



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)

ANNUAL MONITORING REPORT JULY 2021 TO JUNE 2022

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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

TERMINOLOGIES, INTERPRETATION AND DEFINITIONS

Authorized Supply The quantity of water allotted to a command area.

Baseline study: A baseline study measures the situation at the beginning of the project. This can then be compared to the situation after the end of the intervention, to establish what change has occurred.

Canal Command Area Watercourses: A tertiary-level water distribution system that is operated and maintained by its shareholders; it receives flows from secondary conveyance channels managed by the government (distributary/minor canal) or operated by communities (civil canal) and carries these flows to various holdings, usually in a weekly rotation.

Chak Block of land identified as the smallest administration unit with reference to irrigation.

Chakbandi The gross area commanded by an outlet for irrigation.

Command Area The area served by a watercourse, a distributary or a canal.

Cropping pattern: Cropping pattern refers to the proportion of area under different crops at a particular period of time. A change in cropping pattern means a change in the proportion of area under different crops.

Cropping Intensity: Cropping intensity refers to raising of a number of crops from the same field during one agricultural year; it can be expressed through a formula, $\text{Cropping Intensity} = \frac{\text{Gross Cropped Area}}{\text{Net Sown Area}} \times 100$

Dera A multi-purpose building built on the farm to keep animals, agricultural equipment and dry fodder.

Distributary A relatively small sized canal which supplies water to the watercourse outlets. The hierarchy of water supplying channels in terms of size, in descending order, are as follows: Main canal, branch canal, distributary, minor and watercourse.

Doab Land between two rivers.

Katcha Informal, unofficial or unregulated.

Khal Watercourse; a water channel jointly owned and managed by the water users of an outlet command area that transports water to the field outlets.

Kharif Summer cropping season; from April to October.

Laser land levelling (LLL) Laser levelling is a process of smoothing the land surface (± 2 cm) from its average elevation using laser-equipment.

Mogha An outlet in a canal or distributor to supply water to a watercourse.

Nambardar Headman of the village basically responsible for collecting land revenues and irrigation fee and forwarding them to the government along with mediating social and political affairs of the village.

Non-Canal Command Area Watercourses: A tertiary-level water distribution system that is operated and maintained by its shareholders for receiving flows from sources other than canals, such as tube wells, khwars, nullahs, springs, tanks and ponds, etc., and carries these flows to various holdings, usually in a weekly rotation.

Nakka An outlet from the watercourse to deliver water to the farmers' fields

Panchayat An assembly of village elders to settle disputes and regulate the traditional codex of the village.

Pansal Nawees Gauge reader and record keeper of the water supply at the lower level in the main system; regulates water supply to a number of distributaries or minors. Patwari Lower-level revenue official at the field level for a particular area, surveyor of crops to assess the revenue fee for every farm, keeper of revenue and Wara Bandi schedules.

Pukka Formal, official or regulated.

Rotatory system for the distribution of irrigation water. Water User(s) The actual water manager(s) at the watercourse and fields level.

Rabi Winter cropping season; from October to April.

Stratified sampling: Use when sample frame is very heterogeneous and you need to accurately represent certain subgroups in order to compare them

Survey: A survey is a method of gathering information for a sample of a target population through a sequence of focused, targeted questions. The sample is scientifically chosen to reflect the larger population. Information is collected by standardized procedures to ensure that each individual is asked the same questions in the same way and sequence.

Sarkari Khal Main section of the watercourse transporting water to the water users' field outlet (nakkas). Tube well an irrigation well to lift the underground water with electric or diesel motor engine connected to a sizeable metallic tube bored in the earth. Ushar An annual Islamic tax on agricultural produce which amounts to 1/10th of the yield for irrigated land and 1/20th for non-irrigated land. Wara Bandi

Sarkari Khal Main section of the watercourse transporting water to the water users' field outlet (nakkas).

Tube well: A drilled well, cased and screened, usually gravel-packed, used to pump water from a subsurface aquifer

Tube well: an irrigation well to lift the underground water with electric or diesel motor engine connected to a sizeable metallic tube bored in the earth.

Ushar An annual Islamic tax on agricultural produce which amounts to 1/10th of the yield for irrigated land and 1/20th for non-irrigated land.

Wara Bandi The rotatory system for the distribution of irrigation water. Water User(s) The actual water manager(s) at the watercourse and fields level.

Water Storage Tank: A small-scale, farm-level water storage reservoir of typically about 180 cubic meters' capacity that is generally constructed above the ground to collect water from various sources (tube wells, dug wells, open wells, springs, etc.) with very small flows (about 10–15 lps). Direct application of these small flows is not feasible or efficient. With the tank, the water resource can be subsequently used in larger volumes by intermittent release for surface flooding or high-efficiency irrigation systems.

Water Storage Pond: A small-scale water storage reservoir normally constructed to collect rainwater runoff by pumping, for subsequent supplementary irrigation through surface flooding or high-efficiency irrigation systems.

Water Users' Association: 'Association' means a 'water users' association' (anjuman-e-abpashi) organized and registered under the Khyber Pakhtunkhwa Water Users' Association Ordinance 1981 for the improvement and subsequent maintenance of watercourses and the construction of water storage tanks/ponds.

Wara Bandi: A rotational method for the distribution of water drawn from a common source in its command area through a watercourse according to a predetermined schedule specifying the day, time and duration of

supply in proportion to each irrigator's size of landholdings. Pukka Formal, official or regulated. Rabi Winter cropping season; from October to April.

Zamindar Landowner. Zeladar Junior member of the supervisory staff of the revenue division of 14 scale in Irrigation Department, supervising a number of patwaris.

MEASURES AND THEIR CONVERSION

- Acre Anglo Saxon measure; 1 acre = 100 decimal = 0.4047 ha.
- Acre foot the volume of irrigation water that would cover one acre to a depth of one foot and equals to 43,560 cubic feet = 1,233 m³
- Cusecs Cubic feet per second = 28.317 litre per second
- Murabah A block of demarcated land, with an area of 25 to 27.7 acres. A commonly used unit of area for agricultural land.
- Maund Weight measurement unit; 37.32 Kilogram
- Karam A local unit of length measurement; 5.5 feet.
- Marla 1 Marla is equal to 0.0025 ha.

EXECUTIVE SUMMARY

The report in hand, “Annual Monitoring Report for the period of 1st July 2021–30th June 2022, is comprising of seven chapters.

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

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

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

Section-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.

Section-3 covers the details about the Annual Monitoring Report. This Annual Monitoring Report (AMR) covers the period from 1st July 2021 to 30th June 2022.

Section-4 of this report covers the detail of deliverables submitted to Client from ME&IE Consultants during the reporting period are summarized below:

- Draft Inception Report
- Final Inception Report
- Regular Monthly Monitoring Reports
- Quarterly Monitoring Reports
- Baseline Survey Report-Stage-1

Section-5 of this report covers the activities completed during the reporting period are summarized below:

- Preparation for Base Line Survey-II
- Improvement / Refinement of Monitoring Tools in the light of lessons learnt during BLS-I
- Regular Monitoring of Interventions in the field by ME&IE Field Teams / Data Collation for Baseline Survey-II
- Meetings and trainings
- Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring
- Training of field staff and Key staff on Survey Manual of MTs and Android Base System
- Training of Measurement of water flow by Pygmy current meter
- Data entry, Data cleaning, Data processing & data Analysis
- Development of web site of NPIWC-II
- Improvement of Android based Mobile Application as per Improved MTs
- Testing of Monitoring tools on Android based system
- Data collection of interventions in MIS/GIS database
- Designing / Launching of dashboard of Project Interventions
- Meeting of DTLs with respective DTL of NWMC
- Deliverables

Section-6 of this report covers the detail of ME&IE Consultants’ activities initiating during the Quarter (April 2022 to June 2022) of Second Years of the Project i.e. 1st July 2021 to 30th June 2022. Time span detail is mentioned in the Tentative Work Plan. **Annex-A.**

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

Section-7: Describes the problems and bottlenecks. Due to non-availability of data from NWMC (NESPAC)& respective Directorates and resources from Client, ME&IE Consultants has been facing constraints for timely initiating the activities.

Table:- 1: Compliance Status of 2nd Year's Quarterly Tentative Work Plans

No.	Activities Planned for the Reporting Quarter		Status	
1	Pre-field Activities:			
1.1	Preparation for 2 nd Phase Baseline Survey (Finalization of MTs)		Complied	
1.2	Internal Meetings of ME&IE Consultants’ Zonal Office for development of Methodology 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/continued for current year	
2.2	Data Collection of the Interventions in the Field		Complied/ in progress	
2.3	Baseline Survey Stagee-2		Data Collection is in progress	
2.4	Online data entry in android based application		In progress	
3	ICT Assignment:			
3.1	Development / Improvement of web site 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/Dashboard		Complied	
3.5	Designing & Launching of Dashboard, Data Cleaning for Dashboard, Training Client’s staff on Dashboard		Complied	
4	Coordination			
4.1	Meetings of TL with NPC and OFWM departments regarding Project Progress / issues		Meetings conducted	
4.2	Meetings of DTLs with respective DTL of PC & concerned OFWM departments		Meetings conducted	
5	Deliverables:			
5.1	Monthly Monitoring Report (MMR)	16 th MMR (APR 2022)	Submitted	
		17 th MMR (MAY 2022)	Submitted	
		18 th MMR (JUN 2022)	To be submitted on Stipulated time	
5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER (JAN-MAR 2021)	Submitted	
		QM&ER (OCT-DEC 2021)	Submitted	
		QM & ER (APR-JUN 2022)	To be submitted on Stipulated time	
5.3	Annual Monitoring & Evaluation Report (2 nd)	July 2021-June 2022	Report in hand to be submitted on Stipulated time	
5.4	Baseline Survey Phase-II	Data Collection in the field is in progress		
5.5	Special Report, Project Administration Manual (PAM)	Submitted		

1. INTRODUCTION TO NPIWC-II

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. DGA OFWM KP 4. DGA OFWM Balochistan 5. Director Irrigation and Small Dams, AJ&K 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 years
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 BACKGROUND

The Government of Pakistan is implementing a five-year National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II), funded by the Ministry of National Food Security and Research (MNFSR), Islamabad. The executing agencies (EAs) are Federal Water Management Cell (FWMC), all Provincial Directorates of OFWM and respective departments of AJK, GB and ICT, District Governments and Farmers' Organizations (FOs) / Water Users Associations (WUAs). The coordination rests with FPMU-FWMC Islamabad.

There was a requirement of the project implementation to hire expert services of consultants for Monitoring, Evaluation and Impact Evaluation. For this purpose, a joint venture of G3 Engineering Consultants Pvt. Ltd., Ease-Pak Engineering Services (Pvt.) Ltd., Center for Social Research and Development (CSR) and ADA Inc., Canada has been selected through competitive bidding process as ME&IE Consultants. An Agreement was signed by the Joint Venture and the National Project Coordinator (NPC) on behalf of the Client dated 26th October 2020. The ME&IE Consultants team was mobilized on 20th November 2020.

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.

1.3 BRIEF DESCRIPTION OF THE PROJECT

1.3.1 Project Development Objectives

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

1.3.2 Project Objectives - General

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/litigations,
- Motivation/participation of farmers,
- Poverty reduction through employment generation,
- Increase in crops yield/sufficiency in food.

1.3.3 Project Objectives – Quantitative

The quantitative objectives of the Project are as under:

Project outputs

- i) Mobilization through capacity building of Water Users Associations/Farmers Organizations in improved water management techniques and their registration under On-Farm Water Management and Water User Associations Ordinance [Act] 1981 and organization of 47,278 WUAs,
- ii) Reconstruction/renovation and remodeling of 47,278 watercourses, involving complete earthen renovation, partial lining of critical reaches (50% of the total watercourse length as decided in the high-level meeting), and installation of water control structures. It is expected to save around 5.82 MAF per annum (approx. saving of 123 acre-feet (AF) per watercourse per annum),
- iii) Construction of 14,932 water storage tanks with 60% subsidy,
- iv) Provision of 11,610 Laser Land Levelers at 50% cost sharing, with the expectation to save about 50% irrigation water for wheat and about 68% of irrigation water for paddy.

Project impacts

- i) Reduction in Water Logging and salinity in project areas to the extent of 10%,
- ii) Cropping intensity is expected to increase by 5-20%,
- iii) Crops yield is estimated to increase by 10-15%.
- iv) Equity in water distribution increased by about 30%,

- v) Reduction in water disputes/thefts and litigation amongst the Farmers over water distribution by about 80%,
- vi) Help poverty reduction through generation of employment,
- vii) Self-sufficiency in food through utilization of water saved for edible oil seed production.

Project indirect benefits to industry/economic activities

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

Awareness support to farmers

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

1.4 PROJECT TARGETS

Project aims at achieving the targets (Table-1.1) for 5 years starting from year 2019-20 to 2023-24. The targets for each province/Unit (excluding Sindh) are given in **Table-1.1 to 1.4** and at Pakistan & Zonal Level detail is given in **Figure 1.1 and Figure 1.2**.

Table 1.1: Project Targets (in numbers)

Sr. No.	Intervention	Punjab	KP	Balochistan	GB	AJK	ICT	Total
1	Reconstruction of Watercourses (more than 20 years old/Additional lining 50 %)	7,500	3,000	3,589	-	-	-	14,089
	New Watercourses (Unimproved)	2,500	10,000	16,800	2,500	1,165	224	33,189
	Total Watercourses	10,000	13,000	20,389	2,500	1,165	224	47,278
2	Water Storage Tanks	3,000	5,000	5,507	825	600	-	14,932
3	Laser Land Leveling Units	9,500	600	1,500	5	5	-	11,610

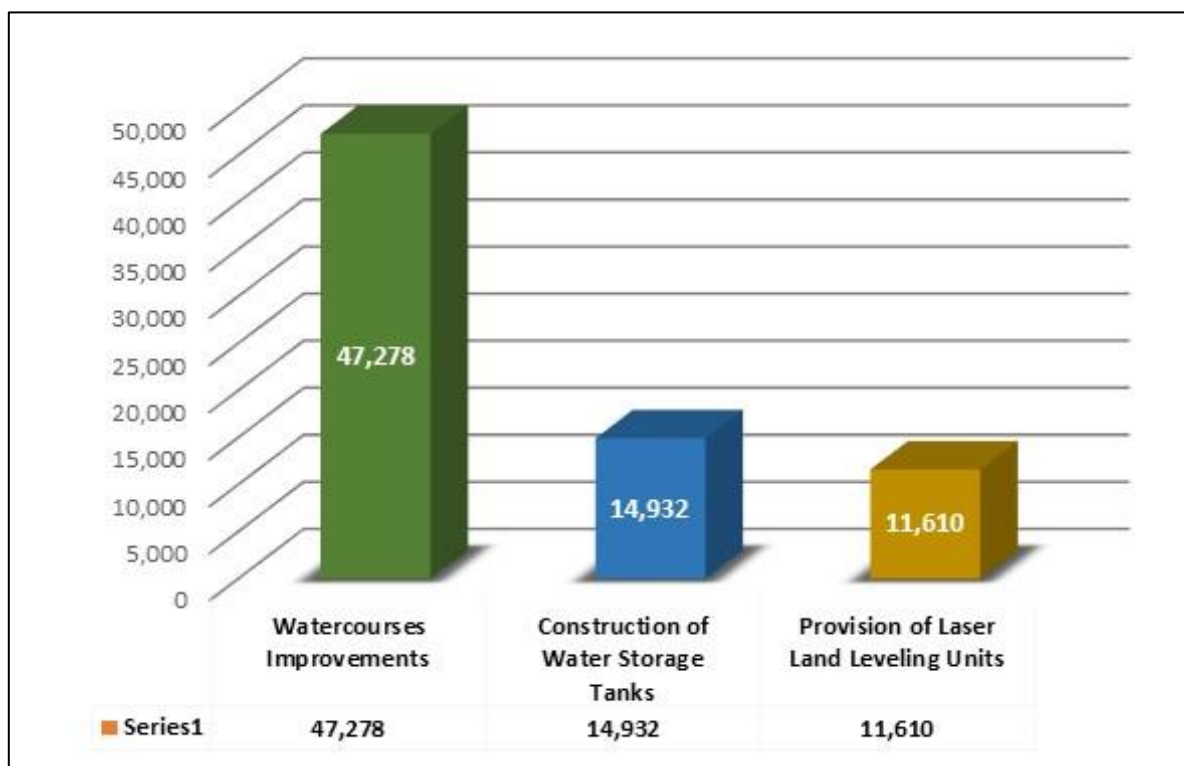


Figure 1.1: Pakistan Targets

Table 1.2: Province-wise year-wise watercourses targets

Sr. No.	Province / Unit	Watercourses (Numbers)					
		Year-1	Year-2	Year-3	Year-4	Year-5	Total
1	Punjab	1,000	1,100	2,700	2,800	2,400	10,000
2	Khyber Pakhtunkhwa	1,600	3,200	3,200	3,200	1,800	13,000
3	Balochistan	2,020	5,250	5,530	4,800	2,789	20,389
4	Gilgit Baltistan	496	496	500	504	502	2,500
5	AJK	190	227	244	278	226	1,165
6	ICT	24	45	47	57	51	224
Total		5,330	10,320	12,221	11,639	7,768	47,278

Table 1.3: Province-wise year-wise water storage tanks targets

Sr. No.	Province / Unit	Water Storage Tanks (Numbers)					
		Year-1	Year-2	Year-3	Year-4	Year-5	Total
1	Punjab	400	400	800	700	700	3,000
2	Khyber Pakhtunkhwa	550	1,300	1,300	1,300	550	5,000
3	Balochistan	360	1,000	1,510	1,500	1,137	5,507
4	Gilgit Baltistan	163	164	165	165	168	825
5	AJK	120	120	120	120	120	600
6	ICT	-	-	-	-	-	-
Total		1,593	2,984	3,895	3,785	2,675	14,932

Table 1.4: Province-wise year-wise Laser Land Leveling Unit targets

Sr. No.	Province / Unit	Laser Land Leveling (Numbers)					
		Year-1	Year-2	Year-3	Year-4	Year-5	Total
1	Punjab	1,700	2,200	2,200	2,000	1,400	9,500
2	Khyber Pakhtunkhwa	-	200	200	200	-	600
3	Balochistan	200	350	400	400	150	1,500
4	Gilgit Baltistan	-	2	3	-	-	5
5	AJK	-	2	3	-	-	5
6	ICT	-	-	-	-	-	-
Total		1,900	2,754	2,806	2,600	1,550	11,610

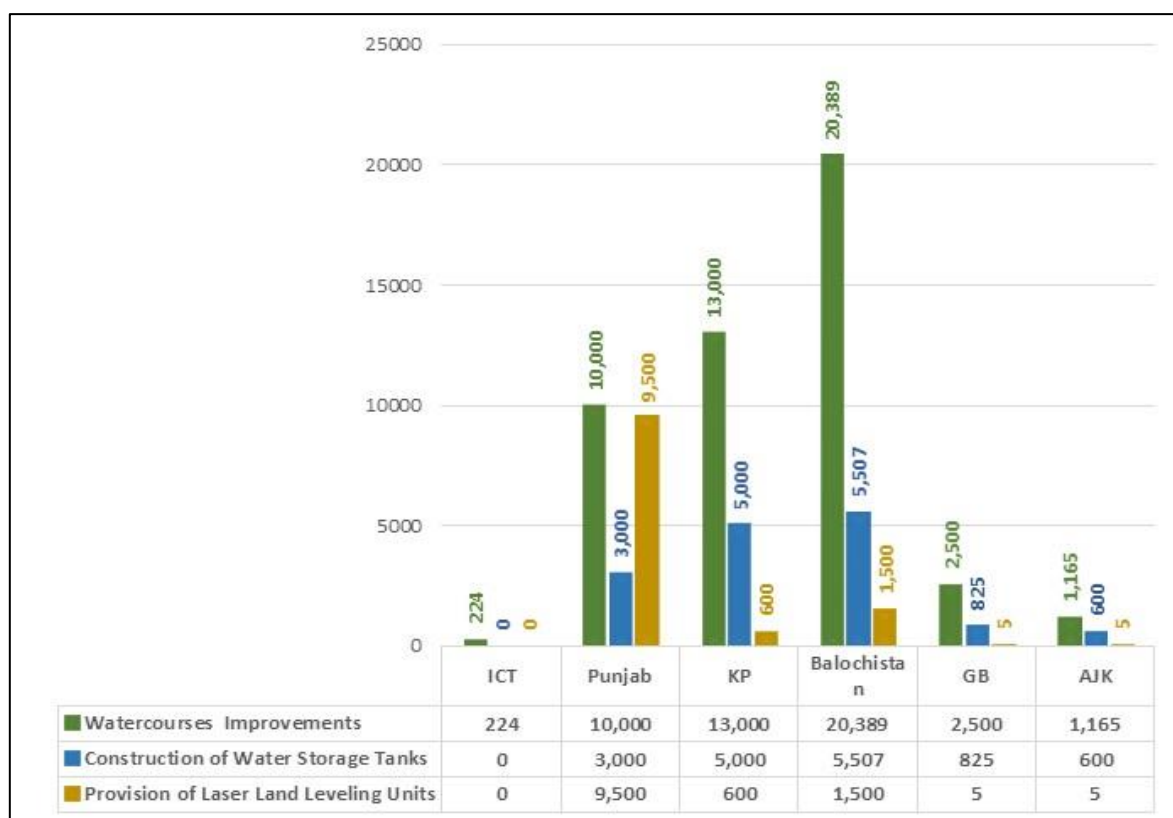


Figure 1.2: Zonal Targets

1.5 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.

1.6 PROJECT COMPONENTS

The project comprises four components, detailed as under:

1.6.1 Component C1: Organization of Water Users' Associations

The effective involvement and participation of the shareholders act as a catalyst for successful implementation of any development undertaking. The key to success of OFWM program in Pakistan is farmers' participation in execution of envisaged interventions through a community driven implementation approach. The proposed works will also be carried out through the WUAs to be registered under "On Farm Water Management & Water Users Associations Ordinance [Act]-1981(Amended 2001)" with following key responsibilities.

- 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.

1.6.2 Component C2: Watercourse Improvements

Total 47,278 watercourses are planned to be improved under NPIWC-II. The share of various provinces / areas is Punjab 10,000, KP 13,000, Balochistan 20,389, Gilgit Baltistan 2,500, AJK 1,165 and ICT 224. The project will consider three categories of the watercourses to be taken for improvement:

- 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.

1.6.3 Component C3: Construction of Water Storage Tanks

An on-farm water storage tank is a structural best management practice that enables to capture and

store canal water, surface water runoff during the rainy season, tail water from furrow irrigation etc., so that it may be used subsequently at required time of irrigation. These systems may be constructed with a water storage tank and an enlarged tail water Recovery Ditch (TWRD).

The purpose of providing water storage tanks includes the followings:

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

It is planned that 14,932 On Farm Water Storage Tanks will be constructed during Project period to supply supplemental irrigation.

1.6.4 Component C4: Provision of Laser Land Leveling Units

Enhancement of water productivity at farm level is the most appropriate solution to redress water scarcity. Laser land leveling is the best option for improving water productivity through minimizing water application losses. Precision land leveling has been promoted in the country since inception of OFWM program. Use of Laser technology for the purpose is the latest development, which was introduced in the country during 1985. On average Laser Land Leveler has the capacity of doing precision land leveling of about 300 acres per annum.

Laser Land leveling technology is highly popular amongst farming communities in the country especially in the Punjab because of its quick returns. Keeping in view huge demand for the technology and massive economic returns, it has been planned to provide 11,610 Laser Land Leveling Units to the farmers/service providers under NPIWC-II. 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 (one-time financial assistance of Rs.

250,000/-, while the beneficiary farmer would contribute the entire remaining cost of the equipment).

Baltistan excluding Sindh. It also covers Gilgit Baltistan (GB), Azad Jammu & Kashmir (AJK) and Islamabad Capital Territory (ICT). The location maps with total targets are shown in Figure-1.3 & 1.4.

1.7 PROJECT COVERAGE AND LOCATION

The works are being undertaken in the Province of Punjab, Khyber Pakhtunkhwa (KP), Balochistan, Gilgit

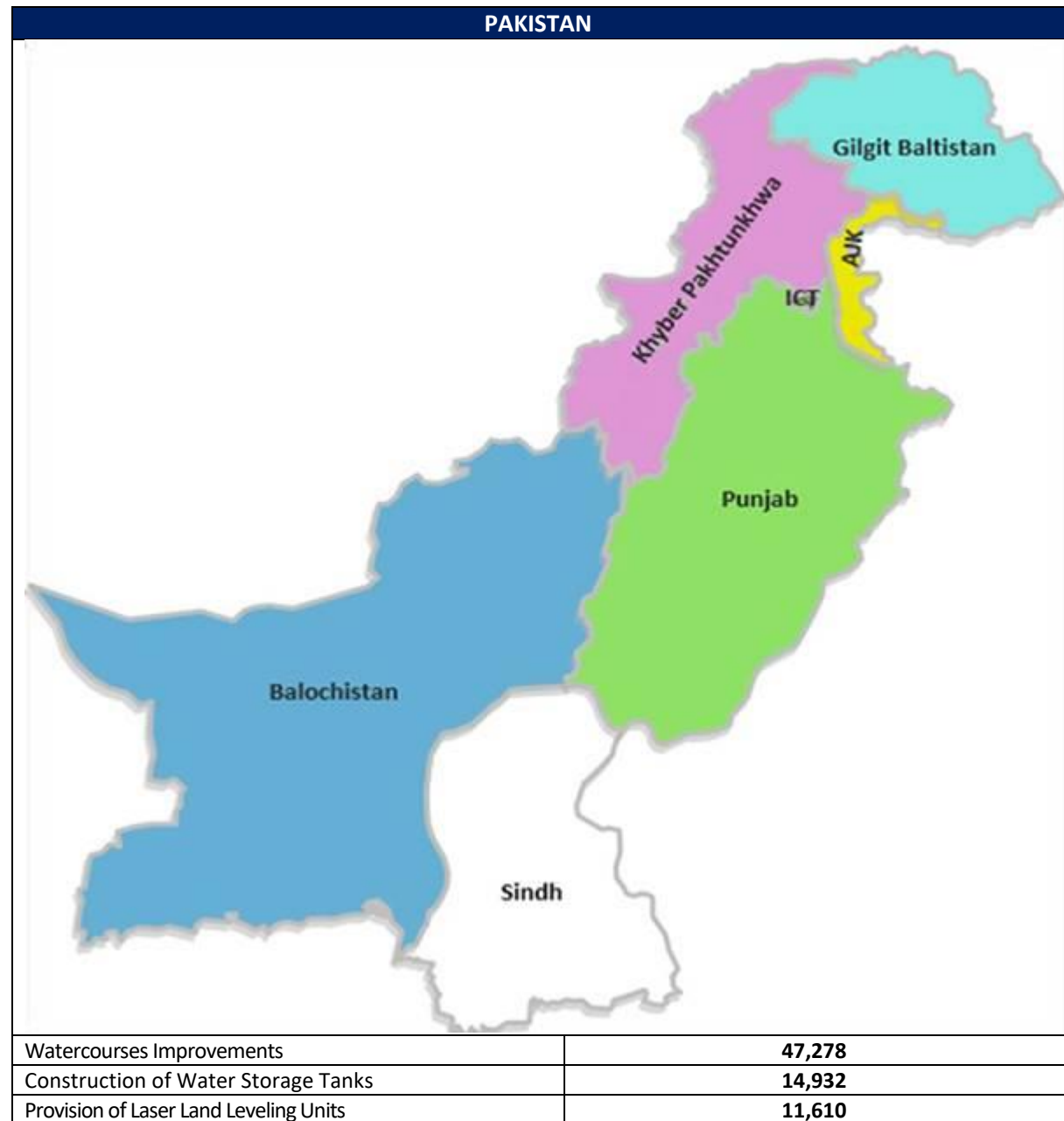


Figure 1.3: Location Map & Pakistan Targets

Zonal Targets:

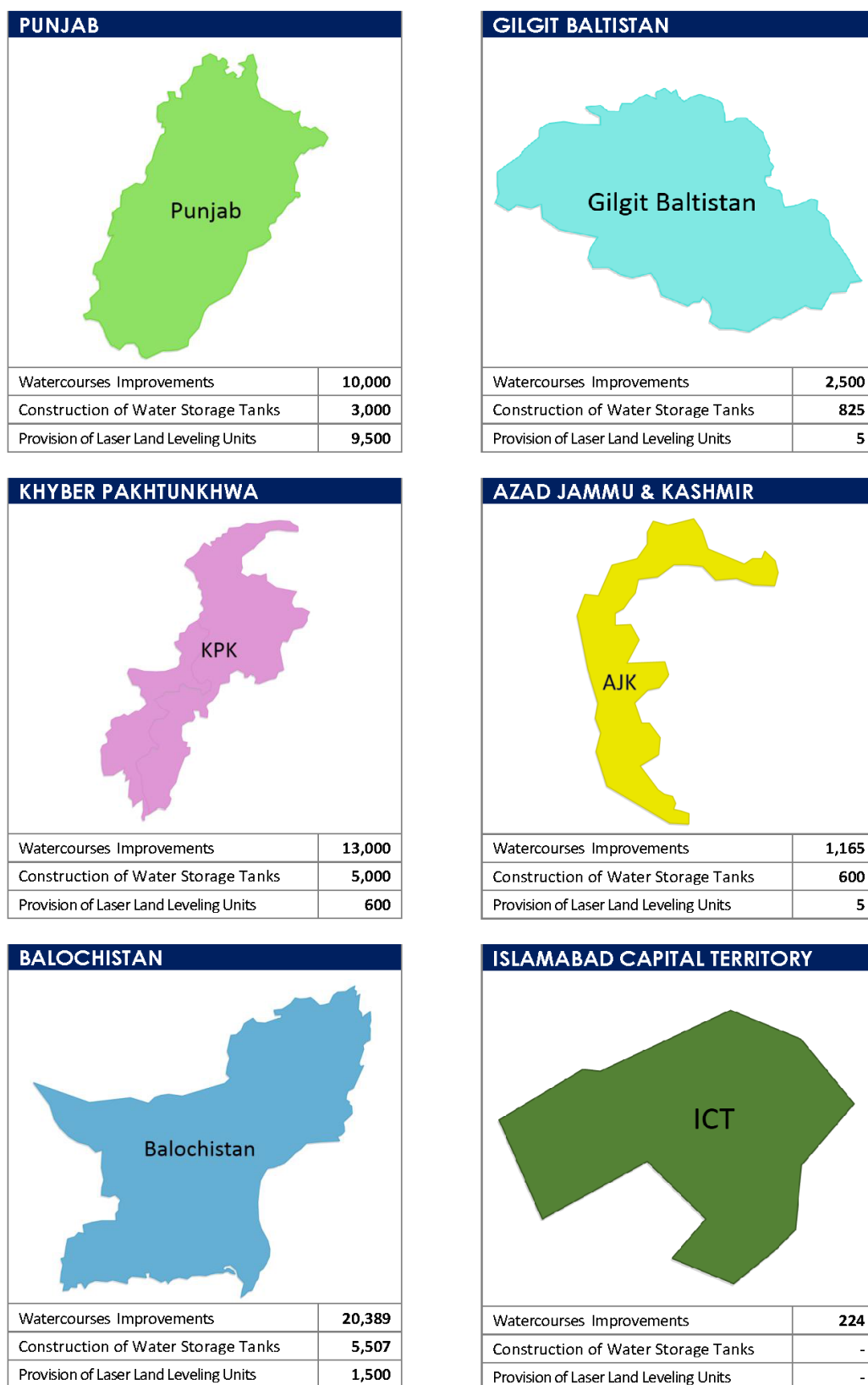


Figure 1.4: Location Maps & Zonal Targets

2. SCOPE AND SERVICES OF ME&IE CONSULTANTS

2.1 INTRODUCTION

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 consultants have to develop a State-of-the-Art Management Information System (MIS) with GIS focuses for NPIWC-II to monitor progress on project interventions and to carry out effective monitoring process. The MIS will help decision makers to make informed the decisions.

2.2 OBJECTIVES

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

2.3 SCOPE OF THE SERVICES

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

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

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

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

2.4 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 are explained in Chapter 6 of Inception

Report. The strategy aims to be finalized and implemented in close coordination with the client and active participation of the beneficiaries as well as the project stakeholders.

Table 2.1: Monitoring Strategy for ME&IE Activities

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
1	Baseline, midline and endline surveys	Team Leader, Socio-Economic Expert, Agricultural Economist and Deputy Team Leader of respective province/unit.	<ul style="list-style-type: none"> 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

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
			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 periodic 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 levelled: <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

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
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. Parameters like IRR, NPV and BCR will be estimated.
7	Impact evaluation-on the stakeholders	Team Leader, Agricultural Economist & 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.

2.5 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS

The indicators were further enhanced and refined in consultation with the client as well as stakeholders. They will also get improved as the project implementation

progresses as in the light of real and on the ground situations. The log-frame of the project inputs, outputs, outcomes and impacts with ME&IE methodologies is placed at **Annex-C**.

3. ANNUAL MONITORING AND EVALUATION REPORT

3.1 INTRODUCTION

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

3.2 OBJECTIVE OF AM&E REPORT

The Main objective of Annual Monitoring and Evaluation Report is to update the Client about the activities carrying out by the ME&IE Consultants during the reporting F.Y. 2021-2022. Reporting is an integral part of monitoring and evaluation framework.

3.3 REPORTING YEAR

This Second Annual Monitoring & Evaluation Report (AM&ER) covers the period from 1st July 2021 to 30th June 2022. The Report In-hand provides the progress made in various activities relating to the accomplishment of Monitoring activities of project interventions e.g., Improvement / Refinement of Monitoring Tools (MTs) in the light of lessons learnt in Baseline Survey-I and Comments received from Client on Report of Baseline Survey-I, Preparation for Baseline Survey-II, Monitoring of Interventions in the Field, Data Collection for BLS-II, Development Website of NPIWC-II, Development and launching of Project Dashboard. The report also describes all activities to be carried out as per quarterly work plan for the Year 2022.

4. ACTIVITIES COMPLETED DURING THE REPORTING YEAR TILL 30th June 2022

4.1 INTRODUCTION

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

4.2 OBJECTIVE OF AM&E REPORT

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

This Second Annual Monitoring & Evaluation Report (AM&ER) covers the period from 1st July 2021 to 30th June 2022. The Report In-hand provides the progress made in various activities relating to the accomplishment of Monitoring activities of project interventions e.g., Improvement / Refinement of Monitoring Tools (MTs) in the light of lessons learnt in Baseline Survey-I and Comments received from Client on Report of Baseline Survey-I, Preparation for Baseline Survey-II, Monitoring of Interventions in the Field, Data Collection for BLS-II, Development Website of NPIWC-II, Development and launching of Project Dashboard. The report also describes all activities to be carried out as per quarterly work plan for the Year 2022.

4.3 IMPROVEMENT OF MONITORING TOOLS (MTS) FOR 2ND PHASE BASELINE SURVEY

The ME&IE Consultants conducted multiple sessions of discussions on the Monitoring Tools (MTs) for improvement. Consultants reviewed the MTs in the light of Client's comments received on 1st Baseline Survey Report and lessons learnt by the consultants during activities of 1st Baseline Survey. The MTs were reviewed by all the zonal offices in coordination with Team Leader. Improvements / amendments were made in the MTs after detailed discussions. Some new indicators have also been added in the previous MTs which were felt necessary to evaluate the impact of the project interventions. Improved MTs were

submitted to NPC office on 27 February, for comments.

Field teams were also provided training on the updated MTs and refined / updated MTs were pretested in the field by the field teams. MTs have also been updated on Android base application for data collection in the field.

4.4 REGULAR MONITORING OF INTERVENTIONS IN THE FIELD

The routine monitoring is containing brief analysis of the results; calculating achievement rates and establishing trends, relevant findings that may help or constraint the future data collection activities in the established periods and, if appropriate, propose specific solutions assessing the advantages and disadvantages of each.

The regular monitoring assignments under the project NPIWC-II are comprised of input-output and process as defined in the Annual Work Plan / Budget and tracking of the outcome's indicators. Regular routine monitoring is to look at the extent to which the proposed project activities are being implemented as planned. Routine monitoring by the ME&IE consultants remained in progress during the reporting period.

Zonal teams of ME&IE consultants visited client offices for data collection to develop dashboard for Islamabad and KP zones. Consultants also conducted meeting with client offices for planning of 2nd Phase of Baseline Survey.

Detail of field visits and observations of the field teams and other ME&IE activities of all the Zonal offices during the reporting period is given below:

4.4.1 Regular Monitoring / Field Visits of Interventions in ICT / AJK Zone

During the reporting period field visits / monitoring carried out by ICT Zone field team is given below in detail. Zone Field Team visited the interventions, coordinated with the respective OFWM departments for documents and official details. Officials from OFWM department accompanied ME&IE consultants' the team for surveys. Field Team visited and surveyed the watercourses and water storage

tanks for baseline and monitoring surveys according to the schedule. Detail of field visits is as under:

4.4.1.1 Monitoring / Data Collection of Interventions in ICT Zone

- Field Visit of WC at Tarlai Kalan, ICT, on 16th July 2021

Details of WC at Tarlai Kalan	
Province/Unit	ICT
District	ICT
Tehsil	Tarlai Kalan
Village	Tarlai Kalan
Name of Watercourse	Omer Ali Khan – Tarlai Kalan
Coordinates	N 33.6365023 , E 73.1384257
No. of beneficiaries	1
Culturable Command Area (CCA)	20 Kanals
Name of Owner	Omer Ali Khan
Total Number of Water Users	1
Cropping Pattern	Leechee, Oranges, Grapefruits, Plum, Peach, Olives
Type of watercourse	PVC 3"
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	28.32 LPS
Main Source of water	Dug well
Additional Source of water	Bore
Length of watercourse	340 Meters
Date of Technical Sanction	15-07-2020
Sanctioned Cost	Rs. 757,799/-
Field visit of ME&IE Team with DD ICT is shown in Picture 4.1 below:	



Picture 4.1: Measuring Length of PVC 3" Dia Pipeline in ICT Zone

- Field Visit of WC at Pind Begwal, ICT, on 16th July 2021

Details of WC at Pind Begwal	
Province/Unit	ICT
District	ICT
Tehsil	Pind Begwal
Village	Pind Begwal
Name of Watercourse	Pind Begwal – Ch. Khanzada Khan
Coordinates	N 33.7117241 , E 73.2586318
No. of beneficiaries	1
Culturable Command Area (CCA)	20 Kanals
Name of Owner	Ch. Khanzada Khan
Total Number of Water Users	1
Cropping Pattern	-
Type of watercourse	PVC 3"
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	28.32 LPS
Main Source of water	Tubewell
Additional Source of water	No
Length of watercourse	340 Meters
Date of Technical Sanction	20-06-2020
Sanctioned Cost	Rs. 851,951/-

Pictorial view of Visit is given in picture 4.2.



Picture 4.2: Measuring the Legth of PVC3" Dia Pipeline

- Field Visit of WHS at Jari Kass, Mirpur, AJK, on 28th July 2021

Details of WHS at Jari Kass

Province	Azad Jammu & Kashmir
Division/Unit	Mirpur
District	Mirpur
Tehsil	Mirpur
Village	Jari Kass
Name of Water Harvesting Structure	Jari Kass – Raja Muhammad Munir
Coordinates	N 33.1026696, E 73.8527942
No. of beneficiaries	3
Culturable Command Area (CCA)	100 Kanals
Name of WUA Chairman	Raja Muhammad Munir
Total Number of Water Users	3
Cropping Pattern	Citrus Fruits (Oranges, Lemons, Guawa), Mango, Fodder, Wheat, Millet
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	-
Main Source of water	Bore
Additional Source of water	No
Specification of Dam	Clay Dam + Stone Pitching
Size of Earth Dam in documents	10 ft × 20 ft × 12 ft
Measured Size of Earth Dam	10.6 ft × 20.5 ft × 16.2 ft

Date of Technical Sanction	07-06-2021
Sanctioned Cost	Rs. 846,488/-
Government's Share (80%)	Rs. 677,190/-
Farmer's Share (40%)	Rs. 169,298/-

Pictorial view of Visit is given in picture 4.3:



Picture 4.3: Measuring Dimensions of Earthen Dam of WHS at Jari Kas Mirpur

- Field Visit of WC at Akbarabad, Mirpur, AJK, on 28th July 2021

Details of WC at Akbarabad

Province	Azad Jammu & Kashmir
Division	Mirpur
District	Mirpur
Tehsil	Mirpur
Village	Akbarabad
Name of Watercourse	Akbarabad – Muhammad Aslam
Coordinates	N 32.9698486, E 73.8132382
No. of beneficiaries	3
Culturable Command Area (CCA)	60 Kanals
Name of Owner	Muhammad Aslam
Total Number of Water Users	3
Cropping Pattern	-
Type of watercourse	PCPS
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	42.5 LPS
Main Source of water	Bore

Additional Source of water	No
Sanctioned Length of Watercourse	810 ft
Measured Length of Watercourse	816 ft
Date of Technical Sanction	20-05-2021
Sanctioned Cost	Rs. 503,290/-
Government's Share (80%)	Rs. 402,632/-
Farmer's Share (40%)	Rs. 100,658/-

Pictorial view of Visit is given in picture 4.4:



Picture 4.4: Taking Dimensions of W/C at Akbarabad, Mirpur

- Field Visit of WC Katchi, Bhimber, AJK, on 4th August 2021

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

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

- Field Visit of WC at Machia, Bhimber, AJK, on 4th August 2021

General Details of WC at Machia	
Province	Azad Jammu & Kashmir
Division	Mirpur
District	Bhimber
Tehsil	Bhimber
Village	Machia
Name of Watercourse	Machia-2
Coordinates	N 32.9561907, E 74.0567329
No. of beneficiaries	3
Culturable Command Area (CCA)	50 Kanals
Name of Chairman	Iftikhar Ahmad
Total Number of Water Users	3
Cropping Pattern	-
Type of watercourse	PCPS
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	28.32 LPS
Main Source of water	Tube-well
Additional Source of water	No
Date of Technical Sanction	01-10-2020
Sanctioned Cost	Rs. 409,944/-
Government's Share (80%)	Rs. 327,955/-
Farmer's Share (20%)	Rs. 819,89/-

• **Field Visit of WHS at Machora, Bhibber, AJK, on 4th August 2021**

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

• **Field Visit of WC at ARA, ICT, on 10th August 2021**

General Details of Arrah	
Province/Unit	ICT
District	ICT
Tehsil	-
Village	Arrah
Name of Watercourse	Zahid Hussain – Arrah
Coordinates	N 33.6298725, E 73.244946
No. of beneficiaries	1

Culturable Command Area (CCA)	40 Kanals
Name of Owner	Zahid Hussain
Total Number of Water Users	1
Cropping Pattern	Kharif (Maize, Sorghum, Millet) Rabi (Wheat, Mustard)
Type of watercourse	PVC 3"
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	8 LPS
Main Source of water	Mini Dam
Additional Source of water	No
Date of Technical Sanction	-
Sanctioned Cost	Rs. 1,402,491/-
Government's Share (75%)	Rs. 1,051,868/-
Farmer's Share (25%)	Rs. 350,623/-

• **Field Visit of WC at Payout, ICT, on 10th August 2021**

General Details of Payout	
Province/Unit	ICT
District	ICT
Tehsil	-
Village	Payout
Name of Watercourse	M. Hakeem Khan – Payout
Coordinates	N 33.6928138, E 73.3218476
No. of beneficiaries	1
Culturable Command Area (CCA)	25 Kanals
Name of Owner	Muhammad Hakeem Khan
Total Number of Water Users	1
Cropping Pattern	Kharif (Maize, Millet) Rabi (Wheat, Mustard)
Type of watercourse	PVC 3"
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	8 LPS
Main Source of water	Naala

Additional Source of water	No
Date of Technical Sanction	-
Sanctioned Cost	Rs. 1,330,671/-
Government's Share (75%)	Rs. 995,004/-
Farmer's Share (25%)	Rs. 332,668/-

• **Field Visit to Watercourse in Village Dhandr Kalan Bhimber, AJK of 28 May 2022**

Scheme	Watercourse
Farmer Name	Chaudry Muhammad Anwar
Name of village:	Dhandr Kalan
Chairman WUA:	Choudry Muhammad Anwar
District:	Bhimber
Province	AJK
Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	2348 feet
Command area of watercourse:	7.5 Acres
No of beneficiaries:	3
Cropping intensity increased	Cropping intensity did not increase. However, crop production has been increased significantly.
Equity in water distribution increased	From the start they have their own tubewell and they tend to use plastic pipe for irrigation of landholdings. However, this pipe became non-useable after one season of crops. Now they are happy because they can get speedy water delivery to end portion of land and they don't need much labour for handling plastic pipe or else.
Reduction in water disputes/thefts	Previously tube-well used to run for longer hours, however, now working hours are reduced. There were no disputes at all from the beginning.

• **Field Visit - Watercourse Waheed Anjum, Mirpur AJK - February 22, 2022**

Scheme	Watercourse
Farmer Name	Waheed Anjum
Name of village:	Faridabad
Chairman WUA:	Waheed Anjum
District:	Mirpur
Province	AJK
Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	900ft
Command area of watercourse:	7.37 Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer is Chairman of the WUA He has 200 Kanal land under this watercourse; however, 59 Kanal will be facilitated by the lining of this watercourse. He has requested the Department for the lining of watercourse as it takes 7 hours to irrigate 1-acre land due to sandy land and non-sufficient rainfall patterns. From this 59 kanal, 57 kanals is used for agriculture, while 2 kanal is being used for animal shed and labour residences.

General Observations	<ul style="list-style-type: none"> Land in this area is sandy WUA is actively working. Watercourse is precast parabolic segments. The source of the watercourse was Tube well which is owned by the beneficiary.
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Picture 4.5: Faridabad: Unlined watercourse and crops



Picture 4.6: Faridabad: tube well source of water

- Field Visit - Watercourse Abdul Majeed (Dhok Balyala), Mirpur, AJK - 22 February, 2022

Scheme	Watercourse
Farmer Name	Abdul Majeed
Name of village:	Dhok Balyala
Chairman WUA:	Abdul Majeed
District:	Mirpur
Province	Ajk
Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	848ft
Number of segments:	212

Command area of watercourse:	4 Acres (32 Kanal)
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer is Chairman of WUA WUA is actively working No female is working in WUA.
General Observations	<ul style="list-style-type: none"> The source of water was Tube well. Farmers use water only from the tubewells and don't sell water to any other farmer.



Picture 4.7: Balyala: Plastic foldable pipes being used for irrigation before lining of watercourse



Picture 4.8: Balyala: Lined Watercourse

• **Field Visit - Watercourse Waheed Ahmed
(Ternal -4), Mirpur, AJK - February 22, 2022**

Scheme	Watercourse
Farmer Name	Naveed Ahmed
Name of village:	Ternal
Chairman WUA:	Naveed Ahmed
District:	Mirpur
Province	Ajk
Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	320ft
Number of segments:	60
Command area of watercourse:	4.75 Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	<i>No Problems related to Equity in Water Distribution.</i>
Reduction in water disputes/thefts	<i>No problems related to water theft</i>
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer's current land holding is 38 Kanal and all the land is suitable for cultivation. He had hired two permanent labors for farming activities. No female participation in farming activities.
General Observations	<ul style="list-style-type: none"> The type of the watercourse is precast parabolic segment. The lining length of WC was 320ft, while the number of segments were 60. The source of the watercourse was only Tube well.



Picture 4.9: Ternal 4: W.C. Under Construction

• **Field Visit - Watercourse Naveed Ahmed
(Ternal), Mirpur, AJK - 22 February, 2022**

Scheme	Watercourse
Farmer Name	Naveed Ahmed
Name of village:	Ternal
Chairman WUA:	Naveed Ahmed
District:	Mirpur
Province	Ajk
Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	472ft
Number of segments:	118
Command area of watercourse:	2.8Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	<i>No Problems related to Equity in Water Distribution.</i>
Reduction in water disputes/thefts	<i>No problems related to water theft</i>
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer has his own farming equipment including rotavator, tractor He also a tube well. His current land holding is 23 Kanal and all the land was suitable for cultivation.

	<ul style="list-style-type: none"> He had hired two permanent labors for farming activities. <p>No female participation in farming activities</p>
General Observations	<ul style="list-style-type: none"> The source of the watercourse was only Tube well. They had livestock and the consumption pattern of food was given by the beneficiary.

Pictorial view of visit is given in figures 4.10.& 4.11



Picture 4.10: Tarnal Watercourse Branches



Picture 4.11: ME&IE Team interviewing farmers

- Field Visit – Watercourse Muhammad Irfan (Sirla-1), Bhimber, AJK - 23 February 2022**

Scheme	Watercourse
Farmer Name	Muhammad Irfan
Name of village:	Sirla
Chairman WUA:	Muhammad Irfan
District:	Bhimber
Province	Ajk
Source of irrigation:	Tube Well
Type of watercourse:	PCPS

Length of the watercourse:	700ft
Number of segments:	175
Command area of watercourse:	2.87 Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer is owner of 32 Kanal of land He is the chairman of WUA. The beneficiary was cultivating only fodder crops and is using his livestock for business purpose. He had hired 2 labors as permanent. There is no female participation in farming activities. With the help of Agricultural Department, he got his land leveled by Laser Land Lever and made it useful for agriculture. He has installed a tubewell in his land. Before lining of watercourses, he used to irrigate the land through plastic foldable pipes.
General Observations	<ul style="list-style-type: none"> The source of the watercourse is tube well only. Most of the land is sandy, and requires lot of irrigation timing, however, the pipe

	<p>system made it easy to irrigate.</p> <ul style="list-style-type: none"> Assistant Director told that other people have also levelled their land are requesting the Irrigation Department for the lining of the watercourse falling in their land.
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Pictures 4.12 & 4.13 are depicting the field visit.



Picture 4.12: Meeting with farmer in Serla



Picture 4.13: Newly Constructed Watercourse

- Visit of Watercourse Ulfat Hussain (Sokason), Bhimber, AJK - February 23, 2022

Scheme	Watercourse
Farmer Name	Ulfat Hussain
Name of village:	Sokason
Chairman WUA:	Ulfat Hussain
District:	Bhimber
Province	Ajk
Source of irrigation:	Tube Well
Type of watercourse:	PCPS

Length of the watercourse:	404ft
Number of segments:	101
Command area of watercourse:	3.75 Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer holds 30 Kanal of land. He is the chairman of the WUA No female participation in the farming activities He hires casual labours whenever needed.
General Observations	<ul style="list-style-type: none"> The source of the water is only tubewell and sometimes rainfalls, however rainfall is insufficient throughout the season.



Picture 4.14: Sokason Watercourse Under Construction

- Field Visit - Watercourse Usman Mehmood (Channi Kanjal), Bhimber, AJK - 23 February 2022

Scheme	Watercourse
Farmer Name	Usman Mehmood
Name of village:	Channi Kanjal
Chairman WUA:	Usman Mahmood
District:	Bhimber
Province	AJK

Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	870ft
Number of segments:	290
Command area of watercourse:	7.5 Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	<i>No Problems related to Equity in Water Distribution.</i>
Reduction in water disputes/thefts	<i>No problems related to water theft</i>
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> • He is holding 60 Kanal agriculture land • He has established a farm for his livestock including Australian cows, buffaloes, ducks. • He installed lined watercourses during NPIWC-I • During NPIWC-II he not got more lining of WC but he also constructed Dam in a gully area to store water for irrigation purpose. • He also installed few tube well in this land holding and watercourses are lined in a way that lower watercourses can be irrigated from upper area whenever needed. • No female participation in farming activities.
General Observations	<ul style="list-style-type: none"> • This land was uneven and was not useful for

Agriculture. Now he has leveled lot of area and using for agriculture.

- He planted Eucalyptus in his land before 7 years which are more than 60,000 trees.
- Now he has planted olive plants on other part of his land which will be more productive for him.
- He has to hire experienced labor from Punjab or KPK and the hiring cost of those labor is much higher



Picture 4.15: Channi Kanjal Watercourse Under Construction

• **Field Visit to Water Harvesting System in Village Oithorani Bhimber AJK 28 May 2022**

Scheme	WHS
Farmer Name	Muhammad Abdul Rehman
Name of village:	Pithorani
Chairman WUA:	Muhammad Abdur Rehman
District:	Bhimber
Province	AJK
Source of irrigation:	Rainwater
Command area of water Harvesting System:	3.625 Acres (32 Kanal)
No of beneficiaries:	3
Cropping intensity increased	Not measured

Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft

Pictorial view of visit is given in Picture 4.16.



Picture 4.16: Field Team with beneficiaries of WHS, Pithorani, Bhimber, AJK

- Field Visit to Watercourse Naseer Ahmed in Village Kokran Gujran, Bhimber AJK 28 May 2022

Scheme	Watercourse
Farmer Name	Naseer Ahmed
Name of village:	Kokran Gujran
Chairman WUA:	Naseer Ahmed
District:	Bhimber
Province	AJK
Source of irrigation:	Tube Well
Type of watercourse:	PCPS
Length of the watercourse:	340 feet
Number of segments:	
Command area of watercourse:	5.25 Acres
No of beneficiaries:	3
Cropping intensity increased	Not measured due to new lining.
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft



Picture 4.17: PCPS Watercourse (L) and Livestock farm at Khokran Gujran, Bhimber, AJK

- Field Visit to Water Storage Tank Kagyali Kandhar Kotli, AJK, on 10 June 2022

Scheme	Water storage Tank
Farmer Name	Muhammad Mouzam
Name of village:	Kagyali Kandhar
Chairman WUA:	Muhammad Mouzam
District:	Kotli
Province	AJK
Source of irrigation:	Stream
Shape of WST	Square
Capacity of Water storage Pond	1568 cubic feet
Command area of WSP :	7.5 Acres
No of beneficiaries:	3
Reduction in water disputes/thefts	No problems related to water theft

Pictorial view of visit is given in Picture 4.4.



Picture 4.18: Water Storage Tank Kaghyali

- Field Visit to Watercourse Maira Nakyal, AJK, on 10 June 2022

Scheme	Water Course
Farmer Name	Muzaffar Hussain
Name of village:	Maira Nakyal
Chairman WUA:	Muzaffar Hussain
District:	Kotli
Province	AJK
Source of irrigation:	Stream/ Nullah
Type of watercourse:	PCC

Length of the watercourse:	1017 ft.
Command area of water Harvesting System:	8.125 Acres (65 Kanal)
No of beneficiaries:	4
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft
Pictorial view of visit is given in Picture 4.19.	



Picture 4.19: ME&IE team with Beneficiaries of Maira Nakyal W.C. (L) ME&IE Team Measuring Maira Nakyal W.C (R)



Picture 4.20: Damaged part of WC (left), ME&IE team with beneficiaries of Jandrot WC (R)

- Field Visit to Watercourse in Jandrot Kathar Zereen, AJK, on 10 June 2022

Scheme	Watercourse
Farmer Name	Muhammad Asghar
Name of village:	Jandrot Kathar Zereen
Chairman WUA:	Muhammad Asghar
District:	Kotli
Province	AJK
Source of irrigation:	Stream
Type of watercourse:	PCC
Length of the watercourse:	1610 ft.
Command area of watercourse:	7.5 Acres
No of beneficiaries:	4
Equity in water distribution increased	No Problems related to Equity in Water Distribution.
Reduction in water disputes/thefts	No problems related to water theft
Pictorial view of visit is given in Picture 4.20.	

4.4.2 Regular Monitoring / Field Visits of Interventions in Punjab Zone

4.4.2.1 Progress of Various Interventions Against the Target

National Program for Improvement of watercourses (NPIWC – II) was initiated in 2019 – 20. The overall objective of the project was to improve the water productivity. The project envisages to the following inventions.

- Improvement of watercourses
- Organization of water User Associations
- Construction of water Storage Tanks
- Provision of Laser Land Leveler

Monitoring Evaluation and Impact Evaluation (ME&IE) consultants were inducted in 2020 – 21, one year after the project started. The ME&IE consultants have successfully completed the baseline survey – I in all provinces and units of the project by the end of 2021.

Under the experience of Phase – I gained in monitoring /baseline survey, in the project the sampling techniques in the distribution of the sampled interventions in Punjab were revised this was carried over with the consultation of Dr. Muhammad Abdul Quddus Agricultural Economist, National office Islamabad. This strategy is being

followed for Monitoring/Baseline Survey Phase – II, which is under way. The revised sampling methodology, sample size, and sampling technique in distribution of sample size in Punjab is as under:

• Sampling Methodology of Punjab Zone

Sampling is the process of choosing a representative proportion of a population, the entire group of items (elements) of various interventions in the project. It is contrasted with the process of complete enumeration in which every number of defined populations is included. In the study under review the defined population/number of various intervention units in the Punjab zone are:

- i. Watercourses for Improvement – 10,000
 - Additional Watercourses – 7,500
 - Regular Watercourses – 2,500
- ii. Water Storage Tanks – 3,000
- iii. Laser Land Levelers – 9,500

The establishment of a water user association is a pre-requisite for the improvement of a watercourse. The number of Water user associations will be the same as for the watercourses.

• Sample Size

The overall appropriate sample size of various interventions in the project area was estimated earlier keeping in view the dispersion of interventions as well as financial and human resources. For this evaluation study, the best statistical techniques were used for estimating the appropriate sample size for each intervention and Province/unit as mentioned in the inception report. The sample size estimated for Punjab province was as under:

- i. Watercourse for Improvement = 300 (3% total project target)
 - Regular = 75
 - Additional Lining = 225
- ii. Water Storage Tanks = 60 (2% of total project target)
- iii. Laser Land Levelers = 300 (3% of total project target)

The sample size units (subjects) determination was for the entire universe, to be completed over the period of 5 Years. (2019-2020 to 2023-2024) Phase – I was completed towards the end of June 2021.

It was proposed earlier to conduct the baseline survey in 3 phases, in each phase 1/3 sample size will be covered Phase – II is in progress, whereas Phase – III will be conducted later on. The phase-II will spin around the target units up to 2020-21 of each intervention.

• Sampling Techniques in Distribution of Sample

To draw a true, representative sample of various interventions following sampling techniques have been used.

- Stratified
- Purposive
- Cluster
- Multi - stage
- Randomized

- Stratified Sampling

The Punjab zone could be stratified on the basis of source of irrigation and cropping patterns in a specific area. Each stratum is being called a crop ecological zone (**Figure 1.5**). The crop ecological zones along with their location (districts) are shown below.

- i. Barani – Attock, Chakwal, Rawalpindi and Jhelum
- ii. Partial Barani – Mianwali and Bhakkar
- iii. Irrigated (Rice zone) - Gujranwala, Hafizabad, Gujrat, Narowal, Sialkot, Mandi Bahu Din, Lahore, Kasur, Nankana Sahib and Sheikhupura.
- iv. Irrigated (Mixed Zone) - Sahiwal, Okara, Pakpattan, Faisalabad, Jhang, Chiniot, Toba Tek Singh, Sargodha, and Khushab.
- v. Irrigated (Cotton zone) - Bahawalpur, Bahawalnagar, Rahim Yar Khan, Vehari, Lodhran, Khanewal, Multan D.G Khan, Rajanpur, Muzaffargarh and Layyah.

- Purposive Sampling

Out of 36 districts, 9 districts (about 25 percent) as a representative of a respective crop ecological zone considering homogeneity and purposiveness were sampled as under:

- i. Barani zone - Chakwal
- ii. Partial Barani zone – Bhakkar
- iii. Irrigated Rice – wheat – Hafizabad, and Sheikhupura
- iv. Irrigated Mix – Wheat – Faisalabad and Sargodha
- v. Irrigated cotton – Wheat - Bahawalnagar R.Y Khan and D.D Khan

The remaining districts other than sampled in Phase-II, and already covered in Phase-I baseline survey, will be given due weightage in Baseline Survey-III for enhancing the representation of the respective zones.

Source:

*Farm Account, the Family Budget of rural families, and Cost of Production of Major Crops (2017 – 18), Punjab Economic Research Institute, Lahore



Figure 4. 1: Classification of project area by ecological zone

- Cluster Sampling

Within each district sampled a cluster of 1-2 homogenous tehsils based on local conditions are identified with the consultation and coordination of OFWM, field teams.

- Multi-Stage Sampling

First Stage Sampling

The choice of the cluster of tehsils in each district is the first stage sampling. The identification of the sampled sites of each intervention will be carried out with the cooperation of OFWM field staff at the tehsil level. Selection of tehsils is in process and will be finalized during the field survey.

Second Stage Sampling / Randomized Sampling

After the identifications of various intervention sites, second stage sampling of the respondents will be conducted randomly.

• Water Course Users / Beneficiaries

About 15 – 20 % of beneficiaries / users are randomly drawn out of the list of beneficiaries of water course for further study on the baseline / impact of the project. Selection is made as 1/3 at the head, 1/3 at the middle, and 1/3 at the tail (approximately six users, 2 at each location). The number may vary with the variation of the beneficiaries/user of water of the respective watercourses.

Due consideration is given to the farm size. However female and tenant beneficiaries (if Any) are preferably included in the list of respondents to highlight their representations.

• Water Storage Tank Users / Beneficiaries

There is generally one beneficiary/ user of a water storage tank i.e., owner He / She becomes the respondent.

• **Laser Land Leveler Users / Beneficiaries**

Besides the service provider of the laser land leveler there are many beneficiaries/ users of this service. With the consultation of respective service users one beneficiary / user will be selected as a respondent for collecting the relevant data / information.

• **Summary of sample size for Baseline Survey - II**

In each sampled ecological zone / district total sample size for each intervention in the phase-II survey are shown in table 4.1.

Table 4. 1: Sample Size – Baseline Survey Phase - II

Sr. No.	Cropping Zone	Sample District	Water Course for Improvement			Water Storage Tank	Laser Land Leveler
			Sample Baseline As per the Inception Report			Sample Baseline As per the Inception Report	Sample Baseline As per the Inception Report
			Total	Regular	Additional		
1	BARANI	Chakwal	-	-	-	7	-
Sub Total			-	-	-	7	-
2	PARTIAL BARANI	Bhakkar	11	7	4	04	23
Sub Total			11	7	4	04	23
3	IRRIGATED (RICE ZONE)	Sheikhupura	13	9	4	01	26
		Hafizabad	12	8	4	02	21
Sub Total			25	17	8	03	47
4	IRRIGATED (MIXED ZONE)	Faisalabad	10	10	-	05	29
		Sargodha	19	11	8	05	28
Sub Total			29	21	8	10	57
5	IRRIGATED (COTTON ZONE)	B. Nagar	40	32	8	05	32
		R.Y. Khan	61	51	10	06	32
		D.G. Khan	14	7	7	05	09
Sub Total			115	90	25	16	79
Grand Total			180	135	45	40	200
No of Beneficiaries / Respondents per unit of an intervention			6	6		1	1
Total Beneficiaries / Respondents			1080			40	200

4.4.2.1 Progress of Monitoring/Baseline Survey of Various Interventions

Overall progress of various interventions during Phase-II in the year 2021-2022 is presented below given in table 4.2.

Table 4. 2: Physical Progress of Monitoring / Baseline Survey Phase-II (2021-22) by Crop Ecological Zones

Crop Ecological zone	Improvement of Watercourse						Construction of Water Storage Tank			Laser Land Leveller		
	Sample Size			Unit Visited/ Monitored			Sample Size	Unit Visited/ Monitored	No of Respondent / Beneficiaries	Sample Size	Unit Visited/ Monitored	No of Respondent / Beneficiaries
	Regular	Additional	Total	Additional	Regular	Total						
Barani Zone	-	-	-	-	-	-	7	8	3	-	-	-
Partially Barani	7	4	11	2	1	3	4	5	5	23	5	5
Irrigated Rice zone	17	8	25	18	3	21	3	14	14	47	-	-
Irrigated Mix zone	21	8	29	11	0	11	10	5	5	57	-	-
Irrigated Cotton	30	25	115	16	6	22	16	14	14	73	18	18
Total	135	45	180	47	10	57	40	47	47	200	23	23

Overall performance is also reflected in diagram as under:

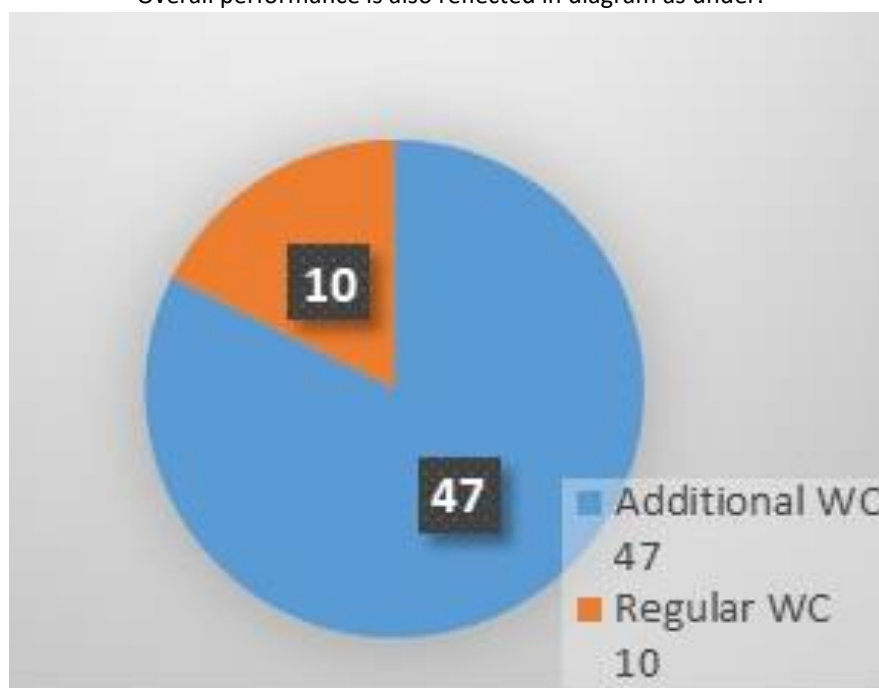


Figure 4.2: Share of Various Types of Watercourses

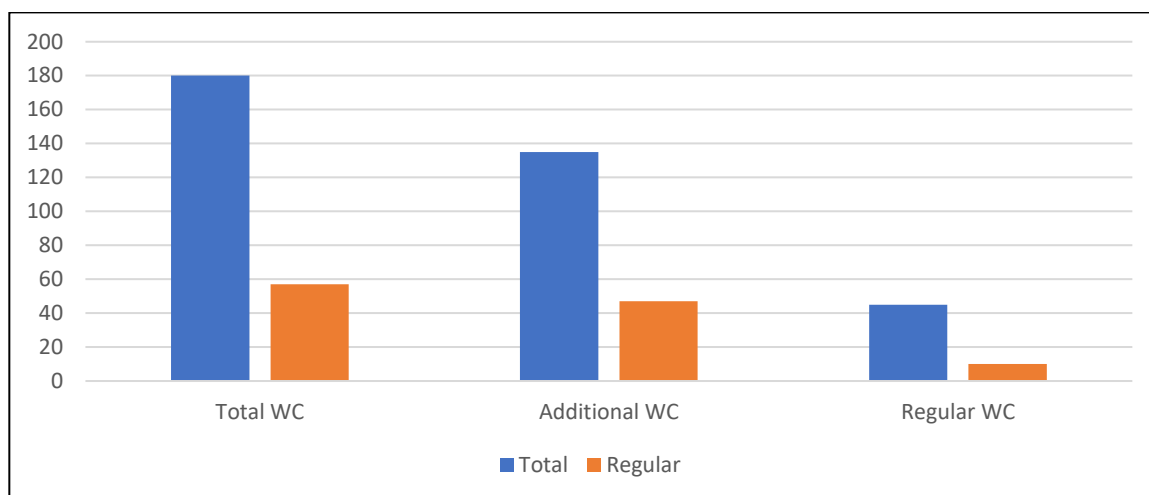


Figure 4.3: Achievements of the target sample of the watercourse

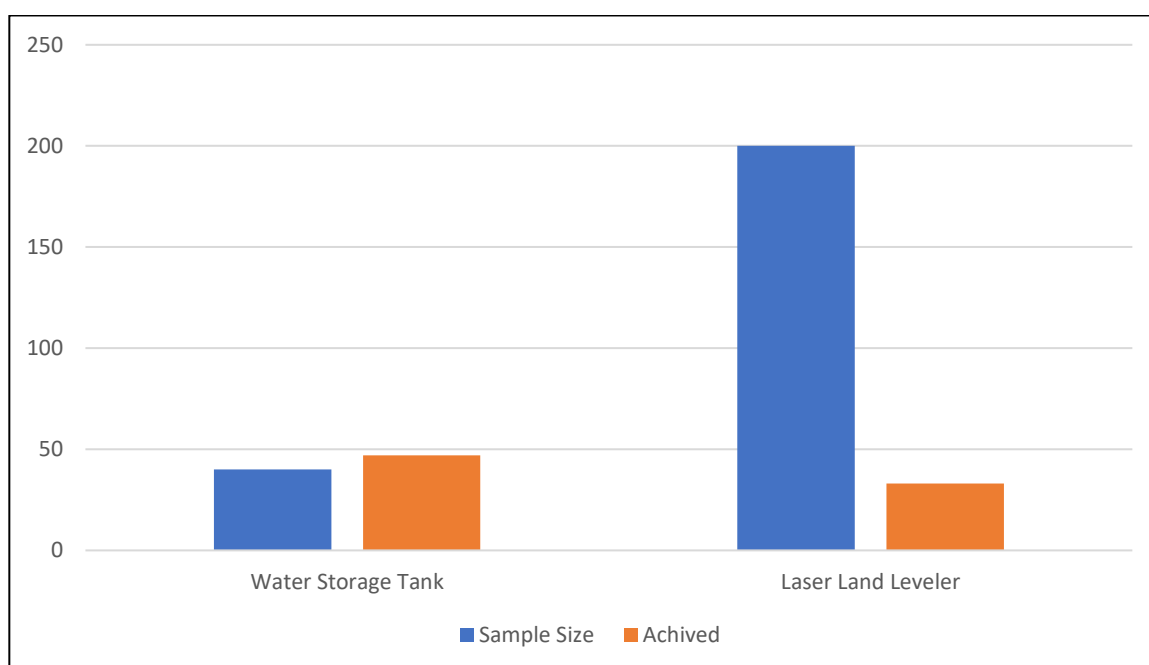


Figure 4.4: Achievements of target sample of water storage tank and laser land leveler

4.4.2.2 The Crop Ecological Zone Wise Progress:

The Crop Ecological Zone Wise Progress is presented in the following sequence.

- i. Improvement of watercourse
 - Monitoring of Improvement of Watercourse
 - Baseline survey of watercourse
- ii. Construction of Water Storage Tank Intervention
 - Monitoring of Water Storage Tank
 - Baseline of Water Storage Tank
- iii. Provision of Laser land leveler Intervention

- **Monitoring of Improvement of Watercourse**

The Various important fact about monitored watercourse are shown in the respective zone along with the summary are as follows:

- **Partial Barani Zone**

The Partial Barani zone comprises of a district Mainwali and Bhakkar.

Table 4.3: List of Watercourses Monitored

Sr. No.	Cropping Zone	District	Tehsil	Mouza / Chak No	WC ID		No Of Share holders	Financial Year	GCA	CCA	Design Discharge (LPS)	Sanctioned Lining Length	Total WC Lenth (meter)
					Additional	Regular							
1	Partial Barani	Bhakkar	Bhakkar	Mamdowala	74750/R		60	2021 - 22	622	-	90		
2			Darya Khan	Khanpur Janoobi	26750/L		12	2021 - 22	385	-	100		
3			Kaloor Kot	Bakawala		34000 TL	27	2021 - 22	460	-	90		

Summary									
No. of Watercourses			No. of Shareholders		Finacial Year		Design Discharge		
Total	3	100%	Total	99	2019-20	0	Total	280 LPS	
Additional	2	67%	Mean	33	2020-21	0	Mean	93	
Regular	1	33%	Range	12 - 60	2021-22	3	Range	90 - 100 LPS	

ME&IE consultants observed that improvement of the watercourse is the need of the day in the desert area.

- **Irrigated Rice Zone**

Table 4.4: List of watercourses Monitored

Summary									
No. of Watercourses			No. of Shareholders		Finacial Year		Design Discharge (LPS)		
Total =	21	100%	Total =	510	2019-20	10	Total =	1337	
Additional =	18	86%	Mean =	27	2020-21	7	Mean =	74	
Regular =	3	14%	Range =	9 - 110	2021-22	3	Range =	45 - 150	

- Irrigated Mix zone

Table 4.5: List of Watercourse Monitored

Summary									
No. of Watercourses			No. of Shareholders		Financial Year		Design Discharge (LPS)		
Total =	11	(100%)	Total =	372	2019-20	1	Total =	974	
Additional =	11	(100%)	Mean =	34	2020-21	6	Mean =	89	
Regular =	0	0%	Range =	9 - 67	2021-22	4	Range =	0 - 165	

- Irrigated Cotton Zone

Table 4.6: List of Watercourse Monitored

Summary									
No. of Watercourses			No. of Shareholders		Financial Year		Design Discharge (LPS)		
Total =	22	(100%)	Total =	580	2019-20	1	Total =	2203	
Additional =	16	73%	Mean =	26	2020-21	17	Mean =	110	
Regular =	6	27%	Range =	5 - 66	2021-22	4	Range =	60 - 210	

4.4.2.3 Overall Punjab Status

- Overall Monitoring of Improvement of Watercourse

Table 4.7: Overall Monitoring Summary of Improvement of Watercourses

Summary									
No. of Watercourses			No. of Shareholders		Financial Year		Design Discharge (LPS)		
Total	57	100%	Total	1561	2019-20	6	Total	4794	
Additional	47	82%	Mean	28.4	2020-21	30	Mean	94	
Regular	10	18%	Range	5 - 110	2021-22	21	Range	45 - 210	

- **Baseline Survey of Respondent of Sampled Watercourse**

The baseline survey pertains to all the watercourses as monitored except 26 watercourses which were visited only for the purpose of monitoring. The baseline survey pertains to 31 watercourses as under

- **Partial Barani**

Table 4.8: List of Watercourse and Respondent Survey for Baseline

Summary							
No. of WC's	No. of Beneficiaries	Location of WC		Operated Area		Tenurial Status	
3	18	Head	0	Total	326	Owner	21
		Middle	3	Mean	18.1	Owner + Tenant	0
		Tail	15	Range	4-50	Tenant	0

- **Irrigated Rice zone**

Table 4.9: List of Watercourse and Respondent Survey for Baseline

Summary							
No. of WC's	No. of Beneficiaries	Location of WC		Operated Area		Tenurial Status	
10	52	Head	12	Total	893	Owner	37
		Middle	18	Mean	17.2	Owner + Tenant	13
		Tail	22	Range	2.5 - 70	Tenant	2

- **Irrigated Mix zone**

Table 4.10: List of Watercourse and Respondent Survey for Baseline

Summary							
No. of WC's	No. of Beneficiaries	Location of WC		Operated Area		Tenurial Status	
5	28	Head	9	Total	331	Owner	20
		Middle	10	Mean	12.3	Owner + Tenant	8
		Tail	9	Range	2.5 - 50	Tenant	0

- **Irrigated Cotton zone**

Table 4.11: List of Watercourse and Respondent Survey for Baseline

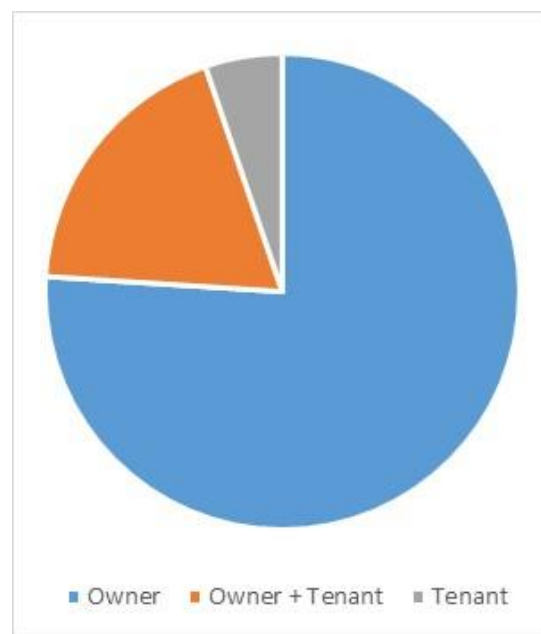
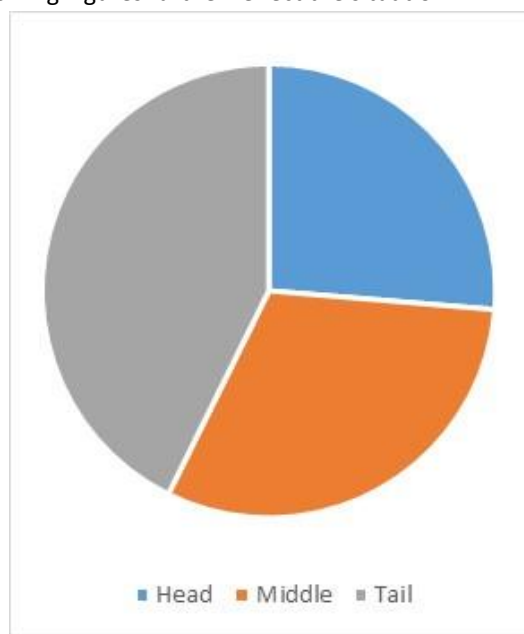
Summary							
No. of WC's	No. of Beneficiaries	Location of WC		Operated Area		Tenurial Status	
13	68	Head	12	Total	818.8	Owner	55
		Middle	18	Mean	11.4	Owner + Tenant	11
		Tail	38	Range	1-66	Tenant	7

4.4.2.4 Over All Status of Punjab Respondent survey for Baseline

Table 4.12: Summary List of Watercourse and Respondent Survey for Baseline

Summary							
No. of WC's	No. of Beneficiaries	Location of WC		Operated Area		Tenurial Status	
31	171	Head	45	Total	2368.8	Owner	130
		Middle	53	Mean	14	Owner + Tenant	32
		Tail	73	Range	1-70	Tenant	9

Following Figures further reflect the situation



4.4.2.5 Partial Barani Zone

Table 4.13: List of Water Storage Tank Monitored

Summary					
Finacial Year		Command area		Types / Shape of WST	
2019-20	0	Total	78.175	Square	5
2020-21	7	Mean	8.7	Rectangular	4
2021-22	2	Range	3 - 16.1	Trapezoidal	0

4.4.2.6 Barani zone

Table 4.14: List of Water Storage Tank Monitored

Summary					
Finacial Year		Command area		Types / Shape of WST	
2019-20	0	Total	55.5	Square	0
2020-21	1	Mean	11.1	Rectangular	0
2021-22	4	Range	9 - 12.5	Trapezoidal	5

4.4.2.7 Irrigated Rice zone

Table 4.15: List Of Water Storage Tank Monitored

Summary					
Finacial Year		Command area		Types / Shape of WST	
2019-20	5	Total	107.7	Square	2
2020-21	8	Mean	10.77	Rectangular	8
2021-22	1	Range	5 - 19	Trapezoidal	3

4.4.2.8 Irrigated Mix zone

Table 4.16: List Of Water Storage Tank Monitored

Summary					
Finacial Year		Command area		Types / Shape of WST	
2019-20	0	Total	46.5	Square	0
2020-21	2	Mean	11.6	Rectangular	2
2021-22	3	Range	6 - 20	Trapezoidal	3

4.4.2.9 Irrigated Cotton zone

Table 4.17: List Of Water Storage Tank Monitored

Summary					
Finacial Year		Command area		Types / Shape of WST	
2019-20	2	Total	101	Square	0
2020-21	6	Mean	8.4	Rectangular	2
2021-22	6	Range	3 - 15	Trapezoidal	12

4.4.2.10 Overall Punjab Status

Table 4.18: Overall Monitoring of Water Storage Tank

Summary					
Financial Year		Command area		Types / Shape of WST	
2019-20	7	Total	388.9	Square	7
2020-21	24	Mean	8.3	Rectangular	17
2021-22	16	Range	3 - 20	Trapezoidal	23

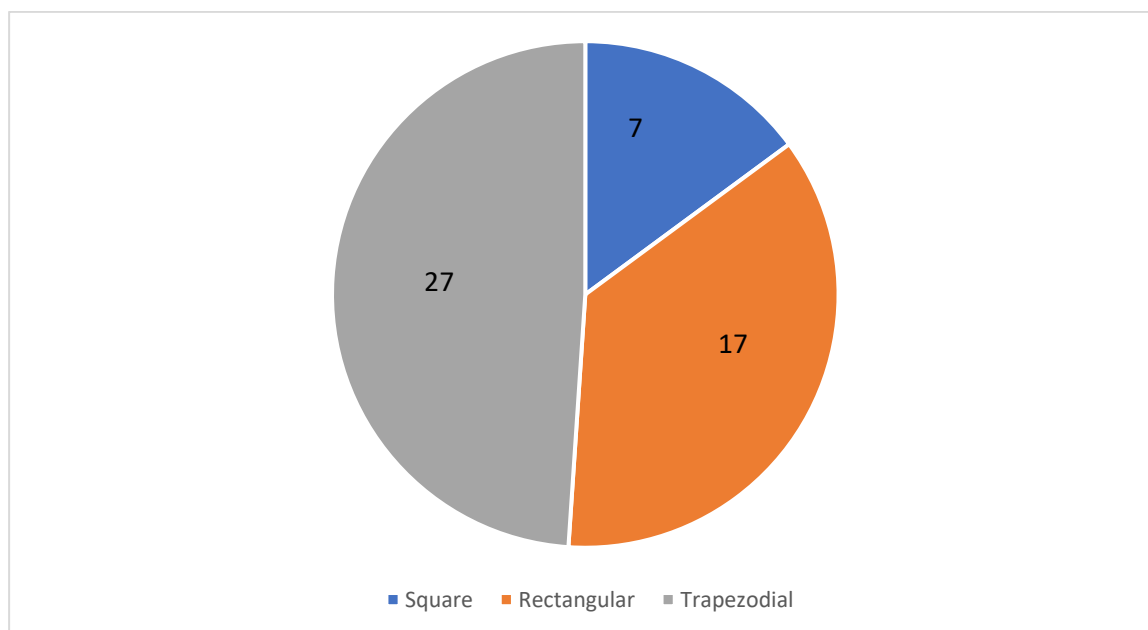


Figure 4.7: Type/Shape of Monitored Water Storage Tank

4.4.2.11 Overall List of Water Storage Tank Respondent/ Survey for Baseline

Table 4.19: Summary of Water Storage Tanks Respondents / Survey for Baseline

Summary			
Ecological Zone	Total CCA	Mean	Range
Barani	11.2	3.75	3 - 4.6
Rice	12.5	5	1 - 5
Cotton	76.8	5.48	5 - 7.4

The baseline survey pertains to only 18 water storage tanks surveyed during the year early 29 water storage tanks were visited for the monitoring purpose only the area to be covered by water storage tank were

generally culturable waste and are being plot under cultivation. In the newly area brought under cultivation most of the water storage tank are, planted with citrus, fruits most of the area under these fruits are has not yet resulted any crops. In few cases Area sown with construction of water storage tank have traditional crops like wheat and grain channel yield of these crops are generally low.

4.4.2.12 Provision of Laser Land Leveler Interventions

The Monitored evaluation of laser land leveler intervention has been started comparatively late as compared to other interventions. The data/ information relevant collected during 2021 – 22 is shown in table 4.20.

Table 4.20: Laser Land Leveler Units/Services Providers

Sr. No.	Crop Ecological Zone	District	Tehsil	LLL Owner Name	Company Name providing LLL	Machine Delivery (Year)
1	Partial Barani Zone	Bhakkar	Mankera	Muhammad Asad Khan	Modern Farming	2022
2			Mankera	Muhammad Younus	Crosfield Agro	2022
3			Kaloor Kot	Hassan Abbas	Modern Farming	2021
4			Darya Khan	Ameer Iqbal Asif	Ali Bhai Engineers	2021
5			Bhakkar	Muhammad Shahid	Modern Farming	2022
6	Irrigated Cotton Zone	Dera Ghazi Khan	D. G. Khan	Muhammad Zahid	Hanzala Traders	2021
7			D. G. Khan	Muhammad Aslam	Cross Field	2021
8			D. G. Khan	Muzzaffar Qasim	Cross Field	2021
9			D. G. Khan	Muhammad Adrees	Falcon Construction Company	2021
10			D. G. Khan	Ghulam Hussain	Hanzala Company	2021
11			D. G. Khan	Abdul Majeed	Cross Field	2021
12			Tounsah Sharif	Lalan Mai	Modern Company	2021
13		Bahawalnagar	Haroonabad	Muhammad Sarwar	Al Inayat	2022
14			Haroonabad	Dildar Hussain	M/S.Easy Farming	2021
15			Chishtian	Sultan Mehmood	M/S Haji Sons International Lahore	2021
16			Chishtian	Abdul Ghafoor	Cross Field Agro	2020-21
17			Minchina bad	Muhammad Sohna	Easy Farming	2021
18			Minchina bad	Saif ur Rehman	Easy Farming	2021
19			Minchina bad	Noor Ahmad	Easy Farming	2021
20			Haroonabad	Ahsan Zahoor	Anayat & Son's	2022
21			Haroonabad	Muhammad Sharif	Easy Farming	2019
22			Haroonabad	Ahsan Zahoor	Al Anayat & Son's	2022
23			Bahawalnagar	Muhammad Aslam	MS.Easy Farming	2021

During the field survey only data on basic basic profile has been recorded it was observed that most of the laser land leveler have been delivered at least one to two year earlier. The data information/ data have been submitted through ODK for analytical purpose by ICT team.

4.4.2.13 Monitoring and Data Collection in Punjab Zone

Field Visit WC, at Hafizabad on 15th July 2021

Details of some field visits of monitoring / survey of interventions during the reporting period are given below:

Watercourse ID:	6990-R
Name of village:	Sunderana

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



Picture 4.21: Inspection of control structure at W/C No 6990-R

• **Field Visit of WC at Shujabad, Multan on 16th July 2021**

Watercourse ID:	106200/TR
Name of village:	Raja Ram
Village council:	Raja Ram
Chairman WUA:	Toqeer Ahmed
Cell No.	0300-8539575
Tehsil & District:	Shujabad, Multan
Source of irrigation:	Canal+Tube Well
Total length of watercourse:	5263 m
Estimated length of lining:	844 m
Command area of watercourse:	682 Acres
No of beneficiaries:	36

Starting date:	04-12-2019
Completion date:	-
Construction cost of WC:	Rs.2433817/-




Picture 4.22: Improper Cleaning of W/C 106200 L

• **Field Visit on 16th July 2021**


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

• **Field visit of WC at Sahiwal on 17th July 2021**

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


Completion date:	Completed
Construction cost of WC:	763889
	
<p>Picture 4.23: View of Lined Curvy Water Course</p>	

- Field Visit WC at Chichawatni, Sahiwal on 17th July 2021

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

Picture 4.24: Measuring Lining Length of W/C with Measuring Wheel

- Field Visit of WST at Pindi Bhattian, Hafizabad on 17th July 2021

Water Storage Tank	
Name of village:	Bahuman
Union council:	UC – 32
Beneficiaries Name	Iftikhar Ahmed
Tehsil & District:	Pindi Bhattian Hafizabad
Source of irrigation:	Tube well
Shape of water storage tank:	Trapezoidal
Size of water storage tank:	33/33
Depth of WST:	6 feet
Command area of water storage tank:	5.45
No of beneficiaries:	1
Starting date:	1/3/2020
Construction Cost of water storage tank:	N/A
	

Picture 4.25: Taking Coordinates at Water Storage Tank

- Field of Water Storage Tank Jehania, Khanewal, on 16th July 2021

Water Storage Tank	
Name of village:	131-A
Union council:	Mubarak Pur
Chairman WUA:	Muhammad Hamid Nawaz
Tehsil & District:	Jahania, Khanewal
Source of irrigation:	Canal+Tubewell
Shape of water storage tank:	Trapezoidal
Size of water storage tank:	40.6 x 24.2 m
Depth of WST:	1.89 m

Command area of water storage tank:	12.00 Acres
No of beneficiaries:	1
Starting date:	05-05-2020
Completion date:	N/A



Picture 4.26: View of WST- Hamid Nawaz

- Visit of Water Storage Tanks - Rawalpindi Division**

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



Picture 4.27: Field Team Visits WST (Khalid Parwaiz)

- Visit of Watercourse at Faisalabad, Jaranwala, on 21st February 2022**

Date of Visit	Feb 21, 2022
Watercourse No	12648/R
Type of Watercourse	Additional Lining
Chak No/Village	97-GB
District and Tehsil	Faisalabad / Jaranwala

Name of Distributary	Pawalian	
Type of Moga	Open Flume	
Measured Discharge Before Improvement	Head	145 LPS (l/s)
	Middle	70 LPS
	Tail	50 LPS
Sanctioned Discharge	52 LPS	
Tube well Discharge (if any)	20 LPS	
Designed Discharge	165 LPS	
Gross Command Area	641 Acres	
Culturable Command area	612 Acres	
Total No of water users	39	
Estimated lining Length	2411 meter	
Additional Lining	First lining was made in 1992-93. The old watercourse flow was insufficient.	



Picture 4.28: Site Visit at 12648 R Under Construction Watercourse along with Supervisor and Beneficiaries

- Visit of Watercourse No. 6730-L Additional Lining at Marh Bashi, Hafizabad on 22nd February 2022**

Date of the Visit	Feb 22, 2022	
Watercourse No	6730-L	
Type of Watercourse	Additional Lining	
Chak No/Village	Marh Bashi	
District and Tehsil	Hafizabad / Hafizabad	
Name of Distributary	Dherankay	
Type of Moga	A.O.S.M (Adjustable Orifice Semi-Module)	
	Head	50 LPS
	Middle	39 LPS
Measured Discharge Before Improvement	Tail	27 LPS
	Sanctioned Discharge 47 LPS	

Tube well Discharge (if any)	23 LPS
Designed Discharge	70 LPS
Gross Command Area	322 Acres
Culturable Command area	309 Acres
Total No of water users	10
Estimated lining Length	702 meters
Reduction in Water Theft / Litigation	It was about 15/20%
Salinity / Water logging	It was about 5-10%
Main source of irrigation	Non-Perennial Canal + Tube well
Quality of Ground Water	Fit for Irrigation



Picture 4.29: Site Visit to Watercourse

- **Visit of Muhammad Afzal Water Storage Tank Marh Bashi, Hafizabad 22nd February 2022**

WST Owner:	Muhammad Afzal
Name of village:	Marh Bashi
Union council:	25
Tehsil & District:	Hafizabad / Hafizabad
Source of irrigation:	Canal + Tube well
Shape of water storage tank:	Trapezoidal
Size of water storage tank:	42.66m x 21.94m
Depth of WST:	5 ft
Quality of Geo membrane	Not good
Maintenance of WST	Not properly maintained
Uses of WST	For drainage and fish farming purposes.
Source of WST	Canal + Tube well + Rainfall (Being low

	among the other fields)
Command area of water storage tank:	12.5 acres
No of beneficiaries:	1



Picture 4.30: ME&IE Team Measuring the Dimensions of Watercourse

- **Visit of Watercourse at Sheikhpur, Muridke, on 2nd 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	



Picture 4.31: Site Visit at 16800 R Watercourse along with ADA Mr. Zaffar Munir and Beneficiaries



Picture 4.32: ME&IE Team Interviewing the Farmer- ADA Zafar Munir is also with Team

• Visit of W/C at Chuchli Virkan / Sheikhpura 2nd 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	Sheikhpura / 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



Picture 4.33: Site Visit of 20460 R Watercourse along with ADA and Beneficiaries.



Picture 4.34: ME&IE Team Interviewing Farmer at W/C

• Visit of Watercourse Mateela, Sargodha on 3rd 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	



Picture 4.35: ME&IE Team in discussion with beneficiary of WC

- Field Visit of Watercourse at Sundarana, District Hafizabad, Punjab on 223rd April 0220

Watercourse No	6990-R	
Type of Watercourse	Additional	
Chak No/Village	Sundarana	
District and Tehsil	Hafizabad	
Name of Distributary	Udoki 1	
Type of Moga	ASOM	
Measured Discharge Before Improvement	Head	80
	Middle	65
	Tail	40
Sanctioned Discharge	20 LPS	
Tube well Discharge (if any)	-	
Designed Discharge	80 LPS	
Culturable Command area	302 Acre	

Total No of water users	16
Estimated lining Length	1280 Meter

Pictorial view of the field visit is given as picture 4.36:



Picture 4.36: General Discussion with farmer about water saving due to intervention of watercourse

- Field Visit of Watercourse 666-L at Saroopwala, District Hafizabad, Punjab on 26th April 0220

Watercourse No	655-L	
Type of Watercourse	Additional	
Chak No/Village	Saroopwala	
District and Tehsil	Hafizabad	
Name of Distributary	Jalalpur	
Type of Moga	Pipe	
Measured Discharge Before Improvement	Head	13 LPS
	Middle	10 LPS
	Tail	8 LPS
Sanctioned Discharge	7 LPS	
Tube well Discharge (if any)	28 LPS	
Designed Discharge	45 LPS	
Culturable Command area	127	
Total No of water users	10	
Estimated lining Length	200	
Description of field visit is as below as Picture 4.37		



Picture 4.37: ME&IE Team Monitoring WC

- Field Visit of Watercourse at Thatha Noor Shah, District Hafizabad, Punjab on 26th April 0220

Watercourse No	8210-L
Type of Watercourse	Additional
Chak No/Village	Thatha Noor Shah
District and Tehsil	Hafizabad
Name of Distributary	Jalalpur
Type of Moga	Pipe
Measured Discharge Before Improvement	Head 23 LPS Middle 19 LPS Tail 18 LPS
Sanctioned Discharge	19 LPS
Tube well Discharge (if any)	36 LPS
Designed Discharge	60 LPS
Culturable Command area	324
Total No of water users	18
Estimated lining Length	1636 Meter

Description of field visit is as picture 4.38 below:



Picture 4.38: Data collection from beneficiary of the WC

- Field Visit of Watercourse at Basti Milana, District D.G Khan, Punjab on 23rd May 0222

Watercourse No	59100-TR
Type of Watercourse	Additional

Chak No/Village	Basti Milana
District and Tehsil	D.G Khan, Kot Chutta
Name of Distributary	Paigan
Type of Moga	Open Flume
Measured Discharge Before Improvement	Head - Middle - Tail -
Sanctioned Discharge	102 LPS
Tube well Discharge (if any)	-
Designed Discharge	347
Culturable Command area	566
Total No of water users	16
Estimated lining Length	1289 M

Pictorial view of field visit is as below in Picture 4.39:



Picture 4.39: ME&IE Field Team visiting and measuring Watercourse No. 59100-TR in the presence of Chairman WUA

- Field Visit of WC in D. G. Khan on 27th May 2022

Watercourse No	19288-L
Type of Watercourse	Regular
Chak No/Village	Ramin
District and Tehsil	D.G Khan, D.G Khan
Name of Distributary	Lower Kalla
Type of Moga	Pipe Outlet
Measured Discharge Before Improvement	Head - Middle - Tail -
Sanctioned Discharge	43 LPS
Tube well Discharge (if any)	35 LPS
Designed Discharge	71 LPS
Culturable Command area (Acres)	-
Total No of water	5

Users	
Estimated lining Length	850 M

View of visit is given in Picture 4.40:



Picture 4.40: View the site of the watercourse

- Field Visit to D. G. Khan WC No. 11470-L on 26 May 2022 – Punjab

Watercourse No.	11470/L	
Type of Watercourse	Additional	
Chak No/Village	Hadwar	
District and Tehsil	Taunsa Sharif , D.G Khan	
Name of Distributary	NA 189	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	-
	Middle	-
	Tail	-
Sanctioned Discharge	47 LPS	
Tube well Discharge (if any)	-	
Designed Discharge	100 LPS	
Culturable Command area (Acres)	260	
Total No of water Users	20	
Estimated lining Length	743	

Description of field visit is give as picture 4.41:



Picture 4.41: ME&IE consultants visit to site

- Field Visit to D. G. Khan Water Storage Tank Muhammad Zareef on 24th May 2022

WST Owner:	Muhammad Zareef
Name of village:	Bajha
Tehsil & District:	D.G khan, Koh-e-Suleman
Source of irrigation:	Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	20 x 20
Depth of WST:	1.89
Command area of water storage tank:	4 Acre
No of beneficiaries:	1
Name of the crops	Wheat / Maize also citrus orchard on 3 acres

Description of field visit is give as picture 4.42:



Picture 4.42: View of Water Storage Tank of Mr. Zareef in Punjab

- Field Visit to D. G. Khan Water Storage Tank Muhammad Sharif on 24th May 2022

WST Owner:	Muhammad Sharif
Name of village:	Bajha
Tehsil & District:	D.G khan, Koh-e-Suleman
Source of irrigation:	Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	14.17x14.30
Depth of WST:	1.90
Command area of water storage tank:	4 Acre
No of beneficiaries:	1
Name of the crops	Wheat / Maize

Pictorial view of the field is given as picture 4.43 below:



Picture 4.43: Data collection from the beneficiaries at his WST

- Field Visit to D. G. Khan Water Storage Tank Muhammad Babar Ashraf on 24th May 2022

WST Owner:	Muhammad Babar Ashraf
Name of village:	Vehoa
Tehsil & District:	D.G Khan, Taunsa Sharif
Source of irrigation:	Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	20x20
Depth of WST:	1.83
Command area of water storage tank:	10 Acre
No of beneficiaries:	1
Name of the crops	Land is barren it is being brought under cultivation

Picture of field visit is given in Picture 4.44:.



Picture 4.44: Monitoring of Water storage tank of Mr. M Babar Ashraf with ADA, and owner

- Field Visit to Laser Land Leveler of Mr. Muzaffar Qasim D.G. Khan on 24 May 2022 – Punjab

Owner of LLL	Muzaffar Qasim
District	D.G. Khan
Tehsil	D.G Khan
Quality Of ground Water	Fit for Irrigation
Major Crops	Wheat, Rice, Maize, cotton

Picture of field visit is given in Picture 4.16.



Picture 4.45: A general discussion along with the beneficiary of Laser

- Field Visit to Laser Land Leveler of Mr. Muhammad Idrees D.G. Khan on 25 May April 2022 – Punjab

Owner of LLL	Muhammad Idrees
District	D.G Khan
Tehsil	D.G Khan
Quality Of ground Water	Fit for irrigation
Major Crops	Wheat, Rice

Picture of field visit is given in Picture 4.46:



Picture 4.46: ME&IE Field Team Inspecting the Laser Land Leveler on site along with beneficiary

- Field Visit to Laser Land Leveler of Mr. Muhammad Aslam, D.G. Khan on 24th May 2022 – Punjab

Owner of LLL	Muhammad Aslam
District	D.G Khan
Tehsil	D.G Khan
Quality Of ground Water	Fit for irrigation
Major Crops	Wheat, Rice, Maize

Picture of field visit is given in Picture 4.47:



Picture 4.47: Discussion / data collection from Beneficiary regarding Laser Land Leveler

i) **Field Visit to Laser Land Leveler of Mr. M. Zahid, D.G. Khan on 23rd May 2022**

Owner of LLL	Muhammad Zahid
District	D.G Khan
Tehsil	Kot Chutta
Quality Of ground Water	Fit for irrigation
Major Crops	Wheat, Cotton

Picture of field visit is given in Picture 4.48:



Picture 4.48: A view of Laser Land Leveler

• **Field Visit to Laser Land Leveler of Mr. Ghulam Hussain, D.G. Khan on 24th May 2022 – Punjab**

Owner of LLL	Ghulam Hussain
District	D.G Khan
Tehsil	D.G Khan
Quality Of ground Water	Fit for irrigation
Major Crops	Wheat, Rice

Picture of field visit is given in Picture 4.49:



Picture 4.49: Monitoring of Field Operations of LLL

• **Field Visit to Laser Land Leveler of Mr. Abdul Majeed, D.G. Khan on 26th May 2022**

Owner of LLL	Abdul Majeed
District	D.G Khan
Tehsil	D.G Khan
Quality Of ground Water	Fit for irrigation
Major Crops	Wheat

Picture of field visit is given in Picture 4.50.



Picture 4.50: Discussion on visiting the unit of LLL

• **Field Visit to Laser Land Leveler of Lalan Mei, D.G. Khan on 27th May 2022**

Owner of LLL	Lalan Mei
District	D.G Khan
Tehsil	Taunsa Sharif
Quality Of ground Water	Fit for irrigation
Major Crops	Wheat, Rice

Picture of field visit is given in Picture 4.51:



Picture 4.51: Inspection of LLL by ME&IE consultants

• **Field Visit to Bahawalnagar WC No. 17132 R on 27th May 2022**

Watercourse No.	17132 R	
Type of Watercourse	Additional	
Chak No/Village	Mosa Bhatta	
District and Tehsil	Bahawalnagar, Bahawalnagar	
Measured Discharge Before Improvement	Head	127
	Middle	125
	Tail	100
Sanctioned Discharge	100 LPS	
Tube well Discharge (if any)	20 LPS	
Designed Discharge	125 LPS	
Culturable Command area (Acres)	454 Acres	
Total No of water Users	-	



- Field Visit of WC at Bahawalpur on 27th May 2022

Watercourse No.	5250 R	
Type of Watercourse	Regular	
Chak No/Village	Manohar Garh	
District and Tehsil	Bahawalnagar	
Name of Distributary	Takhat Mahal	
Type of Moga		
Measured Discharge Before Improvement	Head	-
	Middle	-
	Tail	-
Sanctioned Discharge	67	
Tube well Discharge (if any)	-	
Designed Discharge	125	
Culturable Command area (Acres)	349 Acres	
Total No of water Users	60	
Estimated lining Length	1850 M	
Picture of field visit is given in Picture 4.53:		



- Field Visit of WC at Bahawalpur on 28th May 2022

Watercourse No.	1310/R	
Type of Watercourse	Regular	
Chak No/Village	91/6R	
District and Tehsil	Bahawalnagar	
Name of Distributary	6/R	
Type of Moga	Pipe Outlet	
Measured Discharge Before Improvement	Head	-
	Middle	-
	Tail	-
Sanctioned Discharge	36.803 LPS	
Tube well Discharge (if any)	-	
Designed Discharge	210 LPS	
Culturable Command area (Acres)	342 Acres	
Total No of water Users	18	
Estimated lining Length	1933 M	
Picture of field visit is given in Picture 4.54:.		



Picture 4.54: View of watercourse

- Field Visit of WC in Bahawalpur on 28th May 2022

Watercourse No.	13880/R	
Type of Watercourse	Regular	
Chak No/Village	Ali Gohar 325	
District and Tehsil	Bahawalnagar	
Name of Distributary	Mahar Minor	
Type of Moga	-	
Measured Discharge Before Improvement	Head	-
	Middle	-
	Tail	-
Sanctioned Discharge	67 LPS	
Tube well Discharge (if any)	50 LPS	
Designed Discharge	95 LPS	
Culturable Command area (Acres)	212 Acres	
Total No of water Users	8	
Estimated lining Length	1245 M	

Picture of field visit is given in Picture 4.5:



Picture 4.55: General discussion with the Beneficiaries at the watercourse

- Field Visit of WC in Bahawalpur on 28th May 2022

Watercourse No.	77560/L	
Type of Watercourse	Additional	
Chak No/Village	Jhullan Arian	
District and Tehsil	Bahawalnagar	
Name of Distributary	Dhudi	
Type of Moga	-	
Measured Discharge Before Improvement	Head	110
	Middle	95
	Tail	80
Sanctioned Discharge	80 LPS	
Tube well Discharge (if any)	28 LPS	
Designed Discharge	120 LPS	
Culturable Command area (Acres)	375 Acres	
Total No of water Users	47	
Estimated lining Length	1659 M	

Picture of field visit is given in Picture 4.56:



Picture 4.56: View of Lined watercourse

- Field Visit of WC in Minchinabad, Bahawalnagar, on 1st June 2022

Date	01-06-2022	
Watercourse No	10666/R	
Type of Watercourse	Regular	
Chak No/Village	Babul wala	
District and Tehsil	Bahawalnagar, Minchanabad	
Name of Distributary	Darbari	
Type of Moga	Pipe outlet	
Measured Discharge Before Improvement	Head	100 LPS
	Middle	80 LPS
	Tail	65 LPS

Sanctioned Discharge	80 LPS
Tube well Discharge (if any)	20 LPS
Designed Discharge	135 LPS
Culturable Command area	247 Acres
Total No of water users	17
Estimated lining Length	1902 m

Picture of field visit is given as Picture 4.57:



Picture 4.57: A view of Lined Portion of Watercourse no 10666 R

- Field Visit of WC in Minchinabad, Bhawalnagar, on 1st June 2022

Date	01-06-2022	
Watercourse No	26066/L	
Type of Watercourse	Regular	
Chak No/Village	Khuda Baksh	
District and Tehsil	Bahawalnagar. Minchanabad	
Name of Distributary	Darbari	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	95 LPS
	Middle	85 LPS
	Tail	70 LPS
Sanctioned Discharge	80 LPS	
Tube well Discharge (if any)	20 LPS	
Designed Discharge	100 LPS	
Culturable Command area	230 Acres	
Total No of water users	20	
Estimated lining Length	2584 m	

Pictorial view of field visit is given in Picture 4.58:



Picture 4.58: A view of lined portion of watercourse no. 26066/L

- Field Visit to Haroonabad, Bhawalnagar, Punjab, WC No. 57890-L on 2nd June 2022

Fauji, W. & H. (2022) For 2 June 2022

Date	02-06-2022	
Watercourse No	57890/L	
Type of Watercourse	Additional	
Chak No/Village	74-4R	
District and Tehsil	Haroon Abad Bahawalnagar	
Name of Distributary	4R	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	110 LPS
	Middle	96 LPS
	Tail	90 LPS
Sanctioned Discharge	85 LPS	
Tube well Discharge (if any)	25 LPS	
Designed Discharge	135 LPS	
Culturable Command area	567 Acre	
Total No of water users	19	
Estimated lining Length	1020 M	

Pictorial view of field visit is given in Picture 4.59:

Pictorial view of field visit is given in Picture 4.59:



Picture 4.59: View of Lined Water Course No. 57890/L from the Mogah portion

- Field Visit to Haroonabad, Bhawalnagar, Punjab, WC No. 56830-L on 2nd June 2022

Date	02-06-2022	
Watercourse No	56830/L	
Type of Watercourse	Additional	
Chak No/Village	Bhakrana	
District and Tehsil	Haroonabad, Bahawalnagar	
Name of Distributary	1L	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	120 LPS
	Middle	100 LPS
	Tail	80 LPS
Sanctioned Discharge	100 LPS	
Tube well Discharge (if any)	25 LPS	
Designed Discharge	150 LPS	
Culturable Command area	469 Acre	
Total No of water users	31	
Estimated lining Length	1000 M	

Pictorial view of visit is given in Picture 4.60:



Picture 4.60: View of Lined Water Course No. 56830/L

- Field Visit to Chishtian, Bhawalnagar, Punjab, WC No. 55980-L on 3rd June 2022

Date	03-06-2022	
Watercourse No	55980/L	
Type of Watercourse	Additional	
Chak No/Village	Ghazi Wala Moza Nathu Dhaka	
District and Tehsil	Chishtian, Bahawalnagar	
Name of Distributary	Bahadar wah	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	75 LPS
	Middle	60 LPS
	Tail	50 LPS
Sanctioned Discharge	70 LPS	
Tube well Discharge (if any)	10 LPS	
Designed Discharge	90 LPS	
Culturable Command area	336 Acres	
Total No of water users	66	
Estimated lining Length	1285	

Pictorial view of visit is given in Picture 461:



Picture 4.61: View of Lined Water Course No. 55980/L

- Field Visit to Chishtian, Bhawalnagar, Punjab, WST of Mr. M. Rizwan on 2nd June 2022

Date	02-06-2022
WST Owner:	Muhammad Rizwan
Name of village:	36/3R
Tehsil & District:	Haroonabad, Bahawalnagar
Source of irrigation:	Canal + Tube well

The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	25.6x30.5 M
Depth of WST:	1.85 M
Command area of water storage tank:	15
No of beneficiaries:	1
Name of the Orchard	Citrus
Pictorial view of visit is given in Picture 4.62:	



Picture 4.62: A view of water storage tank of Muhammad Rizwan

- Field Visit to Chishtian, Bahawalnagar, Punjab, WST of Mr. Saifullah on 3rd June 2022

Date	03-06-2022
WST Owner:	Saifullah
Name of village:	430/6R
Tehsil & District:	Haroonabad, Bahawalnagar
Source of irrigation:	Canal + Tube Well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	25.6 x 30
Depth of WST:	1.85 M
Command area of water storage tank:	10 Acre
No of beneficiaries:	1
Name of the Orchard	Citrus
Pictorial view of visit is given in Picture 4.63:	



Picture 4.63: Pumping water from WST Saifullah

- Field Visit to Chishtian, Bahawalnagar, Punjab, WST of Mr. Abdul Waheed on 3rd June 2022

Date	03-06-2022
WST Owner:	Abdul Waheed
Name of village:	99/F
Tehsil & District:	Chishtian, Bahawalnagar
Source of irrigation:	Canal + Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	25.6 x 30
Depth of WST:	1.5 M
Command area of water storage tank:	3
No of beneficiaries:	1
Name of the Orchard	Wheat, Sugarcane
Picture of field visit is given in Picture 4.64:	



Picture 4.64: A view of water storage tank of Mr. Abdul Waheed

- Field Visit to Laser Land Leveler of Mr. Muhammad Aslam, in Bahawalnagar, Punjab, on 28th May 2022

Owner of LLL	M. Aslam
District	Bahawalnagar
Tehsil	Bahawalnagar
Quality Of ground Water	Brackish
Major Crops	Wheat, Rice
Pictorial view of visit is given in Picture 4.65:	



Picture 4.65: View of Laser Land Leveler

- Field Visit to Laser Land Leveler of Mr. Muhammad Sarwar in Haroonabad, Bahawalnagar, Punjab, on 30th May 2022

Owner of LLL	M Sarwar
District	Bahawalnagar
Tehsil	Haroonabad
Quality Of ground Water	Brackish
Major Crops	Wheat, Rice
Pictorial view of visit is given in Picture 4.66:	



Picture 4.66: View of Laser Land Leveler

- Field Visit to Laser Land Leveler of Mr. Muhammad Sharif in Bahawalnagar, Punjab, on 30th June 2022

Owner of LLL	Muhammad Sharif
District	Bahawalnagar
Tehsil	Haroonabad
Quality Of ground Water	Brackish
Major Crops	Wheat, Rice
Pictorial view of visit is given in Picture 4.67:	



Picture 4.67: ME&IE Team in Interview with Beneficiary of LLL

- Field Visit to Laser Land Leveler of Mr. Zahoor Ahmed in Haroonabad, Bahawalnagar, Punjab, on 31st May 2022

Owner of LLL	Ahsan Zahoor
District	Bahawalnagar
Tehsil	Haroonabad
Quality Of ground Water	Saline
Major Crops	Wheat, Rice
Pictorial view of visit is given in Picture 4.68:	



Picture 4.68: ME&IE Team in Interview with Beneficiary of LLL

- Field Visit to Laser Land Leveler of Mr. Dildar Hussain in Haroonabad, Bahawalnagar, Punjab, on 31st May 2022

Owner of LLL	Dildar Hussain
District	Bahawalnagar
Tehsil	Haroonabad
Quality Of ground Water	Saline
Major Crops	Wheat, Sugar Cane
Pictorial view of visit is given in Picture 4.69:	



Picture 4.69: View of Laser Land Leveler

- **Field Visit to Laser Land Leveler of Mr. Muhammad Hussain in Minchinabad, Bahawalnagar, Punjab, on 02nd June 2022**

Owner of LLL	M. Hussain
District	Bahawalnagar
Tehsil	Minchinabad
Quality Of ground Water	Brackish
Major Crops	Wheat, Cotton
Pictorial view of visit is given in Picture 4.70:	



Picture 4.70: View of Laser Land Leveler

- **Field Visit to Laser Land Leveler of Mr. Saif Ur Rehman, Minchinabad, Bahawalnagar, Punjab on 2nd June 2022**

Owner of LLL	M. Saif Ur Rehman
District	Bahawalnagar
Tehsil	Minchinabad
Quality Of ground Water	Sweet
Major Crops	Wheat, Rice, Sugar Cane
Pictorial view of visit is given in Picture 4.71:	



Picture 4.71: Discussion / data collection from Beneficiary of Laser Land Leveler

- **Field Visit to Laser Land Leveler of Mr. Noor Ahmed in Bahawalnagar, Punjab, on 2nd June 2022**

Owner of LLL	Noor Ahmad
District	Bahawalnagar
Tehsil	Minchinabad

Quality Of ground Water	Brackish
Major Crops	Wheat, Rice
Pictorial view of visit is given in Picture 4.72:	



Picture 4.72: View of LLL connected to Tractor

- **Field Visit to Laser Land Leveler of Mr. Muhammad Sohna, Bahawalnagar, Punjab on 2nd June 2022**

Owner of LLL	M. Sohna
District	Bahawalnagar
Tehsil	Minchinabad
Quality Of ground Water	Sweet
Major Crops	Wheat, Rice, Sugar Cane
Pictorial view of visit is given in Picture 4.73:	



Picture 4.73: View of Laser Land Leveler

- **Field Visit to Laser Land Leveler of Mr. Abdul Ghafoor, Bahawalnagar, Punjab on 4th June 2022 – Punjab**

Owner of LLL	Abdul Ghafoor
District	Bahawalnagar
Tehsil	Chishtian
Quality Of ground Water	Saline
Major Crops	Wheat, Rice



Picture 4.74: A view of Laser Land Leveler

- Field Visit to Laser Land Leveler of Mr. Sultan Mehmood, Bahawalnagar, Punjab on 4th June 2022

Owner of LLL	Sultan Mehmood
District	Bahawalnagar
Tehsil	Chishtian
Quality Of ground Water	Saline
Major Crops	Wheat, Rice



Picture 4.75: ME&IE Team In Interview with beneficiary of LLL



Picture 4.76: View of lined WC No. 74750/R

- Field Visit to District Bhakkar, Punjab, WC No. 74750-R on 15th June 2022

Date	15-06-2022	
Watercourse No	74750/R	
Type of Watercourse	Additional	
Chak No/Village	Mamdowala	
District and Tehsil	Bhakkar, Bhakkar	
Name of Distributary	Mehmood	
Type of Moga	AOSM	
Measured Discharge Before Improvement	Head	90 LPS
	Middle	85 LPS
	Tail	70 LPS
Sanctioned Discharge	90 LPS	
Tube well Discharge (if any)	100 LPS	
Designed Discharge	90 LPS	
Culturable Command area	622 Acre	
Total No of water users	60	
Estimated lining Length	2265 M	

Pictorial view of visit is given in Picture 4.76:

- Field Visit to District Bhakkar, Punjab, WC No. 26750/L on 16th June 2022

Date	16-06-2022	
Watercourse No	26750/L	
Type of Watercourse	Additional	
Chak No/Village	Khanpur Janoobi	
District and Tehsil	Darya Khan, Bhakkar	
Name of Distributary	Fateh Major	
Type of Moga	Open Outlet	
Measured Discharge Before Improvement	Head	70 LPS
	Middle	60 LPS
	Tail	40 LPS
Sanctioned Discharge	75 LPS	
Tube well Discharge (if any)	30 LPS	
Designed Discharge	100 LPS	
Culturable Command area	385 acres	
Total No of water users	12	
Estimated lining Length	660 m	

Pictorial view of field visit is given in Picture 4.77:



Picture 4.77: Measurement of Discharge by Pygmy Meter at WC No. 26750/L

- Field Visit to District Bhakkar, Punjab, WC No. 34000 TL on 17th June 2022

Date	17-06-2022	
Watercourse No	34000 TL	
Type of Watercourse	Regular	
Chak No/Village	Bakawala	
District and Tehsil	Kaloor Kot, Bhakkar	
Name of Distributary	Sardar	
Type of Moga	Open Outlet	
Measured Discharge Before Improvement	Head	53 LPS
	Middle	39 LPS
	Tail	30 LPS
Sanctioned Discharge	41 LPS	
Tube well Discharge (if any)	37 LPS	
Designed Discharge	90 LPS	
Culturable Command area	460 Acre	
Total No of water users	27	
Estimated lining Length	930 M	
Pictorial view of field visit is given in Picture 4.78:		



Picture 4.78: WC No. 34000 TL under construction

- Field Visit to District Bhakkar, Punjab, WST of Mr. Muhammad Shahid on 15th June 2022

Date	15-06-2022
WST Owner:	Muhammad Shahid
Name of village:	Khansar
Tehsil & District:	Bhakkar
Source of irrigation:	Tubewell+Canal
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	34.6 x 26 M
Depth of WST:	1.5 M
Command area of water storage tank:	12.5
No of beneficiaries:	1
Name of the Orchard	Wheat, Citrus

Pictorial view of field visit is given in Picture 4.79:



Picture 4.79: View of Concrete WST of Muhammad Shahid

• **Field Visit to District Bhakkar, Punjab, WST of Mian Rehmat on 16th June 2022**

Date	16-06-2022
WST Owner:	Mian Rehmat Ullah
Name of village:	Gadai
Tehsil & District:	Darya Khan, Bhakkar
Source of irrigation:	Tubewell+Canal
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	32.6 x 28.5 M
Depth of WST:	1.5 M
Command area of water storage tank:	9
No of beneficiaries:	1
Name of the Orchard	Citrus

Pictorial view of field visit is given in Picture 4.80:



Picture 4.80: View of WST of Mian Rehmat Ullah

• **Field Visit to District Bhakkar, Punjab, WST of Mr. Ahmad Nawaz on 17th June 2022**

Date	17-06-2022
WST Owner:	Ahmad Nawaz
Name of village:	6RH
Tehsil & District:	Kaloor Kot, Bhakkar
Source of irrigation:	Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	34.6x30.4 M
Depth of WST:	1.52 M
Command area of water storage tank:	9.5
No of beneficiaries:	1
Name of the Orchard	Citrus

Pictorial view of field visit is given in Picture 4.52



Picture 4.81: Measurement of WST of Ahmad Nawaz

• **Field Visit to District Bhakkar, Punjab, WST of Mr. Muhammad Riaz on 18th June 2022**

Date	18-06-2022
WST Owner:	Muhammad Riaz
Name of village:	Mankera
Tehsil & District:	Mankera, Bhakkar
Source of irrigation:	Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	37.7 x 30 M
Depth of WST:	1.52 M
Command area of water storage tank:	12
No of beneficiaries:	1
Name of the Orchard	Fodder, Wheat

Pictorial view of field visit is given in Picture 4.82:



Picture 4.82: ME&IE Team in interview with the owner of WST Muhammad Riaz

• **Field Visit to District Bhakkar, Punjab, WST of Mr. Nazeer Ahmad on 18th June 2022**

Date	18-06-2022
WST Owner:	Nazeer Ahmad

Name of village:	Mankera
Tehsil & District:	Mankera, Bhakkar
Source of irrigation:	Tube well
The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	34.6 x 22.3 M
Depth of WST:	1.5 M
Command area of water storage tank:	12.5
No of beneficiaries:	1
Name of the Orchard	Citrus

Pictorial view of field visit is given in Picture 4.83:



Picture 4.83: View of WST of Nazir Ahmad

- Field Visit to Laser Land Leveler of Mr. Ameer Iqbal Asif, District Bhakkar, Punjab on 16th June 2022

Owner of LLL	Ameer Iqbal Asif
District	Bhakkar
Tehsil	Darya Khan
Quality Of ground Water	Fit for Irrigation
Major Crops	Gram (Channa), Cotton

Pictorial view of visit is given in Picture 4.56



Picture 4.85: Photo of Mr. Ameer Iqbal Asif with LLL

- Field Visit to Laser Land Leveler of Mr. Muhammad Shahid, District Bhakkar, Punjab on 15th June 2022

Owner of LLL	Muhammad Shahid
District	Bhakkar
Tehsil	Bhakkar
Quality Of ground Water	Fit for Irrigation
Major Crops	Wheat, Citrus

Pictorial view of field visit is given in Picture 4.84



Picture 4.84: View of LLL of Muhammad Shahid

- Field Visit to Laser Land Leveler of Mr. Hassan Abbada, District Bhakkar, Punjab on 17th June 2022

Owner of LLL	Hassan Abbas
District	Bhakkar
Tehsil	Kaloor Kot
Quality Of ground Water	Fit for Irrigation
Major Crops	Wheat, Cotton


Pictorial view of visit is given in Picture 4.57:



Picture 4.86: View of LLL of Hassan Abbas

- Field Visit to Laser Land Leveler of Mr. Muhammad Younas, District Bhakkar, Punjab on 18th June 2022

Owner of LLL	Muhammad Younas
District	Bhakkar
Tehsil	Mankera

Quality Of ground Water	Fit for Irrigation
Major Crops	Wheat, Cotton
Pictorial view of field visit is given in Picture 4.87:	
	

Picture 4.87: View of LLL of Muhammad Younas

- **Field Visit to Laser Land Leveler of Mr. Muhammad Asad, District Bhakkar, Punjab on 18th June 2022**

Owner of LLL	Muhammad Asad
District	Bhakkar
Tehsil	Mankera
Quality Of ground Water	Fit for Irrigation
Major Crops	Wheat, Cotton
Pictorial view of field visit is given in Picture 4.88:	
	

Picture 4.88: View of LLL of Muhammad Asad

4.4.2.14 Field Observations of ME&IE Teams in Punjab

- Wara Bandi at the watercourse was Pakki
- Land rent before improvement of the watercourse was 26000 to 28000 per acre now it has been raised to 32,000 to 35,000 per acre most of the farmers interviewed of sampled watercourses were the owners.

- Land was of Halki Mera where as in hilly area type its quality was good.
- There was no Water logging and salinity was found at site.
- Groundwater is fit for irrigation.
- Major crops at these watercourses were Wheat, Cotton, Fodder e.g. Maize, Berseem, and Soghram etc.
- Behavior of the OFWM staff was good/supportive
- Before the improvement of watercourse cleaning of watercourses particularly weed were removed 8 – 10 times per year. After improvement weed cleaning of watercourses was carried out 2 – 3 times.
- Time consumed to fill one acre before improvement was 4 to 5 hrs. now it has been reduced to 2 to 2.5 hr.
- Reduction in labor because before construction of watercourse water theft / litigation occurs now labor to look after the watercourse in the field has been reduced significantly.
- Before the lining of Watercourse due to acute shortage of water and other losses, canal water cannot be reached in the field. As an alternate they run tube well. It costs too much. i.e. Rs. 1000/hr.
- Due to the lining of Watercourse there is;
 - Increase of water flow, losses less been minimized due to which tube well consumption has been reduced.
 - Before improvement of Watercourse about 50% of water was lost in the field now these losses have been reduced.
 - Most of the farmer was happy about the construction of Watercourse. In this program we lined the Watercourse up to 50%. Now the demanding the lining of next 50% of the Watercourse.
 - Before improvement of Watercourse yield was low up to 30

to 35 Mound /Acre now it has been increased up to 40-45 Mounds/ Acre. Although due to sudden increase in temperature affect their yield and grain size as well but still increase in yield is noticed.

- Increase in Water flow 25 to 30%.
- No change in cropping pattern was found at site

Field observations of Water Course (Tansa)

- Soil was of Clay / Chikni / Pakki.
- Canal is of perennial type.
- Ground water is fit for irrigation.
- Major crop at the Watercourse was wheat /sesame/ fodder e.g. maize / bearseem and soghram.
- Behavior of the OFWM Department was good.
- Before improvement of watercourse clearing of watercourse particularly weeds were removed 6 to 8 times. Now it has been reduced up to 2 to 3 times per annum.
- The farmer located at the head did not face any storage of water. But farmer located at the middle and till face acute shortage of water due to which they grew crop only in Rabi season and did grow not any crop in Kharif season depends upon availability of water.
- Before the lining of Watercourse due to acute shortage of water and other losses, canal water cannot be reached in the field. As an alternate they run tube well it costs him too much.
- Before improvement of Watercourse about 30 to 40% of water was lost in the field due to water theft/ litigation now it has been reduced.
- Increase of water flow up to 35 to 40 %.
- Time consumed to fill 1-Acre before improvement of Watercourse was 5 to 6hr. Now it has been reduced up to 3 to 3.5hr per acre.

Field observations of Laser Land Leveler

Follows are the benefits of Laser Land Leveling unit observed at site during the field visit.

- Increase in yield up to 5 to 10%.
- Less expense during sowing in the field.
- Less diesel is used doing land preparation.
- Time consumed to fill 1 acre before Laser Land Leveler was 6 to 7 hr. Now it less been reduced to 4 to 4.5hr per acre.
- Wastage of seed in the field is minimized. Its consumption is reduced and growth rate has been increased up to 80%.
- Uniform distribution of seed.
- Harvesting is easy.
- Uniform distribution of fertilizer and its consumption has been reduced.
- Reduction in water losses in the field due to uneven terrain has been reduced up to 10 to 15%.

Monitoring of LLL

- Most of the Owners /service provider were happy about the benefits of LLL. They praised the OFWM department and appreciate their role and cooperation.
- One of the farmer whose name was Muhammad Aslam complains about the quality of different parts of LLL. According to him he purchased LLL of cross field company but quality of
 - Tyre was not good.
 - Transmitter /Charger were not of good quality.

Baseline Survey / Monitoring/ Impact of Water Storage Tank by Field Team 2 Sub-Zone 2 Lahore

- Before the construction of WST, the land was barren and its terrain was uneven.
- Farmer did not grow any crop because Its soil consists of gravels. It was not possible to grow any crop in this area.

For last 2 to 3 years' farmer store a Rainy/Flood water in the hilly area.

- Rainy/Flood water brings Fertile soil with us. This fertile soil makes a layer on the surface of this land. In each year there is increase in the thickness of soil layer. Farmer continues this process 2 to 3 years. after this farmer was able to grow any crop on this type of land.
- But farmer face issues regarding shortening of water. He had no proper system to store rain water as well. There are no proper roads. It is very difficult to travel in this area.
- OFWM department official guided about the scheme / program started by Govt. of Pakistan for construction of WST on subsidy basis.
- In spite of fact that his farm is located in hilly area and with the assistance of OFWM department he constructed the Tank and started storage of water.
- He started construction of WST on 15-Jan 2020. He installed tube well in 2020 but pressure of water was low due to less depth because below this gravel was present basically it was low discharge well. He applied water directly to field by 3"-inch dia pipe but it took 3 to 4 days to fill one acre. That's why due to shortage of water he did not grow any crop. He did not have any system to store rain water.
- After completion of WST, he adds low discharge tube well water into the WST by 3" dia pipe. Then by 6" dia pipe he supplied this water to the field.
- The time consumed to fill one are after construction is 3 to 4 hr. There is no shortage of water in Rabi season. During the Kharif season he faced acute shortage of water. His crop wholly depends upon rain water in kharif season. He installed a pump to put rain water into WST to store water into tank.
- Mr. Muhammad Zareef the owner of WST was very happy and fully satisfied by the role of OFWM department. because before the construction of WST the land, which was barren now it has been converted into Agricultural land.
- Now after construction of WST he is growing Orchard i-e citrus but still after 2 years he did

not get the Yield. other main crops are he grew are Wheat/ Berseem/ Maize and Soghram as well.

4.4.3 Regular Monitoring / Field Visits of Interventions in KP Zone

KP ME&IE Consultants' field team conducted monitoring / survey visits of WCs and WSTs in 7 (Seven) districts of KP in the second round of monitoring and baseline survey during reporting Year. These districts include Peshawar, Nowshera, Mardan, Kohat, Abbotabad, Mansehra, and D.I. Khan. Samples were drawn from the list of WCs/WSTs for which Technical Sanctions have been issued. Two survey teams were deputed to these districts. Details of monitoring / survey visits are given below.

S. No.	Name of District	Component		Total
		WC	WST	
1.	Peshawar	03	01	04
2.	Nowshera	14	07	21
3.	Mardan	03	--	03
4.	Kohat	02	--	02
5.	Abbotabad	01	--	01
6.	Mansehra	01	--	01
7.	D. I. Khan	08	04	12
Total		32	12	44

4.4.3.1 Monitoring / Data Collection on Interventions in KP Zone

• Field Visit on 02nd August 2021

Details of the WC/WST	
Name of Watercourse/WST	159000/L WC
Type of watercourse/WST	Parabolic
Category of water course	Additional
Culturable Command Area (CCA) Acers	250
Coordinates	33.9254589, 71.7281103
Sanctioned Length of Watercourse	1406
Measured Length of Watercourse	1406
No. of beneficiaries	15

District	Peshawar
Tehsil	Peshawar
Village	Umar Miana
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetable Kharif: Maize, Orchard
Water Logging & Salinity	0
Warabandi System	Pakka
Designed Discharge	90
Main Source of water	Canal
Additional Source of water	No
Date of Technical Sanction	02 Feb 2020
Sanctioned Cost	2,907,958
Demographic information	
Name	Adalat Khan
Age	50
Family size	6
Education	Matric
Tenurial status	Owner cum Tenant
Area owned	7.5
Cultivable land	7.5
Fallow land	0

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

• **Observations and Findings:**

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

• **Field Visit 06th August 2021**

Details of the WC/WST:	
Name of Watercourse	70000/L Hazar Khwani Branch
Type of watercourse/WST	Parabolic
Category of water course	Additional Lining

Culturable Command Area (CCA) Acres	500
Coordinates	33.9555919 71.6885428
Sanctioned Length of Watercourse	700
Measured Length of Watercourse	592
No. of beneficiaries	80
District	Peshawar
Tehsil	Peshawar
Village	Umar Miana
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetables, Fodder kharif: Orchard, Maize, Vegetables
Water Logging & Salinity	Nil
Warabandi System	Pakka
Designed Discharge	3 Lps
Main Source of water	Canal
Additional Source of water	Nil
Date of Technical Sanction	02/02/2020
Sanctioned Cost	Rs.2845164/-
Demographic information	
Name	Muhammad Naseer
Age	42
Family size	5
Education	Matric
Tenurial status	Owner
Area owned	12 Acres
Cultivable land	12 Acres
Fallow land	Nil

• **Observations and Findings:**

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

• **Field Visit 04th Aug 2021**

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

Observations and Findings:

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

• **Field Visit Date: 03rd August 2021**

Details of the WC/WST	
Name of Watercourse/WST	Aqeel Afzal WST
Type of watercourse/WST	Bricks
Category of water course	New
Culturable Command Area (CCA) Acres	15
Coordinates	33.8752619, 71.6798746
Sanctioned Length of Watercourse	N/A
Measured Length of Watercourse	N/A
No. of beneficiaries	7
District	Peshawar
Tehsil	Peshawar
Village	Ghari Chandan
Cropping pattern Rabi and Kharif	Rabi: Wheat, Vegetable Kharif: Maize, Vig
Water Logging & Salinity	0
Warabandi System	Pakka
Designed Discharge	10
Main Source of water	Tube-well
Additional Source of water	N/A
Date of Technical Sanction	19 Apr 2021
Sanctioned Cost	4,31,104
Demographic information	
Name	Ashraf u ddin
Age	42
Family size	10
Education	Illiterate
Tenurial status	Owner
Area owned	23
Cultivable land	12
Fallow land	0

Observations and Findings:

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

• **Field Visit 05th August 2021**

Details of the WC/WST	
Name of Watercourse/WST	3900/R
Type of watercourse/WST	Parabolic
Category of water course	New
Culturable Command Area (CCA) Acres	251
Coordinates	33.9547078, 71.8231448
Sanctioned Length of Watercourse	837
Measured Length of Watercourse	837
No. of beneficiaries	13
District	Nowshera
Tehsil	Pabbi
Village	Shabara
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Sugarcane
Water Logging & Salinity	0
Warabandi System	Pakka
Designed Discharge	80
Main Source of water	Canal
Additional Source of water	0
Date of Technical Sanction	12 Feb 2020
Sanctioned Cost	1,580,000
Demographic information	
Name	Arshad Khan
Age	55
Family size	16
Education	Middle
Tenurial status	Owner cum Tenant
Area owned	35
Cultivable land	35
Fallow land	0

Observations and Findings:

The vegetation needs to be cut down. The water user association was not active. Other than the

chairman of WUA no one was aware of the association.

• **Visit to Watercourse Abdullah at Pabbi, Nowshera, KP on 05th August 2021**

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

Observations and Findings:

Abdullah water course is a solar water course and is maintained properly however the WUA

members need to be active; they were not at the moment.

• **Field Visit to Watercourse, Zahir Shah, Umarary Kaly, Nowshera, KP, on 23rd June 2022**

Name of Watercourse	Zahir Shah TWWC
Type of watercourse	PCPS
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	12 Acres
Coordinates	Long:33.57044087 Lat: 72.5508767
Total Length of Watercourse	596 m
Lining Length of Watercourse	298 m
No. of beneficiaries	1
District & The	Nowshera
Village	Umaray Kaly
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Designed Discharge	Lps:10
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	21/12/2021
Financial Year	2021-22

Observations Findings / of ME&IE Team:

- The only crop on this land was orange only. Wheat production started last year after the improvement of water course however the farmer is preparing the land for maize crop for the coming season.
- There was only 1 beneficiary on the water course but according to FCR the number of beneficiaries is 8. There is properly managed WUA, therefore, there was no meeting of WUA during the last year.

• **Field Visit to Watercourse, Faidd Gul, in Maraji, Nowshera, KP, on 27th June 2022**

Name of Watercourse	Faidd Gul TWWC
Type of watercourse	PVC 4"
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	6 Acres
Coordinates	Long: 33.919866 Lat: 71.978475
Total Length of Watercourse	800 m
Lining Length of Watercourse	400 m
No. of beneficiaries	4
District & The	Nowshera
Village	Mara j i
Cropping pattern Rabi and Kharif	Rabi: Wheat, Oat Kharif: Oat
Water Logging & Salinity	Nil
Designed Discharge	Lps: 10
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	23/2/2022
Financial Year	2021-22
Status	Complete

Observations Findings / of ME&IE Team:

- Total numbers of beneficiaries are 4 and they are cousins. They didn't divide the land, all work in same land and distribute the yield among them.
- It was noted that there was conflict in completion date of WC as the completion date on the FCR is 9 Jun 2022 while team was by the ONFWM engineer (Mr. Malik Naeem) that the WC was completed in Apr 2022 and that the date on the FCR is incorrect.

- Total CCA mentioned in Feasibility is 14 Acre but according to farmer total land is 6 Acre.
- **Field Visit to Watercourse of Kashif Rafique, Bahram Kaly, Nowshera, KP, on 24th June 2022**
- **Field Visit to Water Storage Tank, Irshad Ali at Jahangira, Nowshera, KP, on 23rd June 2022**

Name of Watercourse	Kashif Rafique TWWC
Type of watercourse	PCPS
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	40 Acres
Coordinates	Long: 34.08962 Lat: 71.96
Total Length of Watercourse	1170 m
Lining Length of Watercourse	582 m
No. of beneficiaries	15
District & Tehsil	Nowshera
Village	Bahram Kaly
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 35
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	21/12/2021
Financial Year	2021-22
Status	Complete

Observations Findings / of ME&IE Team:

- The farmer has a very big dairy form of 2800 cows in front of the water course. The farmer uses total land to grow fodder for these cows.
- According to ONFWM there are 15 beneficiaries but in actual Mr. Kashif Rafique is the only beneficiary on site.

Name of Water Storage Tank	Irshad Ali WST
Type of water Storage Tank	Square
Category of water	Regular (New)
Culturable Command Area (CCA) Acres	6 Acres
Coordinates	
Size Of Water Storage Tank	Length 1 : 9.8m Width 1 :9.8m Depth: 1.36 Length 2 : 9.8m Width 2 :9.8m
No. of beneficiaries	10
District	Nowshera
Tehsil	Jahangira
Village	Umaray Kaly
Cropping pattern Rabi and Kharif	Rabi: Vegetables Kharif: Vegetables
Water Logging & Salinity	Nil
Designed Discharge	6 Lps
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	22/11/2021
Financial Year	2021-22
Sanctioned Cost	Rs. 420,000
Status	Complete

Observations Findings / of ME&IE Team:

Main crops of the farmer are vegetables. According to the farmer vegetables production increased by 25-30% after the WST

- **Field Visit to Water Storage Tank, Zia Ullah at Manki Shareef, Nowshera, KP, on 27th June 2022**

Name of Water Storage Tank	Zia Ullah WST
Type of water Storage Tank	Square

Category of water	Regular (New)
Culturable Command Area (CCA) Acres	17 Acre
Coordinates	
Size Of Water Storage Tank	Length 1 : 9.8m Width 1 :9.8m Depth: 1.36 Length 2 : 9.8m Width 2 :9.8m
No. of beneficiaries	1
District & The Village	Nowshera Manki Shareef
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Maize
Water Logging & Salinity	Nil
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	21/12/2021
Financial Year	2021-22
Sanctioned Cost	Rs.420,000
Status	Complete

Observations Findings / of ME&IE Team:

- Initially there were 1200 plant of lemon and some orange plants on the land. The farmer has planted further 2000 lemon plants after the water course improvements.
- There are also 2300 orange plants but the orange production not started yet.
- According to FCR number of beneficiaries are 10 but in actual there is only 1 beneficiary. No farming activities by females at all.
- Approved size of the WST is 32 feet but actual size our team measured is 45 feet. On questioning the ONFWM engineer told our team that the farmer wanted to increase the size of WST and that the farmer spent his own money for the extra 13 feet space.
- Field Visit to Water Storage Tank, Abdullah at Ghanderi, Nowshera, KP, on 24th June 2022**

Name of Water Storage Tank	Abdullah WST
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Type of water	Square
Category of water	Regular (New)
Culturable Command Area (CCA) Acres	5.5 Acre
Coordinates	
Size Of Water Storage Tank	Length 1 : 9.8m Width 1 :9.8m Depth: 1.36 Length 2 : 9.8m Width 2 :9.8m
No. of beneficiaries	7
District & The Village	Nowshera Ghanderi
Cropping pattern Rabi and Kharif	Rabi: Wheat, sugarcane, Vegetable Kharif: Maize
Water Logging & Salinity	Nil
Designed Discharge	6 LPS
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	27/2/2021
Financial Year	2021-22
Sanctioned Cost	Rs.420,000
Status	Complete

Observations Findings / of ME&IE Team:

- The WST is maintained very well but back filling needed.
- Farmer has also kept fish in the WST. The farmer put 1200 fish initially bought @ Rs 4.0 per fish. Today each fish reached to 1 – 1.5 kg.
- The beneficiaries in the file are 7 but actual beneficiary on ground is only
- Field Visit to Watercourse Shehzad Khan at Maraji, Nowshera, KP, on 28th June 2022**

Name of Watercourse	Shehzad Khan TWWC
Type of watercourse	PCPS

Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	6 Acres
Total Length of Watercourse	1300 m
Lining Length of Watercourse	579 m
No. of beneficiaries	1
District & Tehsil	Nowshera
Village	Maraji
Cropping pattern Rabi and Kharif	Rabi: Orange Kharif:
Water Logging & Salinity	Nil
Designed Discharge	6 Lps:
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	23 Feb 2022
Financial Year	2021-22
Status	Complete

Observations Findings / of ME&IE Team:

- The watercourse under construction and is not completed yet. The only crop is orange.
- The orange crop is almost 30 years old.
- WUA formed as a formality. There was no meeting of WUA during the last year
- Field Visit to Watercourse Khadim Ali, at Manki Sharif, Nowshera, KP, on 28th June 2022**

Name of Watercourse	Khadim Ali TWWC
Type of watercourse	PCPS
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	12 Acres
Total Length of Watercourse	1500 m

Lining Length of Watercourse	700 m
No. of beneficiaries	1
District & Tehsil	Nowshera
Village	Manki Sharif
Cropping pattern Rabi and Kharif	Rabi: Orange Kharif:
Water Logging & Salinity	Nil
Designed Discharge	6 Lps:
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	9 Apr 2022
Financial Year	2021-22
Status	Complete

Observations Findings / of ME&IE Team:

- The construction of water course is in progress.
- The only crop is orange.
- The water source is tube well.
- The scheme is approved for a single person. WUA list is in the file but it is not functional.

- Field Visit to Watercourse Afraz Khan, at Bahram Kaly, Nowshera, KP, on 28th June 2022**

Name of Watercourse	Afraz Khan TWWC
Type of watercourse	PCPS
Category of water course	Regular (New)
Culturable Command Area (CCA) Acres	10 Acres
Coordinates	Long: 33.97986 Lat: 72.0755
Total Length of Watercourse	1210 m
Lining Length of Watercourse	605 m
No. of beneficiaries	1

District & Tehsil	Nowshera
Village	Bahram Kaly
Cropping pattern Rabi and Kharif	Rabi: Wheat Kharif: Orange
Water Logging & Salinity	Nil
Warabandi System	N/A
Designed Discharge	Lps: 6
Main Source of water	Tube well
Additional Source of water	Nil
Date of Technical Sanction	9 Apr 2022
Financial Year	2021-22
Status	Complete

Observations / Findings of ME&IE Team:

- This is an ongoing scheme and work is in progress.
- There are 900 orange plants on 10 acres.
- The farmer also cultivates wheat on 5 acres of orchard land.
- WUA is existing as according to farmer there were 3-4 WUA meeting during the last year.
- **Field Visit to Watercourse Malik Habib Ullah, at Qazi Khokaer, D.I. Khan on 27th June 2022**

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

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

Observations / Findings of ME&IE Team:

- Water user association was formed but is not functional and there was not record of meeting and problem solving.
- The former was owner of the land and they prepared land in Kachha of Indus river side. According to former water was not reaching till end before construction of WC. Now he is getting water at tail reach.
- Former and WUA was unaware from the actual coast of scheme and the department take sign on blank check.
- Females were neither member of water user association nor actively involved in farm activities. However, they are involved in farm activities during harvesting season only.

- Majority of females were working as Housewives and supporting their family males in farm activities; like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children.
 - Female folk of farm households are also engaged in making Handicrafts, embroidery works and stitching etc.
- **Field Visit to Watercourse Abbas, at Yarik, D.I. Khan on 22nd June 2022**

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

Age	57
Family size	11
Education	0
Tenurial status	Owner
Area owned	16
Cultivable land	10
Fallow land	6

Observations / Findings of ME&IE Team:

- There are two beneficiaries of the watercourse, Mr. Abbas and Mr. Mati Ullah.
 - Water user association was formed but is not functional and just a formality. There is no record of meetings and problem solving
 - The total cost of the scheme was RS. 940,569 out which material cost was RS. 705,426 and farmer shared in land RS 235,142. First installment was released RS 329,695 from the financial years 2021-2022 while 2nd installment is still pending which will be released in 2021-2022.
 - According to FCR from material cost PCPS 498 demanding while actually 516 segment was on ground where there was a difference of 18 number of segments.
 - The farmer (Mr. Abass) was not willing to provide gender related information regarding their female due to cultural constrain.
 - Female are not the part of water user association and are not actively involved in farm activities. However, they are rarely involved in decision making regarding farm activities. Majority of female are working as housewives while supporting their family, like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children.
- **Field Visit to Watercourse Ghulam Rabbani, at Rodi Khel, D.I. Khan on 28th June 2022**

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

Observations / Findings of ME&IE Team:

- Water user association was formed and is functional up to some extent. However, there

is no record of meetings and problem solving by WUA.

- The formers are cooperative with each other in farming issues. The total cost of the scheme was RS 824,742. First installment of 40% was released RS 329,695 from the financial years 2021-2022 while 2nd installment is still pending which will be released in 2022-2023.
- There is no female member of WUA. Females are not actively involved in farming activities. They are rarely involved in decision making regarding farm related activities.
- Majority of females are working as housewives while supporting their family in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children.
- Female take interest in handicraft and stitching.
- Field Visit to Watercourse Sabir Hussain, at Sheik Rajo, D.I. Khan on 24th June 2022**

Name of Watercourse/WST	Sabir Hussain TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	7.625
Coordinates	31.758583 70.8944304
Sanctioned Length of Watercourse	442
Measured Length of Watercourse	431
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Sheikh Rajo
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize,
Water Logging & Salinity	No
Warabandi System	No

Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Sabir Hussain
Age	50
Family size	5
Education	Middle
Tenurial status	Owner
Area owned	7.6
Cultivable land	6
Fallow land	1.6

Observations / Findings of ME&IE Team:

- Water user association was formed but is not functional.
- There was no record of meetings and problem solving by WUA.
- The former Mr. Sabir Hussain is the only beneficiary of WC. He is owner of the land, prepared in Kachha of Indus river side.
- According to former water did not reach at tail reach before construction of WC. However, now he is getting water at tail reach also. Now my water reached till end.
- The condition of WC is not good as no proper maintenance of is not carried out. Backfilling is not done properly and vegetation is not removed properly.
- WUA is not taking care of the watercourse.
- Females are not member of WUA and not actively involved in farming activities.
- Majority of females are working as housewives while supporting their family in keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children.
- Female take interest in handicraft and stitching.

Field Visit to Watercourse Allah Dad, at Sheik Rajo, D.I. Khan on 24th June 2022

Name of Watercourse/WST	Allah Dad TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	19.13
Coordinates	32.0290014 71.0167323
Sanctioned Length of Watercourse	440
Measured Length of Watercourse	431
No. of beneficiaries	10
District	D.I. Khan
Tehsil	Pahar Pur
Village	Qazi Koker
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize, Beet Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	26 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Allah Dad
Age	63
Family size	12
Education	Middle
Tenurial status	Owner
Area owned	19.12
Cultivable land	16.63
Fallow land	2.5

Observations / Findings of ME&IE Team:

- Water user association was formed but not functional.
- There was not record of meetings and problem solving by WUA.
- The former was owner of the land and he prepared land in Kachha of Indus river side.
- According to former our water was not reaching till end before construction of WC. Now my water reached till end.
- Females were not members of water user association and were not directly involved in farm practices. However, they took part in crop harvesting both in Rabi and Kharif season. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Females were confined to household activities and Handicraft and stitching activities.
- Field Visit to Watercourse Ijaz Ud Din, at Sheik Rajo, D.I. Khan, KP, on 25th June 2022**

Name of Watercourse/WST	Ijaz Ud Din WC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	12.5
Coordinates	31.7621304 70.8913902
Sanctioned Length of Watercourse	404
Measured Length of Watercourse	480
No. of beneficiaries	12
District	D.I.Khan
Tehsil	D.I.Khan
Village	Sheikh Rajo
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize, Barley
Water Logging & Salinity	No

Warabandi System	No
Designed Discharge	14 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 420,000
Demographic information	
Name	Muhammad Imran
Age	40
Family size	12
Education	Bachelor
Tenorial status	Tenant
Area owned	0
Cultivable land	6
Fallow land	2

Observations / Findings of ME&IE Team:

- Water user association was formed but not functional. Record of water user association of meeting and problem solving was not found.
- The former was tenant. According to former our water was not reaching till end before construction of WC. Now my water reached till end.
- No female was found to be a member of water user association and was not actively involved in farm activities. Females were only involved in harvesting season. Majority of females working as House Wife and supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of formers associated to Handicraft and stitching.

• **Field Visit to Watercourse, Saif Ur Rehman, at
Dhap Chabak, D.I. Khan, KP, on 23rd June 2022**

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

Observations / Findings of ME&IE Team:

- Water user association was formed but not functional. Record of water user association of meeting and problem solving was not found.
- The former was owner of the land and they prepared land in Kachha of Indus river side. According to former our water was not reaching till end before construction of WC. Now my water reached till end. Forming able him to do business of agriculture products and fuel agency in the land where Water Course was installed.
- Female involvement in farm practices was not significant. However, during crop harvesting they were found participating in harvesting. No female was member of water user association. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of formers associated to Handicraft and stitching.

• **Field Visit to Watercourse, Ghulam Rabbani, at Rodi Khel, D.I. Khan, KP, on 28th June 2022**

Name of Watercourse/WST	Ghulam Rabbani TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	25
Coordinates	32.0701579 70.8054826
Sanctioned Length of Watercourse	528
Measured Length of Watercourse	528
No. of beneficiaries	12
District	D.I.Khan

Tehsil	Paharpur
Village	Rodi Khel
Cropping pattern Rabi and Kharif	Rabi: Wheat ,Grain Kharif: Maize, Barley
Water Logging & Salinity	Yes
Warabandi System	No
Designed Discharge	18 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,742
Demographic information	
Name	Ghulam Rabbani
Age	49
Family size	26
Education	Matric
Tenorial status	Owner
Area owned	25
Cultivable land	23
Fallow land	2

Observations / Findings of ME&IE Team:

- Water user association was formed and functional up to some extent. Record of water user association of meeting and problem solving was not found. The formers were cooperative with one another.
- The total cost of the scheme was RS 824,742. First installment of 40% was released RS 329,695 from the financial years 2021-2022 while 2nd installment is still pending which will be released in 2022-2023.
- No female was part of water user association and was not actively involved in farming activities. They were rarely involved in decision making regarding forming related activities. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of

their family elders and children. Female of formers associated to Handicraft and stitching.

- Field Visit to Watercourse, Malik Habibullah, at Qazi Koker, D.I. Khan, KP, on 27th June 2022**

Name of Watercourse/WST	Malik Habib Ullah TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acers	13.41
Coordinates	32.0208515 71.0141491
Sanctioned Length of Watercourse	540
Measured Length of Watercourse	620
No. of beneficiaries	12
District	D.I.Khan
Tehsil	Pahar Pur
Village	Qazi Koker
Cropping pattern Rabi and Kharif	Rabi: Wheat , Kharif: Maize, Beet Sugar Cane
Water Logging & Salinity	No
Warabandi System	No
Designed Discharge	32 LPS
Main Source of water	Tube Well
Additional Source of water	Barani
Date of Technical Sanction	09/11/2020
Sanctioned Cost	Rs: 824,517
Demographic information	
Name	Habib Ullah
Age	50
Family size	12
Education	0

Tenurial status	Owner
Area owned	13.41
Cultivable land	11
Fallow land	2.5

Observations / Findings of ME&IE Team:

- Water user association was formed but not functional. Record of water user association of meeting and problem solving was not found. The former was owner of the land and they prepared land in Kachha of Indus river side. According to former our water was not reaching till end before construction of WC. Now my water reached till end.
- Former and WUA was unaware from the actual coast of scheme and the department take sign on blank check.
- Females' involvement in farm activity was confined to household boundaries. These activities include; crop produce cleaning, animal watering, animals shed cleaning, milking, taking of meals to the fields for the males etc. However, they helped their males in crop harvesting.
- Field Visit to Watercourse, Sana Ullah, at Yarik, D.I. Khan, KP, on 28th June 2022**

Name of Watercourse/WST	Sana Ullah TWWC
Type of watercourse/WST	PCPS
Category of water course	Tube Well
Culturable Command Area (CCA) Acres	60
Coordinates	32.0971518 70.7768866
Sanctioned Length of Watercourse	532
Measured Length of Watercourse	532
No. of beneficiaries	10
District	D.I.Khan
Tehsil	D.I.Khan
Village	Yarik

Cropping pattern Rabi and Kharif	Rabi: Wheat ,Grain Kharif: Maize, Millet
Water Logging & Salinity	Yes
Warabandi System	No
Designed Discharge	16 LPS
Main Source of water	Tube Well
Additional Source of water	Barani & Rodh Kohi
Date of Technical Sanction	23/12/2021
Sanctioned Cost	Rs: 824,742
Demographic information	
Name	Sana Ullah
Age	47
Family size	15
Education	Bachelor
Tenurial status	Owner
Area owned	6.25
Cultivable land	5
Fallow land	1.25

Observations / Findings of ME&IE Team:

- Water user association was formed and was functional up to some extent. Record of water user association of meeting and problem solving was not found.
- The formers were cooperative with one another. The total cost of the scheme was RS 824,742. First installment of 40% was released RS 329,695 from the financial years 2021-2022 while 2nd installment is still pending which will be released in 2021-2022.
- Females' involvement was very small in farm practices. None of the female was found as member of the Water User Association or involved in decision making regarding farm activities. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and

caring of their family elders and children. Females have no role in farming except animal rearing at home. Some of the females are associated to Handicraft and stitching.

- Female was not the part of water user association and was not actively involved in forming activities. Female are only involved during harvesting session. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of formers associated to Handicraft and stitching.
- Female involved in harvesting season in farming.
- Female was not the part of water user association and was not actively involved in forming activities. They are rarely involved in decision making regarding forming related activities. Majority of female working as House Wife while supporting their family male like keeping livestock, milking animal, food preparation, washing clothes and caring of their family elders and children. Female of formers associated to Handicraft and stitching.

4.4.3.2 Follow-up of the Data Collection from OFWM Department

The ICT team has trained the officials of the OFWM Department on direct entry to the Dashboard. Now they have started entering the data of WCs and WSTs Schemes directly to the Dashboard and the KP ICT team regularly monitoring this process. Where there is any discrepancy find the ICT team point out that to the OFWM Department and they make correction accordingly. Moreover, we keep close coordination about the progress of data entry to the Dashboard by the OFWM Department.

4.4.4 Regular Monitoring / Field Visits of Interventions in Balochistan Zone

The Balochistan Team has conducted several activities in the reporting year i.e. from July 2021 to June 2022.

The activities done by ME&IE Consultants, Balochistan during in last year is being covered in Second Annual Report precisely as listed below:

- Completed First Baseline Survey of schemes i.e., F.Y. 2020-21 and F.Y. 2021-22.
- Conducted Regular Monitoring / Spot Checking of all schemes i.e., completed or ongoing.
- Impact Evaluation of completes sites
- Analysis of the main Project Indicators.
- Benchmarked the critical data of First Baseline Survey
- Worked on Case Studies / Success Studies
- Conducted Training / Sessions on different project components at Provincial and National levels.
- Meetings
- Submitted all deliverables timely i.e. MMR, QMR, AMR, Baseline Report etc.

4.4.4.1 Updated Progress of ME&IE Consultants - Balochistan

The ME&IE Consultants, Balochistan has monitored 17 Watercourses and 50 Water Storage Tanks in "First Baseline Survey" activities. Total benchmarked sites in First Baseline Survey were 67 tills to date.

The Balochistan field teams are also conducting regular monitoring of on-going / completed sites covering all financial years i.e., 2019-20, 2020-21 and 2021-22 on a monthly basis. The Balochistan field teams have so far monitored 75 watercourses and 65 Water Storage Tanks. Total 140 sites have been monitored till to date.

Updated status of field visits is given in below Table 4.21:

Table 4.21: Updated Status of Field Visits in Balochistan Zone

Sr. #	District	Baseline / Bench Marked		Regular Monitoring / Spot Checking		Total
		WC	WST	WC	WST	
1	Quetta	-	6	10	11	27

Sr. #	District	Baseline / Bench Marked		Regular Monitoring / Spot Checking		Total
		WC	WST	WC	WST	
2	Pishin	-	7	4	13	24
3	Killa Abdullah	1	1	3	2	7
4	Ziarat	-	3	2	4	9
5	Mastung	1	5	6	7	19
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	12	5	23
11	Jaffarabad	-	-	4	1	5
12	Sohbatpur	7	-	11	-	18
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		17	50	75	65	207

4.4.4.2 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&IE, 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.

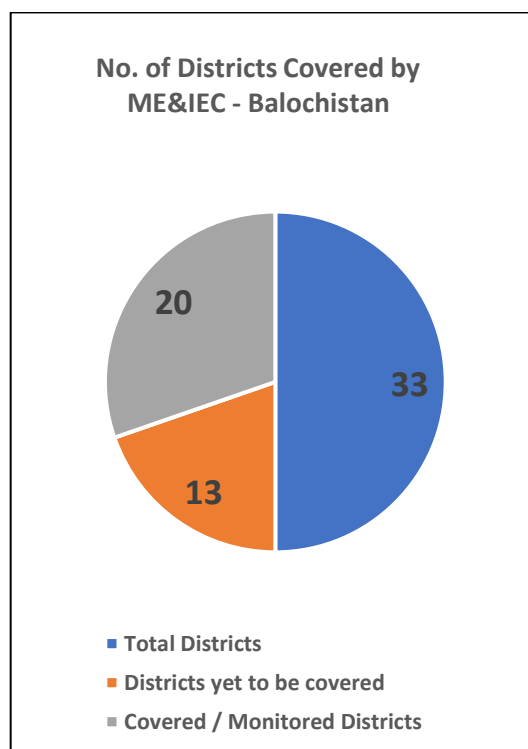


Figure 4.8: Districts Coverage in Balochistan

4.4.4.3 Updates Status of Activities / Sites Monitored in F.Y. 2021-22

The ME&IEC-Balochistan monitored total 128 sites i.e. 68 WCs and 60 WST in regular monitoring. The ME&IEC also did the Baseline Survey Field activities in this year and completed the First Baseline Survey. Total 36 sites were monitored i.e. 06 WC and 30 WST as per targets / sample size.

The detail of activities done in F.Y. 2021-22 is given in Table 4.22 below:

Table 4.22: Activities Done by Balochistan ME&IE Teams During the F.Y. 2021-2022

Months	Regular Monitoring		Baseline Survey		Total
	WC	WST	WC	WST	
Jul-21	18	6	0	0	24
Aug-21	14	12	0	0	26
Sep-21	0	0	0	0	0

Oct-21	4	2	0	0	6
Nov-21	11	0	0	0	11
Dec-21	5	4	0	0	9
Jan-22	3	3	0	0	6
Feb-22	0	0	0	0	0
Mar-22	2	19	2	19	42
Apr-22	6	2	0	0	8
May-22	0	0	0	0	0
Jun-22	5	12	4	11	32
Total	68	60	6	30	164

Note: The ME&IEC was working on MTs in the months of September 2021, February, 2022 and May 2022 and staff were engaged on Pre-testing of MTs and trainings

Graphical Presentation:

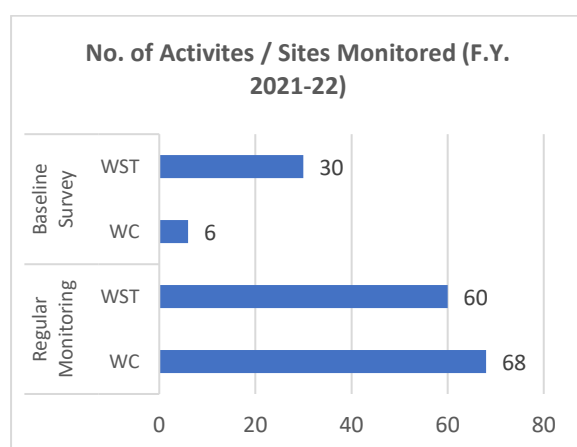


Figure 4.9: No. of Sites Visited in Balochistan

4.4.4.4 Field Team Composition - Balochistan

The ME&IE Consultants, Balochistan deployed three (03) field teams in Balochistan for data collection and field monitoring activities. Two teams are stationed at Naseerabad and Zhob, while one team is stationed at Zonal Office, Quetta. Two teams stationed at Naseerabad and Quetta are covering the South Zone while the team stationed at Zhob district is covering the north zone.

The field staff are not deputed or assigned districts or zones permanently. Team's deployment remained largely flexible and shuffled the staff from one team to other team as per the quantum of work and need basis so that work could not suffer and quality work could be obtained.

4.4.4.5 Targets, Sampling and Analysis / Critical Data – First Baseline Survey

The targets as per PC-1 / Inception Report, targets given by the OFWM, Balochistan, Sampling size by ME&IE Consultants, Balochistan and achieved the

targets of First Baseline Survey is given below in Table 4.23:

Table 4.23: Targets achieved for BLS

Component	PC1 Targets (2 Years)	Total Targets received from OFWM, (FY 2020-21 & 2021-22)	Sampling Size 3%	Achieved
WC	10,780	437	13	17
WST	2,510	1,629	49	50
Total	13,290	2,066	62	67

The Balochistan Field Teams have done Baseline Survey of 67 sites (17 WC and 50 WST). Now the Balochistan field teams are going to initiate the Midline Survey from July 2022.

The First Baseline Survey was conducted in different phases/months i.e. in first phase 31 sites were monitored, in second phase 21 sites were monitored and last phase 15 sites were monitored. The 31 sites have already been reported in the first Annual Report and the rest of activities are being reported in the year. The First Baseline Report report will be submitted in the month of July 2022. However, some analysis and critical data regarding First Baseline Survey is being presented below.

- Source of Water for Agriculture in Balochistan:**

The twenty-one 21 (sites) were monitored in Baseline Phase-II of 04 districts i.e. Khuzdar, Pishin, Kachi and Jhal Magsi. In all four districts the source of water for agriculture was **Tube wells** and water was being pumped out from tube wells for agriculture purposes.

The ME&IEC found that in Balochistan **groundwater extracted through dug wells, tube wells, springs and karezes**. These are the main sources of water for irrigation of orchards and other cash crops besides domestic and industrial uses.

The people of Balochistan have always depended on natural water sources such as **springs, streams, rivers and karezes**. Among these, the karezes are the most persistent; other sources are seasonal and depend on climatic conditions.

Balochistan's water resources comprise **4% groundwater, 39% water share from the Indus Basin, and 57% floodwater**. The groundwater is over-abstracted and requires a comprehensive reassessment

In Balochistan maximum agriculture are being done through tube wells, however in some districts canal system is available i.e. Naseerabad, Jaffarad, Sohbatpur, Lasbella and some areas of Dera Bugti.

The province is known as the fruit-basket of the country producing **90 per cent of grapes, cherry and almonds, 60 per cent of peach, pomegranate, apricot, 34 per cent of apple and 70 per cent of date fruit**. The province, with diverse climates ranging from temperate to sub-tropical and tropical, produces various fruit crops.

The fruits are the major produce of Balochistan being cultivated on an area of 0.221 million Hectares (Mha). The water required to raise these orchards is of the order of 1.168 million Acre Feet (MAF) as shown in below Table 4.24.

Table 4.24: Water Requirement for Orchards in the Monitored Project areas

Fruits	Area (ha)	Annual Water Requirement (mm)	Production (Tones)	Water Requirement (MAF)
Almonds	9,800	350	20,800	0.028
Apple	101,500	625	223,800	0.514
Apricot	26,200	450	187,700	0.095
Banana	1,400	1,700	23,000	0.019
Citrus	1,300	1,050	5,900	0.011
Dates	42,300	1,100	224,900	0.377
Grapes	12,600	350	48,400	0.036
Guava	600	625	2,600	0.003
Mango	1,400	625	6,600	0.007
Peach	9,400	450	18,500	0.034
Pears	100	400	500	0.000
Plums	3,700	450	26,400	0.013

Fruits	Area (ha)	Annual Water Requirement (mm)	Production (Tones)	Water Requirement (MAF)
Pomegranate	10,700	350	36,100	0.030
Total	221,000		825,200	1.168

The constant usage of tube wells, the water level is constantly going down. The following Table 4.25, of visited sites showing the current depth of Water Table in different districts/areas:

Table 4.25: Water depth in Different Areas under Project

Sr. #	Districts	Tehsil/UC	Name of Scheme	Depth of Water Table (ft.)
1	Khuzdar	Khuzdar/Baghbana	Ali Akbar	550
2	Khuzdar	Khuzdar/Baghbana-2	Mujeeb-Ur-Rehman	590
3	Khuzdar	Wadh/Wair	Gul Muhammad	620
4	Khuzdar	Wadh	Habib-Ur-Rehman	580
5	Khuzdar	Khuzdar/Zeedi	Fareed Ahmed	400
6	Khuzdar	Karkh/Lakharo Balok	Dr. Abdul Haq	300
7	Khuzdar	Khuzdar/Kathan	Muhammad Tayyab	650
8	Pishin	Bostan/Bostan	Ahmed Khan	700
9	Jhall Magsi	Gandawah/Khari	Safdar Ali Shah	200
10	Jhall Magsi	Gandawah/Khari	Safdar Ali Shah	200
11	Jhall Magsi	Gandawah/Khari	Jan Baig	150
12	Jhall Magsi	Gandawah/Khari	Abdul Rasheed	150
13	Jhall Magsi	Gandawah/Khari	Ghulam Hussain	100
14	Kachhi	Dhadar/Mashkaf	Khuda Bux	250
15	Kachhi	Dhadar/Kot Raisani	Karim Bux	250
16	Kachhi	Dhadar/Mashkaf	Abdul Nabi	250
17	Kachhi	Dhadar/Mashkaf	Munir Ahmed	250
18	Kachhi	Dhadar/Kot Raisani	Mir Mohammad	250
19	Kachhi	Dhadar/Kot Raisani	Mukhtiar Ahmed	250
20	Kachhi	Dhadar/Mashkaf	Moheem Khan	250
21	Kachhi	Dhadar/Kot Raisani	Rasheed Zaman	250

The Government of Balochistan is giving subsidies to the farmers on electricity bills and taking a fixed amount instead of consumption of actual units, but heavy load shading of 12 to 18

hrs is badly affecting the agriculture activities. Therefore, it is suggested that solar panels may be provided to the farmers on subsidies rates as solar panels are an advanced way to acquire energy from the sun light, this technology not only cuts down the overall usage of electricity in the province but is also a sustainable way for agriculture activities.

- **Area Owned and Cultivable Wasteland:**

The Table 4.26 is showing area owned and cultivable wasteland of monitored sites:

Table 4.26: Area Owned and Cultivable Wasteland of Monitored Sites

Sr. #	Name of Scheme / Beneficiary	Area Owned (acres)	Cultivable Wasteland (acres)	%
1	Mujeeb-Ur-Rehman	46	0	0%
2	Dr. Abdul Haq	35	0	0%
3	Gul Muhammad	35	5	14%
4	Habib-Ur-Rehman	30	8	27%
5	Muhammad Tayyab	1500	400	27%
6	Ahmed Khan	1000	300	30%
7	Munir Ahmed	60	20	33%
8	Ghulam Hussain	80	30	38%
9	Abdul Nabi	50	20	40%
10	Fareed Ahmed	100	45	45%
11	Ali Akbar	50	25	50%
12	Karim Bux	55	30	55%
13	Mir Mohammad	75	45	60%
14	Rasheed Zaman	80	55	69%
15	Jan Baig	100	70	70%
16	Khuda Bux	120	87	73%
17	Abdul Rasheed	200	153	77%
18	Mukhtiar Ahmed	200	170	85%
19	Moheem Khan	100	85	85%
20	Safdar Ali Shah	1300	1248	96%
21	Safdar Ali Shah	1300	1250	96%

The table showed that in 11 sites, cultivable wasteland is more than 50%. In the last two sites it has been reached up to 96%. However, after initiating the NPIWC-II activities, a lot of improvements are being observed. The ME&IEC, Balochistan will report the impacts of NPIWC-II interventions in the upcoming Endline Survey / Impact Evaluation Report.

- **Education of Farmers / Beneficiaries:**

Education gives us the skills, techniques, information and knowledge to know. Therefore, the magnitude of the importance of education in life is huge as well as multifold. The importance of education in life is that it helps everyone develop a good perspective of looking at the world and our society. Education helps us in getting new ideas and exploring new ideas.

Due to illiteracy **farmers are unable to identify whether the seeds are original or spurious and also to analyses the market position of particular agri-inputs (i.e.) seed.**

Literacy is one of the grave issues of Balochistan, which is running long in Balochistan. Balochistan stands at the lowest point of literacy rate then other provinces. In Balochistan, on average, there is a primary school after every 30 kilometers, a middle school after every 260 kilometers, and a high school after every 360 kilometers. The Table 4.27 shows an overview of education standards of visited sites.

Table 4.27: Overview of Education Standard in the Visited Sites of the Project Areas

Sr. #	Name of Farmer / Beneficiary	Education (Years)
1	Ali Akbar	0
2	Gul Muhammad	0
3	Habib-Ur-Rehman	0
4	Abdul Rasheed	0
5	Ghulam Hussain	0
6	Abdul Nabi	0
7	Munir Ahmed	0
8	Moheem Khan	0
9	Jan Baig	10
10	Ahmed Khan	12
11	Mukhtiar Ahmed	12
12	Rasheed Zaman	12
13	Mujeeb-Ur-Rehman	14
14	Muhammad Tayyab	14
15	Khuda Bux	14
16	Karim Bux	14
17	Mir Mohammad	14
18	Fareed Ahmed	16
19	Dr. Abdul Haq	16
20	Safdar Ali Shah	16
21	Safdar Ali Shah	16

The above table is showing that 08 farmers/beneficiaries out of 21 were found illiterate, they never went to schools. While 13 out of 21 were literate in which 09 farmers were well educated who did graduation or masters in different fields. The overall situation is satisfactory in Balochistan scenario, however, a lot of efforts are required to increase literacy rate in Balochistan, especially in rural areas, so that the agriculture sector could be improved accordingly.

• **Environment: Trees Cut Down During NPIWC-II Intervention:**

The below table 4.28 is showing the status of trees cut down during the construction of WC or WST in NPIWC-II and how many trees planted in lieu of cut down trees:

Table 4.28: Status of Trees Cut Down & New Plantation During Interventions

Sr. #	Name of Scheme / Farmer	Scheme	Trees cut down for Intervention	New Trees planted
1	Ali Akbar	WST	0	0
2	Mujeeb-Ur-Rehman	WST	0	0
3	Gul Muhammad	WST	0	0
4	Habib-Ur-Rehman	WST	0	0
5	Fareed Ahmed	WST	0	0
6	Dr. Abdul Haq	WST	0	0
7	Muhammad Tayyab	WC	0	0
8	Ahmed Khan	WST	0	0
9	Safdar Ali Shah	WST	0	0
10	Safdar Ali Shah	WC	0	0
11	Jan Baig	WST	0	0
12	Abdul Rasheed	WST	0	0
13	Karim Bux	WST	0	0
14	Abdul Nabi	WST	0	0
15	Munir Ahmed	WST	0	0
16	Mir Mohammad	WST	0	0
17	Moheem Khan	WST	0	0
18	Rasheed Zaman	WST	0	0
19	Khuda Bux	WST	2	2
20	Ghulam Hussain	WST	4	10
21	Mukhtiar Ahmed	WST	4	10

In 18 monitored sites out of 21 sites no tree was cut down. However, some trees had to be cut down on

03 sites and the farmer planted the trees in lieu of cut down trees as well. It was observed that in 01 scheme (Khuda Baksh) the set protocol regarding planting the three ways was not followed. In this scheme only 02 was planted in place of 02 cut down trees. The field teams advised the farmer to follow the set protocols regarding cut down trees and planted more trees as per protocols.

• **Status of Water Users Association (WUA) and Female Participation in WUA:**

The formation of the Water Users Association (WUA) is a basic requirement of the NPIWC-II project to ensure the participation and ownership of the farmers/beneficiaries. The role and responsibilities of WUA in the program such as:

1. Arrange skilled and unskilled labour for construction/ maintenance of earthen water channels, water control structures and lining of critical reaches.
2. Procure construction materials for civil works construction.
3. Facilitate construction by arranging alternate channels of conveying water during execution.
4. Carry out works as per standards and specifications under supervision of OFWM field staff.
5. Settle disputes among water users in respect of WC improvement.
6. Resolve settlement of disputes arising due to program implementation within the water users.

The Table 4.29 is showing the status of WUA of visited sites:

Table 4.29: Status of WUA in the Monitored Areas of the Project

Sr. #	District	Beneficiary Name	WUA formed	WUA Functional	Female Participation
1	Khuzdar	Ali Akbar	Yes	No	No
2	Khuzdar	Mujeeb-Ur-Rehman	Yes	No	No
3	Khuzdar	Gul Muhammad	Yes	No	No
4	Khuzdar	Habib-Ur-Rehman	Yes	No	No
5	Khuzdar	Fareed Ahmed	Yes	No	No

Sr. #	District	Beneficiary Name	WUA formed	WUA Functional	Female Participation
6	Khuzdar	Dr. Abdul Haq	Yes	No	No
7	Khuzdar	Muhammad Tayyab	Yes	No	No
8	Pishin	Ahmed Khan	Yes	No	No
9	Jhall Magsi	Safdar Ali Shah	Yes	No	No
10	Jhall Magsi	Safdar Ali Shah	Yes	No	No
11	Jhall Magsi	Jan Baig	Yes	No	No
12	Jhall Magsi	Abdul Rasheed	Yes	No	No
13	Jhall Magsi	Ghulam Hussain	Yes	No	No
14	Kachhi	Khuda Bux	Yes	No	No
15	Kachhi	Karim Bux	Yes	No	No
16	Kachhi	Abdul Nabi	Yes	No	No
17	Kachhi	Munir Ahmed	Yes	No	No
18	Kachhi	Mir Mohammad	Yes	No	No
19	Kachhi	Mukhtiar Ahmed	Yes	No	No
20	Kachhi	Moheem Khan	Yes	No	No
21	Kachhi	Rasheed Zaman	Yes	No	No

The Water Users Association (WUA) was formed in all 21 monitored sites, but they were not functional. It was also observed that there was no participation of women. As far as the women participation is concerned, the women are not allowed to participate in such activities due to culture barriers throughout Balochistan. However, as per project design, the WUA should be fully functional and should play their role and responsibilities for the success of the project. The department is requested to look into the matter and do needful.

- Education and Farming Experience:

Table 4.30: Education and Farming Experience

S. #	Scheme/Farmer Name	Scheme	District	Education of Beneficiary (years)	Farming Experience (years)
1	Qudratullah	WST	Mastung	14	2
2	Sahib Khan	WST	Mastung	10	11
3	Abdul Baki	WST	Mastung	3	15
4	Aminullah	WST	Pishin	0	4
5	Abdul Qadir	WST	Pishin	10	20
6	Malak Habib	WST	Pishin	0	27
7	Syed Meer Muhammad	WST	Ziarat	12	40
8	Farid Khan / Haji Noor Muhammad	WST	Ziarat	0	40
9	Nasibullah	WST	Ziarat	10	40

S. #	Scheme/Farmer Name	Scheme	District	Education of Beneficiary (years)	Farming Experience (years)
10	Aman ullah	WST	Ziarat	5	50
11	Abdul Hameed	WST	Ziarat	8	30
12	Rahimdad	WC	Sohbat Pur	10	20
13	Mohammad Ali	WC	Sohbat Pur	10	11
14	Shafi Mohammad	WC	Sohbat Pur	12	10
15	Miss Taiba	WC	Sohbat Pur	10	30

- Area Owned/Command Area and Area Cultivated:

Table 4.31: Area Owned/Command Area and Area Cultivated

S. #	Scheme/Farmer Name	Scheme	District	Area Owned (acres)	Area Cultivated (acres)
1	Qudratullah	WST	Mastung	70	12
2	Sahib Khan	WST	Mastung	30	7
3	Abdul Baki	WST	Mastung	17	8
4	Aminullah	WST	Pishin	30	24
5	Abdul Qadir	WST	Pishin	25	25
6	Malak Habib	WST	Pishin	32	16
7	Syed Meer Muhammad	WST	Ziarat	10	5
8	Farid Khan / Haji Noor Muhammad	WST	Ziarat	22	18
9	Nasibullah	WST	Ziarat	5	3
10	Aman ullah	WST	Ziarat	120	50
11	Abdul Hameed	WST	Ziarat	45	15
12	Rahimdad	WC	Sohbat Pur	60	60
13	Mohammad Ali	WC	Sohbat Pur	70	60
14	Shafi Mohammad	WC	Sohbat Pur	140	120
15	Miss Taiba	WC	Sohbat Pur	180	165

- Cultivated Wasteland and Area Planted in both Seasons:

Table 4.32: Cultivated Wasteland and Area Planted in both Seasons

S. #	Scheme/Farmer Name	Scheme	District	Cultivable Wasteland (acres)	Area Planted in both seasons (acres)
1	Qudratullah	WST	Mastung	57	0
2	Sahib Khan	WST	Mastung	22	2
3	Abdul Baki	WST	Mastung	7	0
4	Aminullah	WST	Pishin	4	0
5	Abdul Qadir	WST	Pishin	0	20
6	Malak Habib	WST	Pishin	12	5

S. #	Scheme/Farmer Name	Scheme	District	Cultivable Wasteland (acres)	Area Planted in both seasons (acres)
7	Syed Meer Muhammad	WST	Ziarat	2	5
8	Farid Khan / Haji Noor Muhammad	WST	Ziarat	4	18
9	Nasibullah	WST	Ziarat	2	3
10	Aman ullah	WST	Ziarat	70	50
11	Abdul Hameed	WST	Ziarat	30	15
12	Rahimdad	WC	Sohbat Pur	0	60
13	Mohammad Ali	WC	Sohbat Pur	0	60
14	Shafi Mohammad	WC	Sohbat Pur	10	120
15	Miss Taiba	WC	Sohbat Pur	10	165

- **Status of Water Table Level and Waterlogging or Salinity:**

Table 4.33: Status of Water Table Level and Waterlogging or Salinity

S. #	Scheme/Farmer Name	Scheme	District	Depth of Water Table (ft.)	Waterlogging or Salinity
1	Qudratullah	WST	Mastung	700	No
2	Sahib Khan	WST	Mastung	720	No
3	Abdul Baki	WST	Mastung	850	No
4	Aminullah	WST	Pishin	220	No
5	Abdul Qadir	WST	Pishin	750	No
6	Malak Habib	WST	Pishin	610	No
7	Syed Meer Muhammad	WST	Ziarat	600	No
8	Farid Khan / Haji Noor Muhammad	WST	Ziarat	750	No
9	Nasibullah	WST	Ziarat	700	No
10	Aman ullah	WST	Ziarat	400	No
11	Abdul Hameed	WST	Ziarat	400	No
12	Rahimdad	WC	Sohbat Pur	0	No
13	Mohammad Ali	WC	Sohbat Pur	0	No
14	Shafi Mohammad	WC	Sohbat Pur	0	No
15	Miss Taiba	WC	Sohbat Pur	0	No

- **Permanent Hired Labour, Casual Hired Labour and Status of Livestock:**

Table 4.34: Permanent Hired Labour, Casual Hired Labour and Status of Livestock

S. #	Scheme/Farmer Name	Scheme	District	Permanent Hired Labor	Casual Hired Labor	Total Livestock
1	Qudratullah	WST	Mastung	6	5	0
2	Sahib Khan	WST	Mastung	4	2	0
3	Abdul Baki	WST	Mastung	10	3	1
4	Aminullah	WST	Pishin	12	8	15
5	Abdul Qadir	WST	Pishin	18	0	9
6	Malak Habib	WST	Pishin	4	7	8
7	Syed Meer Muhammad	WST	Ziarat	6	4	0
8	Farid Khan / Haji Noor Muhammad	WST	Ziarat	3	2	0
9	Nasibullah	WST	Ziarat	0	3	6
10	Aman ullah	WST	Ziarat	7	4	23
11	Abdul Hameed	WST	Ziarat	3	4	30
12	Rahimdad	WC	Sohbat Pur	3	0	24
13	Mohammad Ali	WC	Sohbat Pur	5	0	30
14	Shafi Mohammad	WC	Sohbat Pur	6	0	9
15	Miss Taiba	WC	Sohbat Pur	7	0	20

- **Status of Water Users Associations and Female Participation:**

Table 4.35: Status of Water Users Associations and Female Participation

S. #	Scheme/Farmer Name	Scheme	District	WUA formed	WUA Functional	Female Participation in WUA
1	Qudratullah	WST	Mastung	Yes	No	No
2	Sahib Khan	WST	Mastung	Yes	No	No
3	Abdul Baki	WST	Mastung	Yes	No	No
4	Aminullah	WST	Pishin	Yes	No	No
5	Abdul Qadir	WST	Pishin	Yes	No	No
6	Malak Habib	WST	Pishin	Yes	No	No
7	Syed Meer	WST	Ziarat	Yes	No	No

S. #	Scheme/ Farmer Name	Sche me	Distri ct	WUA formed	WU A Func tional	Female Partici pation in WUA
	Muham mad					
8	Farid Khan / Haji Noor Muham mad	WST	Ziarat	Yes	No	No
9	Nasibulla h	WST	Ziarat	Yes	No	No
10	Aman ullah	WST	Ziarat	Yes	No	No
11	Abdul Hameed	WST	Ziarat	Yes	No	No
12	Rahimda d	WC	Sohb at Pur	Yes	No	No
13	Moham mad Ali	WC	Sohb at Pur	Yes	No	No
14	Shafi Moham mad	WC	Sohb at Pur	Yes	No	No
15	Miss Taiba	WC	Sohb at Pur	Yes	No	No

Coordinates:	N 30.1510, E 66.9543
Source of irrigation:	Tube Well
Total length of Watercourse:	2995.88 rft.
Estimated length of lining:	2000 rft.
Financial Year:	2019-2020

Pictorial view of the visit is given in Picture 4.89:



Picture 4.89: Field Team Measuring the WC

• Cropping Pattern and Cost of Production:

Table 4.36: Cropping Pattern and Cost of Production

S. #	Scheme/Farmer Name	Sche me	District	Cropping Pattern	Cost of Production n per Acre (PKR)
1	Qudratullah	WST	Mastung	Tomato, Grape	170,000 and 250,000
2	Abdul Qadir	WST	Pishin	Grape	190,000
3	Syed Meer Muhammad	WST	Ziarat	Tomato	120,000
4	Farid Khan / Haji Noor Muhammad	WST	Ziarat	Apple	645,000
5	Nasibullah	WST	Ziarat	Apple	725,000
6	Aman ullah	WST	Ziarat	Grapes	196,000
7	Abdul Hameed	WST	Ziarat	Grapes	190,000

• Field Visit of WST in Quetta, Balochistan on 18th April 2022

Scheme:	Water Storage Tank
Name of Farmer:	Abdul Quddus
Province:	Balochistan
District:	Quetta
Tehsil:	Quetta
Union council:	Shamozai
Coordinates:	N 30.1138, E 66.9414
Source of Irrigation:	Tube Well
Shape of Water Storage Tank:	Square
Size of Water Storage Tank:	60x60 ft.
Depth of WST:	4.5 ft.
Financial Year:	2019-2020

Pictorial view of the visit is given in Picture 4.90:



Picture 4.90: View of WST with Scheme Board

4.5.4.1 Monitoring / Field Visits of Interventions by Zonal Teams, Balochistan

• Field Visit of Watercourse in Quetta, Balochistan on 18th April, 2022

Scheme:	Watercourse
Nature of Scheme:	New
Name of Farmer:	Ghulam Farooq
Province:	Balochistan
District:	Quetta
Tehsil:	Shadezai
Union council:	Kirani

• **Field Visit of WC in Quetta, Balochistan on 19th April 2022**

Scheme:	Watercourse
Nature of Scheme:	New
Name of Farmer:	Muhammad Siddique
Province:	Balochistan
District:	Quetta
Tehsil:	Quetta
Union council:	Samungli
Coordinates:	N 30.2527, E 66.9146
Source of irrigation:	Tube Well
Total length of Watercourse:	1408.20 rft.
Estimated length of lining:	1346.85 rft.
Financial Year:	2019-2020

Pictorial view of the visit is given in Picture 4.91:



Picture 4.91: Mogha View of WC with Point and Source of water & Command Area

• **Field Visit of WST in Quetta, Balochistan on 19th April 2022**

Scheme:	Water Storage Tank
Name of Farmer:	Faqeer Muhammad
Province:	Balochistan
District:	Quetta
Tehsil:	Kuchlak
Union council:	Kuchlak
Coordinates:	N 30.3041, E 66.9370
Source of Irrigation:	Tube Well

Shape of Water Storage Tank:	Square
Size of Water Storage Tank:	40x40 ft.
Depth of WST:	4.5 ft.
Financial Year:	2019-2020

Picture 4.92 Explains the Site Visit:



Picture 4.92: ME&IE Team taking Measurements of WST

• **Field Visit of WC in Naseerabad, Balochistan on 19th April 2022**

Scheme:	Watercourse
Nature of Scheme:	Mohammad Ali
Name of Farmer:	Mohammad Ali
Province:	Balochistan
District:	Naseerabad
Tehsil:	Dera Murad Jamali
Union council:	Quba Sher Khan Sharqi
Coordinates:	28.62679 68.32737
Source of irrigation:	Rabi Canal
Total length of Watercourse:	387.4 meter
Estimated length of lining:	427 meter
Financial Year:	2020-21

Pictorial view of the visit is given in Picture 4.93:



Picture 4.93: ME&IE Team Measuring WC & interviewing farmer for BLS data, in presence of DDA

- Field Visit of WC in Naseerabad, Balochistan, on 19th April 2022**

Scheme:	Watercourse
Nature of Scheme:	Mohammad Younas
Name of Farmer:	Mohammad Younas
Province:	Balochistan
District:	Naseerabad
Tehsil:	Dera Murad Jamali
Union council:	Quba Sher Khan Sharqi
Coordinates:	28.64958 68.22892
Source of irrigation:	Rabi Canal Left with Tube well
Total length of Watercourse:	387.4 meter
Estimated length of lining:	427 meter
Financial Year:	2020-21

Pictorial view of the visit is given in Picture 4.94:



Picture 4.94: Measuring length of WC Muhammad Younas for BLS data, in presence of DDA

- Field Visit of WC in Naseerabad, Balochistan on 20th April 2022**

Scheme:	Watercourse
Nature of Scheme:	Nadir Ali
Name of Farmer:	Nadir Ali
Province:	Balochistan
District:	Naseerabad
Tehsil:	Tambo
Union council:	Kharos wah
Coordinates:	28.38761 68.02686
Source of irrigation:	Ropa Shakh Canal
Total length of Watercourse:	350 meter
Estimated length of lining:	350 meter
Financial Year:	2019-20

Pictorial view of the visit is given in Picture 4.95:



Picture 4.95: Measuring length of WC Nadir Ali with farmer & DDA for BLS.

- Field Visit of WST in Naseerabad, Balochistan on 19th April 2022**

Scheme:	Water Storage Tank
Name of Farmer:	Sanaullah
Province:	Balochistan
District:	Naseerabd
Tehsil:	Tamboo
Union council:	Kharos Wah
Coordinates:	28.42769 67.98272
Source of Irrigation:	Ropa shakh Canal left with Tube well
Shape of Water Storage Tank:	Rectangular
Size of Water Storage Tank:	38x38 / 48x48
Depth of WST:	8 ft
Financial Year:	2020-21

Pictorial view of the visit is given as Picture 4.96:



Picture 4.96: Measuring dimensions of WST Sanaullah with farmer & DDA for BLS

- Field Visit of WST in Pishin, Balochistan on 11th June 2022**

Scheme	Water Storage Tank
Farmer Name	Muhammad Akbar
Name of village:	New Mulkiyar
Union council:	Haji Abdul Qadir

Chairman WUA:	Muhammad Akbar
District:	Pishin
Tehsil	Pishin
Coordinates	N 30.67243 E 67.13001
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	60x60 ft.
Depth of WST:	4.75 ft.
Command area of water storage tank:	60 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
Cropping intensity increased	Yes
Crops yield increased	Yes
Equity in water distribution increased	Yes
Reduction in water disputes/thefts	Not reported
Poverty reduction through generation of employment.	Yes
Cement industry, bricks Killen, Precast Structures Industry and other related industries' production is picking up.	Yes
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer suggested that if such schemes are provided in future, it will help many farmers. Cultivated area increased 50%. Farmer has eliminated the Apple orchards in the past due to

	shortage of water, and now he informed us that he has planned to replant the Apples orchard
General Observations	<ul style="list-style-type: none"> The ME&IE team observed that there were 2 more WSTs side by side with this WST. They were interconnected through PVC pipes. As per OFWM Officials all these WSTs were constructed in the same financial year and their beneficiaries are brothers. The OFWM looks into the matter that side by side 03 WST are feasible.

Pictorial view of the visit is given in Picture 4.97:



Picture 4.97: TL, DTL, FTI and M&E Officer of ME&IE Consultants along with Director OFWM, Balochistan, DDA OFWM, Pishin with his team and Beneficiary at Newly Constructed WST

- Field Visit of WC in Pishin, Balochistan on 11th June 2022**

Scheme:	Watercourse
Name of Farmer:	Syed Hakeem Shah
Name of village:	Pishin

Union council:	Killi Syedaan
Chairman WUA:	Syed Hakeem Shah
District:	Pishin
Tehsil	Pishin
Source of irrigation:	Tube Well
Total length of watercourse:	2000ft.
Estimated length of lining:	2000ft.
Command area of watercourse:	12 Acres
No of beneficiaries:	1
Quality of Work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Due to this intervention Farmer was planning to increase his cultivated area up to 5 acres more
General Observations	<ul style="list-style-type: none"> The farmer shifted his grape orchard from planking the plants to terracing system. Farmer was well aware about the cropping pattern of his district and also constructed a Cold Storage on his land. Water saving caused by this WC, he had shifted a few acres of grape orchards to drip irrigation system. He further shifted his tunnel farming and grape nursery of improved variety on drip irrigation as well.
Pictorial view of the visit is given in Picture 4.98:	



Picture 4.98: TL in discussion with farmers during Monitoring Visit of WC in Pishin

• **Field Visit of WST in Mastung, Balochistan on 22nd June 2022**

Scheme	Water Storage Tank
Farmer Name	Qudratullah Khan
Name of village:	Paringabad
Union council:	Paringabad
Chairman WUA:	Qudratullah Khan
District:	Mastung
Tehsil	Mastung
Coordinates	N 29.89778 E 66.86809
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	60x60ft.
Depth of WST:	4.75ft.
Command area of water storage tank:	12 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The Farmer had only 4 acres of cultivable land prior to the provision of WST, after the construction of this WST, farmer has increased cultivable land by 8 acres.

	<ul style="list-style-type: none"> The Farmer told the team that he has 57 acres of cultivable wasteland. He was demanding more schemes so that he could further increase his cultivable land. According to him, the 25% share is too much and he was demanding that it should be reduced. He further suggested that with the provision of WST, WC or HEIS should also be provided to the farmer, so that they may maximize the benefits of the scheme.
General Observations	<ul style="list-style-type: none"> Some cracks were found in the overflow structure. It would be harmful for the Scheme. Scheme board was not available. File of the scheme was completed; maximum required data were missing. The ME&IE Consultants suggested that an awareness session regarding schemes benefits, role and responsibilities of the Farmers, Ownership and involvement of the Farmers may be

	conducted by the Department.
Pictorial view of the visit is given in Picture 4.99:	
	
<p>Picture 4.99: ME&IE team with OFWM staff and Beneficiary during visit of WST with overflow structured</p>	

• **Field Visit of WST in Mastung, Balochistan on 22nd June 2022**

Scheme	Water Storage Tank
Farmer Name	Sahib Khan
Name of village:	Umer Dor
Union council:	Umer Dor
Chairman WUA:	Sahib Khan
District:	Mastung
Tehsil	Dasht
Coordinates	N 29.83140 E 66.99433
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	50.5x50.3ft.
Depth of WST:	4.75ft.
Command area of water storage tank:	7 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
General Observations	<ul style="list-style-type: none"> Backfilling was not properly done

	<ul style="list-style-type: none"> • Scheme board was not available. • The scheme was completed. • The ME&IE Consultants suggested that an awareness session regarding schemes benefits, role and responsibilities of the Farmers, Ownership and involvement of the Farmers may be conducted by the Department.
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Pictorial view of the visit is given in Picture 4.100:



Picture 4.100: ME&IE team with OFWM staff and Beneficiary at WST

• **Field Visit Date – 22nd June, 2022**

Scheme	Water Storage Tank
Farmer Name	Abdul Baki
Name of village:	Gaith
Union council:	Khad Koocha
Chairman WUA:	Abdul Baki

District:	Mastung
Tehsil	Khad Koocha
Coordinates	N 29.89780 E 66.86808
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	40.3x40.3ft.
Depth of WST:	4.75ft.
Command area of water storage tank:	8 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> • Farmer was demanding a PVC pipe scheme because his command area was located very far from the WST and the land topography was not plain due to which a katcha WC is not feasible and cause of wasting of water. • Farmer was demanding that the government must help the farmers to provide solar energy system for their tube wells and also provide HEIS.
General Observations	<ul style="list-style-type: none"> • Back filling was done properly. • Outflow and overflow structures were not proper. • Scheme board was not available.

Pictorial view of the visit is given in Picture 4.101:



Picture 4.101: ME&IE team with OFWM staff and Beneficiary during visit of WST with Loose Back Filling, in Mastung, Balochistan

• **Field Visit of WST in Pishin, Balochistan, on 23rd June 2022**

Scheme	Water Storage Tank
Farmer Name	Aminullah Khan
Name of village:	Hikalzai
Union council:	Hikalzai
Chairman WUA:	Aminullah Khan
District:	Pishin
Tehsil	Pishin
Coordinates	N 30.65011 E 66.93002
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:	24 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
General Observations	<ul style="list-style-type: none"> The inside stairs away from the outflow pipe. Scheme board was not available. The ME&IE Consultants

suggested that an awareness session regarding schemes benefits, role and responsibilities of the Farmers, Ownership and involvement of the Farmers may be conducted by the Department.

Pictorial view of the visit is given in Picture 4.102:



Picture 4.102: ME&IE team with OFWM staff and Beneficiary during visit of WST

• **Field Visit of WST in Pishin, Balochistan on 2nd June 2022**

Scheme	Water Storage Tank
Farmer Name	Abdul Qadir
Name of village:	Dub Khanzai
Union council:	Dub Khanzai
Chairman WUA:	Abdul Qadir
District:	Pishin
Tehsil	Pishin
Coordinates	N 30.72658 E 67.07180
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	49.6x51ft.
Depth of WST:	4.75ft.

Command area of water storage tank:	25 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was planning to increase his cultivable area and cropping pattern after the intervention of WST
General Observations	<ul style="list-style-type: none"> The inside stairs away from the outflow pipe. The back filling of one side of WST was not done properly The farmer made a water pond adjacent to the WST for animals. The ME&IE team advised the farmer to shift this pond to another place as it may collapse the WST. The ME&IE Consultants suggested that an awareness session regarding schemes benefits, role and responsibilities of the Farmers, Ownership and involvement of the Farmers may be conducted by the Department. Scheme board was not available.

Pictorial view of the visit is given in Picture 4.103:



Picture 4.103: ME&IE team with OFWM staff and Beneficiary, interviewing the beneficiary at WST with water pond for animals

• **Field Visit of WST in Pishin, Balochistan on 23rd June 2022**

Scheme	Water Storage Tank
Farmer Name	Malak Habib
Name of village:	New Mulkiyar
Union council:	Sar Khanzai
Chairman WUA:	Malak Habib
District:	Pishin
Tehsil	Pishin
Coordinates	N 30.73039 E 67.11819
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	60.1x60ft.
Depth of WST:	4.75ft.
Command area of water storage tank:	16 Acres
No of beneficiaries:	1
Quality of work	Satisfactory
General Observations	<ul style="list-style-type: none"> The farmer was facing electricity shortage

	<p>problems. Electricity is available 4 hours per day only.</p> <ul style="list-style-type: none"> ● If the Government provides a solar energy system to the farmers for their tube wells, it would help them a lot, especially in peak season. ● Scheme board was not available.
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Pictorial view of the visit is given in Picture 4.104:



Picture 4.104: ME&IE team with OFWM staff and Beneficiary during Visit of WST

● **Field Visit of WC in Sohbat Pur, Balochistan on 23rd June 2022**

Scheme:	Watercourse
Name of Farmer:	Rahimdad
Name of village:	Meher Ali
Union council:	Roopa
Chairman WUA:	Rahimdad
District:	Sohbat Pur
Tehsil	Faridabad
Coordinates	28.5494357 68.4139385
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	404 meters
Estimated length of lining:	404 meters

Command area of watercourse:	60 Acre
No of beneficiaries:	3
Cost of Construction of WC:	2,825,815/=
Quality of Work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> ● The farmer was satisfied and got benefit in order to save appropriate water
General Observations	<ul style="list-style-type: none"> ● Files of schemes were not available.

Pictorial view of the visit is given in Picture 4.105:



Picture 4.105: ME&IE Team in discussion with Beneficiaries of WC in Sohbatpur, Balochistan

● **Field Visit of WC in District Sohbat Pur, Balochistan on 24th June 2022**

Scheme:	Watercourse
Name of Farmer:	Mohammad Ali
Name of village:	Mohammad Ali Khosa
Union council:	Ghuri
Chairman WUA:	Mohammad Ali
District:	Sohbat Pur
Tehsil	Faridabad
Coordinates	24.463126 68.432325
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	393 meters
Estimated length of lining:	393 meters
Command area of watercourse:	100 Acre
No of beneficiaries:	06
Cost of Construction of WC:	2,825,815/=
Quality of Work	Satisfactory

Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> The farmer was satisfied and got benefit in order to savage appropriate water
General Observations	<ul style="list-style-type: none"> Back filling was not done properly File of the scheme was not available.

Pictorial view of the visit is given in Picture 4.106:



Picture 4.106: Interviewing of the farmers and view of WC, District Sohbatpur

• **Field Visit of WC in District Sohbat Pur, Balochistan on 24th June 2022**

Scheme:	Watercourse
Name of Farmer:	Shafi Mohammad
Name of village:	Mohammad Ali Khosa
Union council:	Ghuri
Chairman WUA:	Shafi Mohammad
District:	Sohbat Pur
Tehsil	Faridabad
Coordinates	28.455896 68.438100
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	341 meters
Estimated length of lining:	341 meters
Command area of watercourse:	70 Acre
No of beneficiaries:	05

Cost of Construction of WC:	2,825,815/=
Quality of Work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was happy with this intervention.
General Observations	<ul style="list-style-type: none"> Water curing was not properly done due to this some damages were noticed The Naccas were not properly installed


Pictorial view of the visit is given in Picture 4.107:



Picture 4.107: View of Watercourse with Damaged Portion, Sohbatpur, Balochistan

• **Field Visit of WC in District Shohat Pur, Balochistan on 25th June 2022**

Scheme:	Watercourse
Name of Farmer:	Miss Taiba
Name of village:	Sakhi Sikander
Union council:	Dandha
Chairman WUA:	Miss Taiba
District:	Sohbat Pur
Tehsil	Sohbat Pur
Coordinates	28.6126967, 68.4877354
Source of irrigation:	Pat Feeder Canal
Total length of watercourse:	405 meters
Estimated length of lining:	394 meters
Command area of watercourse:	165 Acre
No of beneficiaries:	7
Cost of Construction of WC:	2,825,815/=
Quality of Work	Satisfactory

Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was happy with this intervention.
General Observations	<ul style="list-style-type: none"> Water curing was not properly done due to this some damages were noticed
Pictorial view of the visit is given in Picture 4.108:	
	
<p><i>Picture 4.108: View of Watercourse in District Sohbatpur, Balochistan</i></p>	

- Field Visit of WST in District Ziarat, Balochistan on 27th June 2022**

Scheme	Water Storage Tank
Farmer Name	Syed Amir Muhammad
Name of village:	Ibraimaan
Union council:	Kach
Chairman WUA:	Syed Amir Muhammad
District:	Ziarat
Tehsil	Ziarat
Coordinates	N 30.45417 E 67.30218
Source of irrigation:	Tube Well
Shape of water storage tank:	Square
Size of water storage tank:	40.3X40 ft.
Depth of WST:	4.6 ft.
Command area of water storage tank:	5 Acres
Quality of work	Unsatisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was satisfied with the scheme and he was

	demanding PVC scheme.
General Observations	<ul style="list-style-type: none"> The farmer spent out 150,000/= on PVC from his own expenses motivated by the OFWM staff. Quality of the plaster work was not good. Brick masonry work was not good, back filling of one side was not done properly. Scheme board was not available at site. File of the scheme was not available with OFWM staff. Gate valve was damaged.

Pictorial view of the visit is given in Picture 4.109:



Picture 4.109: ME&IE Team Visiting WST, in District Ziarat

- Field Visit of WST in District Ziarat, Balochistan on 27th June 2022**

Scheme	Water Storage Tank
Farmer Name	Farid Khan

Name of village:	Varchom
Union council:	Spezindai
Chairman WUA:	Noor Mohammad
District:	Ziarat
Tehsil	Ziarat
Coordinates	30.402763 67.327218
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50 x 50 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	20 Acre
No of beneficiaries:	6
Starting date:	NA
Completion date:	NA
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was Satisfied
General Observations	<ul style="list-style-type: none"> File of site was not available with OFWM staff Scheme board was not available

Pictorial view of the visit is given in Picture 4.8110:



Picture 4.110: View of WST, District Ziarat

- Field Visit of WST in District Ziarat, Balochistan on 27th June 2022

Scheme	Water Storage Tank
Farmer Name	Naseeb Ullah
Name of village:	Lailghat

Union council:	Spazindai
Chairman WUA:	Naseeb Ullah
District:	Ziarat
Tehsil	Ziarat
Coordinates	30.5252439
Source of irrigation:	67.6465689
Shape of water storage tank:	Square
Size of water storage tank:	30 x 30 ft
Depth of WST:	4.5 ft
Command area of water storage tank:	5 Acre
No of beneficiaries:	4
Starting date:	NA
Completion date:	NA
Quality of work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was Satisfied
General Observations	<ul style="list-style-type: none"> File of site was not available with OFWM staff Scheme board was not available

Picture 4.111 below, Explains the Site Visit:



Picture 4.111: ME&IE Team Measuring WST, in District Ziarat

- Field Visit of WST in District Quetta, Balochistan on 28th June 2022

Scheme	Water Storage Tank
Farmer Name	Aman Ullah

Name of village:	Abdulzai
Union council:	Aghbarg
Chairman WUA:	Aman Ullah
District:	Quetta
Tehsil	Chiltan
Coordinates	30.1476093 66.7939709
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	50 x 50 ft
Depth of WST:	4.73 ft
Command area of water storage tank:	50 Acre
No of beneficiaries:	5
Starting date:	9-3-2022
Completion date:	18-3-2022
Quality of work	Satisfactory
Overall feedback of Farmer / Beneficiary	<ul style="list-style-type: none"> Farmer was happy with this intervention.
General Observations	<ul style="list-style-type: none"> File of scheme was not available with OFWM staff Back filling was not properly done. Sign board was not available at the site.

Pictorial view of the visit is given in Picture 4.112:



Picture 4.112: View of WST, District Quetta

• **Field Visit of WST in District Quetta, Balochistan on 28th June 2022**

Scheme	Water Storage Tank
Farmer Name	Abdul Hameed
Name of village:	HalimZai
Union council:	Aghbarg
Chairman WUA:	Abdus Salam
District:	Quetta
Tehsil	Chiltan
Coordinates	30.1818334 66.7791322
Source of irrigation:	Tube well
Shape of water storage tank:	Square
Size of water storage tank:	40 x 40 ft
Depth of WST:	4.11 ft
Command area of water storage tank:	10 Acre
No of beneficiaries:	4
Starting date:	16-3-2022
Completion date:	23-3-2022
Construction Cost of watercourse:	Not provided
Quality of work	Satisfactory
Overall feedback of Farmer / Beneficiary	Farmer was satisfied with this intervention.
General Observations	<ul style="list-style-type: none"> File of the scheme was not provided. Sign board was displayed.

Pictorial view of the visit is given in Picture 4.113:



Picture 4.113: ME&IE Team Measuring Water Storage Tank, District Quetta

4.5 MEETINGS OF ME&IE CONSULTANTS WITH CLIENT / STAKEHOLDERS

4.5.1 Meetings of ME&IE Consultants – ICT Zone

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



Picture 4.114: Field Team in Meeting with D.D. OFWM, Attock

Date	28 July 2021, 01:45 PM
Venue	Department of Irrigation and Small Dams, Mirpur
Participants	
i.	Mr. Javed Qamar, Deputy Director WM
ii.	Mr. Mohammad Ali, WMO
iii.	Mr. Ebadat-Ur-Rehman, FTI (ICT & AJK)

- iv. Miss Sana Gull, ME&IE Officer
- v. Miss Maryam Iqbal, ME&IE Officer

Meeting Agenda: A meeting was held with the Deputy Director Water Management of Mirpur District at Department of Irrigation & Small Dams, Mirpur. The meeting agenda is as follow:

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

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



Picture 4.115: Field Team in Meeting with D.D. OFWM, Mirpur

Date	7 September 2021
Venue	Office of Project Director AJK, Mr. Bashrat Hussain Durrani
Participants	
i.	Mr. Basharat Hussain Durrani - Project Director
ii.	Mr. Tahir Anwar - NPC
iii.	Dr. Tehmina Iqbal Dy. Director Coordination
iv.	Mr. Saiful-Islam Deputy NPC
v.	Prof. Dr. Muhammad Abdul Quddus – Team Leader ME&IE Consultants,
vi.	Mr. Rizwan Saleem – ICT Specialist ME&IE Consultant
vii.	Mr. Ebadat-ur-Rehman Data Supervisor ME&IE Consultant
viii.	Mr. Iftekhar Arain DTL NESPAK
ix.	Mr. Murtaza Chattha FTI NESPAK

x. Mr. Nasir Abbas Field Engineer NESPAK

Meeting Agenda:

NPC conducted 3 days visit AJK project areas from 6 September 2021 to 8 September 2021. ME&IE Consultants ICT Zone accompanied NPC during his visit to AJK. Discuss visit of AJK Project Sites.

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

• **Meeting with Director Agriculture Extension Services ICT**

Date	February 18 2022
Venue	ME&IE Consultants' National Office Islamabad
Participants	
i)	Mr. Waqar Anwar, Director Agriculture Extension ICT
ii)	Dr. Usman Mustafa, Team Leader ME&IE Consultants
iii)	Dr. Umar Farooq, Deputy Team Leader, ME&IE Consultants
iv)	Mr. Muhammad Bilal, Field Team Incharge ICT Zone
v)	Mr. Shumail Mahmood, ICT Expert
Meeting Agenda:	
Discussion of Project activities in ICT Zone, and Coordination for Data Collection in the Field.	
Discussion / Decisions	
Team Leader ME&IE Consultants welcomed Mr. Waqar Anwar in the Consultants National Office Islamabad and thanked him for visiting consultants' office. Following discussions were held in the meeting.	

- Team Leader ME&IE Consultants, Dr. Usman briefed project related of the ME&IE Consultants in ICT Zone.
- Team Leader requested Mr. Waqar Anwar to make available his staff to assist ME&IE field teams during field visits and data collection.
- Team Leader shared a case study of an intervention under the project NPIWC-II in the ICT Zone.
- Director Agri. Extension Mr. Waqar Anwar appreciated the Case Study flyer prepared by the ME&IE Consultants and also gave valuable input in the Case Study.

Pictorial view of meeting is given in Figures 4.116 to 4.117.



Picture 4.116: Team Leader ME&IE Dr. Usman Mustafa in Meeting with D. Agri. Ext. ICT, Mr. Waqar Anwar



Picture 4.117: Team Leader, DTL, FTI, & ICT Expert ME&IE Consultants in Meeting with D. Agri. ICT

4.5.2 Meetings of ME&IE Consultants Punjab Zone

Date	8 July 2021
Venue	Director General (DG) Agriculture (OFWM) Office 21 Davis Road Lahore
Participants	
i.	Mr. Tahir Mehmood- Assistant Director (OFWM) (Technical) D.G OFWM, Office, Lahore.

- ii. Mr. Muhammad Yousaf Bhatti Deputy Team Leader, ME&IE Consultants, Punjab Zone, Lahore.
- iii. Mr. Awais Jahangeer Field Team In-Charge, ME&IE Consultants, Punjab Zone, Lahore.

Meeting Agenda:

- Field Activities so far carried over
- Plan for Three months (July- September 2021)



Picture 4.118: ME&IE Consultants in meeting with AD Tech. Punjab OFWM

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



Picture 4.119: ME&IE Consultants in meeting with Director Agriculture Lahore

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

- The OFWM director and ME&IE consultants assured and extended each other full cooperation in future for smooth working of the field activities.



Picture 4.120: ME&IE Consultants in meeting with Director Agri. Gujranwala

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

Date	November 03, 2021
Venue	Office of the Directorate General of Agriculture (OFWM), Davis Road Lahore
Participants	
<ol style="list-style-type: none"> Mr. Hafiz Qaiser Yasin, Director Agriculture OFWM (H.Q) Mr. Tahir Mehmood, Assistant Director Agriculture (Technical) Dr. Muhammad Abdul Quddus, Agri Economist (ME&IE Specialist) Mr. Muhammad Yousaf Bhatti, Deputy Team Leader (Punjab Zone) Mr. Syed Shahzaib Gillani, Supporting Staff 	
*D. G Agriculture (OFWM) could not attend the meeting as he was engaged in other assignments.	
Meeting Agenda:	
<ol style="list-style-type: none"> Reviewed the progress of the project. Extended request for the data required from OFWM field (DA, DDA, ADA) offices for implementation of MIS dashboard. The formats / templates for data 	

required were handed over to the respective officers of OFWM.



Picture 4.121: Meeting held with DA & ADA in Directorate General (OFWM) Lahore

Date	November 30, 2021
Venue	Office of Director Agriculture OFWM Training Institute OFWM Multan Road Thokhar Niaz Baig Lahore
Participants	
<ol style="list-style-type: none"> Aurangzeb Badar, Assistant Director Agriculture OFWM Lahore Cantt 2. Samiullah Khan Niazi, Assistant Director Agriculture OFWM Lahore City Shahid Khalil Rana, Field Engineer Technician ME&IE Consultants Syed Ali Haider, Field Engineer Technician ME&IE Consultants Misbah u Rehman, Field Engineer Technician ME&IE Consultants 	
Meeting Agenda:	
<ol style="list-style-type: none"> Review of project progress in Lahore District Collection of basic data of watercourses (2021-22) for baseline survey / monitoring purposes. 	



Picture 4.122: ME&IE Consultants after the meeting held with ADA Lahore city and Lahore Cantt.

Date	December 23, 2021
Venue	Directorate General of Agriculture (OFWM), Davis Road Lahore

Participants

- 1) Mr. Kifayat Zaman Director General Federal Water Management Cell Ministry of National Food Security and Research Government of Pakistan, Islamabad.
- 2) Malik Muhammad Akram Director General (AGRI) OFWM, Punjab Lahore.
- 3) Mr. Hafiz Qaiser Yasin Director Agriculture OFWM (H.Q) Lahore.
- 4) Mr. Tahir Mehmood Assistant Director Agriculture (Technical) OFWM Lahore
- 5) Mr. Tariq Khan Deputy Team Leader NWMC, Lahore.
- 6) Muhammad Yousaf Bhatti Deputy Team Leader, ME & IE Consultants Punjab Zone Lahore

Meeting Agenda:

1. Review of OFWM, Activities in Punjab zone.
2. Briefing on NWM Consultants activities and ME & IE Consultants Punjab zone
3. Punjab Water Policy.



Picture 4.123: View of the Meeting held in D.G (AGRI) OFWM Lahore

Date	December 24, 2021
Venue	Office of the Chief Strategic Planning and Reforms Unit (SPRU), Irrigation Secretariat Old Anarkali, Lahore

Participants

1. Mr. Muhammad Aamir Khan Chief – SPRU, Irrigation Department, Lahore
2. Dr. Muhammad Javed Director Social and Environment Management SPRU, Irrigation Department Lahore.
3. Mr. Kifayat Zaman Director General Federal Management Cell Islamabad
4. Dr. Maqsood Ahmed Director OFWM, Training Institute Lahore
5. Muhammad Yousaf Bhatti Deputy Team Leader, ME & IE Consultants Punjab Zone, Lahore

Meeting Agenda:

1. Punjab Water Policy
2. Availability of Surface and ground water.
3. Pricing and usage of water.



Picture 4.124: View Of Meeting held in office of Chief SPRU, Irrigation Department, Lahore

• Meeting with ADA OFWM Jaranwala on Feb 21, 2022

Date:	Feb 21, 2022
Venue:	Office of the Assistant Director (OFWM) Office Tehsil Jaranwala.

Participants:

- i) Maqsood Alam, Assistant Director Agri (OFWM) Jaranwala
- ii) Muhammad Ehsan Water Management Supervisor (Agri) OFWM Jaranwala
- iii) Awais Jahangeer Field Team In-charge, ME&IE Expert/ Socio Expert-1
- iv) Muhammad Zubair Field Team In-charge, ME&IE Expert/ Socio Expert-3

- v) Shahid Khalil Rana Field Engineer
Technician/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.

Pictorial view of meeting given in **Figure 4.87.**



Picture 4.125: Meeting of ME & IE Consultant with Assistant Director Agriculture (OFWM) Hafizabad.

• **Meeting with DDA and ADA OFWM Faisalabad on Feb 22, 2022**

Date:	Feb 22, 2022
Venue:	Deputy Director (OFWM) Office District Faisalabad
Participants:	
i)	Muhammad Asim Rafique, Deputy Director Agriculture (DDA) Faisalabad
ii)	Abuzar Saleem, Assistant Director Agriculture (ADA) Faisalabad
iii)	Awais Jahangeer, Field Team In-charge, ME&IE Expert/ Socio Expert-1
Meeting Agenda:	
Briefing regarding the basic data collection of District Faisalabad and discussion on upcoming field visits.	
Pictorial view of meeting given in Figure 4.88.	



Picture 4.126: Meeting with Deputy Director Agriculture (DDA) Faisalabad Muhammad Asim Rafique and ADA Tehsil Faisalabad Abuzar Saleem Randhawa

• **Meeting with DDA Hafizabad on Feb 22, 2022**

Date:	Feb 22, 2022
Venue:	Deputy Director (OFWM) Office District Hafizabad.
Participants:	
i)	Waheed-uz-Zaman, Deputy Director Agriculture (OFWM), District Hafizabad.
ii)	Mr. Muhammad Rizwan Suleman, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii)	Mr. Muhammad Bilal Sohail, Field Team Engineer (Sub Zone -2) ME&IE Consultants Lahore.
iv)	Nauman Rasheed, Field Team Engineer ME&IE Consultants Lahore.
v)	Misbah-ur-Rehman, Field Team Engineer ME&IE Consultants Lahore.
Meeting Agenda:	
i)	Briefing on ME & IE Consultants activities by Field Team In-charge.
ii)	Review of the other OFWM activities performed by Deputy Director OFWM, Hafizabad and discussed future activities of the department and other relevant issues.
iii)	The Deputy Director informed that improvement of water course activities in Hafizabad particularly rice area, are on peak in between the period "after the harvesting of rice and sowing of wheat". He advised that for the purpose of measurement of water flow in water courses ME&IE consultants should consider the schedule of closure of canals.

- iv) The Deputy Director from OFWM Department and Field Team In-charge from ME&IE consultants assured each other full cooperation in future for smooth working of the field activities. Pictorial view of meeting given in Figure 4.127.



Picture 4.127: Meeting of ME & IE Consultant with Waheed-uz-zaman Deputy Director OFWM Hafizabad

- **Meeting with ADA Hafizabad on Feb 22, 2022**

Date:	Feb 22, 2022
Venue:	Assistant Director (OFWM) Office District & Tehsil Hafizabad.
Participants:	
i)	Zafar Iqbal, Assistant Director Agriculture (OFWM), District & Tehsil Hafizabad.
ii)	Mr. Muhammad Rizwan Suleman, Field Team In-charge (Sub Zone -2) ME&IE Consultants Lahore.
iii)	Mr. Muhammad Bilal Sohail, Field Team Engineer (Sub Zone -2) ME&IE Consultants Lahore.
iv)	Nauman Rasheed, Field Team Engineer ME&IE Consultants Lahore.
v)	Misbah-ur-Rehman, Field Team Engineer ME&IE Consultants Lahore.
Meeting Agenda:	
<ul style="list-style-type: none"> • Briefing on ME & IE Consultants activities regarding Baseline Survey/Monitoring by Field Team In-charge. • Other Issues faced by the department. • Basic data Collection from ADA Office. 	

Pictorial view of meeting given in Figure 4.128.




Picture 4.128: Meeting of ME & IE Consultant with Zafar Iqbal Assistant Director Agriculture (OFWM) Hafizabad.

- **Meeting with ADA OFWM Jaranwala on Mar 2, 2022**

Date:	Mar 2, 2022
Venue:	Office of the Assistant Director (OFWM) Office Tehsil Muridke
Participants:	
vi)	Awais Jahangeer Field Team In-charge, ME&IE Expert/ Socio Expert-1
vii)	Muhammad Zubair Field Team In-charge, ME&IE Expert/ Socio Expert-3
viii)	Shahid Khalil Rana Field Engineer Technician/ME&IE Officers/Socio Officer-1
Meeting Agenda:	
<ul style="list-style-type: none"> • Briefing on ME & IE Consultants activities regarding Baseline Survey/Monitoring by Field Team In-charge. • Basic data Collection from ADA Office and field visit. 	

Picture 4.129: ME&IE Team in meeting with AD Agriculture (OFWM) Tehsil Muridke, District Sheikhupura.

• **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:	iv) Awais Jahangeer Field Team In-charge, ME&IE Expert/ Socio Expert-1 v) 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.
 <p><i>Picture 4.130: Meeting with Assistant Director Agriculture (OFWM) Mr. Ghulam Mustafa Tehsil Safdar Abad District Sheikhupura.</i></p>	

• **Meeting with Field Staff of Director General OFWM Hafizabad, Punjab on 23 April 2022**

Date:	23 April 2022
Venue:	Directorate General OFWM Hafizabad
Participants:	i) Mrs. Sonia Zafar Deputy Director OFWM Hafizabad ii) Mr. M. Rizwan Suleman Field Team in charge Punjab Zone iii) Mr. Bilal Sohail Field Team Engineer iv) Mr. Sohail Ahmad Field Team Engineer
Meeting Agenda:	Review field activities of ME&IE Consultants During baseline survey and monitoring of field activities all possible assistance should

be provided to ME&IE field teams through field teams of client.

Field team of DDA remained very cooperative during the field activities of ME&IE consultants.

ME&IE field team meeting with DD OFWM Hafizabad is depicted in Picture 4.131.



Picture 4.131: Punjab ME&IE Field in Meeting with Ms. Sonia Zafar, Deputy Director OFWM Hafizabad, Punjab

• **Meeting with ADA (Agri) OFWM Hafizabad, Punjab on 23 April 2022**

Date:	23 April 2022
Venue:	Assistant Director (Agri) OFWM Hafizabad
Participants:	i) Zafar Iqbal Assistant Director OFWM Hafizabad ii) Mr. M. Rizwan Suleman Field Team in charge of Punjab Zone iii) Mr. Bilal Sohail Field Team Engineer iv) Mr. Sohail Ahmad Field Team Engineer
Meeting Agenda:	Review field activities of ME&IE Consultants: ADA provided all possible assistance to ME&IE consultants through her field team during baseline survey and monitoring of field activities. ME&IE consultants appreciated cooperation of ADA extended during field activities. Photograph of ME&IE team with DDA during meeting is given below as Picture 4.91.



Picture 4.132: ME&IE Field Team in Meeting with Mr. Zafar Iqbal Assistant Director OFWM Hafizabad, Punjab

- **Meeting with Deputy Director Agriculture (OFWM) Office D. G. Khan, Punjab on 23 May 2022**

Date:	23 May 2022
Venue:	Deputy Director Agriculture OFWM Office
Participants:	
i)	Muhammad Waqas Arshad Deputy Director Agriculture (OFWM)
ii)	Mr. Rizwan Suleman Field Team In-Charge
iii)	Mr. Noman Rashid Field Team Engineer
iv)	Mr. Sohail Ahmad Field Team Engineer
v)	Mr. Abd Ur Raof Saad Field Team Engineer
Meeting Agenda:	
<ul style="list-style-type: none"> • Briefing of ME & IE Consultants on project activities. • To review the progress of the project in the respective area and basic data sampled interventions. • Seek the cooperation/coordination of field staff to conduct the field survey 	

Pictorial view of the meeting is given in Picture 4.133.



Picture 4.133: ME & IE Consultants team with Deputy Director Agriculture (OFWM). Muhammad Waqas Arshad Dera Ghazi Khan

- **Meeting with Assistant Director Agriculture OFWM office Taunsa Sharif, Punjab on 26 May 2022**

Date:	26 May 2022
Venue:	Assistant Director Agriculture OFWM office Taunsa Sharif
Participants:	
i)	Mr. Ghulam Mustafa Assistant Director Agriculture (OFWM)
v)	Mr. Rizwan Suleman Field Team In-Charge
vi)	Mr. Noman Rashid Field Team Engineer
vii)	Mr. Sohail Ahmad Field Team Engineer
viii)	Mr. Abd Ur Raof Saad Field Team Engineer
Meeting Agenda:	
<ul style="list-style-type: none"> • Briefing of ME&IE Consultants on project activities. • To review the progress of the project in the respective area and basic data sampled interventions. • Seek the cooperation/coordination of field staff in Taunsa Sharif 	
Pictorial view of meeting is depicted in Picture 4.134.	



Picture 4.134: Meeting with Assistant Director Agriculture (OFWM) Taunsa Sharif) Ghulam Mustafa regarding the Baseline / Monitoring/ Impact Survey

- **Meeting with ADA (Agri) OFWM Koh-e-Suleman, Punjab on 25 May 2022**

Date:	25 May 2022
Venue:	Assistant Director (Agri) OFWM Kohe-e-Suleman, District D.G. Khan
Participants:	
i)	Muhammad Anwar Assistant Director Agriculture (OFWM)
ii)	Mr. Rizwan Suleman Field Team In

- Charge
- iii) Mr. Noman Rashid Field Team Engineer
 - iv) Mr. Sohail Ahmad Field Team Engineer
 - v) Mr. Abd Ur Raoof Saad Field Team Engineer

Meeting Agenda:

- Briefing of ME & IE Consultants on project activities.
- To review the progress of project in the respective area and basic data sampled interventions.
- Seek the cooperation/coordination of field staff

Photograph of ME&IE team with ADA during meeting is given below as Picture 4.135.



Picture 4.135: Meeting of ME & IE Consultants team with Deputy Director Agriculture (OFWM) Koh-e-Suleman Muhammad Anwar

- **Meeting with Deputy Director (Agri) OFWM Bahawalpur, Punjab on 26 May 2022**

Date:	26 May 2022
Venue:	Deputy Director (Agri.) OFWM Bahawalpur, Punjab
Participants:	
i)	Mr. Naveed Tahir Deputy Director of Agriculture (OFWM)
ii)	Mr. Muhammad Zubair Field Team In-Charge
iii)	Mr. Misbah Ur Rehman Field Team Engineer
iv)	Mr. Umar Farooq Hammad Field Team Engineer
Meeting Agenda:	
<ul style="list-style-type: none"> • Briefing of ME & IE Consultants on project activities. • To review the progress of project in the respective area and basic data sampled interventions. 	

- Seek the cooperation /coordination of field staff

Photograph of ME&IE team with ADA during the meeting is given below as Picture 4.136.



Picture 4.136: ME & IE Consultants with Deputy Director Agriculture (OFWM) Bahawalnagar Naveed Tahir

- **Meeting with Assistant Director (Agri) OFWM Bahawalpur, Punjab on 27 May 2022**

Date	27 May 2022
Venue	Office of Assistant Director Agriculture OFWM Office Bahawalnagar
Participants	
1.	Mr. Muhammad Jameel Assistant Director of Agriculture (OFWM) Bahawalnagar
2.	Mr. Muhammad Zubair Field Team In-Charge
3.	Mr. Misbah Ur Rehman Field Team Engineer
4.	Mr. Umar Farooq Hammad Field Team Engineer
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> 1. Briefing of ME & IE Consultants on project activities. 2. To review the progress of project in the respective area and basic data sampled interventions. 3. Seek the cooperation/coordination of field staff 	
View of the meeting is shown in Picture 4.137.	



Picture 4.137: Meeting of consultants Assistant Director Agriculture (OFWM) Bahawalnagar Muhammad Jameel regarding the Baseline Survey/Monitoring/Impact

- **Meeting with AD Agri. OFWM Haroon Abad, Punjab on 1st June 2022**

Date	01-06-2022
Venue	Assistant Director Agriculture OFWM Haroon Abad

Participants

- Mr. Mazhar Ilyas Assistant Director of Agriculture (OFWM) Haroon Abad
- Mr. Muhammad Zubair Field Team In Charge Team-3
- Mr. Misbah Ur Rehman Field Team Engineer
- Mr. Umar Farooq Hammad Field Team Engineer

Meeting Agenda/Points discussed:

- Briefing of ME & IE Consultants on project activities.
- To review the progress of project in the respective area and basic data sampled interventions.
- Seek the cooperation/coordination of field staff

Meeting with DD is shown in Picture 4.138 below:



Picture 4.138: Had a Meeting with AD Agriculture (OFWM) Haroon Abad Mr. Mazhar Ilyas regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

- **Meeting with AD Agri. OFWM Minchin, Punjab on 3rd June 2022**

Date	03-06-2022
Venue	Assistant Director Agriculture OFWM Minchin Abad

Participants

- Mr. Fiaz Ahmad Assistant Director of Agriculture (OFWM) Minchin Abad
- Mr. Muhammad Zubair Field Team In Charge
- Mr. Misbah Ur Rehman Field Team Engineer
- Mr. Umar Farooq Hammad Field Team Engineer

Meeting Agenda/Points discussed:

- Briefing of ME & IE Consultants on project activities.
- To review the progress of project in the respective area and basic data sampled interventions.
- Seek the cooperation/coordination of field staff

Pictorial view of the Meeting is given as Picture 4.139:



Picture 4.139: Had a Meeting with AD Agriculture (OFWM) Minchin Abad Fiaz Ahmad regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

- **Meeting with AD Agri. OFWM Chistian, Punjab on 4th June 2022**

Date	04-06-2022
Venue	Assistant Director Agriculture OFWM Chistian

Participants

- Mr. Naeem Razzaq Assistant Director of Agriculture (OFWM) Chishtian

- ii. Mr. Muhammad Zubair Field Team In Charge
- iii. Mr. Misbah Ur Rehman Field Team Engineer
- iv. Mr. Umar Farooq Hammad Field Team Engineer

Meeting Agenda/Points discussed:

- Briefing of ME & IE Consultants on project activities.
- To review the progress of project in the respective area and basic data sampled interventions.
- Seek the cooperation/coordination of field staff

View of Meeting with AD Agri. is given as Picture 4.140:



Picture 4.140: Meeting with AD Agri. (OFWM) Chishtian Naem Razzaq regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

- **Meeting with DD Agri. OFWM Rawalpindi, Punjab on 21st June 2022**

Date	21-06-2022
Venue	Office of Deputy Director Agriculture (OFWM) Rawalpindi
Participants	
i.	Mrs. Farkhanda Deputy Director OFWM Agri. Rawalpindi
ii.	Ms. Syeda Sana Gull ME & IE Officer, Islamabad
iii.	Ms. Hafiza Maryam Iqbal ME & IE Officers, Islamabad
iv.	Ms. Abida Munir Social Gender and Specialist (Punjab)
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • Briefing of ME & IE Consultants in Rawalpindi Division • Collection of basic data on WSTs and guideline for visiting sites of WSTs 	

- The OFWM office guided well and accompanied ME&IE consultants team in concerned sites during their visits

Pictorial view of the Meeting is given as Picture 4.141:



Picture 4.141: Meeting Mrs. Farkhanda Deputy Director OFWM Agri. Rawalpindi regarding the Baseline Survey / Monitoring / Impact Survey of WST

- **Meeting with DD Agri. OFWM Bhakkar, Punjab on 15th June 2022**

Date	15-06-2022
Venue	Deputy Director Agriculture OFWM Bhakkar
Participants	
i.	Mr. Dr. Imtiaz Deputy Director of Agriculture (OFWM) Bhakkar
ii.	Mr. Muhammad Zubair Field Team In Charge
iii.	Mr. Misbah Ur Rehman Field Team Engineer
iv.	Mr. Umar Farooq Hammad Field Team Engineer
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • Briefing of ME & IE Consultants on project activities. • To review the progress of project in the respective area and basic data sampled interventions. • Seek the cooperation/coordination of field staff 	
Pictorial view of the Meeting is given as Picture 4.142:	



Picture 4.142: Meeting with DD Agriculture (OFWM) Bhakkar Dr. Imtiaz regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

- **Meeting with AD Agri. OFWM Bhakkar, Punjab on 15th June 2022**

Date	15-06-2022
Venue	Assistant Director Agriculture OFWM Bhakkar
Participants	
i.	Mr. Shakeel Abbas Assistant Director of Agriculture (OFWM) Bhakkar
ii.	Mr. Muhammad Zubair Field Team In Charge
iii.	Mr. Misbah Ur Rehman Field Team Engineer
iv.	Mr. Umar Farooq Hammad Field Team Engineer
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • Briefing of ME & IE Consultants on project activities. • To review the progress of project in the respective area and basic data sampled interventions. • Seek the cooperation/coordination of field staff 	
Pictorial View of Meeting is given as Picture 4.143:	



Picture 4.143: Meeting with Assistant Director Agriculture (OFWM) Bhakkar Mr. Shakeel Abbas regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

- **Meeting with AD Agri. OFWM Kaloor Kot, Punjab on 17th June 2022**

Date	17-06-2022
Venue	Assistant Director Agriculture OFWM Kaloor Kot
Participants	
i.	Mr. Alam Sher Assistant Director of Agriculture (OFWM) Kaloor Kot
ii.	Mr. Muhammad Zubair Field Team In Charge
iii.	Mr. Misbah Ur Rehman Field Team Engineer
iv.	Mr. Umar Farooq Hammad Field Team Engineer
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • Briefing of ME & IE Consultants on project activities. • To review the progress of project in the respective area and basic data sampled interventions. • Seek the cooperation/coordination of field staff 	
Pictorial view of the Meeting is given as Picture 4.144:	



Picture 4.144: Meeting with Assistant Director Agriculture (OFWM) Bhakkar Mr. Alam Sher regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST

- **Meeting with AD Agri. OFWM, Mankera, Punjab on 18th June 2022**

Date	18-06-2022
Venue	Assistant Director Agriculture OFWM Mankera
Participants	
i.	Mr. Riaz Ahmad Kalasara Assistant Director of Agriculture (OFWM) Mankera

ii. Mr. Muhammad Zubair Field Team In Charge
iii. Mr. Misbah Ur Rehman Field Team Engineer
iv. Mr. Umar Farooq Hammad Field Team Engineer
Meeting Agenda/Points discussed:
<ul style="list-style-type: none"> Briefing of ME & IE Consultants on project activities. To review the progress of project in the respective area and basic data sampled interventions. Seek the cooperation/coordination of field staff
Pictorial view of the Meeting is given as Picture 4.145:

<i>Picture 4.145: Meeting with Assistant Director Agriculture (OFWM) Bhakkar Mr. Riaz Ahmad Kalasra regarding the Baseline Survey / Monitoring / Impact Survey of Watercourse / WST</i>

4.5.3 Meetings of ME&IE Consultants – KP Zone

i) 11th Joint Review meeting (JRM) of the Projects under Prime Minister Agri. Emergency Program, on 20th May 2022

Date	20 May 2022
Venue	Committee room of the Agriculture Department, Civil Secretariat, Government of KP, Peshawar
Participants	
i.	Mr. Muhammad Afzal, Director PMU, Peshawar
ii.	Mr. Javid Iqbal, DG OFWM KP Peshawar
iii.	Mr. Yaseen Marwat, DG Soil Conservation, Peshawar
iv.	Mr. Nazir Abbas Banash, Director Agriculture Engineering, Peshawar
v.	Mr. Muhammad Asad, Programme coordinator PMU, Peshawar
vi.	Dr. Humayun Khan, Deputy Team Leader (G3 Consultants)

vii. Engg. Tahir Kamran, AGES Consultants, Peshawar
viii. Engg Ilyas, DTL NESPAK, TPV consultants-NPIWC-II
ix. Engg Nasir, AGES Consultants, Peshawar
x. DG Agriculture Extension, Peshawar Fawad Ahmad, ICT/Technology Specialist (G3 Consultants)
Meeting Agenda/Points discussed:
The Project Management Unit called a general review meeting (JRM) in the Provincial Secretariat, Agriculture Department, Government of Khyber Pakhtunkhwa Peshawar that was schedule at 10.00 am.
Following discussions held at the meeting.
i. Meeting was started with the recitation from the Holy Quran by the secretary Agriculture.
ii. Mr. Muhammad Asad, Programme coordinator PMU, Peshawar presented the progress of different ongoing projects activities taking place in agriculture sector in KP.
iii. A number of observations were raised by the PMU officials on quality of works undertaken by the OFWM Department of KP.
iv. Similarly, a number of observations were raised by the PMU officials on quality of works undertaken by the Water Conservation Department of KP.
v. The Chair also took serious note on the irregularities took place in the execution of work schemes by the Agriculture Engineering Department of KP.
vi. The DTL KP Zone briefly explained the progress made so far by the ME/IE Consultant in KP regarding the NPIWC-II. In this regards the financial constraint was also mentioned by the DTL.
The Chair ended the meeting with a vote of thanks. The participants were served with a cup of tea during the meeting.

Date	October 1, 2021
Venue	AGES Consultants' office 57-E, Canal Road Peshawar
Participants	

1. Mr. Muhammad Nasir, Chief AGES Consultants
2. Dr. Humayun, DTL KP Zone ME&IE consultants
3. Mr. Mehmoodul Hasan, FTI ME&IE consultants Team
4. Mr. Inamullah FTI ME&IE consultants Team

Meeting Agenda/Points discussed:

Training of Field Team on Pigmy Meter for Water Flow Measurement

In continuation of the workshop held in August 30-31, and September 1, 2021, in National Office Islamabad, the DTL KP zone approached, Sardar Muhammad Zafar, Superintendent Engineer (S.E) Irrigation Department KP, for the deputation of an expert to act as resource person for water measurement training of the field teams of ME/IE consultants. As the Irrigation Department KP has engaged AGES Consultants for the same purpose, so S.E. requested Chief Consultant AGES to provide the same services to our survey teams. On the reference of SE, the DTL KP zone arranged a meeting with the Chief Consultant AGES and expressed interest in acquiring services of an engineer for training on water measurement of the Field Teams by Pigmy Current Meter. The matter was discussed in detail in a very cordial atmosphere and Mr. Muhammad Nasir, Chief of AGES Consultants promised to provide the engineer for said purpose. It was agreed that two Civil Engineers will be deputed on October 6, 2021 from the AGES consultants and they will impart training to the field teams.



Picture 4.146: Meeting of the DTL KP and FTIs with the Chief Consultants AGES

Date	October 12, 2021
Venue	Directorate of Water Management KP
Participants	
i.	Dr. Rabnawaz Khan, District Director OFWM Department, Provincial Coordinator NPIWC-II

- ii. Mr. Fawad Ahmad, IT Manager ME/IE Consultants NPIWC-II
- iii. Engineer Muhammad Jameel, OFWM Department KP

Meeting Agenda:

Meeting of Mr. Fawad Ahmad IT Manager KP zonal office with Dr. Rabnawaz Khan, District Director/ Provincial Coordinator NPIWC-II to discuss Data Format

The DTL KP Zonal office deputed Mr. Fawad Manager IT ME/IE Consultants NPIWC-II to Water Manager Department to discuss the data format we required for our field survey. The Officials of the Water Management Department agreed to facilitate the Field Survey Team in this regard.

Time	November 01, 2021
Venue	On Farm Water Management Office, Peshawar

Participants

1. Mr. Javid Iqbal, DG OFWM KP Peshawar
2. Dr. Humayun Khan, Deputy Team Leader (G3 Consultants)
3. Fawad Ahmad, ICT/Technology Specialist (G3 Consultants)

Meeting Agenda

Agenda of the meeting was data sharing of NPIWC-II of KP with ME&IE consultants. Meeting started with the general discussion regarding the ME&IE consultants' activities and progress made so far in this regard.

Following discussions held at the meeting. The DTL KP Zone thanked the DG OFWM KP Mr. Javid Iqbal for his cooperation they extended and requested him for providing files of the schemes of WCs completed during the year 2021. The DG directed Dr. Rab Nawaz Khan, programme coordinator, to facilitate the process of providing relevant files to the M&E consultants.

Dr. Rab Nawaz provided files of completed WCs schemes of 15 districts mostly of central zone to the ME&IE consultants and requested to the District Directors of the remaining districts to provide the same in due course of time.

Meeting ended with a vote of thanks to DG OFWM KP Mr. Javid Iqbal.



Picture 4.147: Meeting of the DTL KP Zone with Mr. Javid Iqbal DG OFWM KP

Date	November 02, 2021
Venue	On Farm Water Management Office, Peshawar
Participants	
<ol style="list-style-type: none"> 1. Dr. Rab Nawaz, Project Director OFWM Peshawar 2. Dr. Humayun Khan, Deputy Team Leader (G3 Consultants) 3. Fawad Ahmad, ICT/Technology Specialist (G3 Consultants) 	
Meeting Agenda	
<p>Meeting started with the greeting note by Fawad Ahmad. Dr. Rab Nawaz welcomed M&E consultant.</p> <p>Following discussions held at the meeting.</p> <ol style="list-style-type: none"> 1. Dr. Rab Nawaz shared the work plan of 2019-2020 & 2020-2021 (Physical and Financial) with M&E consultants. 2. As the work plan of 2021-2022 is not approved and is with steering committee for approval, so it will be shared after approval. 3. All the data files maintained from start of the project till date of each district will be provided to ME&IE consultants for data entry process. 4. Peshawar and near districts files will be provided to ME&IE consultants at Peshawar OFWM office while data of other far distanced districts will be covered by visiting one district and nearest districts will bring data to that district for ME&IE consultants for entry in the system. 5. Dr. Rab Nawaz told that they will ask Districts to include the financial payments' dates column and WUA registration number information in future. 	

Dr. Rab Nawaz told that his office will continue supporting the M&E consultants in providing the required data. Als.

The meeting ended with a vote of thanks to Dr. Rab Nawaz.



Picture 4.148: Meeting of the DTL KP Zone with Dr. Rab Nawaz, Project Coordinator OFWM KP

Date	November 26, 2021
Venue	Project Management Unit Office, 35 C/111 Gul Mahar Lane University Town Peshawar
Participants	
<ol style="list-style-type: none"> 1. Mr. Muhammad Afzal, Director PMU, Peshawar 2. Mr. Javid Iqbal, DG OFWM KP Peshawar 3. Mr. Yaseen Marwat, G Soil Conservation, Peshawar 4. Nazir Abbas Banash, Director Agriculture Engineering, Peshawar 5. Dr. Rab Nawaz, Project Director OFWM Peshawar 6. Dr. Humayun Khan, Deputy Team Leader (G3 Consultants) 7. Dr. Mansab Ali Khokhar, Irrigation Agronomist, Water Conservation Project Barai Areas 8. Engr. Ilyas, DTL NESPAK, TPV consultants-NPIWC-II, 9. Engr. Nasir, AGES Consultants, Peshawar, DG Agriculture Extension, Peshawar 10. Mr. Fawad Ahmad, ICT/Technology Specialist (G3 Consultants) 	
Meeting Agenda	
<p>10th Joint Review meeting (JRM) of the projects under Prime Minister Agriculture Emergency Programme.</p> <p>Agenda of the meeting was to review the ongoing project in Agriculture sector in KP. The Project Management Unit called a general review meeting (JRM) in the PMU Office Peshawar that was schedule at 3.00</p>	

pm. Secretary Agriculture, Livestock, and Cooperative Department of KP was supposed to chair the meeting, but due to his other official engagements, he could not attend it. Mr. Afzal, Director PMU chaired the meeting.

Following discussions held at the meeting.

1. General discussions were made by the participants of the meeting about the ongoing projects activities taking place in agriculture sector in KP.
2. The DTL KP Zone briefly explained the ME&IE activities of Consultant on NPIWC-II in KP Zone.
3. Dr. Mansab Ali KhoKhar, Irrigation Agronomist, Water Conservation in Project Barani areas in KP distributed a pamphlet of a success story of intervention under the project.

Mr. Muhammad Afzal, Director PMU ended the meeting with a vote of thank.

Meeting Date	05 December 2021
Venue	On Farm Water Management Office, Peshawar
Participants	<ol style="list-style-type: none"> 1. Dr. Rab Nawaz Project Director OFWM Peshawar 2. Dr. Humayun Khan, Deputy Team Leader (G3 Consultants) 3. Fawad Ahmad, ICT/Technology Specialist (G3 Consultants)
Meeting Agenda	<p>Agenda of the meeting was data sharing by department and progress till date</p> <p>Following discussions were held in the meeting</p> <ol style="list-style-type: none"> 1. This meeting was in continuation of our previous meetings held for the same purpose. The meeting was started with the greeting note by Fawad Ahmad. Mr. Dr. Rab Nawaz welcomed M&E consultant. 2. Dr. Rab Nawaz was asked about the project activities progress and how they will share the data files of each district with M&E consultants. <p>Following discussions held at the meeting.</p>

1. Dr. Rab Nawaz shared the Workplan of 2019-2020 & 2020-2021 (Physical and Financial) with M&E consultants.
2. As the work plan of 2021-2022 is not approved and is with steering committee for approval, so it will be shared later on once approved.
3. All the data files maintained from start of the project till date of each district will be provided to M&E consultants for data entry process.
4. Peshawar and near districts files will be provided to M&E consultants at Peshawar OFWM office.
5. Other far distanced districts will be covered by visiting one district and near districts will bring data to that district for M&E consultants for data entry.
6. Dr. Rab Nawaz told that they will ask Districts to include the financial payments dates column and WUA registration number information in future.

Dr. Rab Nawaz told that his office will support M&E consultants in providing data every time M&E consultants ask for data. Also, department will cooperate with M&E consultants regarding data sharing at every stage.



Picture 4.149: DTL KP Zone in meeting with Dr. Rab Nawaz, Project Coordinator OFWM KP

Date of Meeting	December 16, 2021
Venue	On Farm Water Management Office, Peshawar
Participants	<ol style="list-style-type: none"> 1. Dr. Rab Nawaz, Project Director OFWM Peshawar 2. Dr. Humayun Khan, Deputy Team Leader (G3 Consultants) 3. Fawad Ahmad, ICT/Technology Specialist (G3 Consultants)

Agenda of the Meeting

Agenda of meeting was data sharing by department and progress till date. This meeting was just a reminder of our previous meetings held for the same purpose. The meeting was started with the greeting note by Fawad Ahmad. Mr. Dr. Rab Nawaz welcomed M&E consultant.

Dr. Rab Nawaz was asked about the project activities progress and how they will share the data files of each district with M&E consultants.

Following discussions held at the meeting.

- Dr. Rab Nawaz shared the Workplan of 2019-2020 & 2020-2021 (Physical and Financial) with M&E consultants.
- All the data files maintained from start of the project till date of each district will be provided to M&E consultants for data entry process.
- Peshawar and near districts files will be provided to M&E consultants at Peshawar OFWM office.
- Other far distanced districts will be covered by visiting one district and near districts will bring data to that district for M&E consultants for data entry.
- Dr. Rab Nawaz told that they will ask Districts to include the financial payments' date column and WUA registration number information in future.

Dr. Rab Nawaz told that they have and will support M&E consultants in providing data every time M&E consultants ask for data. Also, department will cooperate with M&E consultants regarding data sharing at every stage.

Meeting Date	December 21, 2021 10 th Joint Review meeting (JRM) of the projects under Prime Minister Agriculture Emergency Programme
Venue	Project Management Unit Office, 35 C/111 Gul Mahar Lane University Town Peshawar
Participants	

1. Dr. Muhammad Israr, Secretary Agriculture, KP
2. Mr. Muhammad Afzal, Director PMU, Peshawar
3. Mr. Javid Iqbal, DG OFWM KP Peshawar
4. Mr. Yaseen Marwat, DG Soil Conservation, Peshawar
5. Nazir Abbas Bangash, Director Agriculture Engineering, Peshawar
6. Dr. Rab Nawaz, Project Director OFWM Peshawar
7. Dr. Humayun Khan, Deputy Team Leader (G3 Consultants)
8. Engg Ilyas, DTL NESPAK, TPV consultants-NPIWC-II
9. Engg Nasir, AGES Consultants, Peshawar
10. Fawad Ahmad, ICT/Technology Specialist (G3 Consultants)

Agenda of the Meeting

Agenda of the meeting was to review the ongoing project in Agriculture sector in KP. The Project Management Unit called a general review meeting (JRM) in the PMU Office Peshawar that was schedule at 3.00 pm. Secretary Agriculture, Livestock, and Cooperative Department of KP chaired the meeting.

Following discussions held at the meeting.

General discussions were made by the participants of the meeting about the ongoing projects activities taking place in agriculture sector in KP.

All other participants also shared progress of their respective projects.

Dr. Muhammad Israr ended the meeting with a vote of thank. The participants were served with a cup of tea at the end of the meeting.

Note: Minutes of the meeting have not been issued. When these are issued, will be shared by the participant



Picture 4.150: DTL KP Dr. Humayun Khan in 10th JRM of the projects under Prime Minister Agriculture Emergency Programme

Meeting Date	27 to 28 December 2021
Venue	ME/IE Consultants Zonal Office, Peshawar
Participants	Dr. Humayun Khan DTL zonal office Peshawar Mr. Naeem Akhter DPC National office Islamabad Mr. Afzal Hayat Gender Specialist BAWCP KP Fawad Ahmad ICT/Technology Specialist (G3 Consultants)

Agenda of the Meeting

It was a surprise visit of Mr. Naeem Akhter DNPC. However, there was no specific agenda of the meeting. This was just a surprise visit of the DPC. The DTL warmly welcomed the DPC. Following discussions held at the meeting. In this meeting. In general progress on the project activities were discussed by the participants.



Picture 4.151: DTL KP Zone in meeting with DNPC in ME&IE Consultants Zonal office KP

i) Meeting in OFWM Office Peshawar

Meeting Date	January 28, 2022
Venue	On Farm Water Management Office, Peshawar
Participants	i. Dr. Rab Nawaz (Project Coordinator/ District Director) (Chaired the Meeting) ii. Dr. Humayun Khan, Deputy Team Leader KP (G3 Consultants) iii. Dr. Saiful Islam Dy. Project Coordinator, NPIWC II, Islamabad iv. Engg Ilyas DTL NESPAK, TPV consultants- NPIWC-II
Meeting Agenda /Points Discussed	Main Agenda of the meeting was Data sharing by the Department and discuss the Progress till date.

This meeting was held on verbal directives of Dr. Saiful Islam Dy. Project Coordinator NPIWC-II. The meeting was held in the office of Dr. Rab Nawaz Directorate of Water Management Department KP Peshawar and was chaired by Dr. Rab Nawaz Khan.

Dr. Saiful Islam DPC NPIWC -II asked Dr. Rab Nawaz about the progress of project activities and method sharing the data files of each district with M&E consultants. Following were the further discussions held in the meeting.

- Dr. Rab Nawaz shared the Workplan of 2019-2020 & 2020-2021, 2021-22 (Physical and Financial) with M&E consultants.
- All the data files maintained from start of the project till date of each district have been provided to M&E consultants for data entry process.
- Peshawar and nearby districts files was provided to M&E consultants at Peshawar OFWM office.
- Other far distanced districts were covered by visiting one district and near districts were brought data to that district for M&E consultants for data entry.
- Dr. Rab Nawaz told that they will ask Districts to include the financial payments dates column and WUA registration number information in future.
- Dr. Humayun Khan also explained to the DPC NPIWC-II about the data entry process of the acquired data and the progress made so far.

Dr. Rab Nawaz told that they have and will support M&E consultants in providing data every time M&E consultants ask for data. Also, department will cooperate with M&E consultants regarding data sharing at every stage.

The meeting ended with a vote of thanks by Dr. Rab Nawaz.

Pictorial view of the meetins is given in Figures 4.152 to 4.153 below:



Picture 4.152: ME&IE Team and Dr. Saiful Islam DPC NPIWC-II in Meeting with Dr. Rab Nawaz Khan, District Director OFWM Peshawar



Picture 4.153: DTL ME&IE Consultants KP Dr. Humayoun Khan in Meeting with Dr. Rab Nawaz Khan, District Director OFWM Peshawar

ii) Meeting in the office of DG OFWM Peshawar

Date	February 20, 2022
Venue	Office of the Director General On Farm Water Management, Peshawar
Participants	
i)	Mr. Kifayat Zaman, Fed. DG OFWM, Islamabad
ii)	Naseebur-ur-Rehman Khattak, Director OFWM KP
iii)	Dr. Saiful Islam, Deputy Project Coordinator, Islamabad
iv)	Dr. Humayun Khan, Deputy Team Leader (G3 Consultants)
v)	Engg Ilyas, DTL NESPAK, TPV consultants-NPIWC-II
vi)	Muhammad Afzal, Director PMU, Peshawar
vii)	Abdul Wajid, WMO, OFWM Dept Peshawar

- viii) Qazi Shefa, Asstt Director Planning, OFWM Department KP
- ix) Ali Raza Naqvi, I A, FWMC Islamabad
- x) Fawad Ahmad, ICT/Technology Specialist (G3 Consultants)

Meeting Title	Discussion/presentation on the progress of ME/IE Consultants KP Zone
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Agenda of the Meeting/Points Discussed

Meeting was chaired by Mr. Kifayat Zaman, Fed. DG OFWM, Islamabad. The meeting was started with the greeting note by Director H Q, Mr. Naseeb ur Rehman. He welcomed all the participants of the meeting.

Mr. Kifayat Zaman Fed. DG OFWM Islamabad enquired about the progress made so far by the OFWM Department, ME/IE Consultants G-3, and NES PAK Consultants regarding WCs and WSTs Schemes completed under NPIWC-II.

Following discussions held at the meeting.

- ii. Director H Q, Mr. Naseeb ur Rehman made presentation on the schemes (WCs and WSTs) of 2019-2020, 2020-2021 and 2021-22 (Physical and Financial).
- iii. Dr. Humayun Khan DTL KP Zone presented the progress achieved so far by the M&E consultants. The focus was confined to the data collected for the Dash Board till date.
- iv. Engr. Ilyas presented the progress made by the NES PAK consultants regarding their activities of NPIWC-II.

The meeting ended with a vote of thanks to all participants.

Pictorial view of meeting given in Figure 4.154.



Picture 4.154: Meeting of the DTL KP Zone with Mr. Kifat Zaman, DG Fed ONWM cell Islamabad, Dr. Saiful Islam Dy, Project Coordinator, Islamabad and Director HQ OFWM Peshawar

- The DTL, ME&IE Consultants shared the updated progress and told DG and DDs issues regarding non-availability of proper/complete files, owing to this reason monitoring works are suffering. The DTL also raised the issue of TS (FY 2019-20 and 2020-21) which are not yet issued while works of FY 2019-20 have been completed and FY 2020-21 are near to completion.
- The DG, OFWM directed all DDs to prepare TS of F.Y. 2019-20 within two days and get approval.

4.5.4 Meetings of ME&IE Consultants – Balochistan

Date	9 th August 2021
Venue	Office of DG, OFWM at Rani Bagh, Sariab Road, Quetta.
Participants	
I.	Mr. Ali Raza Jamali, Director General, OFWM, Agriculture Deptt, Balochistan, Quetta
II.	All Deputy Directors, OFWM, Balochistan
III.	Mr. Behram Malghani, Agriculture Officer, OFWM, Balochistan
IV.	Mr. Yasir, Agriculture Officer, OFWM, Balochistan
V.	Mr. Khalid Mehmood, DTL, NWMC, Balochistan
VI.	Mr. Rizwan Ahmed, DTL, ME&IE Consultants, Balochistan
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> • All DDs presented the progress of their districts. • The DG, OFWM appreciated the work progress of some DDs and asked Mr. Behram to issue an appreciation letter to them. • The work progress of some DDs was not as per mark or behind the schedule. The DG, OFWM asked Mr. Behram to issue show cause notices to all those DDs. • The DTL, NWMC said to form that in future NWMC will not visit/validate any site till provision of complete file by the department. 	



Picture 4.155: View of meeting held in DG, OFWM Office, Sariab Road, Quetta.

Date	5 th October 2021
Venue	Office of Director General, OFWM at Sariab Road, Quetta.
Participants	
1.	Mr. Ali Raza Jamali, Director General, Agriculture, OFWM, Balochistan, Quetta.
2.	Mr. Manzoor Kasi, FTI / M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	
<ol style="list-style-type: none"> 1. The DG requested give necessary direction to concern staff regarding submission of complete data/beneficiary inventor of F.Y 2019-20 and FY 2020-21 as per provided formats which is required for Balochistan Dashboard. 2. The issue of uncompleted files and issuance of TS were also discussed. 3. The status of new schemes of F.Y. 2021-22 were also discussed. 4. The FTI/M&E Expert briefed to DG about planning of monitoring visits regarding Baseline Phase-2. 	



Picture 4.156: Meeting with Ali Raza Jamali, Director General, Agriculture, OFWM, Balochistan, Quetta

Date	5 th October 2021
Venue	Office of Director General, OFWM at Sariab Road, Quetta.
Participants	
i.	Mr. Faqir Muhammad, Deputy Director, Agriculture, OFWM, Mastung.
ii.	Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta
iii.	Mr. Manzoor Kasi, FTI / M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	
i.	The FTI/M&E Expert of ME&IE Consultants met with Mr. Behram Mulghani, Agriculture Officer, OFWM regarding collection the data/beneficiary inventory of F.Y 2019-20 and FY 2020-21.
ii.	The FTI/M&E Expert also met with Deputy Director, OFWM, Mastung to discuss the field progress.



Picture 4.157: Meeting of Mr. Manzoor Kasi, FTI / M&E Expert with Mr. Faqir Muhammad, DD, Mastung and Mr. Behram Mulghani, Agriculture Officer, Quetta

Date	5 th October 2021
Venue	Office of Director General, OFWM at Sariab Road, Quetta.
Participants	
i.	Mr. Muhammad Yahya Hasni, Deputy Director, Agriculture, OFWM, Kharan.
ii.	Mr. Manzoor Kasi, FTI / M&E Expert, ME&IE Consultants.
Meeting Agenda/Points discussed:	
i.	The FTI/M&E Expert of ME&IE Consultants met with Mr. Yahiya Muhammad Hasni, DD, Kharan OFWM regarding collection the data/beneficiary inventory of F.Y 2019-20 and FY 2020-21.
ii.	The FTI/M&E Expert also met with Deputy Director, OFWM, Mastung to discuss the field progress.



Picture 4.158: Meeting of Mr. Manzoor Kasi, FTI / M&E Expert with Mr. Muhammad Yahya Hasni, DD, Kharan

Date	22nd November, 2021
Venue	Office of the Director General, OFWM, Rani Bagh, Sariab Road, Quetta
Participants	
5.	Mr. Ali Raza Jamali, Director General, OFWM, Agriculture Department, GoB, Quetta.
6.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Quetta.
Meeting Agenda/Points discussed:	
4.	The DG, OFWM requested to provide the missing data of F.Y. 2019-20 and 2020-21 as earlier possible.
5.	The DTL, Balochistan briefed to DG, OFWM about OFWM Website it's importance and benefits.
6.	The DTL, Balochistan informed by DG, OFWM that works of F.Y. 2021-21 are in tendering process and in some districts works has been initiated.

7. The OFWM officials assigned the task by DG, OFWM to provide the updated status of F.Y. 2020-21 to DTL, Balochistan.

Date	24th November, 2021
Venue	Office of the DDA OFWM, Mastung.
Participants	
<ol style="list-style-type: none"> 1. DDA OFWM Mr. Faqir Muhammad 2. Agriculture Officer Mr. Shamsuddin Baka 3. Sub-Engineer Mr. Sher Ahmed 4. NWMC Engineer Mr. Muhammad Ashraf 5. Manzoor Ahmed Kasi, FTI/M&E Expert 6. Mah Gul Noor, M&E Officer 7. Hamza H. Qureshi, M&E Officer 	
Meeting Agenda/Points discussed:	
<ol style="list-style-type: none"> 1. Status of the Beneficiaries list for F.Y 2021-22. 2. Status of work regarding the F.Y 2021-22. 3. Filing of the schemes of F.Y 2019-2020. 4. Farmers' Feedbacks regarding the schemes of NPIWC-II. 5. Discussed the feedbacks of farmers related to provision of additional schemes. 6. The share of farmer i.e., 25% is a burden on the farmers, as the farmers are already facing problems regarding electricity in the district. 	

Date	24th November 2021
Venue	Office of the DDA OFWM, Mastung.
Participants	
<ol style="list-style-type: none"> 1. Mr. Faqir Muhammad, DDA OFWM 2. Mr. Shamsuddin Baka, Agriculture Officer 3. Mr. Sher Ahmed, Sub-Engineer 4. Mr. Muhammad Ashraf, NWMC Engineer 5. Mr. Manzoor Ahmed Kasi, FTI/M&E Expert 6. Miss. Mah Gul Noor, M&E Officer 7. Mr. Hamza H. Qureshi, M&E Officer 	
Meeting Agenda/Points discussed:	
<ol style="list-style-type: none"> 1. Status of the Beneficiaries list for F.Y 2021-22. 2. Status of work regarding the F.Y 2021-22. 3. Filing of the schemes of F.Y 2019-2020. 4. Farmers' Feedbacks regarding the schemes of NPIWC-II. 	

5. Discussed the feedbacks of farmers related to the provision of additional schemes.
6. The share of farmers i.e., 25% is a burden on the farmers, as the farmers are already facing problems regarding electricity in the district.



Picture 4.159: Meeting of ME&IEC Team with Mr. Faqir Muhammad, Deputy Director, OFWM, Mr. Shams, Agriculture Officer, and Mr. Muhammad Ashraf, Site Engineer, NWMC at Deputy Director, OFWM Office at Mastung.

Date	14 th December, 2021
Venue	Office of the worthy Secretary, Agriculture Department, Govt. of Balochistan, Civil Secretariate, Quetta.
Participants	
<ol style="list-style-type: none"> i. Mr. Umaid Ali Khokhar, Secretary, Agriculture Department, Govt. of Balochistan, Quetta. ii. Mr. Tahir Anwar, NPC/Federal DG, National Programme. iii. Mr. Saif-ul-Islam, DPD, NPIWC-II iv. Mr. Asif Kakar, Deputy Coordinator, Enhancing Command Area in Barani Areas v. Dr. Tahmina Iqbal, Deputy Director vi. Mr. Ali Raza Jamali, DG, OFWMC, Balochistan vii. Mr. Abdul Wahab, Director, Water Management, Agriculture Department, Balochistan viii. Mr. Ihtisham, Section Officer, Agriculture Department, Govt. of Balochistan. Quetta. ix. Dr. Ali Raza, Team Leader, NWMC, Islamabad x. Mr. Khalid Mehmood, Deputy Team Leader, NWMC, Balochistan 	

- xi. Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan
- xii. Mr. Tariq Khoso, M&E Expert, ME&IE Consultants, Balochistan.

Meeting Agenda/Points discussed:

- The Secretary, Agriculture Deptt, GoB, Balochistan briefed by NPC, FPMU-NPIWC-II about NPIWC-II activities and highlight the major interventions of the project.
- All participants shared project updates with Secretary and gave suggestions for further improvement
- Both Consultants of NPIWC-II shared updated progress of the project and role of consultants.
- The ME&IE Consultants appreciated the support and cooperation of DG, Balochistan and DDs of OFWM, Balochistan during field visits.
- The Secretary, Agriculture ensured to NPC, FPMU, NPIWC-II and Consultants about ample departmental support at all times.

- The DTL, Quetta shared updated progress with NPC, FPMU.
- The NPC, PFMU met with all ME&IE staff and talked with them on their role and responsibilities.
- The NPC, PFMU and Deputy Project Coordinator, NPIWC-II checked different documents and record. They were provided different records/data by M&E Office on their desire.
- The meeting ended with vote of thanks from the NPC, PFMU.



Picture 4.160: Mr. Tahir Anwar NPC along with his team, Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta and ME&IE Consultants in meeting during of visit of NPC

Date	15th December, 2021
Venue	Office of the ME&IE Consultants, Chiltan Road, Cant, Quetta.

Participants

- i. Mr. Tahir Anwar, NPC, FPMU, NPIWC-II
 - ii. Mr. Saif-ul-Islam, DPD, NPIWC-II
 - iii. Mr. Asif Kakar, Deputy Coordinator, Enhancing Command Area in Barani Areas
 - iv. Dr. Tahmina Iqbal, Deputy Director
 - v. Mr. Abdul Wali, Deputy Director, Technical, OFWM, Balochistan, Quetta
 - vi. Mr. Yasir, Agriculture Officer, OFWM, Balochistan, Quetta.
 - vii. Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan
- All Field and Support Staff of ME&IE Consultants, Balochistan

Meeting Agenda/Points discussed:

- The NPC, FPMU, NPIWC-II visited the ME&IE Office and Guest House, Quetta.

Date	21 st December, 2021
Venue	Office of the Director General, OFWM, Rani Bagh, Sariab Road, Quetta

Participants

- i. Mr. Ali Raza Jamali, Director General, OFWM, Agriculture Department, GoB, Quetta.
- ii. Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Quetta.

Meeting Agenda/Points discussed:

- The DG, OFWM requested to provide the missing data of F.Y. 2019-20 and 2020-21 as earlier possible.
- The DTL, Balochistan requested to DG, OFWM to provide available beneficiary data of F.Y. 2020-21 so that Baseline Survey Phase-2 activities could be started as earliest possible.

Date	22 nd December, 2021
Venue	Office of the Director General, OFWM, Rani Bagh, Sariab Road, Quetta
Participants	
i.	Mr. Ali Raza Jamali, Director General, OFWM, Agriculture Department, GoB, Quetta.
ii.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Quetta.
iii.	Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> The DG, OFWM advised to Mr. Behram, Agriculture Officer, OFWM to provide required data to ME&IE Consultants. Mr. Behram Mulghani, Agriculture Officer provided Laser Land Leveler data to ME&IE Consultants. 	

Date	23 rd December, 2021
Venue	Office of the Director General, OFWM, Rani Bagh, Sariab Road, Quetta
Participants	
i.	Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta.
ii.	Mr. Saleem Abro, M&E Officer, ME&IE Consultants, Quetta.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> M&E Officer, ME&IE Consultants met with Mr. Behram, Agriculture Officer, OFWM regarding data of F.Y. 2019-20, 2020-21 and 2021-22. Mr. Behram provided Laser Land Leveler data to M&E Consultants. 	



Picture 4.161: View of meeting with Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta.

Date	11 th February 2022
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Venue	Director General, OFWM, Agriculture Office, Rani Bagh, Quetta
Participants	
I.	Mr. Wali Muhammad, Deputy Director, Technical, OFWM, GoB, Quetta
II.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan, Quetta.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> A meeting held with Mr. Wali Muhammad, Deputy Director (Technical), OFWM, Balochistan regarding data collection for Dashboard, Balochistan. DG office shared updated progress of F.Y. 2021-22 which is focused for Baseline Phase-II It was decided in the meeting that DTL, Balochistan will be added in the official WhatsApp group of National Program, OFWM, Balochistan for smooth working and timely response / information at the DDs, district level. 	



Picture 4.162: Meeting with Mr. Wali Muhammad, DD, Technical, OFWM, Quetta.

Date	14th 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:	
<ul style="list-style-type: none"> 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 	



Picture 4.163: Meeting with Secretary Agr. Balochistan

Date	09th June 2022
Venue	Zonal Office, ME&IE Consultants, Quetta
Participants	
I.	Mr. Muhammad Asif Kakar, National Project Coordinator (NPC), NPIWC-II, Islamabad
II.	Dr. Usman Mustafa, Team Leader, ME&IE Consultants, National Office, Islamabad.
III.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Balochistan.
IV.	Mr. Manzoor Kasi, FTI/M&E Expert
V.	Mr. Tariq Khosa, FTI/M&E Expert

VI.	Mr. Naseeb Jan, FTI/M&E Expert
VII.	Mr. Hamza Quereshi, M&E Officer
VIII.	Ms. Mahgul Noor, M&E Officer
IX.	Mr. Saleem Abro, M&E Officer
X.	Mr. Basit Kakar, M&E Officer
XI.	Mr. Ibrar Hussain, Office Manager

Meeting Agenda/Points discussed:

- Introduction of Zonal office staff
- Field Progress.
- Office Administration.
- Issues, Problems and Gaps



Picture 4.164: View meeting held in Zonal Office, Quetta. Chaired by NPC, PFMU, NPIWC-II (above). Group photo of Balochistan Team with NPC (below)

Date	26 th January, 2022
Venue	Office of the DDA OFWM, Quetta
Participants	
1)	Noor Ahmed, DDA OFWM, Quetta.
2)	Abdul Ghafoor Jaffar, Agriculture Officer.
3)	Muhammad Ibrahim, Agriculture Officer.
4)	Himayun Muree, Agriculture Officer.
5)	Zahoor Ahmed, Sub-Engineer, Panjpai.
6)	Manzoor Ahmed Kasi, FTI/M&E Expert.
7)	Mah Gul Noor, M&E Officer.
8)	Hamza H. Qureshi, M&E Officer.
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Finalization of the Beneficiaries list for the F.Y 2021-2022. Informed about the visits of the ME & IEC team that were planned for the Pre-testing of the MTs. 	

Pictorial view of the meeting is given in Figure 4.165 below:



Picture 4.165: ME&IE Team in Meeting with the DDA OFWM, Quetta and his Field team

i) Meeting in the office of Directorate of Women Division Agriculture Office Quetta

Date	26th January, 2022
Venue	Directorate of Women Division, Agriculture Office, Quetta
Participants	
1)	Shazia Kurd, DDA Women Division, Quetta
2)	Manzoor Ahmed Kasi, FTI/M&E Expert.
3)	Mah Gul Noor, M&E Officer.
4)	Hamza H. Qureshi, M&E Officer.
Meeting Agenda/Points discussed:	

- Introduction of the ME&IEC teams to the Women Division, Quetta.
- Requested the Women Division to arrange Trainings for women, girls at village and school levels where NPIWC-II activities are being initiated, so that they can play their effective role in making NPIWC-II project more successful.
- A demonstration was given of the Value-added products by the women division to the ME & IEC team.

The pictorial view of the meeting is given in Picture 4.166 below:



Picture 4.166: DDA Women Division Showing to ME&IE Team, all the Value-added Products, produced all over Balochistan

Date	25th January, 2022
Venue	Office of the DDA OFWM, Naseerabad
Participants	
1)	Mr. Anwar Aadil, DDA,, OFWM, Naseerabad

- 2) Mr. Ali Mardan, Sub Engineer, OFWM, Naseerabad
- 3) Mr. Tariq Khoso, FTI/M&E Expert, ME&IE Consultants, Naseerabad Zone.

Meeting Agenda/Points discussed:

- A Meeting held with DDA, OFWM, Naseerabad to discuss the new schemes (F.Y. 2021-22)
- The FTI/M&E Expert, ME&IEC shared the visits plan for pre-testing of MTs / Monitoring Site with request to extend their support regarding data provision / field assistance

The picture of the meeting is given as Picture 4.167 below:



Picture 4.167: Meeting with DDA, OFWM, Naseerabad at his good office.

Date	23rd June, 2022
Venue	Office of the DDA OFWM, Pishin
Participants	
i.	Mr. Faizullah Shah, DDA OFWM, Pishin
ii.	Mr. Naeem Tareen, WMO
iii.	Mr. Imran Hassan, WMO
iv.	Mr. Syed Usman Shah, Sub Engineer
v.	Mr. Syed Ahsanullah, Sub Engineer
vi.	Mr. Manzoor Ahmed Kasi, M&EE/FTI
vii.	Ms. Mah Gul Noor, M&EO
viii.	Mr. Basit Ahmed, M&EO
ix.	Mr. Hamza H. Qureshi, M&EO

Meeting Agenda/Points discussed:

Shared field visit plan, Discuss the issue of non-availability of scheme files. Discussed the site's related issues.

Pictorial view of Meeting is given as Picture 4.168:



Picture 4.168: Meeting held in the office with DDA OFWM, Pishin and his Staff

Date	25 th June 2022
Venue	Office of Deputy Director, Sohbatpur
Participants	
I.	Mr. Imdad Ali Khosa, Deputy Director, OFWM, Agriculture Department, District Sohbatpur
II.	Mr. Muhammad Tariq, Monitoring & Evaluation Expert, ME&IE Consultants, Balochistan
III.	Mr. Saleem Ahmed Abro, M&E Officer, ME&IE Consultants, Balochistan
Meeting Agenda/Points discussed:	
Sharing of Field Visit Plan with DDA (OFWM) Conduct Baseline Survey Phase II Discuss updated progress of National Program Improvement of Watercourses Project. Engagement of farmers/beneficiaries during field visits.	
Pictorial View of Meeting is given as Picture 4.110:	

Picture 4.169: Meeting with DD, OFWM, Sohbatpur and Farmers/Beneficiaries

4.6 INTERNAL MEETINGS OF ME&IE CONSULTANTS

ME&IE Consultants are conducting their internal meetings every Monday do discussed the progress of

work and issues faced by the ME&IE consultants and field teams. A general view of such meetings is given as under

Date	30 th , 31 st Aug. and 1 st Sep. 2021
Venue	National Office of ME&IE Consultants, Islamabad
Participants	
I.	Prof. Dr. Muhammad Abdul Quddus, Team Leader / M&E Specialist NPIWC-II
II.	All DTL of ME&IE Consultants
III.	Mr. Rizwan Saleem, IT Specialist
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> 03 days work was held at Consultants Office, Islamabad to discuss the Baseline Survey Data. Discussed the MTs and revised in the light of feedback by Provincial Head and other Core Team Members. Worked and prepared 06-month Plan Discussed administrative issues, DTLs shared provincial level problems with TL. 	



Picture 4.170: Figure-4.78: View of 03 days' workshop held in Consultants Office, Islamabad.

4.7 NATIONAL PROJECT COORDINATOR'S VISIT TO CONSULTANTS' ZONAL OFFICES

During the current month National Project Coordinator (NPC) Mr. Muhammad Asif Kakar visited zonal offices of ME&IE Consultants NPIWC-II. The schedule of visits was as under.

Zonal Office	Date of Visit
Zonal Office Balochistan	9 th June 2022
Zonal Office Punjab	23 rd June 2022
National Office Islamabad	28 th June 2022

NPC visited consultants' Zonal Office as per above schedule and conducted meetings in all the office. NPC met all the staff members of zonal offices and discussed project progress and issues faced by Consultants & staff.

4th Meeting of BOM was also held on 28th June 2022, in NPC Office. After concluded BOM Meeting NPC visited consultants' National Office Islamabad, where a short meeting was held and NPC met all the office staff.

Pictorial view of the Meetings of NPC in Zonal Office ME&IE Consultants is given in Picture from 4.171 to 4.177. Minutes of all the Meetings held in Zonal office and in National Office Islamabad are attached as **Annex-E to Annex-H**.



Picture 4.171: NPC, Mr. Muhammad Asif Kakar in Meeting with ME&IE Consultants in Zonal Office Balochistan, Quetta on 9th June 2022



Picture 4.172: Group Photo of NPC, Mr. Muhammad Asif Kakar in Meeting with ME&IE Consultants in Zonal Office Balochistan, Quetta on 9th June 2022



Picture 4.173: Team Leader Dr. Usman Mustafa and DTL, Muhammad Yousaf Bhatti Welcomed NPC, Mr. Muhammad Asif Kakar, at Zonal Office, Lahore on 23 June 2022



Picture 4.174: Team Leader, Dr. Usman Mustafa Welcomed NPC, Mr. Muhammad Asif Kakar in National Office Islamabad on 28th June 2022



Picture 4.175: Director CSRD, Mr. Irfan & CEO EASE PAK Welcomed NPC, Mr. Muhammad Asif Kakar at National Office Islamabad, on 28th June 2022



Picture 4.176: NPC, Mr. Muhammad Asif Kakar, Deputy NPC, Mr. Saiful Islam, Deputy NPC Mr. Muhammad Naeem, Deputy National Coordinator, Dr. Tahmina Iqbal, in discussion with Team Leader Dr. Usman Mustafa and Director CSRD, Mr. Irfan, on 28th June 2022



Picture 4.177: NPC in Meeting with ME&IE Consultants in National Office Islamabad, on 28th June 2022

4.8 CHANGE IN KEY STAFF OF ME&IE CONSULTANTS

Deputy Team Leader ICT Zone, Dr. Umar Farooq resigned on 10th June 2022.

To fill this position credentials of Dr. Ikram Saeed have been submitted vide letter No. NPIWC-II/ME&IE/NOISD/0622-0136 dated June 17, 2022, to NPC for approval.

Dr. Umar Farooq was given a farewell party in Consultants' National Office Islamabad (Picture 4.178).



Picture 4.178: Farewell Party for Dr. Umar Farooq DTL ICT Zone

4.9 ICT ACTIVITIES

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

4.9.1 Development of Website of NPIWC-II

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

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

Three number presentations were delivered in Client office at various times. As per instructions of Client Revision/up-dation made each time. The development of the Website has been completed in June 2021. The Revision/up-dation of the Project website has been presented to NPC office and got approval on all changes. Currently all changes have

been incorporated accordingly as per requirements of the Client.

The final Beta version was demonstrated to NPC in his office by August 2021 while the final version presented to NPC on 15 September 2021.

In compliance of the decision made during the 3rd PBOM meeting dated 9th November 2021, the project website was migrated to live server from demo and is currently publicly available on the following link:

<https://npiw2.org/>



4.9.2 Designing of Dashboard of Project Interventions

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

The GIS based MIS will provide the means of:

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

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

Phase-I – MIS Development

Requirement & GAP Analysis – (Completed)

The ME&IE Consultants performed Requirement Analysis to review the project processes. A thorough assessment of any existing IT infrastructure is to;

Perform needs assessment of the current IT capacity of individual stakeholder's and identify any infrastructure gaps and recommend necessary upgrades in IT infrastructure.

Identify hardware and network infrastructure requirements and specification at the core, access, and distribution layers along with endpoint

Determine the technical parameters of the solution based on the following:

Network topology, diagrams, and specifications of hardware of the proposed solution

Bandwidth requirement based on the total number of anticipated users with a redundancy plan.

GIS Integrated MIS Development – (Completed & Delivered)

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

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

<https://pmis.npiw2.org/>



MIS / Android Application Deployment and Testing (Completed)

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

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

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

4.9.3 Data collection of interventions in MIS/GIS database

The activity regarding data collection of Interventions in MIS/GIS database is in progress as its on-going process. The Dashboard has been implemented in AJK, ICT, and KP zones and the progress of Interventions is live on the Dashboard application.

This activity completed in AJK & ICT in the months of September to October. While in KP the activity completed in the months of November 2021 to January 2022.

Balochistan zone the ICT team is facing problems in data collection because a lot of data is missing which was required by the ICT team for the Implementation of MIS Dashboard.

Meetings have been conducted with Technical Team of OFWM department Punjab chaired by the system analyst OFWM department Punjab. (Meeting Picture attached as Annex-F-1) During the meetings 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. However, due to the non-provision of data from the OFWM department, the implementation phase in Punjab Province has not started yet / very slow.

4.9.4 Implementation of MIS Dashboard

The Dashboard has been implemented in AJK, ICT and KP zones as detailed in table below:

Table 4.37: Dashboard Implementation of NPIWC-II

Zone	Department	Date
AJK	Small Dam & Irrigation	November 4, 2021
ICT	Water Management	January 14, 2022
KP	On-Farm Water Management	March 11, 2022

The progress of Interventions is live on the Dashboard application.

AJ&K MIS Dashboard AJK

So far, Total 581 Watercourses data has been received from AJK zone and available live on GIS Dashboard. By which 255 Watercourses has been lined, 24 Watercourses Work Order Cancelled and remaining 302 watercourses are under progress on different levels like at 1st Milestone, at 2nd Milestone, at Work Order Issued Stage, and at Work Order Pending Stage (T.S Stage). Detailed Summary is given in table 4.38 and Figure 4.11 below.

Division	2019 -20	2020 -21	2021 -22	Overa II
Muzaffarabad	32	94	52	178
Poonch	37	38	80	155
Mirpur	38	106	104	248
Overall	107	238	237	581

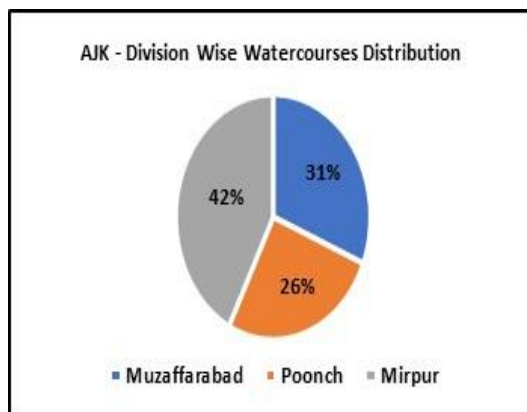


Figure 4.10: Division Detail of WC in AJK

Table 4.38: AJK - Watercourses Data Submissions – Summary

Division	District	Completed	Work Order Cancelled	Under Progress				Overall
				1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Muzaffarabad	MZD	32	3	16	17	23	13	104
	Jhelum	13	0	2	3	2	11	31
	Neelum	8	1	12	5	17	0	43
Muzaffarabad Total		53	4	30	25	42	24	178
Poonch	Poonch	28	1	1	2	14	5	51
	Bagh	18	3	2	0	16	0	39
	Haveli	4	1	2	0	10	7	24
	Sudhnoti	13	4	2	0	16	6	41
Poonch Total		63	9	7	2	56	18	155
Mirpur	Mirpur	57	2	0	0	12	25	96
	Bhimber	65	0	4	1	4	27	101
	Kotli	17	9	6	0	1	18	51
Mirpur Total		139	11	10	1	17	70	248
Overall		255	24	47	28	115	112	581



Figure 4.11: AJK - Watercourse Data on PMIS Dashboard

Overall Water Storage Tank data submission is **392** Water Storage Tanks from which **178** WST has been completed and 102 are under progress. While **112** Water Storage Tanks Work Order Pending (T.S Stage). Detailed Summary is given in Table 4.39 and Figure 4.13)

AJK Zone - WST/WHs Data Summary				
Division	2019-20	2020-21	2021-22	Overall
MZD	36	62	40	138
Poonch	15	42	127	184
Mirpur	2	15	53	70
Overall	53	119	220	392

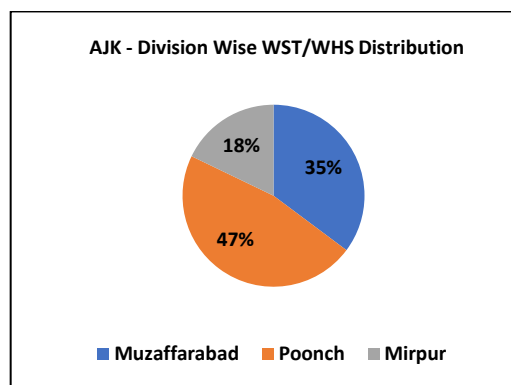


Figure 4.12: Division Detail of WST/WHs in AJK

Table 4.39: AJK - WST/WHs Data Submissions – Summary

Division	District	Completed	Work Order Cancelled	Under Progress		Overall
				Work Order Issued	Work Order Pending	
Muzaffarabad	Muzaffarabad	78	0	22	22	122
	Jhelum	5	0	3	8	16
	Neelum	83	0	25	30	138
Muzaffarabad Total		53	4	42	24	178
Poonch	Poonch	42	2	10	15	69
	Bagh	23	7	21	1	52
	Haveli	4	0	26	14	44
	Sudhnoti	8	0	11	9	28
Poonch Total		102	9	68	39	193
Mirpur	Mirpur	3	1	7	10	21
	Bhimber	3	0	1	25	29
	Kotli	12	1	1	8	22
Mirpur Total		18	2	9	43	72
Overall		178	11	102	112	403



Figure 4.13: AJK - WST Data on PMIS Dashboard

ICT Zone MIS Dashboard

ICT zone so far, only 20 watercourses data received on Dashboard and all 20 Watercourses are lined.

ICT Watercourse Data Summary	
Division	2020-21
ICT	20
Overall	20

KP Zone MIS Dashboard

KP zone dashboard is also live, and data submitted so far, on the Dashboard is 1832 by which 1770 Watercourses have been lined and remaining 62 Watercourses are under progress on different stages. Detailed Summary given in Table 4.40 and Figures 4.14 & 4.15.

KP - Watercourse Data Submission - Summary				
Division	2019-20	2020-21	2021-22	Overall
Bajaur Agency	3	17	10	30
Bannu	74	40	0	114
Dera Ismail Khan	431	11	53	495
Hazara	83	57	7	147

Khyber Agency	6	13	0	19
Kohat	98	41	25	164
Kurram Agency	1	5	2	8
Malakand	177	169	34	380
Mardan	105	64	18	187
M. Agency	4	26	13	43
Orakzai Agency	0	1	0	1
Peshawar	141	85	3	229
S. W Agency	3	12	0	15
Overall	1126	541	165	1832

Table 4.40: KP - Watercourse Data Submission - Summary

Division	District	Completed	Under Progress				Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Bajaur Agency	Bajaur	22	0	0	0	8	30
Bajaur Agency Total		22	0	0	0	8	30
Bannu	Bannu	53	0	0	0	0	53
Bannu	Lakki Marwat	56	0	0	0	0	56
Bannu	N.W Agency	5	0	0	0	0	5
Bannu Total		114	0	0	0	0	114
D.I. Khan	D.I. Khan	441	2	0	11	2	456
	Tank	39	0	0	0	0	39
D.I. Khan Total		480	2	0	11	2	495
Hazara	Abbottabad	16	0	0	0	0	16
Hazara	Battagram	25	0	0	0	0	25
Hazara	Haripur	29	0	0	0	0	29
Hazara	Kohistan	18	0	0	0	0	18
Hazara	Mansehra	47	0	0	1	0	48
Hazara	Torghar	11	0	0	0	0	11
Hazara Total		146	0	0	1	0	147
Khyber Agency	Khyber	19	0	0	0	0	19
Khyber Agency Total		19	0	0	0	0	19
Kohat	Hangu	42	0	0	0	0	42
Kohat	Karak	36	0	0	0	0	36

Kohat	Kohat	86	0	0	0	0	86
Kohat Total		164	0	0	0	0	164
Kurram Agency	Kurram	8	0	0	0	0	8
Kurram Agency Total		8	0	0	0	0	8
Malakand	Buner	52	0	0	0	1	53
Malakand	Chitral	41	0	0	0	1	42
Malakand	Lower Dir	45	0	0	1	1	47
Malakand	Malakand	45	0	0	0	2	47
Malakand	Shangla	29	0	0	1	0	30
Malakand	Swat	125	0	1	0	8	134
Malakand	Upper Dir	27	0	0	0	0	27
Malakand Total		364	0	1	2	13	380
Mardan	Mardan	90	0	0	0	0	90
Mardan	Swabi	79	0	0	1	17	97
Mardan Total		169	0	0	1	17	187
Mohmand Agency	Mohmand	43	0	0	0	0	43
Mohmand Agency Total		43	0	0	0	0	43
Orakzai Agency	Orakzai	1	0	0	0	0	1
Orakzai Agency Total		1	0	0	0	0	1
Peshawar	Charsadda	96	0	0	0	0	96
Peshawar	Nowshera	70	0	0	1	1	72
Peshawar	Peshawar	59	0	0	0	2	61
Peshawar Total		225	0	0	1	3	229
S.W Agency	S.W Agency	15	0	0	0	0	15
S.W Agency Total		15	0	0	0	0	15
Overall		1770	2	1	16	43	1832

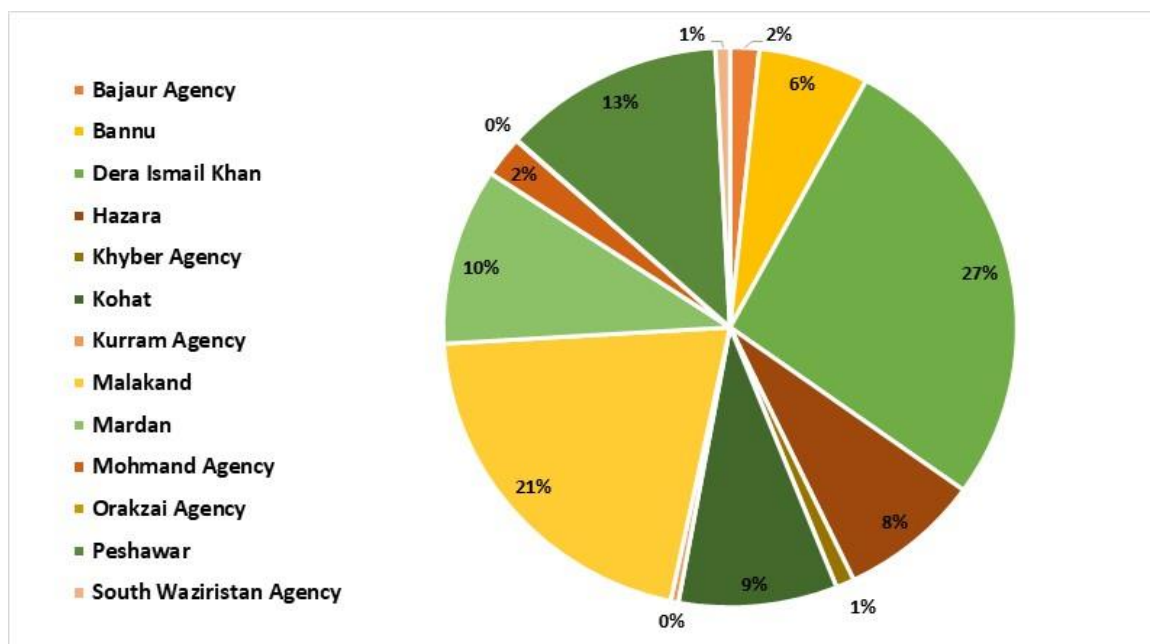


Figure 4.14: KP – Watercourses - Division Wise Distribution



Figure 4.15: KP - Watercourse Data on PMIS Dashboard

KP zone Water Storage Tank Data received on Dashboard is 602 by which 583 Water Storage Tank has been completed and remaining 19 watercourses are Under progress. Detailed Summary is given in Table 4.37 and Figure 4.13 & 4.14.

The progress of Interventions is live on the Dashboard application for AJK, ICT & KP zones. As defined in the submitted working paper of dashboard

implementation on 26 Aug 2021, three stages were defined.

KP - WST Data Submission - Summary				
Division	2019-20	2020-21	2021-22	Overall
Bajaur Agency	1	9	1	11
Bannu	12	18	0	30

Dera Ismail Khan	81	6	5	92
Hazara	28	43	4	75
Khyber Agency	1	9	0	10
Kohat	29	17	1	47
Kurram Agency	1	1	0	2
Malakand	75	92	15	182

Mardan	16	9	5	30
Mohmand Agency	1	36	4	41
Orakzai Agency	0	2	0	2
Peshawar	36	25	4	65
S.W Agency	0	15	0	15
Overall	281	282	39	602

Table 4.41: KP - WST Data Submission - Summary

Division	District	Under Progress		Overall
		Completed	Work Order Pending	
Bajaur Agency	Bajaur	11	0	11
Bajaur Agency Total		11	0	11
Bannu	Bannu	4	0	4
Bannu	Lakki Marwat	18	0	18
Bannu	N.W Agency	8	0	8
Bannu Total		30	0	30
D.I. Khan	D.I. Khan	76	0	76
D.I. Khan	Tank	16	0	16
Dera Ismail Khan Total		92	0	92
Hazara	Abbottabad	0	1	1
Hazara	Abottabad	9	0	9
Hazara	Battagram	22	0	22
Hazara	Haripur	13	1	14
Hazara	Kohistan	9	0	9
Hazara	Mansehra	13	0	13
Hazara	Torghar	7	0	7
Hazara Total		73	2	75
Khyber Agency	Khyber	10	0	10
Khyber Agency Total		10	0	10
Kohat	Hangu	14	0	14
Kohat	Karak	29	0	29
Kohat	Kohat	4	0	4
Kohat Total		47	0	47
Kurram Agency	Kurram	2	0	2
Kurram Agency Total		2	0	2
Malakand	Buner	25	1	26
Malakand	Chitral	6	0	6
Malakand	Dir Lower	7	0	7
Malakand	Dir Upper	14	0	14
Malakand	Malakand	12	3	15
Malakand	Shangla	17	0	17
Malakand	Swat	93	4	97
Malakand Total		174	8	182
Mardan	Mardan	16	1	17
Mardan	Swabi	9	4	13
Mardan Total		25	5	30

Mohmand Agency	Mohmand	41	0	41
Mohmand Agency Total		41	0	41
Orakzai Agency	Orakzai	2	0	2
Orakzai Agency Total		2	0	2
Peshawar	Charsadda	13	0	13
Peshawar	Nowshera	31	0	31
Peshawar	Peshawar	17	4	21
Peshawar Total		61	4	65
S.W Agency	S.W Agency	15	0	15
S.W Agency Total		15	0	15
Grand Total		583	19	602

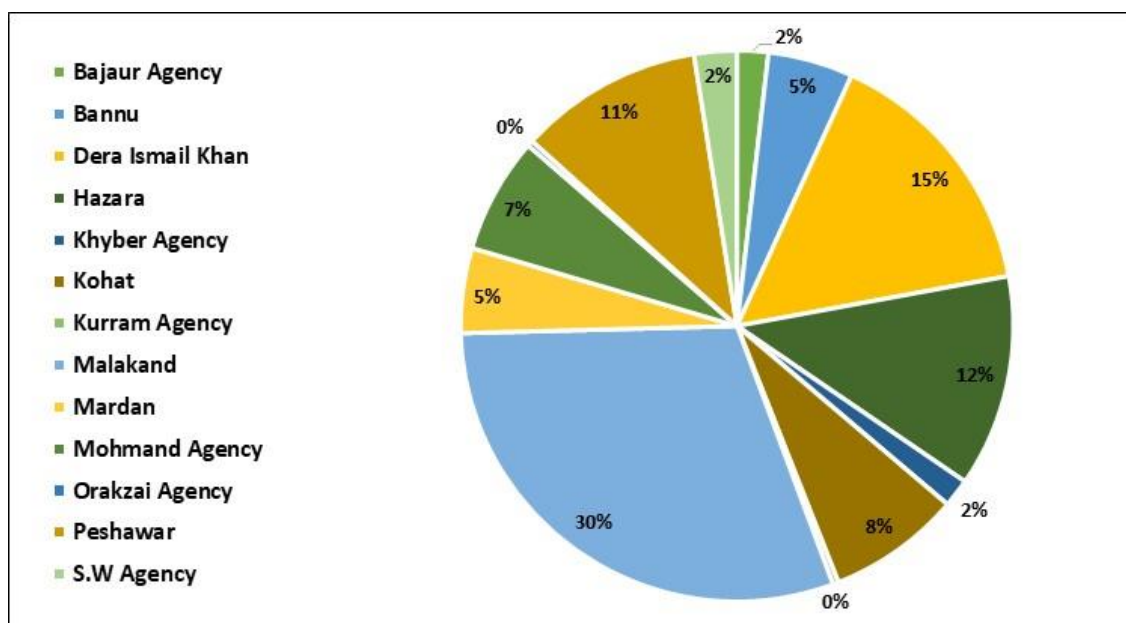


Figure 4.16: KP – Water Storage Tanks – Division Wise Distribution



Figure 4.17: KP - WST Data on PMIS Dashboard

Stage-I - Digitize and Migrate the Data

During this stage, a lot of data has been generated; it can be in digital form or may be in hard copy form. The ME&IE Consultant digitized the hard copy data and migrated the complete data in the respective database forms.

As ME&IE Consultants was not allowed for direct communication with any of Provincial Departmental Head and NWMC, so that the data for dashboard supposed to receive through FPMU. Despite lot of communication for providing data on required format which was shared to FPMU, ME&IE Consultants did not receive positive response.

Upon this bottleneck, ME&IE Consultants took initiative with the approval of NPC to digitize the field progress data of AJK, ICT and KP units, which was not defined in ME&IE TORs.

After study/assessment of files the data deficiencies/missing data was conveyed to ADs. To facilitate the department and to fulfill the backlog of the last 2 years, the ICT team of ME&IE Consultants voluntarily took the responsibility of data entry on the approved forms and scanning of relevant files of all interventions to accommodate the implementation of Dashboard.

The ICT team further worked on data validation to cross-check the database data compared to scanned data.

However, ME&IE Consultants completed the task in AJK & ICT zones during September and October 2021 after that the same practice was adopted in KP zone and ICT team digitize KP zone data from November 2021 to January 2022 according to data provision by the OFWM Department KP.

On the completion of digitization of data, ME&IE Consultants process the preliminary data cleaning and validation.

After cleaning and validation, ME&IE submitted the data to the concern PD for their review and comments.

ME&IE received comments and missing data which was updated accordingly to the MIS database.

Stage II – Meetings with all Stakeholders and Shortlist the Nominations

On the successful completion of Stage-I, ME&IE held meetings with Project Directors of KP, AJK, & ICT Zone to shortlist their respective

nominations for training of dashboard and data collection.

Stage III - Training and Capacity Building

Consultants have provided training of Dashboard data entry, to officials of provincial departments KP, AJ&K, and ICT. The departments are now entering data on dashboard by themselves. However, ICT Experts of ME&IE Consultants are in regular coordination with them to resolve any issues if faced by the department staff

4.9.5 On-Going Data Validation & Cleaning

Data submission is an ongoing process & will continue till the end of the project. Field Staff of AJK Small Dam & Irrigation, Water Management ICT, and On-Farm Water Management Department KP is continuously feeding data through customized Android Application provided & trained by the ICT team of ME&IE consultants.

However, The ICT team is continuously cleaning and validating the received data and communicating mistakes to the concerned Agriculture Departments for correction.

4.10 MONITORING / DATA COLLECTION ON SOCIAL AND GENDER COMPONENT

During the reporting period Gender & Social Specialist visited different areas under the Project NPIWC-II. During the month of June 2022, meetings were held on every Monday to discuss progress of the project. During the meetings teams discussed field visits plans and all other ways to collect information from the fields to get clear picture of the situation. Gender and social specialist activities during June, 2022 were as under:

- Attended Project review meetings
- Participated in farmers' day at Taxila
- Visited Punjab field area in Rawalpindi and Attock
- Reports were finalized for further submission.
- Work plan for next quarter was submitted
- Agriculture issues were penned down based on the field observation

Field Visit to Kalar Syedan, Rawalpindi, Punjab, on 21st June 2022

A visit was planned to Kalar Syedan district Rawalpindi on 21st June 2022. It was coordinated with Deputy Director Mrs. Farkhanda (OFWM Rawalpindi) who managed the visit locations (Picture 4.179). The social and Gender Team along with ME&IE Team (Ms. Maryam and Ms. Sana Gul) visited water courses.



Picture 4.179: Social & Gender Specialist and ME&IE Team in Meeting with Mrs. Farkhanda A.D OFWM Rawalpindi at Agriculture office

Field and Gender team visited the Water Storage Tanks of Rawalpindi

S#	WST Name/Id	District	Date of Visit
1	Mouza Maira Sangal	RWP	21 ST June 2022
2	Mouza Shah Bagh		

An introductory meeting was held between the field team and OFWM the department office in Rawalpindi. The team collected some basic data on WST to be visited. Also, the field team accompanied the OFWM team.

Following observation was found during the field visit.

- There are no WUAs because only one member was holding the land.
- Females were well aware of the crops but no participation.
- It was observed that females were not participating in farming activities.
- Women haven't owned a piece of land.
- Female family members' education level was primary.

- Females were not involved in decision-making.
- They have no knowledge about NPIWC-II Project.
- Household activities are mostly done by women.
- According to Raja Zulfiqar, there is no loss and no benefits during the cultivation period.



Picture 4.180: ME&IE Team interviewing the farmers at Mouza Maira Sangal Rawalpindi

Field Visit to Thatta Kheel, Taxila, Rawalpindi Punjab, on 23rd June 2022

A visit was planned to Thatta Khaleel tehsil Taxila district Rawalpindi on 23rd June 2022. It was coordinated with Deputy Director Mrs. Farkhanda (OFWM Rawalpindi) who managed the visit locations. The social and Gender Team (Mrs. Munaza & Ms. Abida Munir along with ME&IE Team (Mr. Bilal, Ms. Maryam and Ms. Sana Gul)

Farmer's day was being celebrated on 23 June 2022 by the farmer's community in Taxila. Social and Gender Team along with ME&IE Team participated. More than 80 farmer participated in the event Mrs. Farkhanda Deputy Director (OFWM Rawalpindi) chaired the event. Mr. Ghulam Qumar Assistant Director (OFWM Rawalpindi) & Mr. Malik Waris Assistant Director (OFWM Rawalpindi) also gave their valuable inputs. Mrs. Munaza also gave her valuable points during the sessions with farmer. It was observed that no female farmers participated in the event.

Following agenda points were discussed during the event.

- Water storage tank
- Impact of climate change

- Government subsidy/Role of Government
- Rainwater harvesting system
- Drip Irrigation system
- Difference between bore and Water Storage Tank



Picture 4.181: Farmers Day at Thatta Khaleel Taxila

ME&IE team (Mr. Bilal, Ms. Sana Gul and Ms. Maryam) & Social and Gender Team Mrs. Munaza and Abida Munir (Social & Gender Specialist) reached the village Thatta khalil on 23rd June 2022 along with Assistant. Director Chakwal. Team met with the beneficiary of this water storage tank Mr. Muhammad Hamayun, who helped the team to visit his farm land and water storage tank. Following observation was found during field visit to Thatta Khalil.

- There is no WUAs because only one member was holding the land.
- Females were well aware of the crops but no participation in farming activities.
- It was observed that females were not participating in farming activities.
- Women haven't own a piece of land.
- Females were well aware of the crops but no participation in farming activities.
- Female family member education level was primary.
- Females were not involved in decision making.
- Females has no knowledge regarding NPIWC-II Project.
- Mostly women are doing household activities.
- Females were not involved in any labor activities.
- Females were well aware of the crops and the land holding by them, they were active

in decision making related to the land sale, purchase or tenancy condition etc.



Picture 4.182: Water Storage tank at Thatta Khaleel Tehsil Taxila

- Flood irrigation
- Rain water harvesting
- Small dams.
- Groundwater and drip irrigation
- Water tanks.
- Water courses improvement
- Laser land leveling
- High efficiency irrigation system

Gender and social experts discussed in detail on the ground situation actual female farmers' participation in local villages. Picture was not bleak they are participating in different ways in sowing, harvesting and storage. Monitoring and evaluation consultants explained all components of the project and how they can participate and reap the benefits of the project.

Participation in Farmers' Day, on 23rd June 2022

On farm water management officer Malik Waris and (Deputy Director OFWM) Ms. Farkhandha arranged **Farmers day** at Thatta khaleel in tehsil Taxila, it was well organized function and more than 80 farmers participated, NPIWC Monitoring and Evaluation field team along with national and provincial gender and social expert participated Mr. Ghulam Qumar Assistant Director (OFWM Rawalpindi) & Mr. Malik Waris (Assistant Director OFWM Rawalpindi) also gave their valuable inputs. Social & Gender Specialist, Mrs. Muniza also discussed current issues of agriculture and discussed about climatic and agriculture issues which is affecting their yield. Her valuable points during the sessions with farmer. It was also observed the no female farmers were participated in the event.

Following agenda points were discussed during the event.

- Water storage tank
- Impact of climate change
- Government subsidy/Role of Government
- Rainwater harvesting system
- Drip Irrigation system
- Difference between bore and Water Storage Tank.

After informatory session by department question answer session was conducted, following questions were raised by farmers.

- Subsidy on seeds and electricity.
- Free of interest loans
- Subsidized solar system



Picture 4.183: Mr. Malik Waris Assistant Director OFWM Rawalpindi chaired the event.

Group Discussion with Landless Women, on 23rd June 2022

Social & Gender Specialist and ME&IE team also visited the Chakkri village. Team met with landless female farmers, they belong to District Lodhran and came Chakkri for farming activities. Focus group discussion was done with 15 female farmers. All female farmers have no own land.



Picture 4.184: Social & Gender Specialist with Landless female farmers



Picture 4.185: Female farmers are working in cucumber farm Packing for market

Field Visit of Water Storage Tank at Mouza Haji Kund, Hasasnabdal, District Attock Punjab, on 29th June 2022

A visit was planned to Hassanabdal District Attock on 28th June 2022. It was coordinated with Assistant Director Engr. Mrs. Ambreen (OFWM Attock)

An introductory meeting was held between the field team, Social & Gender team and OFWM the department office in Hassanabdal.

Following points were thoroughly discussed.

- According to Mrs. Ambreen Eng. Assistance Director that Qureshi Company is running M1 land project (14000 canal) also bearing the all expenses of project.
- They were in process of plantation of new Orchard over an area of 12.84acres at Land Project Burhan.
- Mrs. Ambreen Eng. Assistance Director explained that they are in process with the Government of Punjab for installation of drip irrigation system with 60%Government and 40%farmer share in scheme of on farm water management.
- Laser land leveling is not possible in Potohar region.

- They are promoting drip Irrigation system because said system didn't damage the land structure.

- Orchard and vegetables were cultivated.

The Social and Gender Team (Mrs. Munaza & Ms. Abida Munir) along with ME&IE Team (Mr. Bilal & Ms. Sana Gul) visited water storage tank intervention in Hassanabdal at Mouza Haji Kund.

Team collected some basic data on WST to be visited. Team met with the beneficiary of this water storage tank, who helped the team to visit his farm land and water storage tank. Following observation was found during the field visit.

- WUAs comprises of three members.
- Females were well aware of the crops.
- It was observed that females were not participating in farming activities.
- Women were owner of land.
- Education level was graduated.
- Females were involved in decision-making.
- They have no knowledge about NPIWC-II Project.
- Household activities are mostly done by women.



Picture 4.186: Meeting with OFWM Department at Hassanabdal, District Attock, Punjab



Picture 4.187: Water storage tank at Hassanabdal

Current Issues of Agriculture in Pakistan 2022 social and gender perspective

Pakistan is an agriculturist country, Pakistan have diversity in, traditions, norms and culture across the regions. Agriculture sector in Pakistan plays a central role in the economy as it contributes major, portion in it., women and men both are participating in agricultural activities and directly and in directly contributing. Although the women are under representation in this sector due to societal norms. Government of Pakistan is a signatory of sustainable development goals and taking all steps to fulfill the commitments, NPIWC-II program is launched at national level.

Government invested a huge amount in this project which enables farmers to get the maximum output and in increase in crops yield and cropping intensity, poverty reduction is expected through employment generation. Agriculture sector is suffering and facing many issues. It constitutes major portion of labor force; the government acknowledges that the sector could not grow more than 2.77 per cent in the current year. The Agriculture sector is most important and key player involved in the Pakistan's financial system since independence. It was considered a dominant sector but due to some political, social, and local weather conditions output of agriculture production is not up to the mark.

Agriculture role in Pakistan economy can't be denied Following are some important contributions of agriculture;

- Major contribution in National Income
- Source of Food Supply
- Source of Raw Material
- Provision of Surplus Food

- Employment
- Source of Foreign Exchange for the Country
- Employment Opportunities for Rural People
- Role in domestic economy
- Poverty reduction

Key Issues of Agriculture:

The agriculture sector is facing problems because of several issues such as a water shortage, shrinking of the area under cultivation and higher costs of inputs.

Following are the main issues that causes decline in agriculture:

- The agriculturalists are typically un-educated and lack technical knowledge. They are incapable to understand the modern scientific methods of agriculture and often remain ignorant of good means to protect and increase their yield.
- Due to lack of investment they cannot afford to purchase modern scientific implements, chemical manures, improved types of seeds etc., they cannot attain the required standards.
- Most of our farmers are still trapped to the deep-rooted traditions of their forefathers.
- Due to small holdings of land and poverty they are unable to use modern scientific methods. That is why their standard is lower than that of cultivators in developed countries. (Ref. Agriculture reports of lower Bari doab project)
- Salinity and water logging is also a major issue
- Traditional method of farming
- Law of inheritance affected, our farmers very severely infected &, land holding is becoming smaller.
- Our farmers have to face many issues due to scarcity of water which is one our major problems. Large tracts of land estimated to be about 22 million acres is lying uncultivated due to shortage of water. Rainfall is uncertain and the existing irrigation facilities in our country are quite insufficient and need to be improved
- The land tenure arrangement of Pakistan has shaped a chain of intermediaries in between the state and the tenants. The system, instead of being helpful to agricultural development, stands in the way of its progress.

- x) Due to lack of latest agricultural information about methods of modern time, our farmers cannot control the countless diseases of crops and attacks of pests and insects. The result is low yields.
- xi) Most of our villages have no road or railway links with our markets. So, farmers have to face countless hardships to sell their products. It decreases farmer's interest in their profession and production suffers.
- xii) Lack of credit facilities, the resources required for agricultural operation are land, layout, livestock, farm equipment, seeds, fertilizers, irrigation, transport etc. For the convenient and timely procurement of these resources the farmers must have easy access to credit.

Agriculture may not grow at a sustainable high rate unless the problem is addressed, prices shooting up every month, prices of agricultural inputs, including seeds and fertilizers, continue to increase.

Preparations to Overcome the Problems:

- Tube-wells should be installed in the affected areas to decrease the salinity.
- Beds of new canals should be made of concrete to avoid water-logging.
- Water courses should have constructed and maintained to save water and equal distribution, it will enable the farmers to reap the benefits. These measures should be taken on priority basis to avoid further deterioration of land. The primary issues in agriculture of Pakistan is shortage of water. It is necessary that the irrigation facilities be extended for increasing agricultural output.
- Land levelling should be done, it will enable to save water and time
- Agriculture extension department should educate farmers.
- Farmers should be informed by outreach staff of agriculture extension regarding fertilizer's and its proper use. The agricultural harvest can also be increased by using fertilizers. The use of manure should be introduced throughout the country. Poverty and illiteracy affected our farmers and they hesitate to purchase the fertilizers.
- The use of improved seeds, manures and modern implements is not possible without adequate credit facilities for the farmers. The

government has improved the existing credit facilities to a large extent. The commercial banks also grant loans to the farmers, but still there is a need for more facilities as our farmers are very poor. The farmers should be provided better quality seeds at the lowest price and at the right time. Better seeds will ultimately give better yield.

- Mechanization of agriculture refers to the use of various equipment's the different stages of cultivation
- Rural infrastructure should be given priority directly y so the value chain system should be developed and farmers would have access to the market

Essential Guidelines, Approaches to improve agriculture:

- Improvement and adoption of new varieties
- Improved access to markets for inputs (seeds, fertilizers, farm mechanization, credit, water) and outputs
- Steps should be taken to reduce post-harvest losses
- Character of middle man should be eliminated.
- More investment in research, development and extension
- Improved quality and self-actualization of requirements for international markets.
- More diversification, especially minor but high value crops
- Farm input and produces pricing
- Demand related policies:
- Income, growth and development
- Education and knowledge
- Food price stabilization
- Market related policies:
- Policies to insulate local markets from global markets
- Access to local markets.

Way forward

- More steps should be taken at government level to help agriculture sector to flourish by making farmer friendly policies.
- Credit facility at low rate or may be interest free it will help share croppers to get more profit which will reduce poverty in rural areas

- Agriculture research institutes should be encouraged by providing grants to work on new varieties.
- While launching any program awareness campaign should be designed.
- Soft loans for female farmers should be sanctioned

4.11 CASE STUDIES OF INTERVENTION CONDUCTED BY ME&IE CONSULTANTS

4.11.1 Case Studies in Punjab

“Conversion of Waste land into Agricultural Land”

Consultants conducted a case study on the Project Intervention in Punjab. A Water Storage Tank of a farmer, Mr. Muhammad Zareef was selected for this study. Muhammad Zareef is a resident of village Bajha Tehsil Koh-e-Suleman, District D. G. Khan. He is an educated and well-known progressive farmer. By his Profession he is a Farmer. He has been associated with farming for the last 10 years. In this tehsil he has only 8 acres of land of his forefathers. Whereas he holds certain pieces of land in other areas.



Picture 4.188: Owner/Beneficiary of Water Storage Tank, Muhammad Zareef

Basic Profile of Water Storage Tank

WST Owner:	Muhammad Zareef
Name of village:	Bajha
Tehsil & District:	D.G Khan, Koh-e-Suleman
Source of irrigation:	Tube well , Rain water

The shape of the water storage tank:	Trapezoidal
Size of water storage tank:	60 x 60 ft
Depth of WST:	6 ft
Command area of water storage tank:	8 Acre
No of beneficiaries:	1
Name of the Crop	Citrus and Wheat / Maize as intercrop



Picture 4.189: View of Water Storage Tank Of Mr. Zareef at Village Bajha, Tehsil Koh-e-Suleman

According to Mr. Muhammad Zareef; before construction of WST, his land was barren. It was located in hilly area and its terrain was uneven. He did not grow any crop because its soil consists of gravels. It was not possible to grow any crop in this area. Rain / flood from hills brings fertile soil along with its water. This fertile soil makes a layer on the surface of this land. Every year a layer of soil increased on his land. Due to increased layers of fertile soil the land became useful for growing crops and farmers was able to grow crops on this type of land. Farmer have shortage of water for crops. He had no proper system to store rain water as well. There are no proper roads. It is very difficult to travel in this area.

Guidance from On Farm Water Management Department:

OFWM department officials motivated the farmer to avail the opportunity from the NPIWC-II Program launched by the Govt. and to construct Water Storage Tank (WST) on subsidy basis. They briefed him about different aspects of NPIWC-II. In spite of the fact that his farm is located in hilly area and with the assistance of OFWM department he constructed the Tank and started storage of water.

He started construction of WST on 15-Jan 2020 and was completed within two months. He installed a tube well in 2020 but it could not fulfill his water requirement. Direct supply of the water to the farm took 3-4 days to irrigate one acre whereas irrigation through a water storage tank took 3 to 4 hours.

There is no shortage of water in the Rabi season. During the Kharif season he faced acute shortage of water. His crop wholly depends upon rainwater in kharif season. He installed a pump to put rain water into the WST to store water into the tank.

Beneficiary Satisfaction:

Mr. Muhammad Zareef the owner of WST is very happy and fully satisfied by the role of OFWM department as his barren land has been converted into Agricultural land due to intervention under the NPIWC-II Program. Now after construction of WST he is growing Citrus Orchard on his land. Other main crops being grown are Wheat/ Berseem/ Maize and Sorghum as well.

Increase in Livestock:

Before the construction of WST, the land was barren; he does not have any livestock because of lack of fodder. Now he can grow food easily. He has started to keep livestock as well. Now he also has Buffaloes, Cows, Goats, and Sheep which are major sources of food and income for his family.



Picture 4.190: ME&IE Team at Water storage tank of Mr. Zareef. ADA Koh-e-Suleman OFWM also accompanied this visit.

Success Story on Water Storage Tank

Rehabilitation of Sandy Dunes of Thal Area in Bhakkar District by Water Storage Tank

If anybody has seen the dunes in Thal area, He can well imagine my position, before the construction of Water storage tank on my land during 2020-21. With the help of modern technology of construction of Water Storage Tank, I was able to cultivate the few areas of desolated land of mine.



Picture 4.191: WST Owner Nazeer Ahmad

Mankera is the tehsil of Bhakkar surrounded by the Thal dessert. Mankera is the main town of Mankera Tehsil, an administrative unit of Bhakkar District in Pakistan's Punjab province. Mankera's one third land is covered with sand area characterized by huge sand dunes. People are largely dependent on agriculture of which the main crop is gram (Channa), which heavily rely on rain; as a result, they are poor. Education and health care services are also poor.



Picture 4.192: Deserted Area of Thal in Mankera

Nazeer Ahmad is a local farmer of Mankera who has land of 12.5 acres in the village of Dagar Kotli. Before the WST intervention, the land was sown with gram (Channa) which was solely dependent on the rainfall. According to Nazeer Ahmad, the rainfall pattern was changing following the years which had made effect on the crop production of gram. Either the production was very low or the crop would burn out. Nazeer was worried about the income that had facilitated his household.

Table 1 WST Beneficiary Details

WST Owner	Nazeer Ahmad
Tehsil & District	Mankera / Bhakkar
Culturable Command Area	12.5 Acres
Source of Irrigation	Tube Well
Quality of Under Ground water	Fit for Irrigation
Major Crops	Citrus (Shakri), Sunflower, Gram (Channa)
Financial Year	2020-21

As fate would have it, one day Nazeer Ahmad was reading a newspaper that had advertised of a subsidized project of provision of Water Storage Tank. He contacted the OFWM department of Mankera and filed an application for the construction of Water Storage Tank which was later on accepted by the department. He was fully satisfied with the cooperation of the OFWM who guided him through at all the stages. The source of water through which the WST was filled via pumping through underground water which was fueled by solar panels.



Picture 4.193: View of WST in the midst of the deserted land along with the figure showing tube well pumping from ground water

A year has passed since the construction of the water storage tank, Nazeer Ahmad has sown citrus (shakri), sunflower, wheat and gram (channa). Before the intervention he was able to cultivate merely 2 to 3

acres but now when the problem of shortage of water has overcome, the cultivated has increased to 10 to 12.5 acres.



Picture 4.194 Cultivation of Plants Citrus (Shakri)



Picture 4.195 Cultivation of Sunflower

The intervention has resulted in irrigate cultivation. Now the farmer is growing orchard (Citrus) and Oil seed crops (Sunflower). It has increased in income of the farmer significantly besides increase in value and rent of land.

4.11.2 A case Studies in Balochistan

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



Picture 4.196: Monakka

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

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

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

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

Process:

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

- vi. In last, they collect the Monakka and put into begs for sale in markets.



Picture 4.197: Fresh grapes collected from farm for further process



Picture 4.198: ME&IEC Field Team at grape's farm



Picture 4.199: Grapes are being dipped in to kiln for 5 to 10 seconds.



Picture 4.200: Grapes are spread on mud coated land to dry in sunlight for 5 to 7 days



Picture 4.201: Different stages of Monakka during drying



Picture 4.202: The Monakka are ready to sell in Market

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

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

The difference in total revenue is showing in below table:

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

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

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

There are so many crops, fruit and vegetable in Balochistan which produced several types of processed products which need to proper guidance for its use to increase their income. Ultimately this increase in income will impact on GDP of Pakistan.

Agriculture has huge contribution toward GDP of Pakistan economy. Increase in GDP shows the developing progress of the economy. By promoting the processed products in agriculture sector, the GDP can be increased. Employment contributes to GDP; it is as with the increase in employment through processed product industries the per capita income will increase which results to increase in GDP rate of the economy. The 3rd largest sector of contributing to GDP is agriculture.

Bottlenecks:

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

Suggestions:

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

Work done by:

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

5 WORK PLAN-ACTIVITIES OF FIRST QUARTER OF SECOND YEAR

The ME&IE activities initiating during the First Quarter (July 2021 to September 2021) of second year i.e., July 2021 to June 2022 is listed below. Time span detail is mentioned in the Tentative Work Plan. **Annex-A.**

5.1 PRE-FIELD ACTIVITIES

- Preparation for Base Line Survey-II
- Improvement / Refinement of Monitoring Tools in the light of lessons learnt during BLS-I

5.2 FIELD ACTIVITIES

- Regular Monitoring of Interventions in the field by ME&IE Field Teams / Data Collation for Baseline Survey-II
- Meetings and trainings
- Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring
- Training of field staff and Key staff on Survey Manual of MTs and Android Base System
- Training of Measurement of water flow by Pygmy current meter
- Data entry, Data cleaning, Data processing & data Analysis
- Development of web site of NPIWC-II
- Improvement of Android based Mobile Application as per Improved MTs
- Testing of Monitoring tools on Android based system
- Data collection of interventions in MIS/GIS database
- Designing / Launching of dashboard of Project Interventions
- Meeting of DTLs with respective DTL of NWMC
- Deliverables

5.3 MATRIX OF RESPONSIBILITIES

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

5.4 DELIVERABLES

The detail of deliverables of ME&IE Consultants with the timelines is as under in **Table 5.1.**

Table 5.1: Detail of Deliverable

No.	Activities Planned for the Reporting Quarter		Status	
1	Pre-field Activities:			
1.1	Preparation for 2 nd Phase Baseline Survey (Finalization of MTs)		Complied	
1.2	Internal Meetings of ME&IE Consultants’ Zonal Office for development of Methodology 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/continued for current year	
2.2	Data Collection of the Interventions in the Field		Complied/ in progress	
2.3	Baseline Survey Stagee-2		Data Collection is in progress	
2.4	Online data entry in android based application		In progress	
3	ICT Assignment:			
3.1	Development / Improvement of web site 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/Dashboard		Complied	
3.5	Designing & Launching of Dashboard, Data Cleaning for Dashboard, Training Client’s staff on Dashboard		Complied	
4	Coordination			
4.1	Meetings of TL with NPC and OFWM departments regarding Project Progress / issues		Meetings conducted	
4.2	Meetings of DTLs with respective DTL of PC & concerned OFWM departments		Meetings conducted	
5	Deliverables:			
5.1	Monthly Monitoring Report (MMR)	16 th MMR (APR 2022) 17 th MMR (MAY 2022) 18 th MMR (JUN 2022)	Submitted Submitted To be submitted on Stipulated time	
5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER (JAN-MAR 2021) QM & ER (OCT-DEC 2021) QM & ER (APR-JUN 2022)	Submitted Submitted Report in hand to be submitted on Stipulated time	
5.3	Annual Monitoring & Evaluation Report (2 nd)	July 2021-June 2022	To be submitted on Stipulated time	
5.4	Baseline Survey Phase-II	Data Collection in the field is in progress		

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

6 ISSUES NEED TO BE ADDRESSED

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

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

ANNEXES A to H

ANNEX-A: TENTATIVE WORK PLAN

ANNEX - A: TENTATIVE WORK PLAN

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

ANNEX-B: MATRIX OF RESPONSIBILITIES

ANNEX - B: MATRIX OF RESPONSIBILITIES

MATRIX OF RESPONSIBILITIES

SR. NO.	DELIVERABLE / ACTIVITIES	LEGEND			
		<p>● Primary Responsibility</p> <p>○ Secondary Responsibility</p> <p>○ Assistance</p>			
		NPC-FPMU	Agriculture Dept. (QEMM)	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

Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
C2: Watercourses Improvements	Improvement of 47,278 watercourses on cost sharing basis: 40% farmers in terms of labour, and 60% funded by project.	a) Establishment of 47,278 Water users' associations (WUAs); b) Registration of 47,278 WUAs; c) Improvement and realignment of earthen section of 47,278 watercourses; d) Lining of up to 50% length of 47,278 watercourse either by: <ul style="list-style-type: none"> • Precast concrete parabolic lining (PCPL) segments, or • Rectangular brick masonry, or 	a) 47,278 WCAs established; b) 47,278 WCAs registered; c) 47,278 watercourses improved and lined;	a) Conveyance losses for improved watercourses decreased by about 15 percentage points. b) 1.654 million households benefited from the activity; c) 11.347 million acres served with improved watercourses	a) Increase in cropping intensity on improved watercourses by 5-24%; b) Increase in crop yields. c) Increase in irrigated area d) Increase in agriculture output per unit of water by about 37%	a) Increase in farm income; b) Increase in employment for farm labour; c) Reduction in poverty; d) Enhanced food security for the country.	a) The water flow measurements will be carried out at before and after watercourse improvement on 2-5% sample basis; b) Agriculture survey before and after watercourse improvement on 2-5% sample basis; c) The survey will determine: <ul style="list-style-type: none"> • Cropping pattern before and after the improvement; • Cropping intensities before and after improvement;

Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
		any other method as approved by the project					<ul style="list-style-type: none"> • Before and after crop yields; • Before and after employment; d) The difference between before and after will be considered the result of the intervention after netting out the contribution of the growth pattern of the crop sector otherwise.
C3: Construction of Water Storage Tanks (WSTs)	a) Construction of 14,932 water storage tanks	a) 14,932 small farmers mobilized to construct water storage tanks for irrigation	a) 14,932 WSTs constructed b) 14,932 WSTs operated and maintained	a) Water which was otherwise largely going to be wasted is saved b) Irrigation provided at	a) More area irrigated b) Increased cropping intensities	a) Increased crop yields b) Increased total crop output quantum c) Increased farm income	a) 2-5% sample of WSTs will be surveyed b) A data collection form will be designed to measure water

Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
		b) They agree to contribute 40% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 40% on issuance of FCR		critical stages of the crops c) Flexibility achieved for irrigation		d) Increased farm employment	saving due to WSTs c) The forms used for baseline and impact surveys in case of 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	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	a) Water application efficiency increased at field level; b) Even germination of seed. c) Field application losses reduced by 10	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

Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
	50% by the project.			by 11,610 units.	percentage points d) Water productivity increased by 24%		agriculture sample surveys. b) 2-4% sample units will be visited by ME&IE Consultants teams after one years of delivery c) The unit will be verified d) Area treated during the year will be collected e) Farmers' feedback collected on quality of the unit, quality of the after-sale service, etc.

ANNEX-D: DELIVERABLES/REPORTING REQUIREMENTS

ANNEX - D: DELIVERABLES/REPORTING REQUIREMENTS

Deliverables/Reporting Requirements

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

ANNEX - E: MINUTES OF NPC MEETING IN QUETTA OFFICE DURING HIS VISIT

MINUTES OF MEETING

Meeting Date & Time	9 th June, 2022 (10:30 AM – 02:00 PM)	Meeting Venue	Zonal Office, ME&IEC, Quetta, Balochistan
Meeting Title	Meeting with the National Project Coordinator (NPC), NPIWC-II and Team Leader, NPIWC-II		
Meeting Chair	National Project Coordinator (NPC), NPIWC-II		

Participants:

Followings members of ME&IECs Team attended the meeting:

SR No.	Name	Designation - Department
1.	Mr. Muhammad Asif Kakar	National Project Coordinator (NPC), NPIWC-II, Islamabad
2.	Dr. Usman Mustafa	Team Leader (TL), ME&IECs for NPIWC-II, Islamabad
3.	Mr. Rizwan Ahmed	Deputy Team Leader, Balochistan (DTLB), ME&IECs. NPIWC-II, Quetta, Balochistan
4.	Mr. Manzoor Ahmed Kasi	Monitoring and Evaluation Expert/Field Team In charge (FTI)
5.	Mr. Tariq Khoso	Monitoring and Evaluation Expert/Field Team In charge
6.	Mr. Naseeb Jan	Monitoring and Evaluation Expert/Field Team In charge
7.	Ms. Mah Gul Noor	Monitoring and Evaluation Officer
8.	Mr. Basit Ahmed	Monitoring and Evaluation Officer
9.	Mr. Saleem Abro	Monitoring and Evaluation Officer
10.	Mr. Hamza H. Qureshi	Monitoring and Evaluation Officer
11.	Mr. Syed Abrar Hussain	Manager Admin and Accounts

A meeting was held on 9th June 2022 in the office of ME&IECs Zonal Office, Quetta, Balochistan. Meeting was chaired by Mr. Asif Kakar, National Project Coordinator (NPC), NPIWC-II. Following agenda points were discussed in the meeting:

Meeting Agenda:

- Introduction of Zonal office staff
- Field Progress.
- Office Administration.
- Issues, Problems and Gaps.

The meeting started with the recitation of the verses from the Holy Quran. The DTB welcomed the NPC, NPIWC-II and TL, ME&IE Consultants, NPIWC-II.

Following are the point of discussion, action taken, responsible person, and timeline:

SR#	Key Points	Discussion and Action Taken/Response	Responsible person / Department	Timeline
1.	Staff introduction and status	<ul style="list-style-type: none"> ME&IE zonal office field staff introduced themselves to NPC and TL. DTLB presented the staff details along with their camp offices. He further informed that in order to have better co-ordinations with line departments Mr. Manzoor Ahmad Kasi, FTI is performing as "Focal Person" for the representation of ME&IE, Balochistan Zone Office besides his own duties. In this connection NPC inquired about the official documentation. DTLB informed that there is no formal notification. NPC advised DTLB to have formal notification about this and circulate it with all stakeholders. 	DTLB	14/06/2022
2.	DTL presented progress of the Balochistan team from June, 2021 to June 9 th 2022.	<ul style="list-style-type: none"> NPC highlighted that the field activities are not up to the mark. Only one Baseline Survey (BLS) report has been submitted. TL informed NPC that Balochistan region progress is much higher as of other regions. Their contribution in BLS is more than 65%. DTLB also informed the NPC that baseline phase-II is continue and hopefully all targets will be achieved as per the work plan. Furthermore, TL ensured the NPC that there will be no further delays in field activities as resources are on the way. 	DTLB with the TL support.	30 th June, 2022
3.	NPC inquired about the progress of Dashboard in Balochistan.	<ul style="list-style-type: none"> DTLB briefed about Dashboard that there are many gaps in the data received from OFWM Balochistan due to which the Dashboard is pending. 	IT Team	15 th July, 2022

SR#	Key Points	Discussion and Action Taken/Response	Responsible person / Department	Timeline
		<ul style="list-style-type: none"> TL informed NPC that IT Specialist, should visit and discuss the issue with concerned staff of OFWM, Balochistan, and look for a solution regarding the Data completion and Dashboard. 		
4.	Shifting of office building	<ul style="list-style-type: none"> DTLB briefed that the new office building was selected as of your instruction during your last visit. Just waiting for final approval. TL advised DTLB to send all requirements so this case got approval. 	DTLB	30 th June, 2022
5.	Vehicles status	<ul style="list-style-type: none"> DTLB briefed about the vehicles previously provided to the field teams. The field vehicles were not suitable for field activities because they were older models. He further briefed that the contract of those vehicles has been canceled and the vehicles returned to the contractor. TL instructed DTLB to follow rules for the acquisition of Vehicles. 	DTLB	30 th June, 2022
6.	Field equipment status	<ul style="list-style-type: none"> NPC inquired from the DTLB about the provision of proper field equipment; pygmy meter, measuring wheel, measuring tape, and android devices, to the field staff. DTLB informed that measuring wheels, measuring tape and one pygmy meter are available for field staff. However, android systems and 02 more pygmy meters are required. In this connection, TL responded that as the funds are now available, android devices will be provided accordingly. 	TL and Accounts Section	15 th July, 2022
7.	Status of Office Equipment	<ul style="list-style-type: none"> NPC inquired about DTLB's acquisition of office equipment; laptops, photocopier, scanner, printers, Projector, etc. DTLB stated that laptop, computers have been provided, however a 		15 th July, 2022

SR#	Key Points	Discussion and Action Taken/Response	Responsible person / Department	Timeline
		<p>photocopier/printer and projector are required.</p> <ul style="list-style-type: none"> NPC made contact with Ch. Saif Sahib, G3EC and directed him to make sure that all these equipment to be provided as soon as possible. 	Team Leader and Accounts Section	
8.	Camp offices	<ul style="list-style-type: none"> DTLB briefed about the status of the position of the camp offices of Nasirabad and Zhob. There is no official office. NPC objected to the posting of FTIs in camp offices without establishing the field offices and directed for proper official field offices. 	DTL, Balochistan	15 th July, 2022
9.	Delay and deductions in salaries, and annual increments of employees	<ul style="list-style-type: none"> M&E officer complaints about not receiving timely salaries. Furthermore, in some cases their salaries are deducted on account of their entitled leaves and there is no annual increment. There was no deduction in salaries made on the end of the Client as NPC confirmed from his office. Therefore, there should not be any deduction from consultants' office and the deducted amount should be reimbursed to concerned officers accordingly. As of now salaries bill up to May 2022 and some other pending bills are cleared and paid to consultants. All employees must be paid their salaries up to May 2022 at the earliest by consultants and Consultants must follow Project Administration Manual (PAM). 	TL (NPIWC-II), DTL (Balochistan) and Accounts Section	30 th June, 2022
10.	TA/DA and hoteling policy	<ul style="list-style-type: none"> NPC informed by the participants that no clear TA/DA and hoteling policy was implemented. NPC instructed to follow Project Administration Manual (PAM) in true form and spirit. 	PBOMs of G3EC and EASE PAK	30 th June, 2022
11.	Yearly increment on the salaries of	<ul style="list-style-type: none"> Participants highlighted that there is no yearly increment. Although it has been mentioned in the Project Administration Manual 	Accounts Section and TL&DTLB	30 th June, 2022

SR#	Key Points	Discussion and Action Taken/Response	Responsible person / Department	Timeline
	the ME&IECs Staff.	(PAM). (Page#41) (Ref.: Section 6.3: HR Policy Governing Charged Staff). <ul style="list-style-type: none"> • NPC directed the TL and DTLB to follow the protocol mentioned in PAM regarding the annual Increment of Salaries. 		
13.	.	<ul style="list-style-type: none"> ○ NPC ensured full cooperation and support by him and his team for the ME&IECs. ○ He also briefed the forum that all the funds have been released from the client office and instructed the TL and DTLB to make sure before July, all field related and administrative issues to be solved at the earliest and the PAM to be effectively implemented. ○ He reinsured TL and DTLB his commitment and availability for the implementation of today's meeting decisions ○ TL and DTLB ensured NPC that they will extend their utmost efforts for effective and efficient working of the project. 	NPC / Team Leader and DTLB	30 th June, 2022

The meeting adjourned with a vote of thanks from the Chair, NPIWC-II, at 02:00 PM.

Mr. Rizwan Ahmed
Deputy Team Leader, Balochistan
ME&IECs, NPIWC-II,
Quetta, Balochistan

ANNEX - F: MINUTES OF NPC MEETING HELD IN ZONAL OFFICE LAHORE

June 24, 2022

Subject: **Draft Minutes of Meeting with the National Project Coordinator Islamabad**

The meeting was held on June 23, 2022 in the DTL Punjab Zonal office at 11.50 a.m. The following attended.

- Muhammad Asif Kakar, In Chair
National Project Coordinator
NPIWC-II, Islamabad
- Rana Muhammad Usman NPC Islamabad
- Dr. Usman Mustafa
Team Leader-ME&IE Consultants Islamabad
- Dr. Muhammad Abdul Quddus
Agricultural Economist, National Office,
Islamabad
- Muhammad Yousaf Bhatti, DTL- Punjab Zonal
Office, Lahore
- Rizwan Saleem, ICT Specialist National office Islamabad

Dr. Usman Mustafa, TL along with the Punjab Zonal Office Team welcomed National Project Coordinator (NPC), Muhammad Asif Kakar. Dr. Muhammad Abdul Quddus recited a few verses from The holy Quran. The DTL Punjab presented the up-to-date progress / achievement along with the issues / problems faced regarding the data collection from the client and from the field.

The NPC comprehended the presentation and addressed the issues / problems faced by the Punjab Zonal office and field team members. The NPC said that last year we surrendered Rs. 4.5 billion but this year we not only spent all of the budget but also demanded more funds for the NPIWC-II project. The participants pointed out / informed the NPC about the present Punjab Zonal office's location which is far away from the client leading consultant's office. It has many other problems. The NPC directed the DTL, Punjab to rent another office (As per the rules) near to the client office along with all the accessories such as parking for the vehicles and office cum residential facility there. This new office should be functional by August 1, 2022 positively. NPC also showed his concern that no ghost employee will be acceptable.

Rana Usman asked about the development of Website, while the ICT specialist responded that the ICT team is working on the development of the website. As far as Dashboard of Punjab NPIWC-II is concerned, ICT specialists responded that Punjab DGA (OFWM) is not providing the Data for the development of the dashboard. ICT also informed him that he got the email from the DGA office and that email will be shared with the NPC.

The NPC also conducted an introduction session with the field team members and asked various technical questions from the field team members and each field team member responded satisfactorily.

After the deliberation the following decisions were taken.

Decisions

- Current office should be shifted near to the client office and this task may be completed by August 1, 2022, positively.
- Inventory of the Punjab Zonal Office be prepared and submit to the NPC office on priority.
- The dashboard task in Punjab should be developed by Mr. Rizwan Saleem ICT Specialist on priority basis. In this regard, he should request to the NPC so that NPC direct the DGA (OFWM) to provide the required data and relevant information needed for the Dashboard development and application. NPC also directed him to attend the meeting in Islamabad held on 28 - 06 – 2022.
- The TA / DA to the field staff members may be accorded as per the rules
- The salary to all ME&IE consultants staff members be given on the first date of each month.
- The data devices for the data collection should be procured for all field team members and handed over for smooth functioning of the data collection.

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

ANNEX - G: MINUTES OF NPC MEETING HELD IN NATIONAL OFFICE ISLAMABAD

June 28, 2022

Subject: **Draft Minutes of Meeting with the National Project Coordinator Islamabad**

After concluding BOM Meeting, NPC visited National Office Islamabad along with his staff. Team Leader and all the office staff welcomed NPC. A short meeting was also held. After meeting with consultants NPC met all the office staff listened their issues. Following attended the meeting.

- Muhammad Asif Kakar, In Chair
National Project Coordinator
NPIWC-II, Islamabad
- Mr. Saif ul Islam
Deputy National Program Coordinator, NPIWC-II
- Dr. Tahmena Iqbal
Deputy NC, NPIWC-II
- Mr. Muhammad Naeem
Deputy National Project Coordinator, WCBA KP
- Hafiz Abdul Rauf
CEO EASE PAK
- Dr. Usman Mustafa
Team Leader-ME&IE Consultants Islamabad
- Mr. Irfan
Director CSRD,

After a short meeting NPC met all the office staff and listened their issues

Decisions

- As payment pending payments has been made to consultants, salaries of all the staff should paid upto June 2022
- The TA / DA to the field staff members may be accorded as per the rules
- The salary to all ME&IE consultants staff members be given on the first date of each month.
- The data devices for the data collection should be procured for all field team members and handed over for smooth functioning of the data collection.

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

ANNEX - H: MINUTES OF 4TH BOM MEETING HELD IN NPC OFFICE

July 05, 2022

Draft

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

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

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

Beside PBOM members following person also attended the meeting:

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

Account Officer, ME&IE Consultants

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

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

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

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

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

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