office and field visit.



Figure 4.20: ME&IE Team in meeting with AD Agriculture (OFWM) Tehsil Muridke, District Sheikhupura.

ii) Meeting with ADA and OFWM Safdar Abad on March 3rd 2022


Date:	Mar 3rd, 2022
Venue:	Assistant Director (OFWM) Office Tehsil Safdar Abad District Sheikhupura
Participants:	
i)	Awais Jahangeer, Field Team In-charge, ME&IE Expert/ Socio Expert-1
ii)	Shahid Khalil Rana Field Engineer Technician/ME&IE Officers/Socio Officer-1
Meeting Agenda:	
Briefing regarding the basic data collection of Tehsil Safdarabad District Sheikhupura and discussion on upcoming field visits.	
	

Figure 4.21: Meeting with Assistant Director Agriculture (OFWM) Mr. Ghulam Mustafa Tehsil Safdar Abad District Sheikhupura.

iii) **Meeting with ADA and OFWM Safdar Abad on March 4th 2022**

Date:	Mar 4th, 2022
Venue:	Assistant Director (OFWM) Office Tehsil Sharaqpur District Shiekhupura
Participants:	
1.	Muhammad Asim Rafique Deputy Director Agriculture (DDA) Faisalabad
2.	Abuzar Saleem Assistant Director Agriculture (ADA) Faisalabad
3.	Awais Jahangeer Field Team In-charge, ME&IE Expert/ Socio Expert-1
4.	Muhammad Zubair Field Team In- charge, ME&IE Expert/ Socio Expert-3
5.	Shahid Khalil Field Engineer Technician/ME&IE Officers/Socio Officer-1

Meeting Agenda:

Briefing regarding the basic data collection of Tehsil Safdar Abad District Sheikhpura and discussion on upcoming field visits.



Figure 4.22: Meeting of ME&IE Consultant with AD Agriculture (OFWM) Mr. Umer Shehzad Tehsil Sharaqpur District Sheikupura.

iv) **Meeting with DDA OFWM on March 3rd, 2022**

Date:	Mar 3, 2022
Venue:	Office of the Deputy Director Agri. (OFWM) Sargodha.
Participants:	
i)	Muhammad Rizwan Suleman Field Team In-charge, ME&IE Expert/ Socio Expert-1
ii)	Noman Rasheed Field Engineer Technician/ME&IE Officers/Socio Officer-1
iii)	Sohail Ahmad Field Engineer Technician/ME&IE Officers/Socio Officer-2
Meeting Agenda:	
i)	Briefing on ME & IE Consultants activities regarding Baseline Survey/Monitoring by Field Team In-charge.



Figure 4.23: Meeting OF ME & IE Consultant with Deputy Director Agri (OFWM) i-e Ishfaq Ahmad Sindu along with ADA (OFWM) Sahiwal i-e M. Tayyab Tahir

v) **Meeting with ADA OFWM on Mar 4, 2022**

Date:	Mar 4th, 2022
Venue:	Assistant Director (OFWM) Office Tehsil kot Momin District Sargodha
Participants:	
i)	M.Rizwan Suleman Field Team In-charge, ME&IE Expert/ Socio Expert-1
ii)	Noman Rasheed Field Engineer Technician/ME&IE Officers/Socio Officer-1
iii)	Sohail Ahmad Field Engineer Technician/ME&IE Officers/Socio Officer-2

Meeting Agenda:

Briefing on ME & IE Consultant Activities regarding Baseline Survey/Monitoring



Figure 4.24: Meeting With Assistant Director (OFWM) Sahiwal i-e Muhammad Tayyab Tahir, Assistant Director (OFWM) Sargodha i-e Umer Hayyat Bhatti Assistant Director (OFWM) kot Momin i-e Tariq Mehmood regarding Baseline Survey Phase-II

vi) Meeting with ADA OFWM on Mar 5, 2022

Date:	Mar 5th, 2022
Venue:	Assistant Director (OFWM) Office District and Tehsil Sargodha
Participants:	1. M. Rizwan Suleman Field Team In-charge, ME&IE Expert/ Socio Expert-1 2. Noman Rasheed Field Engineer Technician/ME&IE Officers/Socio Officer- 1 3. Sohail Ahmad Field Engineer Technician/ME&IE Officers/Socio Officer-2
Meeting Agenda:	Briefing regarding the basic data collection of Tehsil Sargodha District Sargodha.
	
<p><i>Figure 4.25: Meeting of ME & IE Consultant with Assistant Director Agriculture (OFWM) Sargodha i-e Umer Hayyat Bhatti</i></p>	

4.2.3 Regular Monitoring / Field Visits by Zonal Office KP

ME&IE consultants of KP Zone reviewed the Monitoring tools and gave their comments / observation as per experience gained during the first phase of Baseline Survey. Zonal team of KP collected data from the Director General OFWM KP office for the Dashboard. Teams conducted meetings with District Director DR. Rab Nawaz during the process of data collection.

Data of all completed schemes of Watercourses and Water Storage Tanks for the year “2019-20, 2020-21 and 2021-22” were collected by reviewing the hard copies of data files provided by district Directors of OFWM KP for “Online Dashboard”. ME&IE Teams remained engaged in collection of data which was further uploaded to the computer system in close coordination with Mr. Rizwan Saleem, Incharge ICT Team.

Android Application Trainings imparted by ME/IE Consultants NPIWC-II

In the Month of March 2022, the KP field team engineers completed transfer of all the districts’ data of the completed WCs and WSTs (under the NPIWC-II) to the computers. The data was gathered from the files provided by OFWM Department KP. The data was shared with ICT Specialist OF ME&IE Consultants, Mr. Rizwan Saleem to upload to the Dashboard. ICT Team completed the Dashboard of KP Zone of NPIWC-II and demonstrated it to the major stakeholder and OFWM officials of different zones of KP. As it was not manageable to given demonstration and training to OFWM officials in Peshawar jointly, therefore demonstration was given in three districts of KP i.e. D.I. Khan, Abbottabad, and Peshawar. Detail of presentation / training is given section ICT Assignment “Development of Dashboard”.

4.2.4 Regular Monitoring / Field Visits by Zonal Office Balochistan

The ME&IE Consultants, Balochistan conducted several activities during the reporting month i.e., March 2022. The Balochistan team accomplished the assignments and submitted all deliverables timely. The activities done by the Balochistan team are listed below:

- Updated Progress of ME&IE Consultants, Balochistan Zone by 31st March 2022.
- Baseline Survey Phase – II
- Sampling and Methodology of Baseline Survey Phase – II
- Critical Data of Baseline Survey Phase-II
- General Data with Impact Evaluation / Assessment Data of Baseline Survey Phase – II
- Meetings
- Quarterly Work Plan (Apr. to June 2022) – Balochistan Zone.

4.2.4.1 Updated Progress of ME&IE Consultants by March 2022.

Overall Progress:

The ME&IE Consultants, Balochistan has monitored 13 Watercourses and 39 Water Storage Tanks in Baseline Survey activities. Total benchmarked sites in Baseline Survey are 53 by 31st March 2022. The Baseline is being conducted in phase wise and the 2nd Baseline Survey is in progress and will continue in the

upcoming quarter. The Balochistan team are committed to achieve the targets as per PC-1 subject to targets of each Financial Year should be according to the PC-1.

The Balochistan field teams are also conducting regular monitoring of on-going / completed sites covering all financial years on a monthly basis along with the Baseline Surveys. The Balochistan field team has so far monitored 65 watercourses and 50 Water Storage Tanks. Total 115 sites have been monitored by 31st March 2022.

This following table shows the overall progress of Balochistan Zone by 31st March 2022.

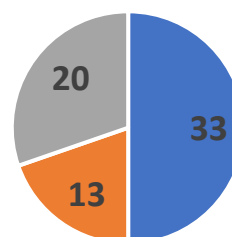
Sr. #	District	Baseline / Bench Marked		Regular Monitoring		Total
		WC	WST	WC	WST	
1	Quetta	-	4	8	7	19
2	Pishin	-	4	3	9	16
3	Killa Abdullah	1	1	3	2	7
4	Ziarat	-	-	2	1	3
5	Mastung	1	2	6	4	13
6	Nushki	-	-	2	1	3
7	Sibi	-	-	1	3	4
8	Jhal Magsi	1	4	1	2	8
9	Kachhi	-	8	1	2	11
10	Naseerabad	2	4	9	4	19
11	Jaffarabad	-	-	4	1	5
12	Sohbatpur	3	-	7	-	10
13	Loralai	1	2	1	2	6
14	Duki	-	-	2	1	3
15	Zhob	-	-	3	2	5
16	Kila-Saifullah	2	1	4	1	8
17	Musa khel	-	-	1	1	2
18	Sherani	-	-	2	2	4
19	Khuzdar	1	6	1	1	9
20	Kalat	1	3	4	4	12
Sub-Total		13	39	65	50	167

Districts Coverage

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

Balochistan has monitored the sites of 20 districts of 33, the remaining 13 districts to be covered in upcoming months.

No. of Districts Covered by ME&IEC
- Balochistan by March 2022



■ Total Districts
■ Districts yet to be covered
■ Covered / Monitored Districts

4.2.4.2 Baseline Field Survey, Phase-II – Balochistan.

The first “Baseline Survey” was conducted in the month of June 2021. The Balochistan field teams covered 09 districts in the first baseline survey. The ME&IE Consultants planned Baseline Survey Phase-II in the reporting month i.e., March 2022. The works of F.Y. 2021-22 were focused for Baseline Survey Phase-II where physical works were started recently. However, some sites of previous Financial

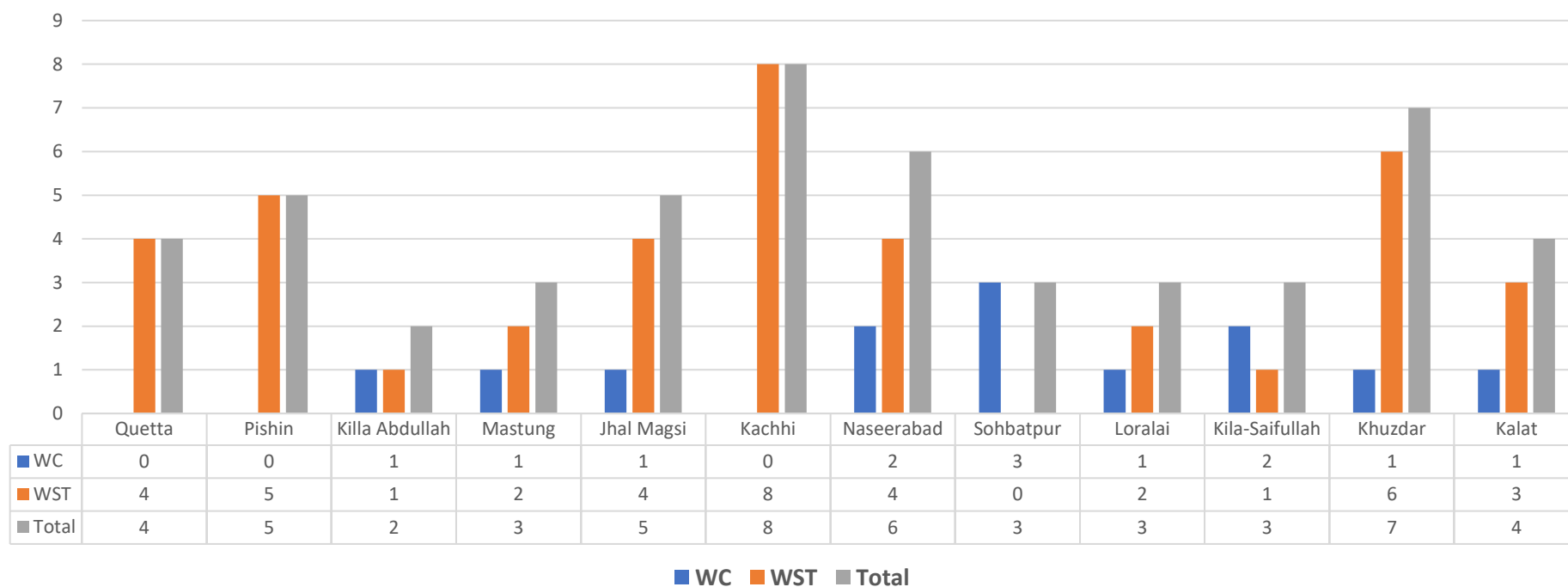
Years were also included in BLS Phase-II to achieve the targets.

Balochistan is the largest province of Pakistan, covering 44% of the country's areas, but it has the lowest population density in the country with a population of only 12.3 million. It is divided into 33 districts and 07 divisions. The reason for the low density of population is due to mountainous terrain and scarcity of water. Balochistan is Pakistan's least developed province with 71% people living below poverty line. Agriculture is the mainstay of Balochistan's economy, accounting for some 60% of the provinces' GDP and employing around 67% of the labour force. The most important products are millet, wheat, apples, vegetables, grapes milk and meat, Balochistan is unique in terms of the different types of irrigated agriculture being practiced and the issues related to sustainable use of scarce water resources (Average annual rainfall in Balochistan varies from 2 to 20 inches, 50 to 500 mm).

The On Farm Water Management (OFWM) executing different interventions under National Program for Improvement of Watercourses in Pakistan, Phase-II i.e., to improve water situation through canal lining, PVC Pipes for conveyance, Concrete Structure and farm level Storage Reservoirs / Water Storage Tanks to curtail water losses.

The updated progress of Baseline Survey of Phase I and Phase – II is given in following graphs:

Progress of Baseline Surveys (Phase I & II) by 31st March 2022



Note: The Baseline Survey Phase-II activities are in progress and will continue next quarter.

4.2.4.3 Sites visits detail:

BLS Conducted by Manzoor Ahmed Kasi, FTI / M&E Expert, Mah Gul Noor, M&E Officer and Hamza H. Qureshi, M&E Officer

i) Field Visit Date – 8th March, 2022

Scheme	Water Storage Tank
Farmer Name	Ali Akbar
Name of village:	Ghori Singh
Union council:	Baghbana
Chairman WUA:	Ali Akbar
District:	Khuzdar
Tehsil	Khuzdar
Coordinates	N 28.047 E 66.3035
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60x60 ft.
Depth of WST:	4.5 ft.
Command area of water storage tank:	5 Acres
No of beneficiaries:	1
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer was planning to plant Olive trees as now sufficient water was available after construction of WST. Beneficiary has prepared land for Cotton as well, after the provision of this WST. Beneficiary was requesting the Govt. that a WC

should also be provided to make this WST more effective.

- As the land was Gravel, it causes more water conveyance losses, a WC or PVC pipe can be very helpful.
- As the land was gravel, there was a lot of water conveyance losses, a WC or PVC pipe can be very helpful.
- The land of this area is suitable for growing grapes, so the Govt. should introduce High Efficiency Irrigation Systems (HEISs) in this area.
- The DDA OFWM Mr. Habibullah Mirwani and his field staff has been very supportive all along, due to which the farmer was also thankful to them.
- The OFWM staff were always providing awareness to the farmers about the technicalities of agriculture and cropping patterns of their land.
- The ME&IEC field team observed that a Plant Protection Officer was giving different information to the farmer about the pesticides and weedicides.

	<ul style="list-style-type: none"> The file works of the scheme was under progress due to this reason ME & IEC field teams could not fill the MTs completely. The farmer was facing a lot of problems due to heavy electricity load shedding in the area.
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Figure 4.26: ME&IE team interviewing the beneficiary, ii) View of WST

ii) Field Visit Date – 8th March, 2022

Scheme	Water Storage Tank
Farmer Name	Mujeeb-Ur-Rehman
Name of village:	Pashtakoi
Union council:	Baghbana-2
Chairman WUA:	Mujeeb-Ur-Rehman
District:	Khuzdar
Tehsil	Khuzdar
Coordinates	N 27.5910 E 66.3039
Source of irrigation:	Tube well

Shape of water storage tank:	Square
Size of water storage tank:	60x60 ft.
Depth of WST:	4.5 ft.
Command area of water storage tank:	20 Acres
No of beneficiaries:	1
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> Before Intervention of WST, the first tube well of this farmer had dried out. The WST is constructed where his second tube well is to be used, now the farmer has prepared new land for Wheat, cotton and mixed vegetables. The command area of the first tube well of this beneficiary was very vast, and now he was struggling to save the old command area as well through this WST and was requesting for a PVC pipeline for water conveyance. The farmer has bought 5000 rft PVC pipe from himself, now he needs about 5000 rft. PVC pipe more to save his old command area. The file works of the scheme was under progress

	<p>due to this reason ME&IEC field teams could not fill the MTs completely.</p> <ul style="list-style-type: none"> The farmer was facing a lot of problems due to heavy electricity load shedding in the area of 16 hours in a day.
	
<p>Figure 4.27: Interviewing the Beneficiary ii) Scheme Board, ME&IEC Team along with OFWM Staff</p>	

iii) Field Visit Date – 9th March, 2022

Scheme	Water Storage Tank
Farmer Name	Gul Muhammad
Name of village:	Chashma Murad Khan
Union council:	Wair
Chairman WUA:	Gul Muhammad
District:	Khuzdar
Tehsil	Wadh
Coordinates	N 27.3522 E 66.2743
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60x60 ft.
Depth of WST:	4.5 ft.

Command area of water storage tank:	18 Acres
No of beneficiaries:	1
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer was planning to grow cotton and mix vegetables after the intervention of WST. He was also trying to increase his cultivable area as now he had sufficient water. Farmer was very well aware about agriculture and his land. The file works of the scheme was under progress due to this reason ME&IEC field teams could not fill the MTs completely. Farmers were facing a lot of problems regarding water due to electricity shortage.



Figure 4.28: ME&IEC Team along with OFWM Staff and Beneficiary ii) Scheme Board

iv) Field Visit Date – 9th March, 2022

Scheme	Water Storage Tank
Farmer Name	Habib-Ur-Rehman
Name of village:	Pir Muhammad
Union council:	Wadh
Chairman WUA:	Habib-Ur-Rehman
District:	Khuzdar
Tehsil	Wadh
Coordinates	N 27.3226 E 66.2628
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60x60ft.
Depth of WST:	4.5ft.
Command area of water storage tank:	20 Acres
No of beneficiaries:	1
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> After the intervention of WST, he has planned to increase his cultivable land for onions, tomatoes and mixed vegetables. He has already prepared nurseries for them. He was requesting a WC to be made on his land. He was also preparing land for Cotton. The farmer was planting the nursery for tomato, and Mr. Muhammad Khan, DDA, Plant Protection, was guiding him regarding the

protection of the newly transplanted tomato plants from termites and other insects.

- The agriculture activities were badly suffering due to heavy load shading in the area.



Figure 4.29: WST Being Maintained properly cured by the Beneficiary

v) Field Visit Date – 10th March, 2022

Scheme	Water Storage Tank
Farmer Name	Fareed Ahmed
Name of village:	Goru Sasool
Union council:	Zeedi
Chairman WUA:	Fareed Ahmed
District:	Khuzdar
Tehsil	Khuzdar
Coordinates	N 27.8078 E 66.8276
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	60x60ft.
Depth of WST:	4.5ft.
Command area of water storage tank:	25 Acres

No of beneficiaries:	1
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> ● He has planned to increase his cultivable area for Cotton and he will also plant Cotton in the land where currently he has planted Wheat. This is due to the WST. ● In future, he has planned to plant low delta crops as well to save maximum water for other crops. ● He was also planning to keep livestock on his land. ● The farmer was requesting for PVC pipe to get maximum benefits of this WST. ● Farmer and his wife were educated and the farmer was a school teacher, due to which he was well aware and concerned about his agriculture practices and his land. ● He was the first person in this area who installed the solar energy system for his tube well.



Figure 4.30: Interviewing the Beneficiary at WST

vi) Field Visit Date – 10th March, 2022

Scheme	Water Storage Tank
Farmer Name	Dr. Abdul Haq
Name of village:	Lakrah
Union council:	Lakharo Balok
Chairman WUA:	Dr. Abdul Haq
District:	Khuzdar
Tehsil	Karkh
Coordinates	N 27.4143 E 67.740
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50x50 ft.
Depth of WST:	4.5 ft.
Command area of water storage tank:	30 Acres
No of beneficiaries:	1
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> ● Beneficiary was very happy due to this WST; his water saving has increased greatly. ● He was preparing more land for

	<p>cultivation of Orchard</p> <ul style="list-style-type: none"> • He was also planning to plant Cotton. • He was planning to start Dairy farming on his land, so that waste of animals to be used as fertilizers for crops and fodder on his land to be used for these livestock. • Farmer was himself a veterinary doctor, and he was well aware about agriculture as well as livestock. • He was planting mangoes, guava, grapes, black plum and mixed vegetables.
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Figure 4.31: ME&IE team with OFWM Staff and the beneficiary at WST

vii) Field Visit Date – 11th March, 2022

Scheme:	Watercourse
Name of Farmer:	Muhammad Tayyab
Name of village:	Kathan

Union council:	Kathan
Chairman WUA:	Muhammad Tayyab
District:	Khuzdar
Tehsil	Khuzdar
Coordinates	N 27.4755 E 66.3856
Source of irrigation:	Tube well
Total length of watercourse:	2000 rft.
Estimated length of lining:	1000 rft. (Estimated) 918.68 rft. (Actual on ground)
Command area of watercourse:	200 Acres
No of beneficiaries:	1
Quality of Work	Satisfactory
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> • Water conveyance losses improved 60% after intervention of Pakka/Cemented WC. • Cultivated area increased by about 4 acres, the farmer was also planning to enhance the cultivation area as much as possible. • The backfilling of WC was not properly done, it needs prompt attention.



Figure 4.32: Interviewing the Beneficiary &) Spot Checking and Measuring the WC

Field Visit Date – 16th March, 2022

Scheme	Water Storage Tank
Farmer Name	Ahmed Khan
Name of village:	Ghulam Muhammad
Union council:	Bostan
Chairman WUA:	Ahmed Khan
District:	Pishin
Tehsil	Bostan
Coordinates	N 30.2517 E 67.246
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	40x40 ft.
Depth of WST:	4.5 ft.
Command area of water storage tank:	250 Acres
No of beneficiaries:	1
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> ● Cultivated area increased about 5 acres due to intervention of WST. ● Farmer was very satisfied by this WST and was demanding to have made another WST of Dimensions 60x60 for another tube well about 700 meters away from this WST to cultivate this barren land. His command area is very wide-spread and also requires a PVC Pipe for better water conveyance. ● After that, he will increase the orchards and vegetables on his land. ● Farmer was very cooperative and well aware,

backfilling of WST was properly done.

- Faizullah Shah Agha, DDA OFWM Pishin and his field staff are very active and cooperative with all the farmers of their district.
- Hafiz Abdul Rauf, PBOM, ME&IE Consultants also visited the site and interacted with the farmer. He appreciated the works of OFWM Department and the upright participation of the farmer. He also appreciated the work of the Field Team of ME&IE Consultants.



Figure 4.33: ME&IEC team with Hafiz Abdul Rauf, BPOM, Mr. Rizwan Ahmad, DTL Balochistan with Faizullah Shah, DDA OFWM District Pishin and the Beneficiary at View of WST

Field Visits detail of Baseline Monitoring - Balochistan Naseerabad Zone

**Team – 01: Monitored by Mohammad Tariq, FTI/
M&E Expert and Saleem Ahmed M&E Officer**

viii) Field Visit Date – 09th March, 2022

Scheme:	Watercourse
Name of Farmer:	Safdar Ali Shah
Name of village:	Fateh Pur
Union council:	Khari
Chairman WUA:	Safdar Ali Shah
District:	Jhal Magsi
Tehsil	Gandawah
Coordinates	N, 28.3360 E, 67.2835
Source of irrigation:	Tube well
Total length of watercourse:	2000 ft
Estimated length of lining:	2000 ft
Command area of watercourse:	42 Acres
No of beneficiaries:	03
Quality of Work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> Conveyance losses decreased about 50%. Water reaching time improved 58%. Capacity building campaigns regarding techniques of farming for Framers are a must. Former was very well educated and was caring the WC very well Farmers had vast uninhabited land due to lack of water, He was demanding a WST to enhance cultivated land.



Figure 4.34: View of WC (above) and interview conducted with farmers with DDA (below).

ix) Field Visit Date – 9th March 2022

Scheme	Water Storage Tank
Farmer Name	Safdar Ali Shah
Name of village:	Fateh Pur
Union council:	Khari
Chairman WUA:	Safdar Ali Shah
District:	Jhal Magsi
Tehsil	Gandawah
Coordinates	N 28.3360 E 67.2836
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	50x50 ft
Depth of WST:	4.50 ft
Command area of water storage tank:	40
No of beneficiaries:	03
Construction Cost of watercourse:	1,238,004.57
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data	<ul style="list-style-type: none"> Cultivated area increased about 6 acres due to intervention of WST.

/ General Observations	<ul style="list-style-type: none"> Farmer was planning to enhance more cultivated land after having sufficient water saving capacity.
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Figure 4.35: Site visit with DDA OFWM, district Jhall Magsi

x) Field Visit Date – 10th March, 2022

Scheme	Water Storage Tank
Farmer Name	Jan Baig
Name of village:	Khari
Union council:	Khari
Chairman WUA:	Jan Baig
District:	Jhal Magsi
Tehsil	Gandawah
Coordinates	N 28.3480 E 67.2130
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	40x40 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	40 acres
No of beneficiaries:	03

Construction Cost of watercourse:	927,766.01
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> After the intervention of WST, the farmer has planned to increase his cultivable land for mixed vegetables. He was requesting a WC to be made on his land.



Figure 4.36: Jan Baig WST District Jhall Magsi

xi) Field Visit Date – 10th March, 2022

Scheme	Water Storage Tank
Farmer Name	Abdul Rasheed
Name of village:	Khari
Union council:	Kotra
Chairman WUA:	Abdul Rasheed
District:	Jhal Magsi
Tehsil	Gandawah
Coordinates	N 29.2493 E 67.2372
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	40x40 ft
Depth of WST:	4.5 ft

Command area of water storage tank:	40
No of beneficiaries:	2
Construction Cost of watercourse:	927,766.01
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> After the intervention of WST, he has planned to increase his cultivable land for cotton and mix vegetables. He was also preparing land for Cotton.



Figure 4.37: Views of under construction WST Village
Abdul Rasheed, District Jhall Magsi

Tehsil	Gandawah
Coordinates	N 28.3359 E 67.2109
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	40x40 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	30
No of beneficiaries:	2
Construction Cost of watercourse:	927,766.01
Quality of work	Good

Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The WST is under construction. Farmer has planned to cultivate more crops to enhance cultivated area after intervention of WST Farmer was taking keen interest in construction works and was satisfied with Department officials.
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Figure 4.38: View of under Construction of WST

xii) Field Visit Date – 10th March, 2022

Scheme	Water Storage Tank
Farmer Name	Ghulam Hussain
Name of village:	Kunbi
Union council:	Khari
Chairman WUA:	Ghulam Hussain
District:	Jhal Magsi

xiii) Field Visit Date – 11th March, 2022

Scheme	Water Storage Tank
Farmer Name	Khuda Bux
Name of village:	Rindabad
Union council:	Mashkaf
Chairman WUA:	Khuda Bux
District:	Kachhi

Tehsil	Dhadar
Coordinates	N 29.4809 E 62.6207
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	60x60 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	25
No of beneficiaries:	04
Construction Cost of watercourse:	1,591,134.79
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer was looking for modern agriculture techniques to enhance his cropping intensity and income after having sufficient water saving with intervention of WST. Strong coordination was seen between the farmer and OFWM team. Trees were cut down during construction of WST. The farm was advised by the DD, OFWM and field team of ME&IEC to cultivate new trees in place of felled trees as per set protocols immediately



Figure 4.39: View of newly constructed WST and Discharge System.

xiv) Field Visit Date – 11th March, 2022

Scheme	Water Storage Tank
Farmer Name	Karim Bux
Name of village:	Kot Raisani
Union council:	Kot Raisani
Chairman WUA:	Karim Bux
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4461 E 67.6049
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	50x50 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	20
No of beneficiaries:	04
Construction Cost of watercourse:	12,38,004.57
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate mix vegetable and low delta crops after intervention of WST The farmer was planning to enhance his cultivated area by 5 to 7 acres.



Figure 4.40: View of functional WST

xv) Field Visit Date – 14th March, 2022


Scheme	Water Storage Tank
Farmer Name	Haji Munir Ahmed
Name of village:	Killi Qambrani
Union council:	Mashkaaf
Chairman WUA:	Haji Munir Ahmed
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4825 E 67.6082
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	60x60 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	30
No of beneficiaries:	04
Construction Cost of watercourse:	1,591,134.79
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate cotton and mix vegetable after intervention of WST The farmer was planning to enhance his cultivated area by about 5 acres.



Figure 4.41: The backfilling of WST is under progress

xvi) Field Visit Date – 14th March, 2022

Scheme	Water Storage Tank
Farmer Name	Abdul Nabi
Name of village:	Chotai
Union council:	Mashkaaf
Chairman WUA:	Abdul Nabi
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4630 E 67.6179
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	60x60 ft
Depth of WST:	4.5
Command area of water storage tank:	50
No of beneficiaries:	05
Starting date:	22-01-2022
Completion date:	04-03-2022
Construction Cost of watercourse:	1,591,134.79
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate mix vegetable and

	<p>low delta crops after intervention of WST</p> <ul style="list-style-type: none"> The farmer was planning to enhance his cultivated area by 3 to 5 acres.
	
<p>Figure 4.42: An interview conducted with farmer for BLS</p>	

xvii) Field Visit Date – 15th March, 2022

Scheme	Water Storage Tank
Farmer Name	Mir Mohammad
Name of village:	Mir Bagh
Union council:	Kot Raisani
Chairman WUA:	Mir Mohammad
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4458 E 67.6046
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	50x50 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	30
No of beneficiaries:	04
Construction Cost of watercourse:	1,238,004.57

Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate low delta crops after having sufficient water storage with intervention of WST The expected enhanced cultivated area with this intervention is about 5 acres in the upcoming one year.



Figure 4.43: View of functional WST 60x60 with DDA Kachi

xviii) Field Visit Date – 15th March, 2022

Scheme	Water Storage Tank
Farmer Name	Mukhtiar Ahmed
Name of village:	Kot Khari
Union council:	Kot Raisani
Chairman WUA:	Mukhtiar
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4341 E 67.5929
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	60x60 ft

Depth of WST:	4.5 ft
Command area of water storage tank:	50
No of beneficiaries:	04
Construction Cost of watercourse:	1,591,134.79
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate mixed vegetable and low delta crops after intervention of WST.



Figure 4.44: An interview conducted with farmer for BLS

xix) Field Visit Date – 16th March, 2022

Scheme	Water Storage Tank
Farmer Name	Rasheed Zaman
Name of village:	Rind Garh
Union council:	Kot Raisani
Chairman WUA:	Rasheed Zaman
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4829 E 67.5896
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	40x40 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	25
No of beneficiaries:	03
Construction Cost of watercourse:	927,766.01
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate mix vegetable and low delta crops after intervention of WST The farmer was planning to enhance his cultivated area by 5 to 7 acres.



Figure 4.45: The WST work was in progress

xx) Field Visit Date – 16th March, 2022

Scheme	Water Storage Tank
Farmer Name	Moheem Khan
Name of village:	Killi Jattak
Union council:	Mashkaaf
Chairman WUA:	Moheem Khan
District:	Kachhi
Tehsil	Dadhar
Coordinates	N 29.4779 E 67.6676
Source of irrigation:	Tube Well
Shape of water storage tank:	Bricks Masonry
Size of water storage tank:	50 x 50
Depth of WST:	4.5 ft
Command area of water storage tank:	20
No of beneficiaries:	02
Construction Cost of watercourse:	1,238,004.57
Quality of work	Good
Impact Evaluation Assessment according to benchmarked data / General Observations	<ul style="list-style-type: none"> The farmer has planned to cultivate mix vegetable and low delta crops after intervention of WST The farmer was planning to enhance his cultivated area by 5 to 7 acres.



Figure 4.46: The backfilling of WST was under progress

4.2.4.4 Meetings of ME&IE Consultants with Client & Stakeholders

Date	8th March, 2022
Venue	DDA OFWM Office, Khuzdar
Participants	
I. Habibullah Mirwani, DDA OFWM Khuzdar II. Tariq Maqbool, Agriculture Officer, OFWM III. Muhammad Khan, DDA Plant Protection IV. Attaullah, Sub-Engineer V. Manzoor Ahmed Kasi, FTI/M&EE VI. Mah Gul Noor, M&EO VII. Hamza H. Qureshi, M&EO	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Introduction and Working of the ME&IECs Introduction of ME&IEC. The OFWM staff requested to provide the beneficiaries Lists of F.Y 2019-20, 2020-21 and 2021-22 The filing system of all schemes were discussed Shared ME&IEC team visits plan with OFWM staff. 	



Figure 4.47: Office of the DDA OFWM, Khuzdar

Date	9th March 2022
Venue	Office of DDA, OFWM at Gandawa District Jhall Magsi
Participants	
I. Mr Ghulam Sarwar Magsi, Deputy Director, Agriculture OFWM, Jhal Magsi II. Mr. Muhammad Tariq, FTI/M & Expert, ME&IE Consultants. III. Mr Saleem Ahmed Abro M&E Officer, ME&IE Consultants.	
<ul style="list-style-type: none"> An introductory meeting held among the DDA, WMO & ME&IE team. 	

- Muhammad Tariq, FTI, ME&IEC shared the visits plan with DD, OFWM.
- The DD ensured the ME & IEC field team for full support and cooperation for field activities.
- The DDs shared the data of current / ongoing schemes with ME&IEC



Figure 4.48: Meeting with DD, OFWM, Jhal Magsi

Date	11 th March 2022
Venue	Office of DDA, OFWM at Dhadar District Kachhi
Participants	
I.	Mr Zakir Husain Chandio, Deputy Director, OFWM.
II.	Mr Naseebullah Rind, Sub Engineer, OFWM.
III.	Mr. Muhammad Tariq, FTI/M & Expert, ME&IE Consultants.
IV.	Mr Saleem Ahmed Abro M&E Officer, ME&IE Consultants.
<ul style="list-style-type: none"> • An introductory meeting held among the DDA, WMO & ME&IE team. • The ME&IEC shared the visits plan of Baseline Field Activities with DD, OFWM. • The DD ensured the ME & IEC field team for full support and cooperation for field activities. • The ME&IEC teams requested DDs to provide beneficiary data of previous years. • The DD, OFWM and his staff ensured ME & IEC for their full support at levels. 	



Figure 4.49: Meeting with DD, OFWM and his staff.

Date	11 th March 2022
Venue	Zoom Meeting
Participants	
I.	Dr. Usman Mustafa, Team Leader, ME&IE Consultants, National Office, Islamabad.
II.	Dr. Muhammad Abdul Quddus, Agricultural Economist, Lahore Office.
III.	Mr. Waseem Ahmad Chaudhry, Financial Manager & Project Coordinator, NPIWC-II, Isb
IV.	Dr. Umar Farooq, Deputy Team Leader, ME&IE Consultants, Islamabad.
V.	Dr. Humayun, Deputy Team Leader, ME&IE Consultants, KPK.
VI.	Mr. Yousaf Bhatti, Deputy Team Leader, ME&IE Consultants, Punjab.
VII.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan.
VIII.	Ms. Muniza Bashir Tarar, Gender Specialist, NPIWC-II, Lahore, Punjab
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • A zoom meeting was held among all Provincial Head / DTLs, chaired by Team Leader, setting the schedule of the zoom meeting for monitoring the progress and future plans. • Contents on the Monitoring Tool for the Baseline Survey-2 • Use of Pygmy Meters for measuring the flow of water in water channels • Planning for the Quarter (April-June) in terms of Work Plan and the Budget Needed • Financial Matters and Salaries Issues • Format of the Case Studies / Success Stories • Capturing Field Visits in Pictures and Video Clips • All DTLs advised by TL to submit 2nd Quarter Work Plan (April to June 2022) by 18th March 2022 	

- The required budget for 2nd Quarter should be annexed with QWP
- Discussed the administrative issues.

Date	14 th March 2022
Venue	Director General, OFWM, Agriculture Office, Rani Bagh, Quetta

Participants

- I. Mr. Umaid Ali Khokhar, Secretary, Agriculture Department, Govt. of Balochistan, Quetta.
- II. Mr. Abdul Wahab, Director General, OFWM, Agriculture Department, Balochistan.
- III. Mr. Abdul Wali, Deputy Director, OFWM, Agriculture Department, Quetta
- IV. All Deputy Directors, OFWM, Balochistan
- V. Hafiz Abdul Rauf, BPOM, ME&IE Consultants, NPIWC-II
- VI. Mr. Khalid Mehmood, Deputy Team Leader, NWMC, Balochistan
- VII. Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan

Meeting Agenda/Points discussed:

- A progress review meeting was held at DG, OFWM Office, chaired by Secretary Agriculture Department, GoB. Quetta.
- All Deputy Directors presented updated progress.
- The Secretary, Agriculture took immediate measures in response to the solution of technical issues raised by DDs.
- The Secretary, Agriculture and DG, OFWM advised all DDs to expedite the progress and complete the works within one week.
- The ME&IEC shared the updated progress of Baseline Survey Phase-II with forum



Figure 4.50: Fresh WST work is ongoing check the material quality with OFWM team

Date	14 th March 2022
Venue	Office of the worthy Secretary, Agriculture Department, Govt. of Balochistan, Civil Secretariat, Quetta.

Participants

- I. Mr. Umaid Ali Khokhar, Secretary, Agriculture Department, Govt. of Balochistan, Quetta.
- II. Mr. Abdul Wahab, Director General, OFWM, Agriculture Department, GoB, Quetta
- III. Mr. Asif Kakar, NPC/Federal DG, NPIWC-II, Islamabad
- IV. Mr. Saif-ul-Islam, DPD, NPIWC-II, Islamabad
- V. Hafiz Abdul Rauf, BPOM, ME&IE Consultants, NPIWC-II.
- VI. Dr. Ali Raza, Team Leader, NWMC, Islamabad
- VII. Mr. Khalid Mehmood, Deputy Team Leader, NWMC, Balochistan
- VIII. Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan

Meeting Agenda/Points discussed:

- A meeting held in the office of Secretary Agriculture Department, GoB to discuss the issues / bottlenecks regarding NPIWC-II project.

- The Feder DG/NPC told the secretary that the target of Balochistan is about fifty percent of total targets, therefore OFWM, Balochistan needs to work hard so that the targets of Balochistan can complete on time.
- The Secretary, Agriculture took immediate actions on issues highlighted by the NPC and his team and gave necessary direction to DG, OFWM, Balochistan to do the needful.
- The Consultants highlighted some technical obligations which need to be filled by the department immediately.



Figure 4.51: Fresh WST work is ongoing check the material quality with OFWM team

- Administrative issues were also discussed.

4.3 INTERNAL MEETINGS OF ME&IE CONSULTANTS

It has been decided to conduct weekly Zoom Meetings for monitoring progress and the updates on the developments taken place. The first Zoom Meeting was held on Friday 11th March 2022. The Minutes of this meeting are as under:

- The Monitoring Tool / Questionnaire was detail discussed and further changes at necessary places were made.
- The methodology of use of Pygmy meter was discussed in terms of how to use and number of observations to be recorded.
- National Team Leader, Dr. Usman Mustafa requested all DTLs to prepare Work Plan and Financial Needs for the next quarter April-June 2022.
- The details about how to prepare Case Studies / Success Stories showing economic and social impacts of the project interventions in the area.
- Format of the Report of Baseline Survey-2 was discussed between the participants.

The 2nd Zoom Meeting was held on 18th March 2022. Various aspects discussed in this meeting are as under:

- How to estimate the increase in water supply and reduction in water loss without using Pygmy meters.
- How different quarries are incorporated in the Monitoring Tool to record farmers' observations about reduction in water loss and increase in water availability.
- Selection of the baseline water course, if the watercourse of the project area has been improved/rehabilitated. It was decided that either some nearest *katcha* watercourse in the same area should selected or from the portion of water course which is not yet constructed on the middle or tail sides.
- It has also been decided to regularly take survey pictures, videos and interviews may also be recorded. The pictures and videos taken should be duly captioned and these pictures should convey clear message to the viewers/audiences.

Date	15 th March 2022
Venue	ME&IE Consultants Office, Balochistan Zone, Quetta
Participants	
IX.	Mr. Saif-ul-Islam, DPD, NPIWC-II
X.	Hafiz Abdul Rauf, PBOM, ME&IE Consultants
XI.	Dr. Ali Raza, Team Leader, NWMC, Islamabad.
XII.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan.
XIII.	Mr. Manzoor Kasi, FTI/M&E Expert, ME&IEC, Balochistan
XIV.	Syed Ibrar Hussain, Office, Manager, ME&IEC, Balochistan.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • The DPD, NPIWC-II asked DTL to provide a next quarter plan of Baseline Survey / regular monitoring visits by 25th March 2022. • The DTL, Balochistan shared updated progress with DPD, NPIWC-II • The DTL, Balochistan provided official data i.e., stock register, details of vehicles, list of equipment etc., to DPD, NPIWC-II on his advice. 	

- It was also proposed to create Project Facebook.

The 3rd Zoom Meeting was planned to be held on 21st March, but could not be conducted because of local holiday in Islamabad.



Figure 4.52: Participants of Zoom Meeting

4.1 ICT ASSIGNMENT

ICT Team remained engaged in different activities related to the ME&IE assignment including development of Android based application, data collection for Dashboard and training of client staff on Dashboard / MIS for the project.

4.1.1 Development of Customized Android Based Applications

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

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

4.1.1 Data collection of interventions in MIS/GIS database

The activity regarding data collection of Interventions in MIS/GIS database was completed in KP Zone in December 2021. Following activities have been carried out in this regard during the reporting period.

- Data cleaning and validation has been completed. Missing data has been communicated to concerned DDs of OFWM

department. The ICT representative in KP zone remained in contact with DDs and acquired missing data.

- The data collection for the dashboard is in progress in Balochistan. The ICT team is facing problems in data collection because a lot of data is missing which was required by the ICT team for Implementation of MIS Dashboard.
- The ICT team of the National Office Islamabad under the supervision of ICT Technology Specialist has planned to visit the Balochistan zone to conduct meetings with department officials to resolve the issues and fill the gaps.
- Meeting has been conducted with Technical Team of OFWM department Punjab chaired by the system analyst OFWM department Punjab. During the meeting ICT Technology Specialist has briefed them on development of Monitoring Tools, Implementation methodology, Development of customized Android based Application, Development, and Implementation of MIS Dashboard of Dashboard. Later, MIS Dashboard and customized Android based application has been demonstrated to the Technical Team.
- The Technical Team showed their satisfaction on the briefing given by ICT Technology Specialist of ME&IE Consultants and showed intention to cooperate in the future.

4.1.2 Implementation of MIS Dashboard

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

AJK Zone - Watercourses Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Muzaffarabad	31	92	51	174
Poonch	33	33	63	129
Mirpur	37	97	96	230
Overall	101	222	210	533

So far, Total 533 Watercourses data from AJK zone has been received and available live on Dashboard out of which 247 Watercourse has been completed & 286 watercourses are under progress. Detailed summary attached as (Annex-E).

AJK Zone - Water Storage Tank Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Muzaffarabad	36	62	38	136
Poonch	15	43	91	149
Mirpur	2	15	49	66
Overall	53	120	178	351

351 Water Storage Tank data received from AJK zone and is available live on Dashboard out of which 159 Water Storage Tanks have been completed and 192 are under progress. Detailed summary is attached as **(Annex-F)**.

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

KP Zone Watercourses Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Bajaur Agency	3	17	0	20
Bannu	74	40	0	114
Dera Ismail Khan	431	11	52	494
Hazara	83	57	7	147
Khyber Agency	6	13	0	19
Kohat	98	41	0	139
Kurram Agency	1	5	2	8
Malakand	177	161	10	348
Mardan	105	64	2	171
Mohmand Agency	4	26	13	43
Orakzai Agency	0	1	0	1
Peshawar	141	85	0	226
S.W Agency	3	12	0	15
Overall	1126	533	86	1745

For KP zone currently total 1745 watercourses data is live on Dashboard and out of these 1721 schemes have been completed and 24 schemes are under progress. Detailed Summary of these schemes is attached as **(Annex-G)**.

KP Zone - Water Storage Tank Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Bajaur Agency	1	9	0	10
Bannu	12	18	0	30
Dera Ismail Khan	81	6	5	92
Hazara	28	43	4	75
Khyber Agency	1	9	0	10
Kohat	29	17	0	46
Kurram Agency	1	1	0	2
Malakand	75	88	5	168
Mardan	16	9	1	26
Mohmand Agency	1	36	4	41
Orakzai Agency	0	2	0	2
Peshawar	36	25	0	61
S.W Agency	0	15	0	15
Overall	281	278	19	578

In KP zone currently total 578 watercourses data is live on Dashboard and out of these 572 schemes have been completed and 6 WSTs are under progress. Detailed Summary is attached as **(Annex-H)**.

ICT Watercourse Data Summary	
Division	2020-21
ICT	20
Grand Total	20

In ICT zone so far only 20 watercourse schemes have been completed, and their data is live on Dashboard. Furthermore, no scheme is under progress in ICT Zone.

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

4.1.3 Training and Capacity Building

Three capacity building training sessions were conducted in KP Zone by ICT Team to facilitate the OFWM staff to get familiar with the Dashboard. Trainings were conducted in OFWM organized venues in D.I. Khan, Abbottabad, and Peshawar. Nominated staff were trained on Android Based Data Collection Application for data feeding on Dashboard. Detail of training venues, dates, and participants is given in table below while pictorial views of the training are given as **Annex- I**.

Training Location	Date	No. of days	No. Participants
D.I.Khan	3 rd March 2022	1	10
Abbottabad	8 th March 2022	1	14
Peshawar	11 th March 2022	1	27
Total		3	51

4.2 MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT

During the reporting quarter team under took different activities i.e. Field visits, prepared case studies, attended zoom meetings and reviewed baseline monitoring and impact evaluation tool. Observation of the team is also shared internally in which it is found that women are not participating due to cultural issues as well as they are not included during the mobilization process. It is imperative to design strategies to involve both male and female in rural and agriculture development Gender equality and women's empowerment, and the linked principles have the potential to make a difference in the lives of hundreds of millions of rural poor.

Most of the underprivileged people in Pakistan live in rural areas, and most of them depend directly or indirectly on agriculture for their livelihoods. Women are the main farmers or producers, but their roles remain largely unrecognized. Both men and women participate in agricultural activities, Agriculture is supposed to be an alleyway out of poverty

To achieve sustainable development goals, role of agriculture in sustainable development and its importance in achieving the sustainable development goals is by 2030. Government of Pakistan has signed and is working on it to reduce the

share of people suffering from life-threatening poverty and hunger. Rising food prices are reminders of the need to focus on food security and agriculture for development.

The different case studies and research clearly depicts the gender in agriculture suggests that accounting for the different roles of women and men and gender equality in access to resources and opportunities is a necessary condition for doing so. In NPIWC-II project activities are now affecting lives of the beneficiaries, case studies by provincial teams are prepared which shows increase in growth and income. This will be creating great impact on their livelihood which leads towards development in all fields.

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, and whether the program also promotes gender equality and women's empowerment. The cases 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.
- Showcase rea

A programs that have intentionally worked to integrate a gender lens into their delivery, whether from the outset or as a course correction. Examine challenges and emerging Case studies consist of three phases:

- The base line phase focuses on an assessment of local conditions and practices and builds relationships The assessment covers four areas:
 - program and policy environment;
 - current conditions and practices;
 - physical conditions; and
 - social and cultural conditions
- During the implementation phase staff and partners work with community members through a participatory approach for mapping the landscape of current practices. How the project activities impacting local lives social financially measuring the effects at midline.

- iii. Finally, in the post implantations phase, conduct follow-up household visits, attend community meetings, and share technical advice for maintaining and facilitate to ensure the communities remain after the program's completion.

Draft Case Studies prepared by the team are given below. **Gender** and social analysis is critical in completing preferred development outcomes of increased production, improved outcomes for poverty alleviation, increased well-being for all, and a fairer distribution of burdens and benefits in agriculture among women and men.

In developing countries, men and women make up 43 percent of the agricultural labor force. Many of them are smallholder farmers, and from paid employment to trade and marketing, women participate in all aspects of rural life. They raise crops and animals, collect water and wood for fuel, and care for family member.

In NPICW 11 now impact studies are showing increase in income which is assisting GOP to achieve the targets and now teams in fields are also going to gather field observations to further improve the project components which will help to pen down recommendations for

- i) Making changes in policy mandates.
- ii) Having senior management and leadership support and involvement.
- iii) Implementing gender-explicit evaluation and monitoring mechanism.

Having sufficient professional staff with gender expertise.

Draft Case Studies prepared by the provincial teams of ME&IE consultants are presented below.

4.2.1 Case Study of Intervention in Punjab

“Conversion of waste land into agricultural land”

Mr. Munir Ahmad is a farmer resident of village chak no 49/SB Tehsil Sillianwali, District Sargodha. His village is located in water scarcely area whereas, canal water is the only source of irrigation water. The ground water is of poor quality and unfit for irrigation which gradually deteriorates the soil health.



Mr. Munir Ahmad Owner of the water Storage Tank Share his views about OFWM Department Role

There he found a piece of land of 6 acres. The land was located at the tail of the watercourse. The land was barren and its terrain was uneven. No one was willing to purchase this land due to acute shortage of water. Mr. Munir Ahmad the Owner of WST Purchased this land in 2018 and then leveled it. He left this land fallow for 1 year due to Non-Availability of Water. Before the construction of water storage tank due to acute Shortage of water Farmer didn't get any Crop.

Guidance from on Farm Water Management Department:

In November, 2019 OFWM Team Guided him about installation of Drip Irrigation System. But he has no proper water Storage System. He contacted with ADA OFWM i-e Hafiz Muhammad Saleem Ullah and share his reservation. He further illustrated that the installation of Drip System was useless without Construction of Water Storage Tank. Then, ADA OFWM briefed him about the scheme of Construction of water Storage tank under the Umbrella of National program of water course phase-2 and convinced him about the Construction of WST intervention.

Basic Profile of water Storage Tank:

Scheme	Water Storage Tank
WST Owner:	Munir Ahmad
Name of village:	49/NB
Tehsil & District:	Sillanwali, Sargodha
Source of irrigation:	Canal
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	68 x 40 ft ²
Depth of WST:	5 feet
Command area of water storage tank:	6 Acre
No of beneficiaries:	1

Due to his Foreign Assignments Farmer was busy. His work was little bit delayed till June 2020.



Mr. Munir Ahmad Owner of the water Storage Tank Sharing his views/Experience with ME & IE Field Team



A View of Water storage tank

After its completion farmer connected these two i-e WST with drip irrigation system.

Mr. Munir Ahmad the owner of WST was very happy after the construction of WST because before the construction of WST the land, which was barren now it has been converted into Green fields. Currently he was growing Orchard i.e., Guava. But still after 2 years he did not get any Yield.

CHAPTER 5: WORK PLAN-ACTIVITIES OF THE CURRENT QUARTER

The ME&IE Consultants' activities initiating during the first Quarter of year 2022 (January 1, 2022 to March 31, 2022) are listed below. A tentative Work Plan for 1st Quarter of the year 2022 (January 1, 2022 to March 31 2022) showing time span detail is given as **Annex-A**.

Pre Field Activities

- i) Review and Update Monitoring Tools for 2nd Phase of Baseline Survey
- ii) Preparation for Baseline Survey 2nd Phase field visit
- iii) Training of Field Teams for 2nd Phase of Baseline Survey

Field Activities

- iv) Data collection from OFWM Department /NWMC for Baseline survey/regular monitoring
- v) Data acquisition from Client for Dashboard
- vi) Data entry of Training Session of field staff and Key staff on Survey Manual of MTs and Android Base System
- vii) Training of Measurement of water Flow-Pygmy current meter
- viii) Data entry, Data cleaning, Data processing & data Analysis
- ix) Regular Monitoring

ICT Assignment

- i) Development of Android based Mobile Application.
- ii) Data collection of interventions in MIS/GIS database.
- iii) Designing of dashboard of Project Interventions.
- iv) Data cleaning for Dashboard
- v) Training of Client staff for Dashboard

Coordination

- i) Meeting of DTLs with respective DTL of NWMC
- ii) Meetings of Team Leader and for refinement of Monitoring Tools.

Deliverables

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

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

Quarterly Monitoring & Evaluation Report-Fourth Quarter year 2021 (OCTOBER – DECEMBER 2021)	Submitted
Monthly Monitoring Report-Thirteenth (JANUARY 2022)	submitted within stipulated time
Monthly Monitoring Report-Fourteenth (FEBRUARY 2022)	submitted within stipulated time
Monthly Monitoring Report-Fifteen (MARCH 2022)	Report in Hand. To be submitted within stipulated time
Quarterly Monitoring & Evaluation Report-First Quarter year 2022 (JANUARY – MARCH 2022)	To be submitted within stipulated time

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

Matrix of Responsibilities

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

CHAPTER 6: ISSUES / BOTTLENECKS

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

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

ANNEXES A to I

ANNEX-A: TENTATIVE WORK PLAN

ANNEX - A: TENTATIVE QUARTERLY WORK PLAN (JAN. TO MAR 2022)

TENTATIVE WORK PLANNED FOR th QUARTER (January 2022 To March 2022)												Legend		
												Activity starts	↓	
												Activity Ends	↓	
												Activity Span	---	
No.	ACTIVITIES		3 Months-Year 2022 (Weeks)											
			January				February				March			
			WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4
1	Pre-Field Activities													
	1.1	Preparation for 2nd-Phase Baseline Survey	↓	↓										
	1.2	Improvement of Questionnaires in the light of experience of 1st-Baseline Survey	↓	↓										
	1.3	Training of Field Staff for 2nd-Phase Baseline Survey	↓	↓	↓									
2	Field Activities													
	2.1	Regular Monitoring of Interventions in the Field	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	2.2	Data collection of the interventions in the field	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	2.3	Baseline Survey stage - 2	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	2.4	Online data entry in android based application	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
3	ICT Assignment													
	3.1	Development / Improvement of website of NPIWC-II	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	3.2	Monitoring online data collection and Data entry	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	3.3	Monitoring Android based Mobile Application under implementation by field staff.	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	3.4	Data collection of interventions in MIS/GIS database	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	3.5	Dashboard for interventions	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
4	Coordination													
	4.1	Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	4.2	Meeting of DTLs with respective DTL of PC & concerned OFWM Departments	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
5	Deliverable													
	5.1	Monthly Monitoring Report	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	5.2	Quarterly Monitoring Report (Oct-Dec 2021)	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
	5.3	Baseline Survey Report 2nd-Phase	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

ANNEX - B: MATRIX OF RESPONSIBILITIES

MATRIX OF RESPONSIBILITIES

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

ANNEX - C: MONITORING LOG-FRAME

Annex-C: Monitoring Log-frame

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

C2: Watercourses Improvements	Improvement of 47,278 watercourses on cost sharing basis: 40% farmers in terms of labour, and 60% funded by project.	<p>a) Establishment of 47,278 Water users' associations (WUAs);</p> <p>b) Registration of 47,278 WUAs;</p> <p>c) Improvement and realignment of earthen section of 47,278 watercourses;</p> <p>d) Lining of up to 50% length of 47,278 watercourses either by:</p> <ul style="list-style-type: none"> ● Precast concrete parabolic lining (PCPL) segments, or ● Rectangular brick masonry, or any other method as approved by the project 	<p>a) 47,278 WCAs established;</p> <p>b) 47,278 WCAs registered;</p> <p>c) 47,278 watercourses improved and lined;</p>	<p>a) Conveyance losses for improved watercourses decreased by about 15 percentage points.</p> <p>b) 1.654 million households benefited from the activity;</p> <p>c) 11.347 million acres served with improved watercourses</p>	<p>a) Increase in cropping intensity on improved watercourses by 5-24%;</p> <p>b) Increase in crop yields.</p> <p>c) Increase in irrigated area</p> <p>d) Increase in agriculture output per unit of water by about 37%</p>	<p>a) Increase in farm income;</p> <p>b) Increase in employment for farm labour;</p> <p>c) Reduction in poverty;</p> <p>d) Enhanced food security for the country.</p>	<p>a) The water flow measurements will be carried out at before and after watercourse improvement on 2-5% sample basis;</p> <p>b) Agriculture survey before and after watercourse improvement on 2-5% sample basis;</p> <p>c) The survey will determine:</p> <ul style="list-style-type: none"> ● Cropping pattern before and after the improvement; ● Cropping intensities before and after improvement; ● Before and after crop yields;
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							<ul style="list-style-type: none"> • Before and after employment; <p>d) The difference between before and after will be considered the result of the intervention after netting out the contribution of the growth pattern of the crop sector otherwise.</p>
C3: Construction of Water Storage Tanks (WSTs)	a) Construction of 14,932 water storage tanks	<p>a) 14,932 small farmers mobilized to construct water storage tanks for irrigation</p> <p>b) They agree to contribute 40% of the cost</p> <p>c) Agree to first construct the tank with his/her own funds and then</p>	<p>a) 14,932 WSTs constructed</p> <p>b) 14,932 WSTs operated and maintained</p>	<p>a) Water which was otherwise largely going to be wasted is saved</p> <p>b) Irrigation provided at critical stages of the crops</p> <p>c) Flexibility achieved for irrigation</p>	<p>a) More area irrigated</p> <p>b) Increased cropping intensities</p>	<p>a) Increased crop yields</p> <p>b) Increased total crop output quantum</p> <p>c) Increased farm income</p> <p>d) Increased farm employment</p>	<p>a) 2-5% sample of WSTs will be surveyed</p> <p>b) A data collection form will be designed to measure water saving due to WSTs</p> <p>c) The forms used for baseline and impact surveys in case of</p>

		received subsidy at 40% on issuance of FCR					watercourses will also be used for WSTs d) Same data analysis will be carried out here as in case of watercourses.
C4: Provision of Land Leveling Units	a) Provision of 11,610 laser land leveling units to farmers and service providers on a cost sharing basis: 50% by farmer / service provider and 50% by the project.	a) 11,610 laser units provided to farmers / service providers; b) Farmers trained in using the units.	a) 11,610 farmers / service providers received PLL units; b) Farmers / service providers received training in using the units.	a) Land 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

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

Deliverables/Reporting Requirements

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

ANNEX - E: WATERCOURSE DATA COLLECTION SUMMARY - AJK

AJK Zone - Watercourses Data Collection Summary											
Division	District	2019-20		2019-20 Total	2020-21		2020-21 Total	2021-22		2021-22 Total	Overall Total
		Completed	Under Progress		Completed	Under Progress		Completed	Under Progress		
Muzaffarabad	Muzaffarabad	20	8	28	12	30	42	0	31	31	101
	Jhelum	1	1	2	12	6	18	0	11	11	31
	Neelum	0	1	1	7	25	32	1	8	9	42
Muzaffarabad Total		21	10	31	31	61	92	1	50	51	174
Poonch	Poonch	11	1	12	11	1	12	4	17	21	45
	Bagh	12	1	13	5	2	7	0	10	10	30
	Haveli	1	1	2	3	1	4	0	11	11	17
	Sudhnoti	6	0	6	7	3	10	0	21	21	37
Poonch Total		30	3	33	26	7	33	4	59	63	129
Mirpur	Mirpur	15	0	15	35	0	35	2	35	37	87
	Bhimber	8	3	11	46	2	48	11	31	42	101
	Kotli	10	1	11	7	7	14	0	17	17	42
Mirpur Total		33	4	37	88	9	97	13	83	96	230
Overall		84	17	101	145	77	222	18	192	210	533

ANNEX - F: WATER STORAGE TANK DATA SUMMARY - AJK

AJK Zone - Water Storage Tank Data Summary

Division	District	2019-20		2019-20 Total	2020-21		2020-21 Total	2021-22		2021-22 Total	Overall
		Completed	Under Progress		Completed	Under Progress		Completed	Under Progress		
Muzaffarabad	Muzaffarabad	35	0	35	40	15	55	3	27	30	120
	Jhelum	1	0	1	4	3	7	0	8	8	16
Muzaffarabad Total		36	0	36	44	18	62	3	35	38	136
Poonch	Poonch	8	0	8	19	0	19	5	30	35	62
	Bagh	3	0	3	14	0	14	1	14	15	32
	Haveli	0	0	0	2	0	2	0	26	26	28
	Sudhnoti	2	2	4	6	2	8	0	15	15	27
Poonch Total		13	2	15	41	2	43	6	85	91	149
Mirpur	Mirpur	0	0	0	1	0	1	0	16	16	17
	Bhimber	1	0	1	2	0	2	0	25	25	28
	Kotli	1	0	1	11	1	12	0	8	8	21
Mirpur Total		2	0	2	14	1	15	0	49	49	66
Overall		51	2	53	99	21	120	9	169	178	351

ANNEX - G: WATERCOURSES DATA SUMMARY - KP

KP Zone - Watercourses Data Summary									
Division	District	2019-20	2020-21		2020-21 Total	2021-22		2021-22 Total	Overall
		Completed	Completed	Under Progress		Completed	Under Progress		
Bajaur Agency	Bajaur	3	17	0	17	0	0	0	20
Bajaur Agency Total		3	17	0	17	0	0	0	20
Bannu	Bannu	38	15	0	15	0	0	0	53
	Lakki Marwat	34	22	0	22	0	0	0	56
	N.W Agency	2	3	0	3	0	0	0	5
Bannu Total		74	40	0	40	0	0	0	114
Dera Ismail Khan	Dera Ismail Khan	419	0	0	0	22	14	36	455
	Tank	12	11	0	11	16	0	16	39
Dera Ismail Khan Total		431	11	0	11	38	14	52	494
Hazara	Abbottabad	7	9	0	9	0	0	0	16
	Battagram	15	10	0	10	0	0	0	25
	Haripur	17	12	0	12	0	0	0	29
	Kohistan	8	10	0	10	0	0	0	18
	Mansehra	34	12	1	13	1	0	1	48
	Torghar	2	3	0	3	6	0	6	11
Hazara Total		83	56	1	57	7	0	7	147
Khyber Agency	Khyber	6	13	0	13	0	0	0	19
Khyber Agency Total		6	13	0	13	0	0	0	19
Kohat	Hangu	29	4	0	4	0	0	0	33
	Karak	17	19	0	19	0	0	0	36
	Kohat	52	18	0	18	0	0	0	70
Kohat Total		98	41	0	41	0	0	0	139
Kurram Agency	Kurram	1	5	0	5	2	0	2	8
Kurram Agency Total		1	5	0	5	2	0	2	8
Malakand	Buner	16	14	0	14	0	0	0	30
	Chitral	12	29	0	29	0	1	1	42
	Lower Dir	21	24	0	24	0	1	1	46

KP Zone - Watercourses Data Summary									
Division	District	2019-20	2020-21		2020-21 Total	2021-22		2021-22 Total	Overall
		Completed	Completed	Under Progress		Completed	Under Progress		
	Malakand	27	18	0	18	0	2	2	47
	Shangla	19	6	0	6	4	1	5	30
	Swat	67	58	0	58	0	1	1	126
	Upper Dir	15	12	0	12	0	0	0	27
Malakand Total		177	161	0	161	4	6	10	348
Mardan	Mardan	37	50	0	50	0	0	0	87
	Swabi	68	14	0	14	0	2	2	84
Mardan Total		105	64	0	64	0	2	2	171
Mohmand Agency	Mohmand	4	26	0	26	13	0	13	43
Mohmand Agency Total		4	26	0	26	13	0	13	43
Orakzai Agency	Orakzai	0	1	0	1	0	0	0	1
Orakzai Agency Total		0	1	0	1	0	0	0	1
Peshawar	Charsadda	70	26	0	26	0	0	0	96
	Nowshera	28	42	1	43	0	0	0	71
	Peshawar	43	16	0	16	0	0	0	59
Peshawar Total		141	84	1	85	0	0	0	226
S.W Agency	S.W Agency	3	12	0	12	0	0	0	15
South Waziristan Agency Total		3	12	0	12	0	0	0	15
Overall		1126	531	2	533	64	22	86	1745

ANNEX - H: WATER STORAGE TANK DATA – KP

KP Zone - Water Storage Tank Data Summary							
Division	District	2019-20		2020-21	2021-22		Overall
		Completed	Under Progress	Completed	Completed	Under Progress	
Bajaur Agency	Bajaur	1	0	9	0	0	10
Bannu	Bannu	2	0	2	0	0	4
	Lakki Marwat	10	0	8	0	0	18
	North Waziristan	0	0	8	0	0	8
Dera Ismail Khan	Dera Ismail Khan	71	0	0	5	0	76
	Tank	10	0	6	0	0	16
Hazara	Abbottabad	0	0	0	0	1	1
	Abottabad	4	0	5	0	0	9
	Battagram	6	0	16	0	0	22
	Haripur	7	0	6	0	1	14
	Kohistan	3	0	6	0	0	9
	Mansehra	5	0	8	0	0	13
	Torghar				2	0	7
Khyber Agency	Khyber	1	0	9	0	0	10
Kohat	Hangu	14	0	0	0	0	14
	Karak	13	0	16	0	0	29
	Kohat	2	0	1	0	0	3
Kurram Agency	Kurram	1	0	1	0	0	2
Malakand	Buner	4	0	12	0	0	16
	Chitral	4	0	2	0	0	6
	Dir Lower	3	0	4	0	0	7
	Dir Upper	6	0	8	0	0	14
	Malakand	7	1	5	0	2	15
	Shangla	8	0	6	3	0	17
	Swat	42	0	51	0	0	93
Mardan	Mardan	9	0	7	0	1	17
	Swabi	7	0	2	0	0	9
Mohmand Agency	Mohmand	1	0	36	4	0	41
Orakzai Agency	Orakzai	0	0	2	0	0	2
Peshawar	Charsadda	13	0	0	0	0	13
	Nowshera	14	0	17	0	0	31
	Peshawar	9	0	8	0	0	17
South Waziristan Agency	South Waziristan	0	0	15	0	0	15
Overall		280	1	278	14	5	578

ANNEX - I: PICTORIAL VIEWS OF DASHBOARD TRAININGS IN KP

Dashboard Training (NPIWC-II) at Abbotabad KP



Dashboard Training (NPIWC-II) at Dera Ismail Khan KP



Dashboard Training (NPIWC-II) at Peshawar KP

