



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

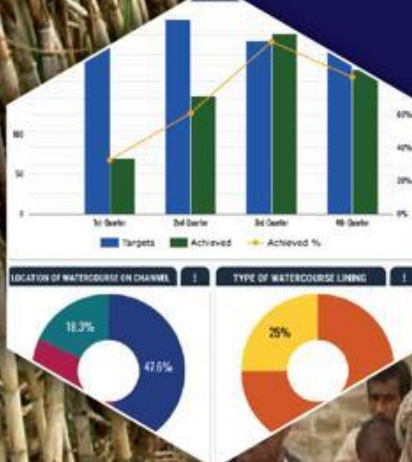
NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN PHASE-II: (NPIWC-II)

MONITORING, EVALUATION AND IMPACT EVALUATION CONSULTANTS



QUARTERLY MONITORING & EVALUATION REPORT

JAN TO MAR 2024



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



EASE-PAK
Consultants (Pvt.)

ADA
Consultants (Pvt.)

In Association with S&S Associates



Federal Project Management Unit (FPMU)
Ministry of National Food Security & Research, Islamabad
Monitoring, Evaluation and Impact Evaluation (ME&IE) Consultants
For
National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)
QUARTERLY MONITORING AND EVALUATION REPORT
JANUARY – MARCH 2024

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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

EXECUTIVE SUMMARY

The report in hand, “Quarterly Monitoring and Evaluation Report for the period of 1st January 2024 to 31st March 2024 is comprised of five chapters.

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

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

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

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

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

Chapter -3 of this report covers the detail of ME&IE Consultants’ activities initiating during the reporting period (1st January 2024 to 31st March 2024) as listed below:

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

Chapter 3 also summarizes the compliance status of tentative Quarterly Work Plan.

Chapter-4 of this report describes the activities completed during the reporting period as summarized below:

- Regular Monitoring of the Interventions in the Field
- Baseline & Endline Impact field visits
- Monitoring of online data collection and Data entry
- Monitoring through Android-based Mobile Application under implementation by field staff.
- Data collection of interventions in MIS/GIS database
- Preparation for 3rd-Phase Baseline Surveys
- Submitted the MMRs for the months of December 2023, January 2024 and February 2024.
- Submitted the QM&ER for Oct 2023 to Dec 2023.
- Special Report on Water Saving Through NPIWC-II Project Interventions
- Special Report on Monitoring and Impact Evaluation of Precision (Laser) Land Leveling
- Special Report on Monitoring, Evaluation, and Impact Analysis of The Project “NPIWC-II”.
- Meetings of ME&IE Consultants with the respective Stakeholders about Project Progress / Issues in hand and its prospects.
-

Chapter-5: highlights the problems faced by the consultants during the ME&IE activities of the 3rd Quarter (January 2024 to March 2024). Due to non-availability of data from NWMC (NESPAK) & respective Directorates, and resources from Client, ME&IE Consultants have been facing constraints for timely completion of the activates of the targeted assignments.

Table-ES-1: Compliance Status of Quarterly Tentative Work Plan, 1st January 2024 to 31st March 2024

No.	Activities Planned for the Reporting Quarter		Status	
1	Pre-Field Activities			
	1.1	Refresher Training of Field Staff for Baseline Survey & End Line Impact Survey	Completed	
2	Field Activities:			
	2.1	Regular Monitoring of Interventions in the field	In Progress	
	2.2	Data collection of the interventions in the field	In Progress	
	2.3	Baseline & Endline Impact field Survey	In Progress	
	2.4	Online data entry in android-based application	In Progress	
3	ICT Assignment:			
	3.1	Improvement of website of NPIWC-II	In Progress	
	3.2	Monitoring online data collection and Data entry	In Progress	
	3.3	Monitoring Android based Mobile Application under implementation by field staff.	In Progress	
	3.4	Data collection of interventions in MIS/GIS database	In Progress	
	3.5	Capacity Building Trainings / Refresher of Departments	In Progress	
	3.6	Data Cleaning.	In Progress	
4	Coordination			
	4.1	Meetings of TL, ME&IE Consultants with NPC regarding Project Progress / Issues	Meetings conducted regularly	
	4.2	Meeting of DTLs with respective DTL of NWMC	Meetings conducted regularly	
	4.3	Internal Meetings of ME&IE Consultants	Weekly meetings conducted on regular basis	
5	Deliverables:			
	5.1	Monthly Monitoring Reports (MMRs)	36 th MMR (Dec 2023)	Submitted
			37 th MMR (Jan 2024)	Submitted
			38 th MMR (Feb 2024)	Submitted
			39 th MMR (Mar 2024)	Submitted
	5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER Oct-Dec 2023	Submitted
			QM&ER Jan-Mar 2024	Report in Hand
	5.3	Special Reports	Water Saving Through NPIWC-II Project Interventions	Submitted
			Monitoring and Impact Evaluation of Precision (Laser) Land Leveling	Submitted
Monitoring, Evaluation, and Impact Analysis of The Project “NPIWC-II”.			Submitted	

CHAPTER-1: INTRODUCTION

1.1 PROJECT PROFILE

Project Name	National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)
Project Areas	Punjab, KP, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir, and Islamabad Capital Territory (ICT)
Sponsoring Agency	Ministry of National Food Security & Research
Executing Agencies (EAs)	Following are different EAs: <ul style="list-style-type: none"> i. Federal Project Management Unit (FPMU), ii. DGA OFWM Punjab iii. DGA OFWM KP iv. DGA OFWM Balochistan v. Director Irrigation and Small Dams, AJK vi. Director WM, GB vii. Director Agriculture Extension Services (AES) ICT
Project Period	5 Year (2019-2024)
Total Project Cost	154,542.355 million (Umbrella PC-1, including Sindh)
ME&IE Consultancy Period	4 year
ME&IE Consultant:	JV of G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering Services (Pvt.) Ltd., Centre for Social Research and Development (CSR) and ADA Consultants Inc. Canada
ME&IE Consultant Mobilized	November 07, 2020

1.2 PROJECT DESCRIPTION

1.2.1 PROJECT DEVELOPMENT OBJECTIVES

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

1.2.2 PROJECT OBJECTIVES – GENERAL & QUANTITATIVE

1) General Objectives:

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

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

2) Quantitative Objectives:

The quantitative objectives of the Project are as under:

The DTL, Balochistan shared updated progress of Balochistan zone and discussed other issues. The Focal Person and FTI, Naseerabad Zone also attended the meeting.

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. Crop's yield is estimated to increase by 10-15%.
- iv. Equity in water distribution increased by about 30%.
- v. Reduction in water disputes/thefts and litigation amongst the Farmers over water distribution by about 80%.
- vi. Help poverty reduction through generation of employment.
- vii. Self-sufficiency in food through utilization of water saved for edible oil seed production.

Project indirect benefits to industry/economic activities

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

Awareness support to farmers

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

1.3 PROJECT BENEFICIARIES

Majority of the direct project beneficiaries constitute the number of farmers (owners as well as tenants) growing crops and orchards on the watercourses improved under NPIWC-II. Assuming 35 farmers on each watercourse, the total number of the farmers benefiting from the activity comes to 1.655 million. The same number will benefit due to Water Users' Associations (WUAs) in terms of cooperative management of irrigation water. Moreover, 14,932 will directly benefit from Water Storage Tanks and 11,620 as recipients of Laser Land Leveling Units. Thus, total gross direct beneficiaries are expected to be around 3.336 million households. However, net beneficiaries are expected to be 1.668 million.

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

1.4 PROJECT COMPONENTS

The NPIWC-II comprises of four components:

C1: ORGANIZATION OF WATER USERS ASSOCIATIONS:

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

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

C2: WATERCOURSE IMPROVEMENTS:

47,278 Watercourses are planned to be improved / reconstructed and lined:

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

C3: CONSTRUCTION OF WATER STORAGE TANKS:

Construction of 14,932 Water Storage Tanks (WSTs).

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

C4: PROVISION OF LASER LAND LEVELING UNITS:

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

1.4.1 PROJECT TARGETS

Project aims at achieving the targets (Figure-1.1) for 5 years starting from year 2019-20 to 2023-24. The

targets for each province/Zone (excluding Sindh) are given in below Figure-1.2.

Project Targets:

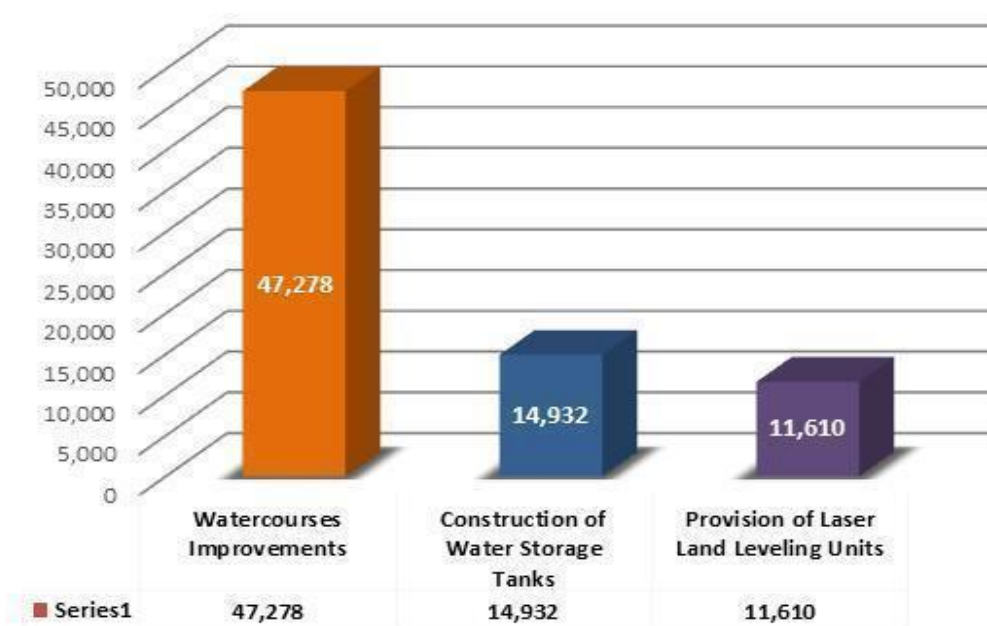


Figure-1.1: Pakistan Targets

Zonal Targets:

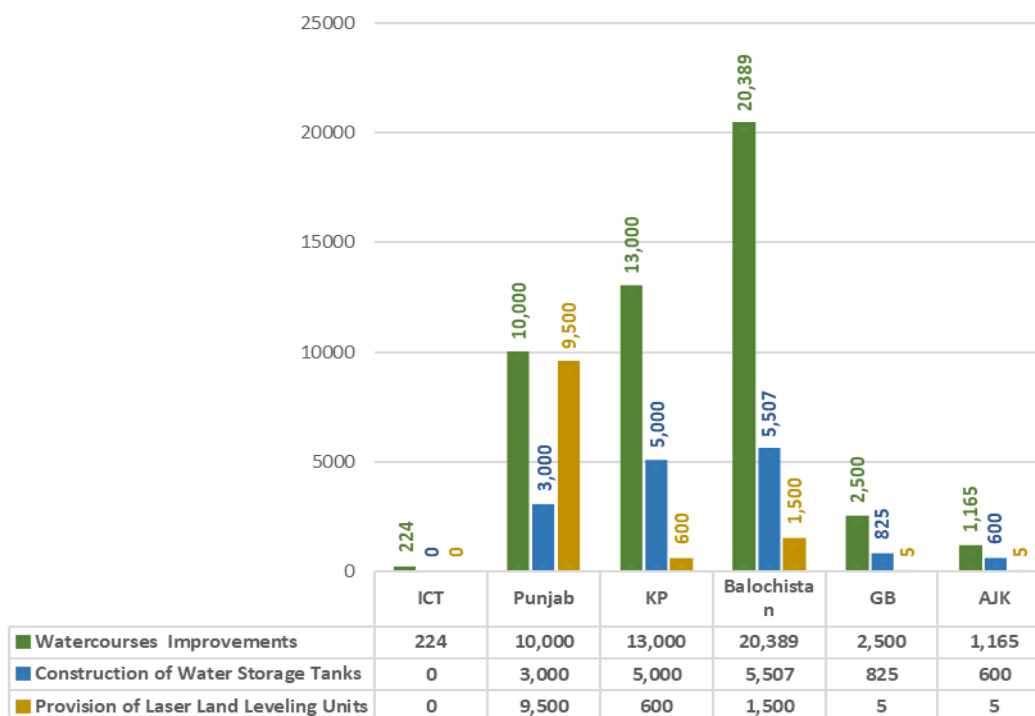


Figure-1.2: Zonal Targets

CHAPTER 2: SCOPE AND SERVICES OF ME&IE CONSULTANTS

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

2.1 OBJECTIVES

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

2.2 SCOPE OF THE SERVICES

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

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

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

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

2.3 MONITORING STRATEGY

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

and procedures to carry out the Monitoring, Evaluations and Impact Evaluations of the project interventions were explained in Chapter 6 of Inception Report. The strategy aims at 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 a 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
			<p>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> <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> <p>Based on water savings on sample LLL units, total water savings will be estimated for all project LLL units. The savings will be reported per LLL unit, per annum and aggregate for the project in LPS and in Acre feet.</p>
4	Community mobilization	Social and Gender Specialist and Socio-Economic Expert	<p>The extent of community mobilization will be assessed by investigating whether:</p> <ul style="list-style-type: none"> • WUAs is functional • Holds regular meetings and keep record of them • Makes decisions democratically • The participation in the organization is voluntary • It is financially and administratively sustainable • Takes steps and ensures maintenance of watercourses, WSTs and laser land leveler
5	Economic benefits assessment for agriculture	Team Leader, Socio- Economist and Agricultural Economist	<ul style="list-style-type: none"> • As indicated at serial No. 1, Agriculture data will be collected before (baseline) and after (impact) the watercourse improvement and WSTs construction. • In both the surveys same forms will be used and same sampled farmers will be interviewed • Data on variables such as crop yields, irrigated area, cropping pattern, cropping intensity, farm income and employment will be collected and analyzed • The difference between before and after situations minus natural growth will be assumed as economic benefits to the agriculture
6	Impact evaluation-on	Team Leader, Agricultural	<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

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
	the economy	Economist and Socio-Economic Expert	<p>estimated. It is benefit towards food security</p> <ul style="list-style-type: none"> Project costs and benefits will be compared in economic and financial terms to carry out economic and financial analysis. Parameters like IRR, NPV and BCR will be estimated.
7	Impact evaluation-on the stakeholders	Team Leader, Agricultural Economist & 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 leveling units, the interventions will be spot checked for quality of construction, material, functioning and beneficiaries' satisfaction etc.
9	Process monitoring	Field Teams of Agriculture Deptt., Project Consultants, ME&IE Consultants & ICT/Technology Specialist	<ul style="list-style-type: none"> The process data for all the interventions will be fed to the MIS/GIS database. Client's field staff and field teams of consultants will furnish data of their activities. The ME&IE will assist in developing mobile application for this purpose From this data reports will be generated for process monitoring All interventions will be fully (100%) covered.
10	Project website and MIS/GIS dashboard development	ICT / Technology Specialist (Including all other core team staff will also coordinate in completing data for the MIS/GIS	<ul style="list-style-type: none"> The State-of-the-art MIS / Progress Monitoring Model will be developed for NPIWC-II. Customized forms will be developed to collect data from the implementing teams on-site for progress monitoring These forms will be made available to the teams on smart phones through an android application The teams will be adequately trained to use the application Data on physical and financial stages with dates will be fed to the system for process monitoring GIS coordinates for watercourses, WSTs, laser units (if available) and WUAs offices will be uploaded to the system and could be viewed / reached by the management online The system will be maintained on GOOGLE server so that it is accessible by the management from anywhere in Pakistan and abroad Custom reports will be possible as the user demands / desires The results could be displayed on small as well as large screens.
11	Development of Android based application	ICT / Technology Specialist	All the data collection forms / tools will be executed through customized developed Android based applications accessible with smart phones / TABs.

2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS

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

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

CHAPTER 3: WORK PLAN OF THE CONSULTANTS FOR THIRD QUARTER

3.1 COMPLIANCE STATUS OF WORK PLAN OF 1ST QUARTER JAN-MAR 2024

The activities of ME&IE Consultants commencing in the 3rd Quarter of 2024 (from 1st January 2024 to 31st March 2024) are outlined below. For a detailed breakdown of the time frame, please refer to the tentative Work Plan for the 3rd Quarter of 2024 provided in **Annex-A**.

3.1.1 Pre-Field-Activities

- Refresher Training of Field Staff for Baseline Survey & End Line Impact Survey

3.1.2 Field Activities

- Regular Monitoring of Interventions in the field
- Data collection of the interventions in the field
- Baseline & Endline Impact field Survey
- Online data entry in android-based application

3.1.3 ICT Assignment

- Improvement of the website of NPIWC-II
- Monitoring online data collection and Data entry
- Monitoring Android-based Mobile Applications under implementation by field staff.
- Data collection of interventions in MIS/GIS database
- Capacity Building Training / Refresher of Departments
- Data Cleaning.

3.1.4 Coordination

- Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues
- Meeting of DTLs with respective DTL of P C & concerned OFWM Departments
- ME&IE Consultants Internal Meetings

3.1.5 Deliverables

- Monthly Monitoring Reports
- Quarterly Monitoring & Evaluation Report (QM&ER)
- Special Reports (Various)

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

Document	Status
Draft Inception Report	Submitted
Final Inception Report	Submitted
Monthly Monitoring Report-First (DEC 2020-JAN 2021)	Submitted
Monthly Monitoring Report-Second (FEB 2021)	Submitted
Monthly Monitoring Report-Third (MAR 2021)	Submitted
Quarterly Monitoring & Evaluation Report-First (JAN-MAR 2021)	Submitted
Monthly Monitoring Report-Fourth (APR 2021)	Submitted
Monthly Monitoring Report-Fifth (MAY 2021)	Submitted
Monthly Monitoring Report-Sixth (JUNE 2021)	Submitted
Quarterly Monitoring & Evaluation Report-Second (APR-JUN 2021)	Submitted
Annual Monitoring & Evaluation Report (1 st)	Submitted
Monthly Monitoring Report-Seventh (JULY)	Submitted
Monthly Monitoring Report-Eighth (AUG 2021)	Submitted
Baseline Survey Report-I	Submitted
Monthly Monitoring Report-Ninth (SEPTEMBER 2021)	Submitted
Quarterly Monitoring & Evaluation Report-Third (JULY - SEPTEMBER 2021)	Submitted
Monthly Monitoring Report-Tenth (OCTOBER 2021)	Submitted
Monthly Monitoring Report-Eleventh (NOVEMBER 2021)	Submitted
Monthly Monitoring Report-Twelfth (DECEMBER 2021)	Submitted
Quarterly Monitoring & Evaluation Report-Fourth Quarter year 2021 (OCTOBER – DECEMBER 2021)	Submitted
Monthly Monitoring Report-Thirteenth (JANUARY 2022)	Submitted
Monthly Monitoring Report-Fourteenth (MARCH 2022)	Submitted
Monthly Monitoring Report-Fifteen (MARCH 2022)	Submitted
Quarterly Monitoring & Evaluation Report-Third Quarter year 2022 (JANUARY – MARCH 2022)	Submitted
Monthly Monitoring Report-	Submitted

Document	Status
Sixteen (APRIL 2022)	
Monthly Monitoring Report-Seventeenth (MAY 2022)	Submitted
Monthly Monitoring Report-Eighteenth (JUNE 2022)	Submitted
Quarterly Monitoring & Evaluation Report-4 th Quarter year 2022 (APRIL – JUNE 2022)	Submitted
Annual Monitoring & Evaluation Report (2 nd) Jul 2021-June 2022	Submitted
Monthly Monitoring Report-Nineteenth (JULY 2022)	Submitted
Monthly Monitoring Report-Twentieth (AUGUST 2022)	Submitted
Monthly Monitoring Report-Twenty First (SEPTEMBER 2022)	Submitted
Quarterly Monitoring & Evaluation Report- 1 st Quarter year 2022 (JUL – SEP 2022)	Submitted
Monthly Monitoring Report-Twenty Second (OCTOBER 2022)	Submitted
Monthly Monitoring Report-Twenty Third (NOVEMBER 2022)	Submitted
Monthly Monitoring Report-Twenty Fourth (DECEMBER 2022)	Submitted
Quarterly Monitoring & Evaluation Report-2 nd Quarter year 2023 (OCT – DEC 2023)	Submitted
Monthly Monitoring Report-Twenty Fifth (JANUARY 2023)	Submitted
Monthly Monitoring Report-Twenty Sixth (FEBRUARY 2023)	Submitted
Monthly Monitoring Report-Twenty Seventh (March 2023)	Submitted
Monthly Monitoring Report-Twenty-eighth (April 2023)	Submitted
Quarterly Monitoring & Evaluation Report-3 rd Quarter year 2023 (JAN – MAR 2023)	Submitted
Monthly Monitoring Report-Twenty-Ninth (May 2023)	Submitted
Monthly Monitoring Report-Thirtieth (June 2023)	Submitted
Monthly Monitoring Report-Thirty First (July 2023)	Submitted
Monthly Monitoring Report-Thirty Second (August 2023)	Submitted
Monthly Monitoring Report-Thirty Third (September 2023)	Submitted
Quarterly Monitoring & Evaluation Report-1 st Quarter year 2023-24 (Jul – Sep 2023)	Submitted
Monthly Monitoring Report-	Submitted

Document	Status
Thirty Fourth (October 2023)	
Monthly Monitoring Report-Thirty Fifth (November 2023)	Submitted
Monthly Monitoring Report-Thirty Sixth (December 2023)	Submitted
Quarterly Monitoring & Evaluation Report-2 nd Quarter year 2023-24 (Oct – Dec 2023)	Submitted
Monthly Monitoring Report-Thirty Seventh (January 2024)	Submitted
Monthly Monitoring Report-Thirty Eighth (February 2024)	Submitted
Monthly Monitoring Report-Thirty Ninth (March 2024)	Submitted
Quarterly Monitoring & Evaluation Report-3 rd Quarter year 2023-24 (Jan – Mar 2024)	Report in hand
Baseline Survey Report -I	Submitted
Baseline Survey Report - II	Submitted
Baseline Survey Report-II (Updated version WC)	Submitted
Baseline Survey Report -II (Draft version of WSTs)	Submitted
Mid-Line Monitoring & Impact Evaluation Report	Submitted
Consolidated Baseline Survey Report (Phase-I&II) Draft	Submitted
Baseline (Phase I&II) Consolidated Report	Submitted
Mid-Term Monitoring and Impact Evaluation Report	Submitted
Special Reports submitted: 1) Monitoring Tools 2) Survey Manual on MTs 3) PAM 4) Working Paper on Technology and Methodology for Implementation of Android Based Field Progress Data Collection and GIS Based Progress Monitoring Analytical Dashboard. 5) Survey Methodology & Questionnaires for Baseline Survey Phase-II 6) Baseline-End Line Manual Survey Manual 7) Android Application PMIS Dashboard Manual 8) Survey Manual on MTs (Updated)	Submitted

Document	Status
9) Water Saving Through NPIWC-II Project Interventions	
10) Special Report on Monitoring and Impact Evaluation of Precision (Laser) Land Leveling	
11) Monitoring, Evaluation, and Impact Analysis of The Project "NPIWC-II".	

* The Yellow highlighted deliverables mentioned above were submitted during the reporting period as specified in the QM&ER.

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

3.2 MATRIX OF RESPONSIBILITIES

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

CHAPTER 4: ACTIVITIES DURING THE REPORTING QUARTER

4.1 INTRODUCTION

The Quarterly Monitoring & Evaluation Report (QM&ER) provides an overview of our comprehension of all the activities outlined in the ME&IE assignment's Terms of Reference (TORs) and their timely execution within the prescribed timeframe.

4.2 OBJECTIVE OF QM&ER

The primary aim of the Quarterly Monitoring and Evaluation role within the monitoring and evaluation framework Report (QM&ER) is to inform the Client about the activities undertaken by the ME&IE Consultants in the current reporting quarter.

REPORTING QUARTER

This current QM&ER covers the period from 1st January 2024 to 31st March 2024.

This Report provides the progress made in various activities relating to the accomplishments of Monitoring activities of project interventions e.g., Field Survey / Monitoring of the field interventions. This report also describes all activities to be carried out as per quarterly work plan. Activities during the reporting period are given below:

4.3 SUBMISSION OF PROGRESS REPORTS MMRS & QM&ER

As per contractual obligation, the consultants have submitted thirty-sixth MMR (December 2023), thirty-seven MMR (January 2024), thirty-eight MMR (February 2024) and 12th QM&ER Oct-Dec 2023. While the 13th QM&ER (the Report in hand) for 1st January 2024 to 31st March 2024 is being submitted.

4.4 SUBMISSION OF SPECIAL REPORTS

4.4.1 Water Saving Through NPIWC-II Project Interventions

Water is life. It has an important role in agriculture. Irrigation water helps to make grow crops, maintain landscapes, and re-vegetate disturbed soils in dry and arid areas. Also during times of below-average rainfall. Furthermore, to these purpose, irrigation is also employed to protect crops from frost, suppress weed growth in grain fields, and prevent soil consolidation.

Irrigation offers moisture required for growth and development, germination and other related functions. The frequency, rate, amount and time of irrigation are different for different crops and also vary according to the types of soil and seasons.

Keeping in view the importance of irrigation water, the Government of Pakistan (GoP) is implementing a 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), Provincial Directorates of OFWM and respective departments of AJ&K, GB and ICT and Water Users Association (WUAs). The Project Consultants (NESPAK & JV Partners) carries out the project supervision. The task of Monitoring Evaluation & Impact Evaluation has been entrusted to ME&IE Consultants. The coordination rests with the Federal Project Management Unit (FPMU) and Federal Water Management Cell (FWMC).

The task of Monitoring Evaluation & Impact Evaluation has been entrusted to ME&IE Consultants. The coordination rests with the Federal Project Management Unit (FPMU) and Federal Water Management Cell (FWMC).

The Project comprises of 4 Components: namely (1) Social Mobilization (Capacity building and establishment of Water Users Associations), (2) Reconstruction/ renovation and remodeling of 47,278 watercourses, (3) Construction of 14,932 Water Storage Tanks and (4) Provision of 11,610 Laser Land Levelers.

The Project Covers; Punjab, Khyber Pakhtunkhwa (KP), Balochistan, Gilgit Baltistan (GB), Azad Jammu and Kashmir (AJ&K) and Islamabad Capital Territory (ICT).

Project Direct Benefit includes, cropping intensity to increase by 5-20%, Crops yield to increase by 10-15%, Equity in water distribution to increases by about 30%, water disputes / thefts and litigation amongst the Farmers over water distribution to reduce by about 80%. Help poverty reduction through generation of employment and Self-sufficiency in food through utilization of water saved. The total number of project beneficiaries

are estimated 1.668 million farmers (owners as well as tenants). Taking family size at five, total net population benefiting is expected to be 8.34 million people.

In the middle of the assignment, ME&IE Consultants are required to submit Midline Survey/ Mid-term Impact Evaluation report which was produced in 2023 which included impact assessment results up to end December 2022 until unless mentioned otherwise elsewhere. It is to be clarified here that these assessments are, however, not final rather these are interim and until all the surveys and studies are completed after the termination of all project activities, these will remain indicative. Thus, these assessments should be taken just as interim or indicative and not final for the time being. The main findings of the report are summarized below:

Impact Evaluation of Component (Improvement of Watercourses)

Land use intensity due to watercourse improvement on sample farms has increased on an average by 4.1%, meaning thereby an increase of 4.1% in cultivated area. Cropping intensity has increased by 10.9%. These increases in land use and cropping intensities have resulted in about 11.8% increase in cropped area under various crops. The Watercourse Improvement Impact on Crop Yields per acre varied from 4% to 49% averaging at 11.4% on an overall basis.

Cumulative impact of Watercourses Improvement is reflected in total production of various crops. Production of various crops has increased at different rates varying from 11.6% in the case of peaches to 317.6% in case of other vegetables. However, weighted average impact calculates at 23% (11.4% due to yield increase and 11.8% due to area increase and one percent due interaction between the two).

On total completed watercourses up to June 2023, total increases in crop area have also been estimated. On total 12,968 (excluding GB) improved watercourses, increase in the crop area has been estimated around 196 thousand acres.

Impact of WC Improvement on per acre net income varies from crop to crop. It varies from PKR 1,008 for cotton to PKR 37,950 for vegetables per acre averaging at PKR. 4,053 for all crops.

Water Conveyance Efficiency on 20% lined additional improved watercourses increases by 14%age point and on new 50% lined watercourses increase by 29%age point. On piped lined watercourses efficiency increases by 50%. On overall basis saving in water losses calculates to 30% of 154 AF per watercourse per annum.

Due to 12,968 watercourses improvement (excluding GB), cultivated area increased by 61,144 acres, cropped area by 196,304 acres, gross income increased by 43,352 million PKR and net income by 19,414 millionPKR.

Impact Evaluation of Component C3 (Construction of WSTs)

Land use intensity due to WSTs Construction on sample farms has increased on an average by 6.3%, meaning thereby an increase of 6.3% in cultivated area. Cropping intensity has increased by 15.4%. These increases in land use and cropping intensities have resulted in about 22% increase in cropped area under various crops.

The WSTs construction Impact on Crop Yields per acre varied from 6.6% in the case of Rabi fodder to 16.7% in case of pulses, averaging 10.2% on an overall basis.

Cumulative impact of WSTs reflected in total production of various crops. Production of various crops has increased at different rates varying from 20% in the case of cotton to 86% in the case of sugarcane. However, weighted average impact calculates at 35% (10% due to yield increase and 22% due to area increase and 3 percent due interaction between the two).

On total 5,062 completed WSTs (excluding GB) up to June, 2023, total increases in area have also been estimated 10,604 acres.

The impact of WSTs on per acre net income varies from crop to crop. It varies from 1,008 PKR for cotton to 37,905 PKR for other vegetables per acre averaging at 22,262 PKR for all crops.

As before the construction of tank, there was no such saving of water losses. The total water storage capacity from above mentioned sources of tank along with the reported filing up frequency leads to calculate the water saving impact. On

overall basis, saving in water losses calculates to 7.31 AF per Storage Tank per annum.

Due to 5,062 WSTs (excluding GB), cultivated area increased by 3,460 acres, cropped area by 10,604 acres, gross income increased by 3,275 million PKR and net income by 1,780 million PKR.

Impact Evaluation of Component C4 (Provision of PLL)

PLL Beneficiaries: Total annual PLL beneficiaries calculate to 11,331 farmers including the owners themselves or 71 farmers per equipment.

Impact of PLL on Crop yields: Impact of PLL on crop yield was also assessed through the farmers' perception. The growers were of the view that laser leveling increases yields of various crops ranging from 8% to 14% averaging at 11% on the whole. Economics and economic benefits of PLL use were also estimated. Total number of delivered PLL up to end of June 2023 is 5,928. At the rate of 254 acres per PLL, total area levelled by all the delivered PLL calculates as 1,506 thousand acres. Net benefits per PLL comes to 521 thousand PKR per annum and for total 5,928 delivered PLL these calculate to 3,091 million PKR.

Water Saving Impact of PLL Units: Information was also asked from the growers regarding the saving of water due to Precision Land Leveling. On an average 25% saving in water use has been reported.

4.4.2 Monitoring and Impact Evaluation of Precision (Laser) Land Leveling

Background: The history of precision (laser) land levelers (PLL) goes back to the 1960s when the researchers first demonstrated their ability to project a focused Laser beam on the surface of the ground to measure its height. The first endeavor of practical development of PLL materialized in the world during the era of mid-1980s. Theodore Harold Maiman, an Engineer and Physicist innovated and developed the first laser land leveler implement on 16 May 1960 at Hughes Research Laboratory in California, USA by employing the high-powered flash lamp on a ruby rod with silver coated surface. Presently, the application of PLL is being commonly practiced in developed and developing countries including Japan, USA, Australia, India, Pakistan, etc. The concept of PLL application has been around globally since the early 1970s, but recently its use

was introduced in the subcontinent, India, and Pakistan in 1985s (Website of Nature and Akmal et al. (2020).

Need for PLL: Under the prevalent status quo, the need for proven technology like PLL was proved to be highly useful in conserving irrigation water. It is a recognized fact that unevenness of the soil surface has been severely impacting delays tillage, proper seed germination, and subsequently to the crop stand establishment leading to downward yield trends of targeted crops through the action of nutrient water interaction and soil moisture distribution pattern available for the crops to uptake, accordingly. The use of PLL for the leveling of agricultural fields in South Asia was practiced on over 1.5 million hectares in 2012. However, the PLL implementation has proved to be more efficient technically as well as economically towards the leveling of land and efficient utilization of scarce water resources by removing unessential depression and raised contours. (Website of Nature; Akmal et al., 2020; (Bhatt and Sharma, undated Indian Extension Bulletin). The present special report scope is mainly limited to monitoring and impact evaluation of precision (laser) land leveling in the project areas of Balochistan, Khyber Pakhtunkhwa, and Punjab zones.

The Government of Pakistan is implementing a 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 the Federal Water Management Cell (FWMC), Provincial Directorates of OFWM, and respective departments of AJ&K, GB, and ICT and Water Users Association (WUAs). The Project Consultant (NESPAK & JV Partners) carries out the project supervision. The task of Monitoring Evaluation & Impact Evaluation has been entrusted to ME&IE Consultants. The coordination rests with the Federal Project Management Unit (FPMU) and Federal Water Management Cell (FWMC).

The Project comprises 4 Components: namely (1) Social Mobilization (Capacity building and establishment of Water Users Associations), (2) Reconstruction/renovation and remodeling of 47,278 watercourses, (3) Construction of 14,932 Water Storage Tanks, and (4) Provision of 11,610 Laser Land Levelers. This part of the special report only discusses the monitoring and impact evaluation of precision (Laser) land leveling (PLL) in

three zones viz., Punjab, Khyber Pakhtunkhwa (KP), and Balochistan.

The project's Direct Benefits include an increase in cropping intensity & Crop yield, saving in water. The total number of project beneficiaries from all the interventions including watercourse improvement, construction of water storage tanks, and provision of PLL are estimated at 1.668 million farmers (owners as well as tenants). Taking family size at five, the total net population benefitting is expected to be 8.34 million people.

In the middle of the assignment, ME&IE Consultants are required to submit a Midline Survey/ Mid-term Impact Evaluation report. Thus, in compliance with its contractual requirement, the ME&IE Consultants have also prepared some special reports (i.e., one of these, the monitoring and impact evaluation of PLL) in addition to the report which evaluates the Project's mid-term Monitoring and Impact assessment results up to the end of October 2023 until unless mentioned otherwise elsewhere. It is to be clarified here that these assessments are, however, not final. Rather these are interim and until all the surveys and studies are completed after the termination of all project activities, these will remain indicative. Thus, these assessments should be taken just as interim or indicative and not final for the time being. The main findings of the report are summarized below:

Progress Monitoring:

During the Project period (5 years), a total number of 11,610 Precision Laser Land Leveling (PLL) Units were targeted to be delivered. By the end of June, 2023 (during 4 years), 5,928 PLL Units were delivered showing a progress of 51% achievement.

Impact Evaluation of Component C4 (Provision of PLL)

Educational Profile of Sample Beneficiaries: Most of the beneficiaries (95%) were found literate. About 15% of beneficiaries are primary/middle level, 27% matric, 20% Intermediate, 25% Graduates, and 9% postgraduate.

Suppliers of Precision (Laser) Land levelers: About 50% i.e., 80 PLL sample units have been supplied by 4 Supply and Service Companies (SSCs), namely Cross Field Agro (21), Easy Farming (24), Modern Farming (14) and Ruba Digital Laser. Out of these 80 PLL units, 79 were delivered by these companies in the Punjab. In KP, 3 PLLs were delivered by Cross Field Agro, one by Modern Farming PLL Services, and one by Ruba Digital

Laser. In Balochistan, all seven PLL units were delivered by Amjad Brothers Zarai Industries.

About 56% of PLL drivers were fully trained for running PLLs in the field and got formal training for this purpose. Around 41% were self-trained and the rest 3% were found un-trained during the monitoring survey.

About 64% of respondents ranked these PLL units as good, 31% as satisfactory and 4% as not satisfactory. About 1 to 2 percent responded that they do not know. It means that 95% of beneficiaries regarded the quality/durability of the delivered PLL units as satisfactory at least.

Regarding after-sales service facility provision status, 60% regarded it as good, and 13% as poor, 6% as very poor, and 21% responded that they do not know.

About 53% of beneficiaries responded that the complaints attended by SSCs were prompt 16% informed that the complaints were not being attended to promptly, and the rest of the respondents didn't yet need to.

As for the prices of PLL concerned status by the respondents, 9% of respondent beneficiaries informed that the SSCs charged high prices, 54% informed that the prices were normal, while the rest 37% responded that they did not know.

The respondents were also asked about the availability of spare parts by the SSCs. Out of 160 respondents, 30% responded that spare parts were available with SSCs whenever required, 7% informed that it took a long time, whereas the remaining 63% informed that they did not need these spare parts as yet.

As for the prices of PLL spare parts charged by the SSCs, 8% of respondent beneficiaries informed that the SSCs charged high prices, 27% informed that the prices were normal, while the rest 65% responded that they did not need these spare parts as yet.

The respondent beneficiaries were also asked about the availability of spare parts in the open market. About 36% of respondents informed that these spare parts are only available with the SSCs, 7% informed that the spare parts were also available in the market, while the rest 57% informed that they did not know.

While spot-checking, all 160 (100%) respondents were using PLL for agricultural purposes. No respondent was found using PLL for non-agricultural purposes.

The PLLs were also spot-checked concerning their working conditions. Out of the total, 60% were found in good condition and well-maintained. The condition of 35% was satisfactory and the remaining 5% were found in poor/unsatisfactory condition.

Record keeping status of Laser Land Leveling Services to Other Farmers: About 97% of PLL owners provided laser leveling servicing to the other fellow farmers. Out of these service providers only 14% keep a complete or partial record of their lending services. Out of these 14 percent, 55% kept records on logbooks, 36% on loose papers and the rest were not keeping records in writing.

Land Leveled during last Rabi and Kharif cropping Seasons: The total laser land leveled by the 160 respondent PLL owners during the last Rabi and Kharif cropping seasons was 40,711 acres or 254 acres per PLL. Out of these total 40,711 acres, 4,092 acres (26 acres per equipment) were owned land, and 36,619 acres (228 acres per equipment) were laser leveled on rent of other fellow farmers.

PLL Beneficiaries: Total annual PLL beneficiaries calculate to 11,331 farmers including the owners themselves or 71 farmers per equipment.

Impact of PLL on Crop yields: The impact of PLL on crop yield was also assessed through the farmers' perception. The growers were of the view that laser leveling increases yields of various crops ranging from 8% to 14% averaging at 11% on the whole. The economics and economic benefits of PLL use were also estimated. The total number of delivered PLLs up to the end of June 2023 is 5,928. At the rate of 254 acres per PLL, the total area leveled by all the delivered PLLs is calculated as 1,506 thousand acres. Net benefits per PLL come to 521 thousand PKR per annum and for a total of 5,928 delivered PLLs, these calculate to 3,091 million PKR.

Water Saving Impact of PLL Units: Information was also asked from the growers on a recall basis regarding the saving of water due to Precision Land Leveling. On average 25% saving in water use has been reported.

4.4.3 Monitoring, Evaluation, and Impact Analysis of The Project "NPIWC-II"

The Project comprises 4 Components: namely (1) Social Mobilization (Capacity building and establishment of Water Users Associations), (2) Reconstruction/renovation and remodeling of 47,278 watercourses, (3) Construction of 14,932 Water Storage Tanks, and (4) Provision of 11,610 Laser Land Levelers.

The Project Covers Punjab, Khyber Pakhtunkhwa (KP), Balochistan, Gilgit Baltistan (GB), Azad Jammu and Kashmir (AJ&K), and Islamabad Capital Territory (ICT).

Project Direct Benefit includes, a cropping intensity to increase by 5-20%, Crops yield to increase by 10-15%, Equity in water distribution to increase by about 30%, water disputes/thefts and litigation amongst the Farmers over water distribution to reduce by about 80%, Help poverty reduction through the generation of employment and Self-sufficiency in food through the utilization of water saved.

The total number of project beneficiaries is estimated at 1.668 million farmers (owners as well as tenants). Taking family size at five, the total net population benefitting is expected to be 8.34 million people.

In the middle of the assignment, ME&IE Consultants are required to submit a Midline Survey/ Mid-term Impact Evaluation report. Thus, in compliance with its contractual requirement, the ME&IE Consultants have prepared this report which evaluates the Project's mid-term Monitoring and Impact assessment results up to the end of June 2023 unless mentioned otherwise elsewhere. It is to be clarified here that these assessments are, however, not final. Rather these are interim and until all the surveys and studies are completed after the termination of all project activities, these will remain indicative. Thus, these assessments should be taken just as interim or indicative and not final for the time being. The main findings of the report are summarized below:

Progress and Monitoring of the Project (NPIWC-II):

During the Project period (4 years), a total number of 39,510 watercourses were targeted to be improved. By the end of June 2023 (during 4 years), 13,777 watercourses had been improved, showing only 35% achievement. As far as Zone-wise / unit-wise, in Punjab out of 7,600 watercourses, 4063 watercourses 53.5% (3,416 additional linings, 647 unimproved watercourses improved) were constructed.

During the Project period (4 years), a total number of 12,257 Water Storage Tanks were targeted to be constructed. By the end of June 2023, during 4 years, 5,390 WSTs were constructed, thus showing only 44% achievement. As far as zone-wise/unit-wise, in Punjab out of 2,300 WSTs 1,021 WSTs were constructed, showing 44.4% achievement.

During the Project period (4 years), a total number of 10,060 Precision Laser Land Leveling (LLL) Units were targeted to be delivered. By the end of June 2023 (during 4 years), 5,928 PLL Units were delivered showing a progress of 59% achievement. As far as zone-wise/unit-wise, in Punjab out of 8,100 LLLs, 5,844 LLL units were accomplished, which shows 72.1% achievement.

Evaluation of Organization of Water Users' Associations - Component C1

On an overall basis, 85% of farmers were aware of the existence/working of WUAs on their watercourses. About 94% of respondents informed that OFWM used to hold awareness meetings before the formation of the WUAs. About 74% of members had been participating in the meeting of WUAs and 98% of members reported that the WUAs were formed through a democratic process. On the whole, 92% of respondent farmers were found to be members of WUAs of which 42% were located at the head of WC reaches, 33% at middle reaches, and 25% at tail reaches and 88% of members were found water users of lined watercourses. About 94% of farmers reported that WUAs were functioning properly.

About half (49%) of the respondent farmers informed that meetings by WUAs were held, 27% informed that no meetings were held and 24% were of the view that these meetings were held to some extent. Moreover, 39% of respondents informed that they always participated in the meetings, 60% participated occasionally and one percent never participated.

Out of the total, 8% of respondents informed that the meetings were held every month, 6% said quarterly, 2% once a year and the remaining 84% informed that these meetings used to be held as and when need arose. About 85% of respondents informed the WUAs were established through a democratic process.

About 97% of member farmers responded that they faced no dispute. Only 3% faced disputes, out of which 50% always got their disputes resolved, 38% to some extent, and 12% never got their disputes resolved.

Out of 3% of respondents who faced disputes, 31% related to Land Acquisition, 59% on the distribution

of Naccas, and 10% regarding funding for accounts. About 45% of disputes were solved by WUAs, 50% by OFWM department, and 5% by Irrigation Department.

Impact Evaluation of Watercourses (WCs) - Component C2

Land use intensity due to watercourse improvement on sample farms has increased by an average of 4.1%, meaning thereby an increase of 4.1% in cultivated areas. Cropping intensity has increased by 10.9%. These increases in land use and cropping intensities have resulted in about an 11.8% increase in cropped areas under various crops.

The Watercourse Improvement Impact on Crop Yields per acre varied from 4% to 49% averaging at 11.4% on an overall basis.

The cumulative impact of watercourse improvement is reflected in the total production of various crops. Production of various crops has increased at different rates varying from 11.6% in the case of peaches to 317.6% in the case of other vegetables. However, the weighted average impact is calculated at 23% (11.4% due to yield increase 11.8% due to area increase, and 1 percent due to interaction between the two).

Of the total completed watercourses up to June 2023, total increases in crop area have also been estimated. Of the total of 12,968 (excluding GB) improved watercourses, the increase in the crop area has been estimated at around 196 thousand acres.

The impact of watercourse Improvement on agriculture employment has also been significant. Labor man days at the farm have increased ranging from 2 percent to more than 100% after WC Improvement averaging at 15% due to an increase in crop area, crop yields, and crop production.

The impact of WC Improvement on per-acre net income varies from crop to crop. It varies from PKR 1,008 for cotton to PKR 37,950 for vegetables per acre averaging at PKR. 4,053 for all crops.

Water Conveyance Efficiency on 20% lined additional improved watercourses increased by 14%age point and on new 50% lined watercourses increased by 29%age point. On piped lined watercourses efficiency increases by 50%. Overall saving in water losses calculates to 30% of 154 AF per watercourse per annum. In total 2.0 MAF water saved from the improvement of

watercourses, indicates \$800 million (Rs.224 billion) saved from these improved watercourses.

Spot Checking of Trees on Watercourses shows that 3,552 trees were cut down during the process of their improvement. As per the rule, at least three times (10,656) trees were required to be planted in place of 3,552 cut-down trees, however, during the spot check it was observed that only 5,259 saplings (49% of the required ones) were planted out of which, 2,731 (52%) were survived after one year of their plantation.

2%) were survived after one year of their plantation.

Spot-checking of Brick Lined Watercourses shows that the compliance of engineering parameters on Rectangular / Brick Lined Watercourses, on the whole, was satisfactory. However, lining length as per design was found on 76% of watercourses. Full-length improved water courses were extremely low; the Katcha portion of only 18% was fully improved. Katcha portions of the remaining 82% of watercourses remained unimproved.

Spot Checking of PCP Lining Watercourses: On Parabolic (PCPL) Watercourses, compliance with most of the parameters was found satisfactory. However, lining length as per design was found on 73% of watercourses and full-length improved water courses were extremely low i.e., only 16%.

Spot Checking of Pipelined Watercourses: The quality of the pipe was found good in 51% of cases, satisfactory in 45% of cases, and poor in 4% of cases only. Pipeline length was as per design in 93% of cases, bends and flanges were as per design in 68% of cases, tees were as per design in 63% of cases and sockets were 56% as per design.

Due to 12,968 watercourse improvements (excluding GB), the cultivated area increased by 61,144 acres, the cropped area by 196,304 acres, gross income increased by Rs. 43,352 million, and net income by Rs. 19,414 million.

Impact Evaluation of Water Storage Tanks (WSTs) - Component C3

Land use intensity due to WSTs Construction on sample farms has increased on an average by 6.3%, meaning thereby an increase of 6.3% in cultivated area. Cropping intensity has increased by 15.4%. These increases in land use and cropping intensities have resulted in about a 22% increase in cropped area under various crops.

The WSTs construction Impact on Crop Yields per acre varied from 6.6% in the case of Rabi fodder to 16.7% in the case of pulses, averaging 10.2% on an overall basis.

The cumulative impact of WSTs is reflected in the total production of various crops. Production of various crops has increased at different rates varying from 20% in the case of cotton to 86% in the case of sugarcane. However, the weighted average impact is calculated at 35% (10% due to yield increase 22% due to area increase, and 3 percent due to interaction between the two).

Of a total of 5,062 completed WSTs (excluding GB) up to June 2023, total increases in the area have also been estimated at 10,604 acres.

The impact of WSTs on agriculture employment has also been significant. Labor man days at the farm have increased ranging from 10% to 69% after WSTs construction averaging at 22% due to an increase in crop area, crop yields, and crop production.

The impact of WSTs on per-acre net income varies from crop to crop. It varies from 1,008 PKR for cotton to 37,905 PKR for other vegetables per acre averaging at 22,262 PKR for all crops.

Before the construction of the tank, there was no such saving of water losses. The total water storage capacity from the sources mentioned above of the tank along with the reported filling-up frequency leads to calculating the water-saving impact. Overall, saving in water losses calculates to 7.31 acre-feet per Storage Tank per annum. It shows that on an overall basis, 39,401 acre-feet (0.0394 MAF) of water was saved. As per the estimated economic value 1 MAF = \$ 400. It means due to Water Storage Tanks water savings the economic value becomes \$15.76 million (Rs. 4.41 billion)

On 222 spot-checked WSTs, 256 trees were reported to be cut down. In their place 922 (more than thrice as per requirement) Saplings were planted out of which 327 survived after one year. WST protection arrangements were about 84% satisfactory and 98% of WSTs were properly maintained.

Out of 222 spot-checked WSTs, satisfactory Excavation Certificates were issued by the Consultants to 192 (87%) WSTs.

About 171 (77%) WSTs were completed before receiving the subsidy amount. The rest 51 (23%) were completed after receiving the subsidy from the department.

Out of a total of 222 spot-checked WST, on an overall basis, 203 (91%) have been completed as per approved standards and specifications.

Due to 5,062 WSTs (excluding GB), the cultivated area increased by 3,460 acres, the cropped area by 10,604 acres, gross income increased by 3,275 million PKR, and net income by 1,780 million PKR.

Impact Evaluation of Provision of Laser Land Levelling (LLLs) Units (Component C4)

Educational Profile of Sample Beneficiaries: Most of the beneficiaries (95%) were found literate. About 15% of beneficiaries are primary/middle level, 27% matric, 20% Intermediate, 25% Graduates, and 9% postgraduate.

Suppliers of Precision (Laser) Land Levelers: In Total 160 Laser Land Leveling (LLLs) sample units have been supplied, 148 were delivered in Punjab, 5 in KP, and 7 in Balochistan. The Supply and Service Companies (SSCs), namely Crosfield Agro (21), Easy Farming (24), Modern Farming (14) Ruba Digital Laser (21), and other SSCs (80).

About 56% of LLL drivers were fully trained for running LLLs in the field and got formal training. Around 41% were self-trained and the remaining 3% were found un-trained during the monitoring survey.

About 64% of respondents ranked these LLL units as good, 31% as satisfactory, and 4% as unsatisfactory. About 1 to 2 percent responded that they did not know. It means that 95% of beneficiaries regarded the quality/durability of the delivered LLL units as satisfactory at least.

Regarding after-sales service, 61% regarded it as good, 13% as poor, 6% as very poor, and 21% responded that they did not know.

About 53% of beneficiaries responded that the attended complaints by SSCs were prompt and 16% informed that the complaints were not being attended promptly.

As for the prices of LLL, 9% of respondent beneficiaries informed that the SSCs charged high prices, 54% informed that the prices were normal, and the remaining 37% responded that they did not know.

The respondents were also asked about the availability of spare parts by the SSCs. Out of a total of 160 respondents, 30% responded that spare parts were available with SSCs whenever required, 7% informed that it took a long time, whereas the remaining 63% informed that they did not need these spare parts as yet.

As for the prices of PLL spare parts charged by the SSCs, 8% of respondent beneficiaries informed that the SSCs charged high prices, 27% informed that the prices were normal, and the remaining 66%

responded that they did not need these spare parts as yet.

The respondent beneficiaries were also asked about the availability of spare parts in the open market. About 36% of respondents informed that these spare parts are only available with the SSCs, 7% informed that the spare parts were also available in the market, while the rest 57% informed that they did not know.

While spot-checking, all 160 (100%) respondents were using PLL for agricultural purposes. No respondent was found using LLL for non-agricultural purposes.

The LLLs were also spot-checked concerning their working conditions. Out of the total, 60% were found in good condition and well-maintained. The condition of 35% was satisfactory and the remaining 5% were found in poor/unsatisfactory condition.

Record Keeping of Laser Land Leveling Services to Other Farmers: About 97% of PLL owners provide laser leveling servicing to the other fellow farmers. Out of these service providers, only 14% keep a complete or partial record of their lending services. Out of these 14 percent, 55% keep records on logbooks, 36% on loose papers.

Land Leveled during the last Rabi and Kharif cropping Seasons: The total laser land leveled by the 160 respondent PLL owners during the last Rabi and Kharif cropping seasons was 40,711 acres or 254 acres per LLL. Out of these total 40,711 acres, 4,092 acres (26 acres per equipment) were owned land, and 36,619 acres (228 acres per equipment) were laser leveled on rent of other fellow farmers.

LLL Beneficiaries: Total annual LLL beneficiaries calculated to 11,331 farmers including the owners themselves or 71 farmers per equipment.

Impact of LLL on Crop yields: The impact of LLL on crop yield was also assessed through the farmers' perception. The growers were of the view that laser leveling increases yields of various crops ranging from 8% to 14% averaging at 11% on the whole. The economics and economic benefits of PLL use were also estimated. The total number of delivered LLLs up to the end of June 2023 is 5,928. At the rate of 254 acres per PLL, the total area leveled by all the delivered LLLs is calculated as 1,506 thousand acres. Net benefits per LLL come to 521 thousand PKR per annum and for a total of 5,928 delivered LLLs, these calculate to 3,091 million PKR.

Water Saving Impact of LLL Units: Information was also asked from the growers regarding the saving of water due to Precision Land Leveling. On average 25% saving in water use has been reported.

Economic Analysis: The benefit-cost ratio at a 12% discount factor in the evaluation is calculated (B/C) at 2.5 and the Internal Rate of Return (IRR) is 50%.

On net and on an overall basis total estimated benefits of all three interventions is Rs. 252.69 billion (i.e., 243.41 WCs + 6.19 WSTs + 3.09 LLLs).

4.5 MONITORING OF INTERVENTIONS IN THE FIELD

The regular monitoring contains 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 routine monitoring tasks 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 quarter.

Consultants field activities, which include routine monitoring of interventions continued during the reporting period.

4.6 ACTIVITIES ICT UNIT – DURING REPORTING QUARTER

4.6.1 Introduction

The Quarterly Monitoring & Evaluation Report (QM&ER) portrays the comprehensive picture of all the activities performed during the out-going quarter (January through March 2024) under the delineated tasks outlined in the Project's Terms of Reference (TORs). The nature of QM&ER activities is hovering around the Monitoring, Evaluation, and Impact Assessment (ME&IE) targeted assignments fulfillment within the stipulated timeline.

4.6.2 Reporting Quarter ICT Zone

The current QM&ER covers the period from 01st Jan 2024 to 31st Mar 2024.

This Report provides the progress made in various activities relating to the accomplishments of Monitoring and Evaluation activities of the project interventions e.g., Field Surveys to apprise the status of the field interventions against the given targets/quarterly work plan.

Activities performed during the reporting period are given below:

- Regular Monitoring visit and spot check of water courses and Water storage tanks.
- Tentative Visit Plan being drafted to meet the remaining targets of end-line survey using the available information compiled on the Dashboard by the ME&IE ICT-Team consultants.
- Five- day training workshop on 'Disasters Risk Management – Issues and Strategies' was attended by the ICT-Unit ME&IE consultants in order to build their respective capacity/refreshing knowledge, skill development and attitude manifestation.
- Scheduled regular meetings were held with Coordinating/Client, cooperating, and internal technical personals, as well as, the Administration and Finance departments of the Zonal and National Offices to ensure timely completion of the deliverables.
- Professionally edited and reviewed the integrated MMR reports for the month of Jan, Feb and March-2023, and submitted for its processing towards final printing and distribution amongst the respective stakeholders.

- Looked after and supported to the Admin and Finance incumbents of the project to render the liabilities entrusted to them under the overall supervision of Team Leader and Deputy Team Leader of the ICT-Unit at the National Office, Islamabad.
- Three special report prepared, printed and delivered to the respective stakeholders, especially NPC office.

4.6.3 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 against the planned. Routine monitoring by the ME&IE consultants remained in progress during the reporting quarter subject to availability of resources both from the company and client.

4.6.4 Updated Progress of ME&IE Consultants Islamabad –Unit

Overall Progress:

The updated performance activities of the ME&IE consultants, Islamabad Unit enlisted in this section, they had completed the Baseline- I & II, as well as consolidation of both baselines, Midline Impact survey as well as the routine regular monitoring and spot checking activities in collaboration with cooperating field operational departments, viz., OFWM, Water Users Associations and beneficiaries of the targeted schemes (i.e., WC, WST).

From inception to date, the ME&IE Consultants ICT field team conducted baseline vis-a' vis impact surveys of **43** watercourses in AJK & ICT as well as baseline vis-a'-vis impact surveys of more than **18** water storage tanks in AJK and **19** in Potohar region of Punjab Zone. The details about those schemes have already been presented in the tabular and graphic forms in the previous MMRs..

ME&IE consultants of ICT-Unit have completed their targets of Baseline-I and Baseline-II & Baseline-III. The impact/ midline survey of Baseline I,II&III schemes had been completed. The consultants had submitted the Midline Impact Evaluation report to the client against the completed baselines I & II by adopting the criterion, out of the list of issued Technical Sanctioned schemes (WCs/ WSTs), which sampled intervention (at the farm of household) had completed at least two crop seasons at the point in time of arresting the middle of the project.

NPC office constituted the team of experts for the revision of PC-1 of the NPIWC-II project. In line, the PC-1 revision team has developed the following strategy to achieve its goals:

- a) To accelerate the process of revision of the revised PC-I NPIWC-II for a further period of two years. In this regard, the main responsibility of the committee is to keep close coordination with the provincial to expedite the respective correspondence and exchange of information.
- b) The committee has asked the provinces to provide information on the Actual Expenditure of 5 Years i.e., 2019-2024 (4.5 Years Actual 6 Months projected Expenditure), and the next two years of the project on approved interventions in the initial PC-1.
- c) The province-wise approved revised PC-I would be obtained with the approved minutes of PDWP and considered to ensure speedy disposal of new amended / revised PC-I within the overall approved cost of earlier PC-I.
- d) Till today, we have received revised PC 1 from KPK, Sindh, Gilgit, Balochistan, and Punjab but still debate is going on for its improvement in time. ICT PC 1 is still awaited. After the election, the AJK PC-1 will be discussed.

Photo Shots of Water Storage Tank Monitored and Spot Checked in the Project Area of Punjab Barani-Zone by ICT-Unit ME&IE Consultants



Vegetables Crops grown in Maira Sangal, Rwp.



Peas crop cultivated in Maira Sangal, Rwp.



Potato/ Peas crops grown in Maira Sangal, Rwp.



M&E Consultants discussing with the Beneficiary in the presence of OFWM supervisor

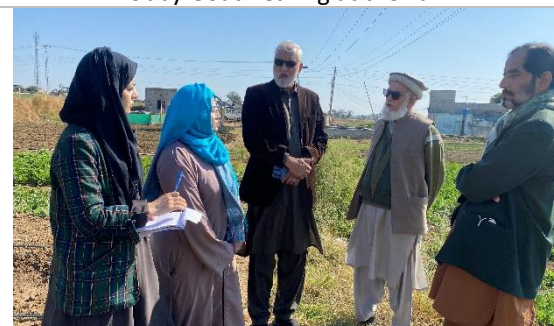
Date of Visit	02-02-2024
Scheme	Water Storage Tank
Farmer Name	Raja Zulfiqar Ali
Name of village:	Maira Sangal
District	Rawalpindi
Province	Punjab
Source of irrigation:	Bore
Shape of WST	Square
Length,width	25X25 Sq.feet
Command area of WSP :	3.5 Acres
No of beneficiaries:	1



WST Scheme in Maira Sangal, Rwp.



Hobby Goat Rearing at the Farm



Beneficiary with the monitoring team ICT-Unit

Field Observations:

- The beneficiary, Mr. Raja Zulfiqar Ali (Numberdar) owns total area of 11.25 Acre out of which 3.5 Acre has been irrigated by WST while the other 7.75 Acre of land was rented out on crop-sharing basis.
- 2.5 Acres of land occupied with vegetable crops cultivation including Peas, Onion,

coriander, Potatoes, Desi & NARC G-1 type garlicks.

- One acre of the farmer's land was being used for wheat production.
- He was using mostly Organic and chemical (DAP) fertilizers for wheat production.
- The farmer has reduced the number of labor manpower due to declining profit margins in crop husbandry. Now, he has hired a family of two members (couple of male and female) with the monthly payment of PKR. 35 thousand.
- The source of irrigation water is Tube well boring system; the depth of bore according to the farmer is 350ft.

Spot check Observations:

- The intervention visited during the survey was found well maintained as per Technical Sanctioned Specified Design.
- No damages /leakages found.
- The structure was completely supported by earth work. Hence, it was open by ceiling but observed clean and de-silted properly.
- The Permanently Hired manpower seemed to have been better skilled and responsible.
- Since, he has been provided the residence at the farmstead to look after the day to day farming chores. Although the WST was

sufficiently enough for irrigating the available command area designed for with the source of water plying through the given capacity of Solar Panel. However, the farmer was unhappy due to non-availability of proper marketing of his farm's produce of vegetables. Because of farmer's opinion, lack of access of Farm to the Market mechanism including quantum of the produce vis-à-vis harvesting, packing and transportation costs which are very high against the market prices fetched to farmer. Moreover, he was also unsatisfied when considering his produces' profit margins comparing to the prices of input output ratios. According to the saying of the farmer, this situation is more prevalent from the recent few years due to higher prices of all the inputs as a factor of stag inflationary.

- Farmer was not being back supported from the Institutional cooperation especially, the agricultural extension department which was not addressing on spot problems and opportunities like the WST intervention has created the opportunity of water saving that led to sure supply of water at the critical stages of plant growth. Thus, they should have recommended, and open up the awareness avenues, for the introduction of high value crops like fruits and vegetable, etc.

Capacity Building: Five Days Training on "Disaster Management Issues and Strategies"



Group Photo of the Training Participants at NCRD, Islamabad

Monday 12 February, 2024

0900-1000 hrs.	Registration of Participants	
1000-1030 hrs.	Inaugural Session	
	Recitation from the Holy Quran	
	NCRD Introduction	Mr. Ahsan Jamil, Research Officer, NCRD
	Course Introduction	Ms. Maira Razzaq, Assistant Director (Trg)
	Getting Acquainted	Mr. Israr Mohammad Khan, Director General, NCRD
1030-1130 hrs.	Basic Terms and Concepts	Ms. Sana Noor, Deputy Project Coordinator, NIDM, Islamabad
1130-1200 hrs.	Break	
1200-1300 hrs.	Disaster Context and Learning from the Experience in Pakistan	Ms. Sana Noor, Deputy Project Coordinator, NIDM, Islamabad
1300-1400 hrs.	Flood Management in Pakistan	Ms. Shazia Akhtar, Deputy Manager, NIDM, NDMA, Islamabad

Tuesday 13 February, 2024

0900-1000 hrs.	Climate Change – Disaster Nexus in Pakistan	Dr. Usman Mustafa, ME & IE Consultant, Federal Water Management Cell, Ministry of Food Security, Islamabad
1000-1100 hrs.	-do-	
1100-1130 hrs.	Break	
1130-1230 hrs.	Risk Assessment & Mapping Using Hazard Analysis and Vulnerability Assessment	Ms. Zahra Hassan, GIS Lead/Senior Manager, National Disaster Management Authority (NDMA) Pakistan, Islamabad
1230-1330 hrs.	-do-	

Wednesday 14 February, 2024

0900-1000 hrs.	DM, DRM and DRR Concepts and Cycle National and International DRR Policies and Protocols	Dr. Salman Atif, Associate Professor, Institute of Geographical Information Systems (IGIS), NUST,
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1000-1100 hrs.	Disaster Management in Pakistan	Islamabad
1100-1130 hrs.	Break	
1130-1230 hrs.	Rescue During Disasters	Ms. Azra Shahid, Rescue & Safety Officer, Rescue 1122, Rawalpindi
12300-1330 hrs.	Rescue 1122 – Case Study	

Thursday 15 February, 2024

0900-1000 hrs.	Disaster Resilience – A Proactive Concept	Brig Fayyaz Hussain Shah, Former DG, NIDM, Islamabad
1000-1100 hrs.	Maximizing Resilience by Minimizing Disaster Risk	
1100-1130 hrs.	Break	
1130-1200 hrs.	Emergency Preparedness: Creating a Family Disaster Plan	Ms. Maira Razzaq, Assistant Director NCRD
1200-1230 hrs.	Psychological First Aid after Disaster	Ms. Anam Akram, Assistant Director NCRD
1230-1330 hrs.	Group Activity	Ms. Maira & Ms. Anam

Friday 16 February, 2024

0900-1000 hrs.	First Aid Technique: What to Do And What Not to Do during emergencies and disasters	Ms. Azra Shahid, Rescue & Safety Officer, Rescue 1122, Rawalpindi
1000-1100 hrs.	Practical Demonstration for the First Aid	
1100-1130 hrs.	Course Learning Assessment	
1130-1145 hrs.	Course Evaluation	Director General and Faculty Members
1145-1200 hrs.	Concluding Session & Award of Certificates	

INTRODUCTION

In an era marked by rapid urbanization, climate change, and increasing global interconnectivity, the frequency and intensity of disasters have surged, necessitating a comprehensive and proactive approach to disaster management. This 5-day training program on "Disaster Management: Issues and Strategies" aims to equip participants with the knowledge and skills required to navigate the complex landscape of disaster preparedness, response, recovery and mitigation.

As the global community grapples with the multifaceted challenges posed by natural and man-made disasters, the significance of effective disaster management strategies becomes paramount. This training program delves into the critical issues surrounding disaster management, offering insights into the latest trends, technologies, and best practices that can enhance the resilience of communities and organizations.

Throughout the five days, participants will engage in interactive sessions, case studies, and practical simulations, fostering a deep understanding of the key elements involved in disaster management. From analyzing the root causes of disasters to formulating proactive mitigation plans and coordinating efficient response efforts, this training will provide a holistic perspective on the entire disaster management cycle.

Moreover, the program will address the evolving landscape of disaster management, acknowledging the impact of climate change, technological advancements, and socio-economic factors. Participants will explore innovative strategies to address emerging challenges and adapt to the dynamic nature of disasters.

By the end of the training, attendees will be equipped with the knowledge and tools necessary to contribute actively to their organizations' disaster management initiatives. This report will document the insights gained, lessons learned, and recommendations formulated during the course of this comprehensive and timely training program on disaster management.

OBJECTIVES & PURPOSE OF TRAINING

The primary objective of a training programme was to raise employees' performance and productivity by enhancing current skills and acquiring new ones. The purpose of training was to train participants on the concept of Disaster Management Issues and strategies. Training included various topics such as

Participatory Development, Participatory Planning, Role of Local Government Representatives and various skills and traits required for effective participatory planning.

METHODOLOGY OF TRAINING

The training methodology was interactive as the trainers ensured that knowledge was not only disseminated but accurately perceived and understood by the participants. And in order to ensure this, trainers engaged participants in discussions and kept the forum open for feedback, queries and suggestions. Discussions and interactive sessions of the training course were supported during training through power point presentations.



Participants attending the Training Session at NCRD, Islamabad

WHAT IS A DISASTER?

"A disaster is a serious problem occurring over a period of time that causes widespread human, material, economic or environmental loss which exceeds the ability of the affected community or society to cope using its own resources."

Importance of Emergency Preparedness

Natural and man-made disasters can strike at any time. Even with advance warning, any disaster, an hurricane, tornado, or a nuclear accident can catch you off guard and put you in grave danger. A little planning and practice before you're in danger can help you and your family survive even from the worst disasters.

Components of a Family Disaster Plan

- Establishing communication channels
- Evacuation routes and meeting points
- Shelter-in-place procedures
- Emergency contacts & medical information
- Pet care plans (if applicable)
- Special considerations for elderly or disabled family members

Importance of Staying Informed

- Vital for personal safety and well-being

- Enables proactive responses to potential threats.
- Empowers individuals to make informed decisions in emergencies.



Training Participants at NCRD Islamabad

Climate Change – Disaster Nexus in Pakistan

- Key Vulnerabilities
- Environment
- Flood
- Causes of Flood
- Indus River System
- Climate Change
- The Most Vulnerable Victims
- Flood Preparedness
- National Disaster Management System
- Questions and Answers

Key Vulnerabilities in Pakistan

- Pakistan regularly experiences some of the highest max. temp. in the world, with many regions experiencing temp. of 38°C and above on an annual basis.
- When weather patterns converge to deliver prolonged periods of heatwave, serious human health impacts can result. During the 2015 heatwave in Pakistan over 65,000 people were hospitalized with heat stroke.
- Pakistan's annual median probability of severe meteorological drought is around 3% and projected to increase further under all emissions pathways, with very strong increases under higher emissions pathways.

Between 1997–2015, Pakistan experienced about 126 heat waves, around 7 per year. Over 1,200 people's deaths resulted from a severe heatwave in 2015, primarily focused in Sindh Province. The multi-model ensemble projects an increase in the median annual probability of a heatwave in any given region from 3% to 4% depending on the emissions pathway.

- While uncertainty is high, the model ensemble projection would suggest that severe drought conditions

- Drought incidence frequency is increasing in arid and semi-arid areas. The frequency of severe drought is increasing in Pakistan's western- northern areas.
- Projected increases in warming are certain, but less certain projected increases in extreme rainfall events can lead to flooding disasters such as those experienced in 2010, thus the monitoring mechanisms need to be implemented to reduce these impacts.
- The low-lying coastal regions of Pakistan including the city of Karachi are at significant risk from projected sea-level rise, facing up to 40 cm rise by the end of the 21st century even under conservative scenarios.
- Rising temperatures and the increased potential of record-breaking heat waves could place severe stress on food production in arid regions leading with the implications for disaster response.



Image of participants attending the training in NCRD

Environment

- 1: the circumstances, objects, or conditions by which one is surrounded
2. a: the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival
- 2.b: the aggregate of social and cultural conditions that influence the life of an individual or community
- 3: the position or characteristic position of a linguistic element in a sequence
- 4: a computer interface from which various tasks can be performed, a programming environment.

Factors Causing Environmental Degradation:

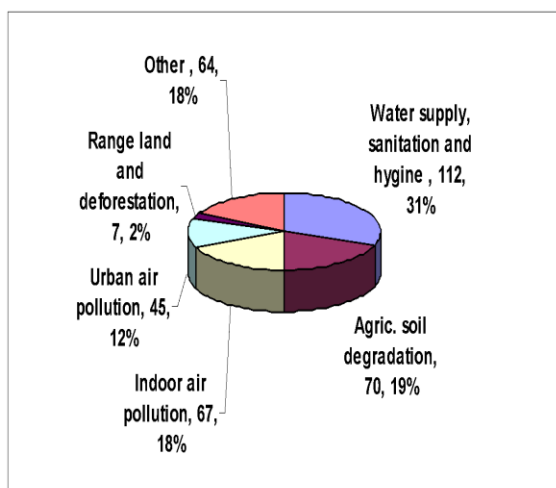
- The atmosphere of the Earth serves as a key factor in sustaining the planetary ecosystem.
- The ozone layer of the Earth's atmosphere plays an important role in depleting the amount of ultraviolet (UV) radiation that reaches the surface.
- Global warming.

Environmental Degradation

- Global warming is increasing in the average temperature of the Earth's near-surface air and oceans since the mid-20th century and its projected continuation.
- Global surface temperature increased by $0.74 \pm 0.18^\circ\text{C}$ ($1.33 \pm 0.32^\circ\text{F}$) during the 100 years, ending in 2005.
- Changing Env. factor responsible of all diseases in developing countries
- 90% of global burden of malaria – kill 1 in 20 of sub-Saharan Africa under 5 years of age
- Salinity reduces 30% yield
- Food crises – due to global warning
- Connectivity of Environment and poverty vicious cycle

The retreat of Aletsch Glacier in the Swiss Alps (situation in 1979, 1991 and 2002), due to global warming.

Annual losses due to Env. Degradation:



Natural Resources Conservation (NRC)

NR and energy conservation is achieved by managing materials more efficiently. Choose from the efforts and resources below to learn how to conserve resources at home and at work:

What are the Indicators of Climate Change in Pakistan?

In Pakistan, climatic changes are expected to have wide-ranging impacts, such as: reduced agricultural productivity, increased variability of water availability, increased coastal erosion and sea water incursion, and increased frequency of extreme climatic events.

Multi-Hazard Vulnerability & Risk Assessment (MHVRA)

- MHVRA is robust scientific approach for joint probabilistic analysis of risk by keeping into consideration multiple impending hazards, multiple dimensions of exposure and vulnerability and the coping and adaptive capacities in a study area.
- The aim of assessment is to develop Risk Profile of the study area and to map the expected losses based upon the cumulative risk assessment.

Pakistan and Hazards:

- History of natural disasters in Pakistan
- Vulnerabilities and societies in Pakistan
- Factors contributing to vulnerabilities

Vulnerabilities and Causes:

- Population Growth
- Unplanned Industrialization and migration
- Dependency on a single mode of income
- Poverty
- Lack of institutional capacity
- Climate change and its impacts
- Land use planning

Components of Risk Management Cycle

Preparedness:

- Assessment
- Planning
- Prevention/mitigation
- Awareness and capacity building
- Early warning

Response:

- Search and rescue
- Relief
- Recovery
- Rehabilitation and reconstruction

Psychosocial Reactions to Crisis Situations:

- Feelings of guilt, sadness, relief, anger, fear, anxiety, confusion, uncertainty, hopelessness
- Feeling numb, increased heartbeat, sweating, shaking, trembling or shortness of breath
- Difficulty making decisions and comprehending complex information
- Difficulty in communicating clearly with others.
- Feelings of helplessness or powerlessness
- Feeling overwhelmed.

People do not all react at the same time or in the same way to a crisis, because:

- Not everyone needs or wants support,

- Witnesses to a frightening event may also be strongly affected and need support,
- Some people are calm and do not react strongly at the time of an event, but have strong reactions later, and
- Some people have strong reactions, and can manage their situation on their own, or have support from other sources.

Complex Reactions:

- Panic attacks and feelings of overwhelming anxiety
- Anger and aggressive behavior
- Self-harm and suicide
- Harmful coping methods
- Prolonged grief
- Sleeping problem
- Flashbacks

The Aim of Psychological First Aid

The goals of psychological first aid include efforts to:

- Calm people
- Reduce distress
- Make people feel safe and secure
- Identify and assist with current needs
- Establish human connection
- Facilitate people's social support
- Help people understand the disaster and its context
- Help people identify their own strengths and abilities to cope
- Foster belief in people's ability to cope
- Give hope
- Assist with early screening for people needing further or specialized help
- Promote adaptive functioning
- Get people through the first period of high intensity and uncertainty
- Set people up to be able to recover naturally from an event
- Reduce the risk factors of mental illness such as posttraumatic stress disorder as a result of the event.

Five elements of psychosocial support:

- Ensuring safety
- Promoting calm
- Promoting connectedness
- Promoting self-efficacy and group efficacy
- Instilling hope.

Pakistan and hazards:

- History of natural disasters in Pakistan
- Vulnerabilities and societies in Pakistan.

Factors contributing to vulnerabilities & Impact:

Earthquakes

Year	Location	Magnitude	Deaths	Losses (Rs in Million)
Oct 2015	KP, Punjab, AJ&K and GB	8.1	280	98,069 houses and 479 schools
Sep 2013	Awaran	7.7	376	6842 houses
Oct 2008	Ziarat	6.4	160	5943 houses
Oct 2005	KP & AJK	7.6	73,338	208,091
Dec 1974	Northern Area	7.4	5,300	4400 houses
Nov 1945	Makran Coast	8.3	4,000	-
May 1835	Quetta	7.7	60,000	-

Source: NDMP and NDMA reports

Province	District
Balochistan	Quetta
KP	Abbottabad, Bajaur, Bannu, Charsadda, Chitral, Dir Lower, Malakand, Mardan, Nowshera, Peshawar, Sawat, Shangla and Swabi
Punjab	Gujrat, Narowal, Okara, Rawalpindi and Sialkot
Sindh	Karachi
AJ&K	Bagh, Hattian, Haveli, Kotli, Muzaffarabad, Poonch and Sudhnoti
GB	Astore, Diamer, Gilgit and Chanche

Source: NDMP

EVALUATION SESSION

At the end of the training, participants were given workshop evaluation forms to share their feedback. In addition, a post-training assessment test was also conducted to help gauge the perceived change in knowledge amongst the participants at the end of the training.

CONCLUSION

Training and development is considered as a strategy for growth in every organization. It is adopted by the organization to fill the gap between skills and future opportunities. These training programs definitely enhance skills, improve efficiency, and productivity and growth opportunities for the learners / employees.

MEETINGS/COORDINATION ICT-ZONE

The management of the project discussed the ongoing progress and suggested to meet the deliverables of the project delineated in the

inception report as well as to address the concerns expressed by the Project Board of Management, Project review professional committees and client regarding the quantity and quality improvement of Baselines, Midline/Impacts, and Endline project reports. In this connection, three special reports were suggested to be finalized during the upcoming month (Team Leader of the NPIWC-II, project fixed the responsibility of the M&E consultants against each report), including:

- i. Monitoring and impact evaluation of watercourses improvement (By Dr. Usman Mustafa, TL);
- ii. Monitoring and impact evaluation of precision land levelling (Dr. Ikram Saeed, DTL, ICT-Zone); and
- iii. Monitoring and impact evaluation/ economics of different types of watercourses improvement (Dr. Muhammad Abdul Quddus, Agricultural Economist, NPIWC-II, Project).

Date	January 2024
Venue	National office Islamabad
Participants	
<ul style="list-style-type: none"> Mr. Mohammad Asif Kakar, NPC, Ministry of Food Security and Research, Islamabad. Mr. Saiful Allah Ijaz Director G3 JV. Dr. Usman Mustafa, Team leader, NPIWC-II, Project Dr. Ikram Saeed, DTL, ICT-Unit, National Office, Islamabad. Mr. Rasheed Ahmed Zehri, FTI, ICT- Unit. 	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Apprised the ongoing activities of the NPIWC-II Project. Auditing the financial and logistics records with the reconciliation of physical verification of the items/ tools in the possession of the National/ ICT-Unit Office, Islamabad, etc. 	
	
ME&IE Consultants and Audit Team with NPC, Ministry of Food Security and Research	

4.6.5 Meetings/Coordination ICT-Unit

The main visiting objectives of the NPC of the NPIWC-II project were to meet the professionals and apprise the ongoing activities of the project. Moreover, an audit team from the office of the NPC accompanied him to conduct the financial and logistic audit of the National and ICT-Unit offices. A number of the official meetings managed from time to time under the supervision of TL and DTL at different levels from lower to High-ups of the OFWM department in ICT and Rawalpindi regions regarding data sharing coordination as well as up-to-date progress status about the interventions and its effectiveness in terms of opportunities and limitations through employing and looking at the results of the impact and monitoring tools in vogue under the scope of this project. Bottlenecks /issues regarding coordination with OFWM staff also came under discussion. The NPC of this project was kind enough to look into the issues and opportunities raised and tried his best to facilitate the effective coordination between M&E consultants and the corresponding staff of different allied Departments.

The issues and bottlenecks faced by the Field Team about the field survey also came under discussion. The NPC showed satisfaction with the overall performance of Field Officers/ M&E consultants and reiterated on timely submission of targeted deliverables. He further underscored to give instructions to the OFWM department to enhance cooperation in this regard.

Date	13-02-2024
Venue	National Office Islamabad
Participants	
<ol style="list-style-type: none"> Dr. IkramSaeed, DTL, ICT-Unit. Mr. Amir Habib, Sr. Manager Admin& Finance, ICT-Unit. Mr. Rasheed Ahmed Zehri, FTI AJK& ICT Unit. Ms. Sana Gull ME&IE Officer AJK & ICT. Ms. AbidaMunir, Social & Gender Specialist. 	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> Discussion on field visit plan for four main purposes: <ol style="list-style-type: none"> i. Baseline & Impact survey ii. Regular Monitoring iii. Spot Checks iv. Impact Evaluation, and v. Potential Case Studies Project Progress Review meetings and development of strategies to overcome the issues and look forward the possible opportunities to be addressed with in limited resources and time in order to smooth running the targeted activities of the project. 	



In-house meeting of the technical and administrative professionals of the Project at National Office, Islamabad

4.7 ACTIVITIES PUNJAB ZONE – DURING REPORTING QUARTER

During the quarter under review, baseline & endline field survey activity was carried out by the ME&IE consultants field teams. The field teams also coordinated with OFWM Field Staff and other stakeholders in the project. The consultants performed following activities of the project during this quarter is as under:

- ix. Pre-Field Activities: Initial Preparation stage, review of relevant data
- x. Field activities: Collection of data from the field for Regular Monitoring, Baseline & endline impact surveys.
- xi. Post field Activities: Validation of field data
- xii. Coordination's / Meeting with stakeholders / Beneficiaries: Feedback from the concern persons
- xiii. Internal Meetings

4.7.1 Pre Field-Activities

From time to time, the field team members and the Deputy Team Leader discussed the Consultants' designing strategy and condition of the ongoing field surveys.

The Punjab field teams remained busy with baseline and endline impact field surveys as well as monitoring and spot checking of Watercourses and Water storage tanks in following districts during this quarter.

District	WC	WST	PLL
Bahawalnagar	12	0	0
Bahawalpur	7	0	0
Bhakkar	8	0	0
Gujrat	0	1	0
Khanewal	0	1	0
Khushab	8	1	0
Layyah	8	0	0
Mianwali	4	1	0
Sialkot	0	1	0
Vehari	0	1	0
Grand Total	47	6	0

District Wise Details are given in Annexure-E

- In the barani zone i.e. Rawalpindi division only water storage tanks/ponds were targeted, being the only intervention of the project in this area.
- In the Cotton Zone (South Punjab) the targets of these interventions were the highest, followed by mixed cropping zone.
- Such data provided an overview of the targets of OFWM activities to the consultants for the year 2023-24.

4.7.2 Field Activities / Field Visit

From inception to the reporting month, the ME&IE Consultants' Punjab field team conducted baseline vis-a' vis impact surveys on a total of **250** watercourses. In addition, they completed baseline and impact surveys for **80** water storage tanks (**61** by Punjab field team and **19** of Potohar Region by ICT Field team) and conducted impact assessments on **148** PLL interventions.

Visit to watercourse # 1400/R (Kaur)

Date Of visit 25/03/2024

Brief profile of Watercourse

Particular Name/Number

Watercourse Number	1400/R
(Disty /Minor	Chinna
Moga	AOSM
Village/Chak	Raja Jang
Tehsil	Kasur
District	Kasur
UC (No)	Raja Jang
PP (No)	175
NA (No)	132
Name of Chairman	Ali Muhammad Khan
Share Holders (Nos)	17
Regular/Additional	Additional
Improvement Year	2021-22
Sanctioned Discharge	60 LPS
Design Discharge	70 LPS
Area (GCA)	250 Acres
Area (CCA)	240 Acres
Total Length of WC	4548 Meters
Length of Lining	2264 Meters
Lining Type	PCPS
Ground Water Quality (Fresh/Saline)	Saline



A view of lined portion of Watercourse



The consultants team discussing issues with beneficiaries at site



A view of Watercourse at the end of lined Portion

As a result of field visit and recording the observations of beneficiaries, it could be concluded that,

- Wheat and rice were main crops grown.
- Average yield of wheat before this intervention was 30 to 35 maunds per acre. Now it is estimated to be around 40 maunds per acre.
- Similarly, the average yield of rice has increased from 10 to 12 maunds per acre during the same period.

Visit to watercourse # 23400L/L (Kot Radha Kishan)

Date Of visit 26/03/2024

Brief profile of Watercourse

Particular Name/Number

Watercourse Number	23400/L
(Disty /Minor)	Chinna
Moga	AOSM
Village/Chak	Matta
Tehsil	Kot Radha Kishan
District	Kasur
UC (No)	Matta
PP (No)	176
NA (No)	132
Name of Chairman	Abdul Jabbar
Share Holders (Nos)	37
Regular/Additional	Additional
Improvement Year	2021-22
Sanctioned Discharge	55 LPS
Design Discharge	60 LPS
Area (GCA)	345 Acres
Area (CCA)	340 Acres
Total Length of WC	3300 Meters
Length of Lining	1341 Meters
Lining Type	PCPS
Ground Water Quality (Fresh/Saline)	Saline



A view of improved Portion of The Watercourse



A view of Collection of Coordinates at Moga Point



Watercourse at the end of Pakka Portion

The observations of the field team and the perceptions of Beneficiaries reflected the picture on impact on major crops viz., wheat and rice. An increase between before and after improvement of the water course was about 15 to 20 percent increase per acre yield in such crop.

4.7.3 Post Field Activities

It pertained to the validation of the accumulated available data. The activities were related to the field data via Water User Associations Improvement of water Courses and Construction of Water Storage Tank/Ponds Intervention Such exercises were performed generally for submission of the data for PMIS Dash Board.

4.7.4 Coordination / Meetings with Stakeholders / Beneficiaries

The physical meetings and telephonic conversation of Deputy Team Leader as well as field team with stake holders / beneficiaries and concerned staff OFWM, were positive signs of coordination. As mentioned earlier, nominal outdoor activities were conducted due to certain reason. During the quarter under review a physical meeting could be held as under:

Meeting Held at Directorate General Agriculture OFWM, Lahore office

Date	27-02-2024
Venue	Directorate General Agriculture OFWM, Office Davis Road, Lahore
Participants	
1. Mr. Tahir Mehmood, Focal Person to DGA OFWM/DDA Headquarter (OFWM)/DDA climate change.	
2. Mr. Muhammad Yousaf Bhatti, Deputy Team Leader ME&IE Consultants, Zonal Office Punjab Lahore.	
3. Dr. Muhammad Abdul Qaddus Agri. Economist ME&IE Consultant, National Office Islamabad.	
4. Mr. Rizwan Suleman, Field Team In-charge	

ME&IE consultants Zonal Office Punjab Lahore.

Discussions/Decisions of Meeting held

1. The ME&IE Consultants briefed their outgoing activities and shared their overall performance / achievements. The Focal Person of DGA OFWM appreciated and endorsed the efforts of ME&IE Consultants.
2. ME&IE Consultants requested to Focal Person, DGA OFWM Office for the provision of remaining data for PMIS / Dashboard. On this matter Focal Person of DGA OFWM responded that all remaining data will be provided to consultants within a week.
3. Focal Person of DGA OFWM. Provided Shared data of targeted areas for the year 2023-24 on all interventions.
4. The Focal Person, DG office showed concerns about the non-functioning of the Dashboard in DG office Lahore. The Consultants' team promised to discuss the matter with their ICT department and make it functional as soon as possible



A View of Meeting: ME&IE Consultants discussing with Focal person to DGA OFWM about the current status of the NPIWC-II, Project

4.7.5 Internal Meeting /Capacity Building

Internal meetings were held as a regular feature during the quarter from time to time, The meetings between DTL and Field team were mostly held to resolve day to day issues. The other matters discussed were relevant to upcoming filed surveys, improvement of the data collection instruments, recording of perceptions of respondents and drawing the "Impact" aspects of the interventions of the project.

4.8 ACTIVITIES OF KP ZONE – DURING REPORTING QUARTER

4.8.1 Brief summary of the ME/IE Consultants' KP Zone activities for the Quarter of January – March 2024

It is mandatory for the ME/IE Consultants to complete all the targets well in time given in the Inception Report. For this purpose, the Consultants have to perform two functions, first; to get the required information from the OFWM Department KP, and Second; to collect the required data from the beneficiaries of the NPIWC-II Schemes. Keeping in view these goals in mind the ME&IE consultants KP Zonal office performed a number of activities during the quarter under deterrence. The Consultants kept close contacts with all the stakeholders of the NPIWC-II, viz Directorate of OFWM KP, Focal Person/Coordinator NPIWC-II of OFWM Department, District Directors OFWM Department and relevant officials. These contacts were made both physically as well as digitally. The ME/IE Consultants visited the OFWM Department KP when and where required to update themselves about the schemes launched under the NPIWC-II project in the KP. Similarly, the officials of OFWM Department approached ME/IE Consultants when they needed the services of the ME/IE Consultants. Continuous guidance both through contacts as well as through telephonic calls were offered to the OFWM Department KP official in uploading the data through android application to the Dashboard. Several meetings with Project coordinator were held regarding newly launched schemes in the year 2023-24 of Water Courses and Water Storage Tanks in different districts of KP. It is important to mention here that the OFWM Department always extend their full cooperation towards the ME/IE Consultants.

The Baseline Survey – III is due since long for which the field survey is important but as already mentioned, time and again in the MMRs of the under-reference quarter that due to lack of financial resources it was not conducted during the current quarter.

4.8.2 Achievements of the Current Quarter:

- ❖ Meetings with OFWM Department KP Officials
- ❖ Monitoring of data entry to the Dashboard of the OFWM Department Officials
- ❖ Regular Field Monitoring and Baseline/Endline Impact data collection from the field.
- ❖ Close Coordination with OFWM focal person/district officers for the missing data on

dashboard such as CNIC duplicates and Technical/ Social data etc.

- ❖ Coordination with the OFWM Department KP for Technical Sanction issued for new schemes.
- ❖ Prepared quarterly work plan
- ❖ Collection, cleaning and entering of data for dashboard from OFWM.
- ❖ Writing of MMRs for the month of January, February, and March 2024

4.8.3 Activities of the Quarter Under-Reference

4.8.3.1 Summary of Activities KP Zone

Despite all financial constraints the ME/IE Consultants tries to achieve the project objectives well in time. They always keep cordial relations with all the stake holders including OFWM Department, beneficiaries of the NPIWC-II, (those farmers who availed water course/water storage tanks construction or improvement facility of the NPIWC-II project) and other relevant departments engaged in agricultural development activities. Keeping in view the mandate and the available resources in mind the consultants KP zone performed their activities to the OFWM Directorate, Agriculture Secretariat, field monitoring and Baseline/Endline Impact data collection from the field. What follows next is the activities performed by the KP zonal office staff Peshawar during reporting period.

Major activities of ME&IE Consultants, KP Zone includes:

- ❖ **Meetings (Formal and Informal)**
- ❖ **Regular Field Monitoring**
- ❖ **Verification of WC and WSTs through Google Earth**
- ❖ **Writing of MMRs of December 2023, January & February 2024**

- **Informal Meetings/Courtesy visits:** The ME/IE Consultants always keep in touch with On Farm Water Management Department KP. As a routine activity a number of courtesy visits were paid and during these visits many meetings were held with OFWM Department's relevant official when and where required to update ME/IE consultants' staff about the ongoing activities of the OFWM Department related to NPIWC-II project. these meetings/contacts were held both physically and telephonically for collection of relevant information of undergoing schemes. Mostly these meeting were informal. As per the ME&IE discussions with the OFWM Department official, it was found that schemes were mostly completed under NPIW-II program.

New schemes for construction/improvement of water courses and water storage tanks will be initiated after the release of funds by the authorities.

- **Formal meetings:** A meeting was held with Mr. Abdul Wajid, Dy. Director OFWM Peshawar during the month of January 2024. Purpose of the meeting was to get updates about the Technical Sanctions issued and the progress made so far during the year 2023-24.

In this regard he provided the following information.

Number of WC and WST where TS are issued for the year 2023-24 are as follow:

WC = 105

Completed = 76

In progress = 29

WST = 24

Completed = 22

In progress = 2

In pursuance of the internal meeting held on March 28, 2024 another meeting was scheduled on March 29, 2024 at 11.00 am with Mr. Hayat Khan Focal Person NPIWC-II at his office.

Agenda of the meeting was to update the ME/IE consultants about the on-going activities of construction of water courses and water storage tanks under the NPIWC-II project during the year 2023-24 in KP.



Meeting of ME/IE Consultants with Focal Person NPIWC-II of OFWM Department KP



Meeting of ME/IE Consultants with Focal Person NPIWC-II of OFWM Department KP

Venue of the meeting was Office of the Focal person of the NPIWC-II at the OFWM Department KP. Participants of the meeting were as follows:

1. Mr. Hayat Khan Focal Person NPIWC-II OFWM Department KP
2. Mr. Muhammad Bilal FTI ME/IE Consultants
3. Mr. Qaiser Khan FO ME/IE Consultants
4. Mr. Farhan Tayyab FO ME/IE Consultants
5. Mr. Ihsan Irrigation Engineer OFWM Department KP

The meeting was held in a cordial atmosphere. The person gave a brief note about general situation of different schemes under the NPIWC-II Project. He also complained about the shortage of funds from the Government side due to which the required targets cannot be achieved. In response the Consultants explained the financial hurdles from the Client side that give rise to such a situation.

- **Internal staff meeting** between the DTL and FTIs were held on March 28, 2024. Agenda of the meeting was to discuss the future plan of the field visits for the remaining targets. The following attended.

Prof. Dr. Humayun Khan DTL KP Zone

Mr. Muhammad Bilal FTI & Mr. Imran Gul FTI

Mr. Qaiser Khan FO, Mr. Farhan Tayyab FO & Mr. Arslan Bashir FO.



Internal meeting held on March 28, 2028



FigInternal meeting held in the office on March 28, 2024.

Agenda of the meeting was to discuss the future plan of the remaining endline impact survey field visits. The item was discussed in detail and it was decided that all the three teams will be mobilized

for this purpose after the release of funds from the concerned quarters.

The DTL also directed the FTIs to visit the coordinator NPIWC-II of OFWM Department KP and update themselves about the progress made so far about construction of water courses and water storage tanks in different districts of KP.

The meeting was adjourned with a vote of thanks by the DTL.

- **Field visits:** The KP zone field teams remained busy in monitoring and spot checking of Watercourses and Water storage tanks in KP zone.
- **Monitoring of data:** As already mentioned that Trainings have been imparted to the officials of the OFWM Department for data entry to the Dashboard. Now they are directly entering the data on android application.
- **Verification of WC and WSTs through Google Earth:** This is a regular activity of the ME/IE consultants KP zone. The ME/IE Consultants made verification of all watercourse, and water storage tank schemes coordinate through Google Earth and identifies incorrect coordinates.

4.8.3.2 Description of Progress:

Like the previous practice during the reporting period also the OFWM Department staff extended all possible help towards the ME/IE consultants. Close contacts through meetings/Telephone calls with different cadre officials of OFWM department were held regarding the ongoing activities under the NPIWC-II during the current reporting period. The purpose of these meetings was to collect the GPS location-based data for dashboard completion and visits of teams to different destinations for baseline surveys. OFWM directorate extends their usual support and provided all the relevant information. The ME&IE Consultants, KP made frequent visits to the directorate of OFWM for acquainting their-selves about the on-going schemes under the NPIWC-II by the concerned department. During these meetings general discussion were also made about the perceptions of the OFWM Department officials and of the farmers about these schemes. As per the OFWM Departments officials most of the farmers were satisfied from the benefits of these schemes in terms of increase of crop productivity, cropping intensities and time saving.

Field surveys:

The monitoring / Baseline pertains to Various interventions of the project viz, improvement of watercourses, water user associations, construction

of water storage tanks, and laser land levelers. Such surveys are carried out from time to time as a part of the regular activity of ME&IE Consultants. From inception to date the KP field team of ME&IE Consultants conducted baseline vis-a-vis impact surveys of **205** watercourses in KP and **40** in GB. Moreover, the consultants had completed baseline vis-a-vis impact surveys of **79** water storage tanks in KP and **15** in GB. Impact assessment field visits of **05** PLL interventions were also carried out in KP.

Data Entry and GPS validation: During reporting period, KP field Teams entered and validated the GPS locations for different schemes of KP province as well. The activity was distributed among different team members with help of ICT team of KP. OFWM directorate extends their usual support and provided all the relevant information.

Capacity Building of OFWM staff on Android Application

The ICT team of the ME/IE consultants' have trained the officials of OFWM in Southern, Central and Northern zones for entering data directly to the Dashboard through android applications. Now they are able to enter the data directly to the dashboard from their offices. However, some time when they stuck somewhere in this exercise, the ME/IE Consultants continuous support was provided to OFWM officials on telephone for any issue while operating android system and/or data collection process. In this regard the ICT team always paid visits to Directorate of OFWM KP and assess the understanding of field staff for utilization of android application to collect the data of GPS coordinates. It was found that there was some negligence from staff of OFWM in collection of GPS coordinates, which was planned to overcome.

The gaps were filled in the understanding of the field teams of OFWM and ensured that they may follow the principals of the data collection in near future for better data gathering.

4.8.3.3 Limitations/Hurdles of ME/IE Consultants Facing in Achieving the Targets.

All the staff members are very devoted and hard-worker towards fulfilling their responsibilities. Similarly, the OFWM staff is extending all possible help and cooperation towards the ME/IE Consultant KP Zone in providing the required information. But due to lack of financial resources from the main pool of funds from the National Office Islamabad, the Consultants is slightly behind in achieving the required targets.

4.8.3.4 Key Challenges & Mitigation Measures Adopted

Some Limitations:

- Due to overall economic situation & liquidity crunches prevailing in the country currently, funds release delays were evident leading to slowing down progress of overall project.
- Directorate remains involved in implementation of other funded projects with the NPIW-II. So, they are not able to give much time to ME&IE Consultants.

4.8.3.5 Suggestions:

For the Smooth operations of field activities following suggestions are forwarded:

- There should be a proper modus operandi for meetings and consistent follow-up among stakeholders to ensure smooth functioning of all aspects and timely resolutions of any impeding hindrances.
- Exposure of Dashboard with its broader perspective and application may present amongst the relevant authorities for its importance and further release of funds for the project activities.

4.9 ACTIVITIES OF BALOCHISTAN ZONE – DURING REPORTING QUARTER

The report in hand, “Quarterly Monitoring and Evaluation Report for the period of 01st Jan 2024 to 31st March 2024” is comprising of different activities has accomplished by ME&IE Consultants, Balochistan, as listed below:

During the past quarter, significant progress has been made on our ongoing project. We have successfully completed several milestones and achieved key objectives as outlined in the project plan. The project's overall implementation is on track, and we remain dedicated to accomplishing our goals within the designated timeframe. The team has worked diligently to ensure smooth execution and overcome any challenges that arose.

Over the last three months, our team conducted Baseline, land impact monitoring field visits of different components. These visits aimed at to assess the on-ground situation, evaluate the effectiveness of implemented measures, and identify areas requiring further improvement. The field visits were instrumental in gaining valuable insights into the project's impact and understanding the needs and concerns of the local communities.

The ME&IE Consultants are delighted to share a success story, highlighting the significant farmer benefits achieved through our project, NPIWC-II. The NPIWC-II project has demonstrated its effectiveness in bringing tangible benefits to farmers. The success stories of improved irrigation infrastructure, enhanced crop yield and quality, increased income and livelihoods, and climate resilience serve as a testament to the transformative power of strategic interventions in the agricultural sector.

Based on comprehensive analysis, we have observed significant positive outcomes resulting from the project implementation. The project has contributed to the expansion of agricultural land by implementing land reclamation and irrigation initiatives. Additionally, our water conservation measures have resulted in substantial water savings, benefiting both the environment and the local communities. Moreover, the engagement and participation of the community have been encouraging, leading to enhanced ownership and sustainability of the project.

The project's monitoring dashboard has been continuously updated with relevant data, providing us with real-time insights into the progress and performance indicators. However, it has come to our attention that certain areas in Balochistan are experiencing slower progress than anticipated. To address this concern, immediate actions are required from the Deputy Directors (DDs). We urge the DDs to assess the bottlenecks and implement strategies to expedite progress. Timely intervention is crucial to ensure the project's overall success.

Over the past three months, we have actively engaged in meetings with the Deputy Directors and other stakeholders. These meetings provided a platform for open dialogue and collaboration, enabling us to address challenges, share updates, and align our efforts towards project goals. Valuable feedback and suggestions were received from the stakeholders, which have been taken into consideration for ongoing and upcoming project activities.

Looking ahead to the upcoming quarter, we have developed an updated tentative work plan to guide our activities. This plan includes specific tasks, timelines, and deliverables, designed to ensure continued progress and adherence to project objectives.

tive work plan to guide our activities. This plan includes specific tasks, timelines, and deliverables, designed to ensure continued progress and adherence to project objectives.

4.9.1 Updated Progress Of Balochistan Zone

The ME&IE Consultants, Balochistan, have monitored **17** sites during the pre-testing of Monitoring Tools in different months. A total of **13** sites were monitored during executive visits with high officials. The ME&IE Consultants, Balochistan have conducted three baseline surveys, the first was conducted in 2021, the second was conducted in 2022 and the third was conducted in 2023-24. A total of **351** sites were visited during the baseline surveys, i.e., **203** Watercourses and **148** Water Storage Tanks. The ME&IEC, field teams visited **07** sites of PLL out of 34 total sites; the percentage of monitored sites is 20%. The Impact Assessment

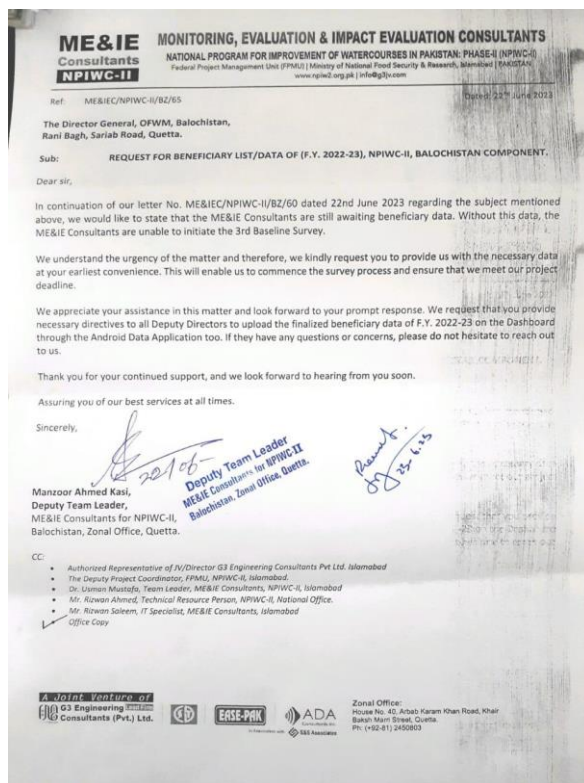
Survey was conducted in the 2022-23 and 2024 in which **351** sites (**203** Watercourses and **148** Water Storage Tanks) have been visited so far. Regular monitoring/spot-checking is another important activity of ME&IE Consultants in which more than **385** sites of different districts have been visited/monitored till the reporting month. In regular monitoring, ME&IE Consultants monitored ongoing / completed sites covering till date. The district wise updated status of the total activities done is given in the table below:

Table-3.1 District-wise Summary of M&E Consultants Field visits till March 2024

Sr. #	District	Baseline Survey		Impact Assessment Survey		Impact Survey (LLL)
		WC	WST	WC	WST	
1	Quetta	4	15	4	15	-
2	Pishin	10	9	10	9	-
3	Killa Abdullah	5	3	5	3	-
4	Ziarat	4	4	4	4	-
5	Mastung	9	8	9	8	-
6	Nushki	6	3	6	3	-
7	Sibi	3	3	3	3	-
8	Jhal Magsi	2	4	2	4	-
9	Kachhi	5	10	5	10	-
10	Naseerabad	9	6	9	6	-
11	Jaffarabad	7	1	7	1	4
12	Sohbatpur	10	1	10	1	3
13	Loralai	17	7	17	7	-
14	Dukki	2	2	2	2	-
15	Zhob	4	4	4	4	-
16	Kila-Saifullah	12	6	12	6	-
17	Musa khel	11	2	11	2	-
18	Sherani	4	2	4	2	-
19	Khuzdar	8	7	8	7	-
20	Kalat	13	9	13	9	-
21	Pangur	8	8	8	8	-
22	Awaran	8	4	8	4	-
23	Barkhan	3	3	3	3	-
24	Chaghi	4	3	4	3	-
25	Dera Bugti	5	2	5	2	-
26	Gwadar	2	1	2	1	-
27	Harnai	2	1	2	1	-
28	Kech	6	5	6	5	-
29	Kharan	4	2	4	2	-
30	Kohlu	3	2	3	2	-
31	Lasbela	10	8	10	8	-
32	Surab	2	2	2	2	-
33	Washuk	1	1	1	1	-
Sub-Total		203	148	203	148	7

4.9.2 Targets of F.Y. 2022-23, Balochistan Zone

The DTL, Balochistan wrote another letter to the DG, OFWM, Balochistan on 22nd June 2023, in continuation of his letter written on 31st March 2024, with a request to provide the beneficiary data of F.Y. 2022-23. The ME&IE Consultants are also in contact with the DDs at the district level regarding this issue. In most of the districts, the work orders have been tendered and awarded, but due to some administrative issues, the physical works are being delayed. The ME&IE Consultants, Balochistan, also request all Deputy Directors to upload the finalized beneficiary data for the fiscal year 2022-23 on the Dashboard through the Android Data Application.



As per the targets for the financial year 2022-23, a total of 99 watercourses, 820 PVC/RCC pipes, and 630 water storage tanks were distributed in 33 districts throughout Balochistan targeted project areas.

The detail of targets component-wise are list below:

➤ Watercourses:

Sr. #	Districts	WC (Barani)	WC (Canal)	Total
1	Kalat	1	0	1
2	Mastung	0	0	0
3	Khuzdar	1	0	1
4	Pishin	2	0	2

Sr. #	Districts	WC (Barani)	WC (Canal)	Total
5	Loralai	1	0	1
6	Killa Saifullah	1	0	1
7	Killa Abdullah	1	0	1
8	Zhob	1	0	1
9	Lasbella	1	0	1
10	Kachi	0	0	0
11	Kech	8	0	8
12	Panjgur	1	0	1
13	Awaran	1	0	1
14	Chagai	0	0	0
15	Nushki	0	0	0
16	Musa Khail	1	0	1
17	Barkhan	1	0	1
18	Quetta	1	0	1
19	Kohlu	1	0	1
20	Jhal Magsi	1	2	3
21	Kharan	1	0	1
22	Washuk	1	0	1
23	Surab	1	0	1
24	Duki	1	0	1
25	Sheerani	1	0	1
26	Ziarat	1	0	1
27	Sibi	1	2	3
28	Harnai	1	0	1
29	Gawadar	1	0	1
30	Naseerabad	0	17	17
31	Jaffarabad	0	17	17
32	Sohbatpur	0	21	21
33	Dera Bugti	2	5	7
Total		35	64	99

➤ PVC / RCC Pipes:

Sr. #	Districts	PVC 4" (300)	PVC 3" (300)	RCC Pipe (16)	Total
1	Kalat	10	5	0	15
2	Mastung	36	21	1	58
3	Khuzdar	36	21	0	57
4	Pishin	9	31	0	40
5	Loralai	29	27	0	56
6	Killa Saifullah	3	2	0	5
7	Killa Abdullah	10	10	0	20
8	Zhob	44	6	0	50
9	Lasbella	68	2	0	70
10	Kachi	60	20	0	80
11	Kech	0	0	0	0
12	Panjgur	17	6	0	23
13	Awaran	17	16	2	35
14	Chagai	7	1	1	9
15	Nushki	14	14	3	31
16	Musa Khail	10	10	0	20
17	Barkhan	14	13	0	27
18	Quetta	5	16	0	21
19	Kohlu	18	0	0	18

Sr. #	Districts	PVC 4" (300)	PVC 3" (300)	RCC Pipe (16)	Total
20	Jhal Magsi	14	0	0	14
21	Kharan	11	18	1	30
22	Washuk	6	6	0	12
23	Surab	4	4	0	8
24	Duki	6	13	0	19
25	Sheerani	7	3	0	10
26	Ziarat	11	11	0	22
27	Sibi	13	1	0	14
28	Harnai	13	14	0	27
29	Gawadar	9	9	0	18
30	Naseerabad	0	0	0	0
31	Jaffarabad	0	0	0	0
32	Sohbatpur	0	0	0	0
33	Dera Bugti	6	4	1	11
Total		507	304	9	820

➤ **Water Storage Tanks:**

Sr. #	Districts	WT 60x60	WT 50x50	WT 40x40	WT 30x30	Total
1	Kalat	8	14	13	0	35
2	Mastung	4	4	6	0	14
3	Khuzdar	5	3	6	0	14
4	Pishin	6	8	8	0	22
5	Loralai	6	4	4	0	14
6	Killa Saifullah	10	15	20	0	45
7	Killa Abdullah	10	14	10	0	34

Sr. #	Districts	WT 60x60	WT 50x50	WT 40x40	WT 30x30	Total
8	Zhob	11	0	0	4	15
9	Lasbella	6	0	0	0	6
10	Kachi	0	0	0	0	0
11	Kech	9	14	11	3	37
12	Panjgur	16	17	9	8	50
13	Awaran	10	5	5	4	24
14	Chagai	12	14	10	0	36
15	Nushki	6	8	4	2	20
16	Musa Khail	9	7	4	0	20
17	Barkhan	7	7	4	0	18
18	Quetta	6	6	4	4	20
19	Kohlu	8	9	4	1	22
20	Jhal Magsi	8	6	6	2	22
21	Kharan	6	4	5	2	17
22	Washuk	4	5	5	1	15
23	Surab	7	8	7	1	23
24	Duki	5	2	3	0	10
25	Sheerani	5	4	5	1	15
26	Ziarat	3	2	3	2	10
27	Sibi	4	2	4	3	13
28	Harnai	4	2	2	2	10
29	Gawadar	5	3	4	0	12
30	Naseera-bad	2	2	0	0	4
31	Jaffarabad	2	2	0	0	4
32	Sohbatpur	2	2	0	0	4
33	Dera Bugti	10	7	7	1	25
Total		216	200	173	41	630

● **District-wise Progress of Dashboard, Balochistan (Watercourses)**

Division	District	2019-20		2020-21		2021-22		TOTAL	
		Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM
Kalat	Awaran	140	76	22	22	0	0	162	98
Kalat	Kalat	97	0	28	28	158	123	283	151
Kalat	Khuzdar	139	0	17	0	9	6	165	6
Kalat	Lasbela	110	0	35	0	44	35	189	35
Kalat	Mastung	102	93	30	1	66	60	198	154
Kalat	Surab	20	20	11	11	11	11	42	42
Total		608	189	143	62	288	235	1039	486
Percentage		31%		43%		82%		47%	
Loralai	Barkhan	61	0	0	0	3	0	64	0
Loralai	Duki	27	27	15	15	1	1	43	43
Loralai	Loralai	158	157	47	43	132	130	337	330
Loralai	Musakhail	100	99	86	44	1	0	187	143
Total		346	283	148	102	137	131	631	516
Percentage		82%		69%		96%		82%	
Makran	Gwadar	12	0	11	0	0	0	23	0
Makran	Kech	68	68	20	20	44	44	132	132
Makran	Panjgur	124	73	25	25	5	5	154	103
Total		204	141	56	45	49	49	309	235
Percentage		69%		80%		100%		76%	
Nasirabad	Jaffarabad	53	53	32	32	56	56	141	141
Nasirabad	Jhal Magsi	16	0	6		5		27	0

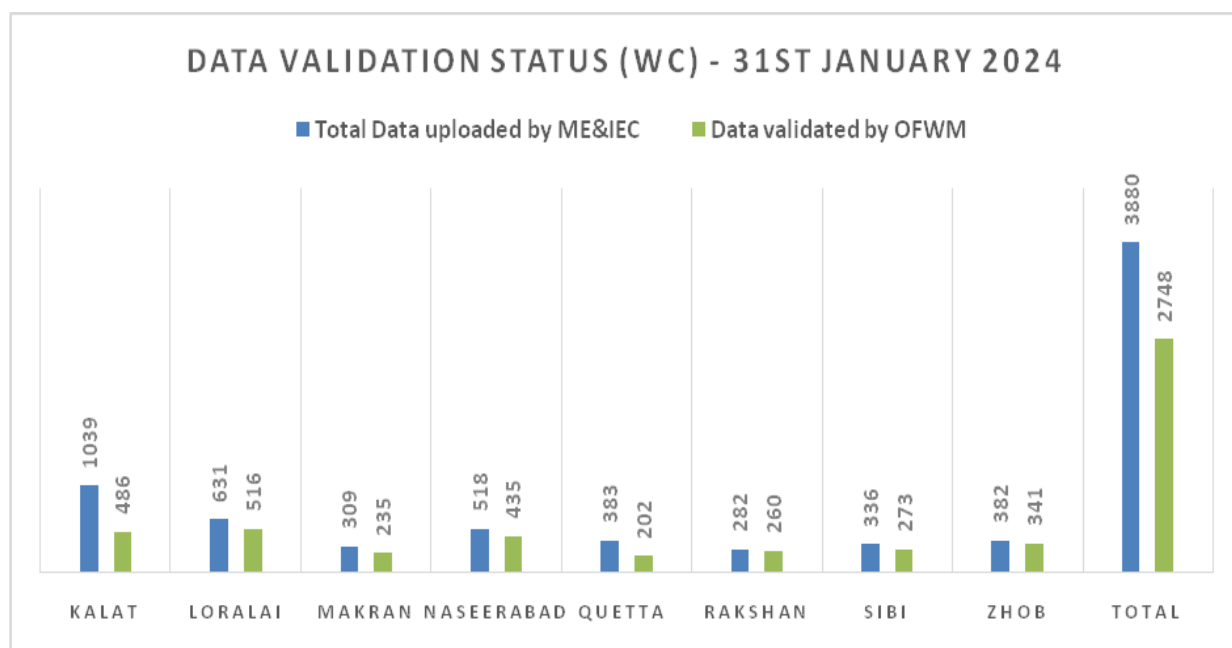
Division	District	2019-20		2020-21		2021-22		TOTAL	
		Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM
Nasirabad	Kachi	81	81	18	18	3	3	102	102
Nasirabad	Nasirabad	52	0	35	35	82	82	169	117
Nasirabad	Sohbatpur	14	14	20	20	45	41	79	75
Total		216	148	111	105	191	182	518	435
Percentage		69%		95%		95%		84%	
Quetta	Killa Abdullah	106	0	2	0	2	0	110	0
Quetta	Pishin	99	97	39	2	52	52	190	151
Quetta	Quetta	41	25	10		33	26	84	51
Total		246	122	51	2	87	78	384	202
Percentage		50%		4%		90%		53%	
Rakhshan	Chaghi	49	49	28	28	0	0	77	77
Rakhshan	Kharan	23	23	3		55	55	81	78
Rakhshan	Nushki	38	38	25	25	40	39	103	102
Rakhshan	Washuk	18	0	2	2	0	0	20	2
Total		128	110	58	55	95	94	281	259
Percentage		86%		95%		99%		92%	
Sibi	Dera Bugti	34	0	0	0	65	65	99	65
Sibi	Harnai	23	0	19	15	0	0	42	15
Sibi	Kohlu	41	41	17	17	0	0	58	58
Sibi	Sibi	33	33	6	6	25	25	64	64
Sibi	Ziarat	54	54	17	15	2	2	73	71
Total		185	128	59	53	92	92	336	273
Percentage		69%		90%		100%		81%	
Zhob	Killa Saifullah	158	124	38	38	39	39	235	201
Zhob	Sherani	19	18	8	8	39	38	66	64
Zhob	Zhob	55	55	23	20	3	1	81	76
Total		232	197	69	66	81	78	382	341
Percentage		85%		96%		96%		89%	
GRAND TOTAL		2165	1318	695	490	1020	939	3880	2747
Percentage		61%		71%		92%		71%	

● District-wise Progress of Dashboard, Balochistan (Water Storage Tanks)

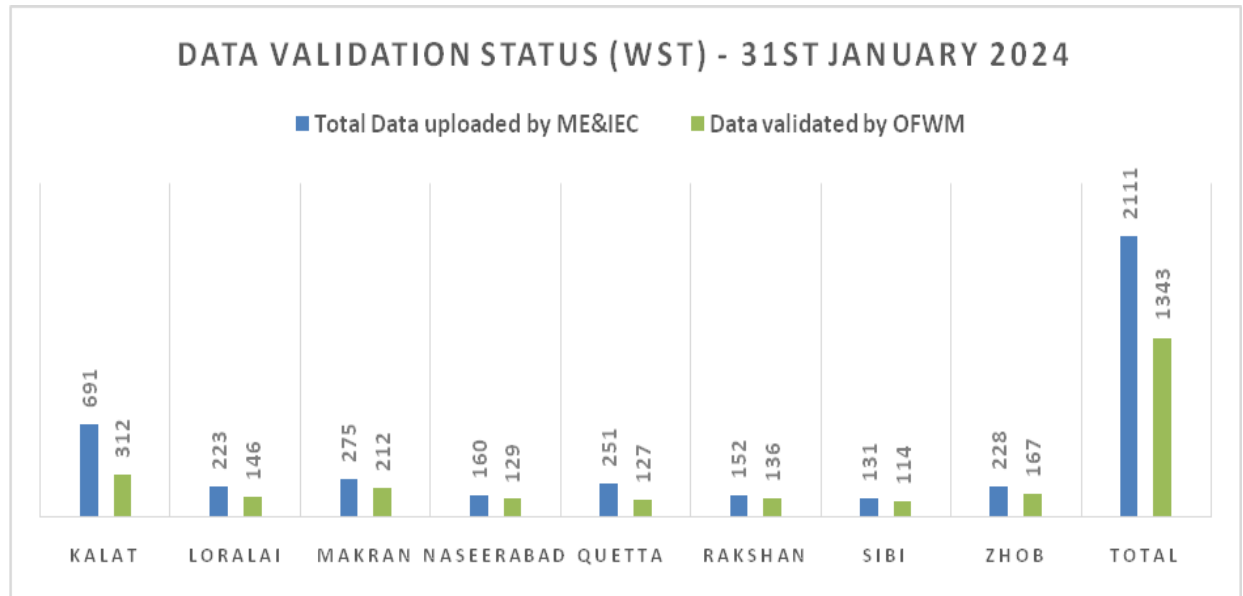
Division	District	2019-20		2020-21		2021-22		TOTAL	
		Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM
Kalat	Awaran	12	12	27	27	48	0	87	39
Kalat	Kalat	20	2	32	32	127	65	179	99
Kalat	Khuzdar	20	0	30	0	89	68	139	68
Kalat	Lasbela	20	0	24	0	106	45	150	45
Kalat	Mastung	20	18	32	2	55	12	107	32
Kalat	Surab	3	3	9	9	17	17	29	29
Total		95	35	154	70	442	207	691	312
Percentage		37%		45%		47%		45%	
Loralai	Barkhan	15	0	0	0	39	6	54	6
Loralai	Duki	7	7	9	9	13	13	29	29
Loralai	Loralai	22	22	32	3	59	59	113	84
Loralai	Musakhail	11	11	16	16	0	0	27	27
Total		55	40	57	28	111	78	223	146
Percentage		73%		49%		70%		65%	
Makran	Gwadar	3	0	4	0	0	0	7	0
Makran	Kech	29	18	24	0	46	46	99	64
Makran	Panjgur	18	18	29	25	122	105	169	148
Total		50	36	57	25	168	151	275	212
Percentage		72%		44%		90%		77%	
Nasirabad	Jaffarabad	0	0	8	8	9	9	17	17

Division	District	2019-20		2020-21		2021-22		TOTAL	
		Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM
Nasirabad	Jhal Magsi	7	0	0	0	23	0	30	0
Nasirabad	Kachi	18	18	24	24	40	40	82	82
Nasirabad	Nasirabad	Percentage 0	0	8	8	9	9	17	17
Nasirabad	Sohbatpur	4	4	8	8	2	1	14	13
Total		29	22	48	48	83	59	160	129
Percentage		76%		100%		71%		81%	
Quetta	Killa Abdullah	22	0	34	0	0	0	56	0
Quetta	Pishin	22	22	36	33	61	61	119	116
Quetta	Quetta	9	9	17		50	32	76	41
Total		53	31	87	33	111	93	251	127
Percentage		58%		38%		84%		51%	
Rakhshan	Chaghi	10	10	23	23	14	14	47	47
Rakhshan	Kharan	3	3	12		14	14	29	17
Rakhshan	Nushki	9	9	23	23	30	30	62	62
Rakhshan	Washuk	4		10	10	0	0	14	10
Total		16	12	45	33	44	44	152	136
Percentage		75%		73%		100%		89%	
Sibi	Dera Bugti	11	11	0	0	28	28	39	39
Sibi	Harnai	3	3	6	6	12	0	21	9
Sibi	Kohlu	9	9	18	18	0	0	27	27
Sibi	Sibi	8	8	5	5	10	5	23	18
Sibi	Ziarat	4	4	6	6	11	11	21	21
Total		35	35	35	35	61	44	131	114
Percentage		100%		100%		72%		87%	
Zhob	Killa Saifullah	30	20	32	32	56	56	118	108
Zhob	Sherani	4	4	6	6	15	15	25	25
Zhob	Zhob	15	10	24	24	46		85	34
Total		49	34	62	62	117	71	228	167
Percentage		69%		100%		61%		73%	
GRAND TOTAL		382	245	545	334	1137	747	2111	1343
Percentage		64%		61%		66%		64%	

● Division-wise Graphical Progress of Dashboard, Balochistan (Watercourses)



● Division-wise Graphical Progress of Dashboard, Balochistan (Water Storage Tank)



4.9.3 Meetings

Date	8 th January 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariab Road, Quetta.
Participants	
1. Mr. Masood Baloch, DG, OFWM, GoB, Quetta.	
2. Mr. Manzoor Ahmed Kasi, DTL, ME&IE Consultants, NPIWC-II, Balochistan, Quetta	
3. Mr. Saleem, FTI, ME&IEC, NPIWC-II.	
Meeting Agenda/Points discussed:	
<ul style="list-style-type: none"> The meeting commenced with a comprehensive review of the updated progress with DG, OFWM, Balochistan in his good office. The DTL, Balochistan provided a detailed overview of the ongoing projects, highlighting achievements, challenges, and areas requiring immediate attention. The meeting was adjourned at 2:00 pm, acknowledging the constructive discussions and proposed actions for resolving the identified issues. 	



View of meeting in progress with Mr. Imran, DD, FPMU, NPIWC-II held at Quetta Office

Date	16 th January 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariah Road, Quetta.

Participants

1. Mr. Behram Mulghani, Focal Person, NPIWC-II, OFWM, Quetta.
2. Mr. Manzoor Ahmed Kasi, DTL, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
3. Mr. Saleem, M&E Officer, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
4. Mr. Kamran, M&E Officer, ME&IE Consultants, NPIWC-II, Balochistan, Quetta.

Meeting Agenda/Points discussed:

- The DTL, Balochistan provided a detailed overview of the ongoing projects, highlighting achievements, challenges, and areas requiring immediate attention.



View of meeting in progress with Mr. Behram, Focal Person, NPIWC-II, held at DG Office, Quetta

Date	16 th January 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariah Road, Quetta.

Participants

1. Mr. Noor Ahmed, DD, OFWM, Quetta.
2. Mr. Manzoor Ahmed Kasi, DTL, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
3. Mr. Saleem, M&E Officer, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
4. Mr. Kamran, M&E Officer, ME&IE Consultants, NPIWC-II, Balochistan, Quetta.

Meeting Agenda/Points discussed:

- The meeting commenced with a comprehensive review of the updated progress within the Balochistan zone.
- The DD shared updated status of data validation of Quetta district for Dashboard, Balochistan.



View of meeting in progress with Mr. Imran, DD, FPMU, NPIWC-II held at Quetta Office

Date	5 th Feb 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariah Road, Quetta.

Participants

1. Mr. Khalid Ahmed Engineer NPIWC-II, Quetta.
2. Qari Basit Ahmed Engineer NPIWC-II Quetta.
3. Mr. Naseeb Jan FTI, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
4. Mr, Basit Ahmed FTI ME&IE, NPIWC-II Balochistan Quetta
5. Mr. Saleem, FTI, ME&IE, NPIWC-II.

Meeting Agenda/Points discussed:

- The meeting commenced with a comprehensive review of the updated progress with Engineer, OFWM, Balochistan in his good office.
- The FTIs, Balochistan provided a detailed overview of the ongoing projects, highlighting achievements, challenges, and areas requiring immediate attention.
- The meeting was adjourned at 2:00 pm, acknowledging the constructive discussions and proposed actions for resolving the identified issues.





View of meeting in progress with Mr. Khalid Ahmed and Qari Abdul Basit Engineer, NPIWC-II held at Quetta Office

Date	13 th Feb 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariab Road, Quetta.

Participants

1. Mr. Behram Mulghani, Focal Person, NPIWC-II, OFWM, Quetta.
2. Mr. Naseeb Jan FTI, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
3. Mr. Saleem, FTI, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
4. Mr. Basit Ahmed, FTI, ME&IE Consultants, NPIWC-II, Balochistan, Quetta.

Meeting Agenda/Points discussed:

- The FTIs, Balochistan provided a detailed overview of the ongoing projects, highlighting achievements, challenges, TS Updates, and areas requiring immediate attention.



View of meeting in progress with Mr. Behram, Focal Person, NPIWC-II, held at DG Office, Quetta

Date	21 st Feb 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariab Road, Quetta.

Participants

1. Mr. Qasim Shah Sb, DD, OFWM, Quetta.
2. Mr. Manzoor Ahmed Kasi, DTL, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
3. Mr. Saleem, M&E Officer, ME&IE Consultants, NPIWC-II, Balochistan, Quetta

Meeting Agenda/Points discussed:

- The meeting commenced with a comprehensive review of the updated progress within the Balochistan zone.
- The DD shared the updated status of data validation of Quetta district for Dashboard, Balochistan.



View of meeting with Mr. Qasim Ali Shah, DD, FPMU, NPIWC-II held at Quetta Office

Date	5 th March 2024
Venue	M & E Office Airport Road, Quetta.

Participants

1. Mr. Mohammad Asif Kakar NPC NPIWC-II, Islamabad.
2. Tam Leader Dr, Ali Raza, Project Consultant NPECA, Islamabad
3. Dr, Mohammad Tahir Deputy Director (COORD) NPIWC-II, FPMU Islamabad
4. DTL Manzoor Ahmed Kasi ME&IE Consultants, NPIWC-II, Balochistan, Quetta
5. Mr. Naseeb Jan FTI, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
6. Mr. Basit Ahmed FTI, ME&IE, NPIWC-II Balochistan Quetta
7. MR. Saleem Ahmed FTI, ME&IE Consultants, NPIWC-II, Balochistan, Quetta

Meeting Agenda/Points discussed:

- The meeting commenced with a comprehensive review of the updated progress with Engineer, OFWM, Balochistan in his good office.
- The DTL, Balochistan provided a detailed overview of the ongoing projects, highlighting

achievements, challenges, and areas requiring immediate attention.

- The meeting was adjourned at 2:00 pm, acknowledging the constructive discussions and proposed actions for resolving the identified issues.



View of meeting with Mr. Mohammad Asif Kakar NPC and DTL Mr, Manzoor Ahmed, NPIWC-II held at Quetta Office

achievements, challenges, and areas requiring immediate attention.

- The meeting was adjourned at 11:00 am, acknowledging the constructive discussions and proposed actions for resolving the identified issues.



View of meeting with Mr. Maqsood Ahmed Baloch, DG, FPMU, NPIWC-II held at Agricultural Office

Date	05 th March 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariab Road, Quetta.

Participants

- Mr. Mohammad Asif Kakar NPC NPIWC-II, Islamabad.
- Tam Leader Dr, Ali Raza, Project Consultant NPECA, Islamabad
- Dr, Mohammad Tahir Deputy Director (COORD) NPIWC-II, FPMU Islamabad
- Mr, Maqsood Ahmed Director General, Agriculture, OFWM, Balochistan, Quetta
- DTL Manzoor Ahmed Kasi ME&IE Consultants, NPIWC-II, Balochistan, Quetta
- DTL Khalid Mehmood ME&IE Consultants, NPIWC-II, Balochistan, Quetta

Meeting Agenda/Points discussed:

- The meeting commenced with a comprehensive review of the updated progress with Engineer, OFWM, Balochistan in his good office.
- The above information has been discussed in the DG office in Balochistan
- The DTL, Balochistan provided a detailed overview of the ongoing projects, highlighting.

Date	21 st March 2024
Venue	Office of the DG, Agriculture, GoB, Rani Bagh, Sariab Road, Quetta.

Participants

- Mr. Qasim Shah Sb, DD, OFWM, Quetta.
- Mr. Manzoor Ahmed Kasi, DTL, ME&IE Consultants, NPIWC-II, Balochistan, Quetta
- Mr. Saleem, M&E Officer, ME&IE Consultants, NPIWC-II, Balochistan, Quetta

Meeting Agenda/Points discussed:

- The meeting commenced with a comprehensive review of the updated progress within the Balochistan zone.
- The DD shared the updated status of data validation of Quetta district for Dashboard, Balochistan.



View of meeting in progress with Mr. Qasim Alli Shah, DD, FPMU, NPIWC-II held at Quetta Office

4.10 SOCIAL AND GENDER COMPONENT

In this quarter gender and social team worked on impact report in this quarter. The field data also reviewed by gender specialist, it can be clearly said that women in our project area, seen vividly working in the fields but not acknowledged much, seen working in the fields, plowing, planting, and harvesting crops. They play a crucial role in every step of the crop cycle, from preparing the soil to collecting the harvest.

Government of Pakistan is a signatory of SGDs and almost more than ten years passed and we are lagging behind the targets. In the project design women are not given due place and lacking in participation. The role of Pakistani women in producing agriculture crops and the way agriculture products are used, valued and shared by them is grossly under-researched. The initial search around the basic key words 'rural women', 'agriculture', and 'crops' did not produce any significant outcome, identifying not so much a paucity of current published literature pertaining to gender in crops producing regions, but rather a more fundamental and widespread inconsistency about the connection between women and grain crops. Moreover, the crop sector of the small farm economy remains to a

certain degree unexplored by economists and anthropologists alike.

Women are not involved in the water users organization and in other water resources, if they fully participate in their communities, communities will achieve better economic and environmental benefits.

Without safely managed water, sanitation and hygiene services, women and girls are more vulnerable to abuse, attack and ill-health, affecting their ability to study, work and live in dignity. Engaging and empowering women to participate in water user associations and public water management bodies is important for successful water management efforts in our reports about gender action plan and its implementation but till to date not received any comments from client office as we are monitoring consultants not implementing consultants and about budget and human resource it needs clarifications.

National gender specialist visited rajanpur on an assignment and had a detailed discussion with land less farmers, situation is very bleak in southern Punjab as they work on mutajari and get less to the extent of 10 percent on total crop. A detailed study on this aspect is suggested and to include them in the project cycle, thus a separate funding is needed.





Tehsil Rojhan / Rajhanpur (Meeting with female landless farmers)

Summary of Social & Gender Activities Balochistan Zone March- 2024

The report presented below provides a brief overview of the significant actions addressed by the social and Gender team during the month of March 2024.

The gender team was also working on documents pertaining to gender.

Held frequent meetings on need-based basis, to monitor progress, plan, and strategize to begin the Project's targeted activities.

The Social & Gender team main activities for this month included the following:

1. The S&G national Expert and provisional S&G specialist prepared draft tentative quarter work plan (April-May 2024) for impact surveys and FGD visits for all zones i.e. Punjab, Balochistan and KPK.
2. Regular meeting with DTL, TL and Gender expert on Gender related activities & documents.
3. Frequent meetings on gender-related activities and documents with respective DTLs, TL, and gender experts.
4. Draft "Social and Gender impact Report" was shared with National Gender expert for finalization.

Next Planning

1. S&G specialist will conduct field visit after Ramzan Mubarak.
2. Case studies will be prepared in next Quarter.

4.11 ICT TEAM ASSIGNMENTS

4.11.1 Implementation Of MIS Dashboard

The Dashboard has been implemented in Punjab, KP, Balochistan, AJK, and ICT zones:

The progress of Interventions is live on the Dashboard application.

Punjab – WC Data – Summary					
Division	19-20	20-21	21-22	22-23	Overall
Bahawalpur	167	197	326	15	705
D.G Khan	154	78	263	1	496
Faisalabad	88	61	203	35	387
Gujranwala	63	28	109	1	201
Gujrat	44	30	125	0	199
Lahore	72	42	134	7	255
Multan	168	81	311	2	562
Sahiwal	94	86	222	0	402
Sargodha	100	95	357	3	555
Overall	950	698	2050	64	3762

A total of **3762** Watercourses data have been received from Punjab zone and available live on GIS Dashboard. (Detailed Summary attached as **Annex-F**)

Punjab – WSP Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Bahawalpur	23	46	91	160
D.G Khan	27	30	25	82
Faisalabad	24	48	57	129
Gujranwala	0	4	2	6
Gujrat	2	10	29	41
Lahore	0	9	5	14
Multan	16	25	26	67
Rawalpindi	0	174	194	368
Sahiwal	9	15	15	39
Sargodha	6	32	47	85
Bahawalpur	23	46	91	160
Overall	107	393	491	991

Total **911** Water Storage Ponds data have been received from Punjab zone and available live on GIS Dashboard. (Detailed Summary attached as **Annex-G**)

Punjab – PLL Data Summary					
Division	2019-20	2020-21	2021-22	22-23	Overall
Bahawalpur	81	324	305	78	788
D.G Khan	50	297	190	100	637
Faisalabad	93	378	274	99	844
Gujranwala	49	231	263	17	560
Gujrat	30	106	122	16	274
Lahore	64	271	258	95	688
Multan	102	273	194	79	648
Sahiwal	71	188	231	98	588
Sargodha	78	266	247	38	629
Rawalpindi	22	76	75	15	188
Overall	640	2410	2159	635	5844

So far, Total **5844** PLL data have been received from Punjab zone and available live on GIS Dashboard. All PLL units have been delivered and currently, there's no underprogress PLL unit as per received data. (Detailed Summary attached as **Annex-H**).

KP – WC Data Summary						
Division	2019-20	2020-21	2021-22	2022-23	2023-24	Overall
Bajaur	3	19	39	18	4	83
Bannu	75	35	94	28	0	232
D.I Khan	448	12	110	7	0	577
Hazara	86	69	152	67	4	378
Khyber	6	13	7	1	0	27
Kohat	98	40	57	28	18	241
Kurram	3	5	3	0	0	11
Malakand	182	179	479	65	16	921
Mardan	105	64	88	26	23	306
Mohmand	4	40	17	30	0	91
N.W Agency	2	3	5	1	0	11
Orakzai	0	1	0	0	0	1
Peshawar	141	89	89	38	0	357
S.W Agency	3	12	15	7	0	37
Overall	1156	581	1155	316	65	3273

So far, Total **3273** Watercourses data have been received from KP zone and available live on GIS Dashboard. By which **3115** Watercourses have been lined and the remaining **96** watercourses are under progress on different stages like 1st Milestone, 2nd Milestone, and Work Order Issued. The remaining **62** Watercourses are pending Work Order Approval. (Detailed Summary attached as **Annex-I**).

The Watercourses data from KP Zone was last updated on February 26, 2024. However, since then, there has been no further data input received from KP Zone enumerators via the Android Application. There is still a significant amount of pending data on their end. That needs to be submitted promptly to address the backlog on the PMIS Dashboard.

KP – WST Data Summary						
Division	19-20	20-21	21-22	22-23	23-24	Overall
Bajaur	1	10	9	1	0	21
Bannu	13	10	23	2	0	48
D.I Khan	81	6	35	0	0	122
Hazara	28	47	84	13	1	173
Khyber	1	9	12	0	0	22
Kohat	27	17	32	14	0	90
Kurram	1	1	0	0	0	2
Malakand	74	97	195	11	8	385
Mardan	16	9	26	4	11	66
Mohmand	1	40	69	0	0	110
Orakzai	0	2	0	0	0	2
Peshawar	36	25	65	15	0	141
S.W Agency	0	15	15	2	0	32
N.W Agency	0	8	8	1	0	17
Overall	279	296	573	63	20	1231

Overall Water Storage Tank data submissions are **1231** of which **1140** WST have been completed and **57** are under progress. While **34** Water Storage Tanks Work Order Pending. (Detailed Summary attached as **Annex-J**).

Note: The Water Storage Tank data from KP Zone was last updated on January 27, 2024. However, since then, there has been no further data input received from KP Zone enumerators via the Android Application. There is still a significant amount of pending data on their end. That needs to be submitted promptly to address the backlog on the PMIS Dashboard.

KP – PLL Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
D.I Khan	0	0	50	0	50
Overall	0	0	50	0	50

So far, Total **50** PLL have been delivered and partial data received from KP zone and available live on GIS Dashboard. (Detailed Summary attached as **Annex-K**).

Balochistan – WC Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
Kalat	597	143	287	0	1027
Loralai	344	148	137	37	666
Makran	204	56	49	0	309
Nasirabad	216	111	191	0	518
Quetta	244	50	87	0	381
Rakhshan	126	58	82	0	266
Sibi	184	59	88	0	331
Zhob	232	69	81	3	385
Overall	2147	694	1002	40	3883

Total **3883** Watercourses data has been received from Balochistan zone of which **3236** Watercourses has been lined, **253** Watercourses are pending at TS Stage and remaining 394 watercourses are under progress. (Detailed Summary attached as **Annex-L**)

Note: The Watercourses data from the Balochistan Zone was last updated on October 17, 2023. However, since then, there has been no further data input received from Balochistan Zone enumerators via the Android Application. There is still a significant amount of pending data on their end. That needs to be submitted promptly to address the backlog on the PMIS Dashboard.

Balochistan – WST Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
Kalat	95	154	442	0	691
Loralai	54	57	111	11	233
Makran	50	57	168	0	275
Nasirabad	29	48	83	0	160

Balochistan – WST Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
Quetta	53	87	111	0	251
Rakhshan	26	68	58	7	159
Sibi	35	34	61	9	139
Zhob	49	61	117	0	227
Overall	391	566	1151	27	2135

A total of **2135** Water Storage Tank data has been received from Balochistan zone of which **1636** Watercourses have been lined, **102** Water Storage Tank at TS Stage and remaining **397** Water Storage Tanks are under progress. (Detailed Summary attached as **Annex-M**).

Note: The Water Storage data from the Balochistan Zone was last updated on October 24, 2023. However, since then, there has been no further data input received from Balochistan Zone enumerators via the Android Application. There is still a significant amount of pending data on their end. That needs to be submitted promptly to address the backlog on the PMIS Dashboard.

Balochistan – PLL Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
Kalat	0	4	0	0	4
Makran	0	11	0	0	11
Nasirabad	0	16	0	0	16
Quetta	0	1	0	0	1
Sibi	0	2	0	0	2
Overall	0	34	0	0	34

So far, Total **34** PLL have been delivered and partial data received from KP zone and available live on GIS Dashboard. (Detailed Summary attached as **Annex-N**).

GB – WC Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Gilgit	180	236	29	445
Skardu	108	231	25	364
Overall	288	467	54	809

A total of **809** completed schemes data have been received and live on Dashboard. (Detailed Summary attached as **Annex-O**).

GB – WST Data Summary				
Division	2019-20	2020-21	2021-22	Overall
Gilgit	83	95	22	200
Skardu	35	82	11	128
Overall	118	177	33	328

A total of **328** completed Water Storage Tanks data have been received and live on Dashboard. (Detailed Summary attached as **Annex-P**).

AJK – WC Data Summary						
Division	2019-20	2020-21	2021-22	2022-23	2023-24	Overall
MZD	30	84	53	29	44	240
Poonch	33	32	30	8	44	147
Mirpur	37	96	72	21	84	310
Overall	100	212	155	57	173	697

A total of **697** Watercourses data has been received from AJK zone of which **537** Watercourses have been lined, **28** Watercourses are pending at TS & Work Order Stage, **132** watercourses are under progress. (Detailed Summary attached as **Annex-Q**).

AJK – WST Data Summary						
Division	2019-20	2020-21	2021-22	2022-23	2023-24	Overall
MZD	35	56	61	9	29	190
Poonch	13	41	62	34	87	237
Mirpur	2	15	31	6	40	94
Overall	50	112	154	49	156	521

A total of **521** Water Storage Tank data has been received from AJK zone of which **387** Water Storage Tank have been lined, **19** Water Storage Tanks are pending at TS Stage, **115** Water Storage Tanks are under progress. (Detailed Summary attached as **Annex-R**).

ICT – WC Data Summary					
Division	2019-20	2020-21	2021-22	2022-23	Overall
ICT	0	20	14	7	41
Overall	0	20	14	7	41

A total of **41** completed Watercourses data have been received and available live on Dashboard. (Detailed Summary attached as **Annex-S**).

4.11.2 On-Going Data Validation & Cleaning

Data submission is an ongoing process & will continue till the end of the project. Zonal Field Staff of AJK 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 Zonal DDs/ADs for correction.

CHAPTER 5: ISSUES / BOTTLENECKS

The ME&IE Consultants are continuously facing the following issues and constraints for timely instigating the activities:

- Due to non-availability of NWMC (NESPAK) deliverables/reports, ME&IE Consultants are facing problems to monitor & evaluate the working of NWMC. In this regard the cooperation and coordination of NWMCs as well as the relevant Directorates are required.
- Non availability of Technical Sanctions of the watercourses.
- Non-availability of complete up-to-date inventory / data of all interventions from the Client, Provincial Agricultural Departments (OFWM) & NWMCs (NESPAK) till to date.
- Irregularity in the fund releases is also one of the key difficulties in the completion of the required project assignments / tasks, on time.

During our internal review of the dashboard, we identified several cases that were experiencing delays. The cases are distributed across various levels and stages, taking into account both the time elapsed and the geographic area of jurisdiction

<u>Days</u>	<u>Departments</u>
100 to 119	District
120 to 149	Division
150 to 164	NPC/DDPC

As some of the cases has crossed third level which is execution agency DG, therefore, you are hereby intimated for your personal intervention to sort out these stuck ups.

We have already pointed out Stuck-Up Cases of NPIWC II Watercourses through our office letter No. NPIWC-II/ME&IE/NOISD/0623-0256 submitted to your office dated 15 June 2023. Your prompt action is required in this matter.

It is also important to mention that when ME&IE Consultants pointed out certain stuck-up cases to FPMU, a quick response has been observed from FPMU vide its Letter dated 12 July 2023 and raise the issue with the executing agencies to settle the issue on priority bases.

ANNEXURES A TO S

ANNEXURE-A: TENTATIVE WORK PLAN FOR THE 3RD QUARTER OF 2023-24 (JAN TO MARCH-2024)

TENTATIVE WORK PLANNED FOR THE QUARTER (January 2024 To March 2024)												Legend				
												Activity starts	↓			
												Activity Ends	↓			
												Activity Span	-----			
No.	ACTIVITIES				3 Months-Year 2024 (Weeks)											
					January				February				March			
					WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4	WK-1	WK-2	WK-3	WK-4
1	Pre-Field Activities															
	1.1	Refresher Trainings of Field Staff for Baseline & Endline Impact Surveys														
2	Field Activities															
	2.1	Regular Monitoring of Interventions in the field														
	2.2	Baseline Survey Phase-III & Impact field survey visits														
	2.3	Online data entry in android-based application														
3	ICT Assignment															
	3.1	Improvement of website of NPIWC-II														
	3.2	Monitoring online data collection and data entry														
	3.3	Monitoring Android based Mobile Application under implementation by field staff.														
	3.4	Data collection of interventions in MIS/GIS database														
	3.5	Capacity Building Trainings / Refresher of Departments														
	3.6	Data Cleaning.														
4	Coordination															
	4.1	Meetings of TL with NPC and OFWM Departments regarding Project Progress / Issues														
	4.2	Meeting of DTLs with respective DTL of PC & concerned OFWM Departments														
	4.3	ME&IE Consultants Internal Meetings														
5	Deliverable															
	5.1	Monthly Monitoring Report				↓	↓			↓	↓			↓	↓	
	5.2	Quarterly Monitoring & Evaluation Report (Oct-Dec 2023)				↓	↓									
	5.3	Special Reports (Various)							↓						↓	

ANNEXURE-B: MATRIX OF RESPONSIBILITIES

MATRIX OF RESPONSIBILITIES

LEGEND	
●	Primary Responsibility
○	Secondry Responsibility
○	Assistance

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

ANNEXURE-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	b)
C2: Watercourses Improvements	Improvement of 47,278 watercourses on cost sharing basis: 40%	a) Establishment of 47,278 Water users' associations (WUAs);	a) 47,278 WCAs established; b) 47,278 WCAs registered; c) 47,278 watercourses	a) Conveyance losses for improved watercourses decreased by	a) Increase in cropping intensity on improved watercourses	a) Increase in farm income; b) Increase in employment for farm	a) The water flow measurements will be carried out at before and after	e)

PROJECT SUBCOMPONENTS	TARGETS	ACTIVITIES	OUTPUTS	OUTCOME-1	OUTCOMES-2	GOALS / IMPACT	METHODOLOGY FOR MEASURING RESULTS	
	farmers in terms of labour, and 60% funded by project.	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 any other method as approved by the project 	improved and lined;	about 15 percentage points. b) 1.654 million households benefited from the activity; c) 11.347 million acres served with 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%	labour; c) Reduction in poverty; d) Enhanced food security for the country.	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; • Before and after crop yields; • Before and after employment; 	

PROJECT SUBCOMPONENTS	TARGETS	ACTIVITIES	OUTPUTS	OUTCOME-1	OUTCOMES-2	GOALS / IMPACT	METHODOLOGY FOR MEASURING RESULTS	
							d) The difference between before and after will be considered the result of the intervention after netting out the contribution of the growth pattern of the crop sector otherwise.	
C3: Construction of Water Storage Tanks (WSTs)	a) Construction of 14,932 water storage tanks	a) 14,932 small farmers mobilized to construct water storage tanks for irrigation b) They agree to contribute 40% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 40% on issuance of FCR	a) 14,932 WSTs constructed b) 14,932 WSTs operated and maintained	a) Water which was otherwise largely going to be wasted is saved b) Irrigation provided at critical stages of the crops c) Flexibility achieved for irrigation	a) More area irrigated b) Increased cropping intensities	a) Increased crop yields b) Increased total crop output quantum c) Increased farm income d) Increased farm employment	a) 2-5% sample of WSTs will be surveyed b) A data collection form will be designed to measure water saving due to WSTs c) The forms used for baseline and impact surveys in case of watercourses will also be used for WSTs d) Same data	e)

PROJECT SUBCOMPONENTS	TARGETS	ACTIVITIES	OUTPUTS	OUTCOME-1	OUTCOMES-2	GOALS / IMPACT	METHODOLOGY FOR MEASURING RESULTS	
							analysis will be carried out here as in case of watercourses.	
C4: Provision of Land Leveling Units	a) Provision of 11,610 laser land leveling units to farmers and service providers on a cost sharing basis: 50% by farmer / service provider and 50% by the project.	a) 11,610 laser units provided to farmers / service providers; b) Farmers trained in using the units.	a) 11,610 farmers / service providers received PLL units; b) Farmers / service providers received training in using the units.	a) Land levelled on Farmers' / service providers' farms; b) Land levelled on fellow farmers on rent; c) Total 3.483million acres levelled by 11,610 units.	a) Water application efficiency increased at field level; b) Even germination of seed. c) Field application losses reduced by 10 percentage points d) Water productivity increased by 24%	e) Increased area under irrigated crops; f) Enhanced crop yields g) Increased farm income	a) The land levelling is expected to save irrigation water and result in better and even germination of seeds which can enhance crop yields. The crop yields thus affected will be reflected in agriculture sample surveys. b) 2-4% sample units will be visited by ME&IE Consultants teams after one years of delivery c) The unit will be verified d) Area treated	f)

PROJECT SUBCOMPONENTS	TARGETS	ACTIVITIES	OUTPUTS	OUTCOME-1	OUTCOMES-2	GOALS / IMPACT	METHODOLOGY FOR MEASURING RESULTS	
							during the year will be collected e) Farmers’ feedback collected on quality of the unit, quality of the after-sale service, etc.	

ANNEXURE-D: 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

ANNEXURE-E: ECOLOGICAL ZONE PHYSICAL TARGETS OF VARIOUS INTERVENTIONS FOR THIS YEAR 2023-24

Ecological zone	Districts	Water Course			Water Storage Ponds/Tanks	Laser Land Leveller
		Regular	Additional	Total		
Barani	Rawalpindi	0	0	0	15	0
	Attock	0	0	0	15	0
	Jehlum	0	0	0	7	0
	Chakwal	0	0	0	22	0
Sub Total		0	0	0	59	0
Partial Irrigated Barani Zone	Bhakkar	15	70	85	20	15
	Mianwali	8	70	78	7	22
Sub Total		23	140	163	27	37
Irrigated (Rice Zone)	Gujranwala	8	83	91	0	36
	Hafizabad	12	40	52	6	35
	Gujrat	0	40	40	6	18
	Narowal	10	32	42	0	20
	Sialkot	12	65	77	0	30
	Mandi Bahu Din	6	50	56	0	23
	Lahore	5	42	47	2	10
	Kasur	6	90	96	2	43
	Sheikhupura	2	75	77	2	40
	Nankana Sahib	0	55	55	9	33
Sub Total		61	572	633	27	288
Irrigated (Mixed Zone)	Sahiwal	8	90	98	3	38
	Okara	14	90	104	3	50
	Pakpatan	7	85	92	3	50
	Faisalabad	0	100	100	3	50
	Jhang	5	80	85	6	35
	Chiniot	3	46	49	0	25
	Toba Tek Singh	0	86	86	6	38
	khushab	15	116	131	10	20
	Sargodha	15	100	115	1	35
Sub Total		67	793	860	35	341
Irrigated (Cotton Zone)	Multan	14	40	54	5	34
	DG Khan	15	60	75	10	15
	Bahawalpur	24	70	94	10	40
	Bahawalnagar	25	80	105	5	40
	Rahim Yar Khan	24	100	124	7	39
	Lodhran	10	77	87	5	18
	khanewal	12	80	92	5	30
	Rajanpur	15	50	65	5	20
	Muzaffargarh	12	60	72	10	31
	Layyah	12	68	80	5	28
	Vehari	6	55	61	5	39
Sub Total		169	740	909	72	334
Grand Total		320	2245	2565	220	1000

ANNEXURE-F: PUNJAB - WATERCOURSE DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress				Overall I
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Bahawalpur	Bahawalnagar	220	0	0	0	0	220
Bahawalpur	Bahawalpur	154	0	0	0	0	154
Bahawalpur	Rahim Yar Khan	331	0	0	0	0	331
Bahawalpur Total		705	0	0	0	0	705
Dera Ghazi Khan	Dera Ghazi Khan	118	0	0	0	0	118
Dera Ghazi Khan	Layyah	126	0	0	0	0	126
Dera Ghazi Khan	Muzaffargarh	133	0	0	0	0	133
Dera Ghazi Khan	Rajanpur	119	0	0	0	0	119
Dera Ghazi Khan Total		496	0	0	0	0	496
Faisalabad	Chiniot	34	0	0	0	0	34
Faisalabad	Faisalabad	130	0	0	0	0	130
Faisalabad	Jhang	99	0	0	0	0	99
Faisalabad	Toba Tek Singh	124	0	0	0	0	124
Faisalabad Total		387	0	0	0	0	387
Gujranwala	Gujranwala	101	0	0	0	0	101
Gujranwala	Narowal	16	0	0	0	0	16
Gujranwala	Sialkot	84	0	0	0	0	84
Gujranwala Total		201	0	0	0	0	201
Gujrat	Gujrat	35	0	0	0	0	35
Gujrat	Hafizabad	85	0	0	0	0	85
Gujrat	Mandi Bahauddin	79	0	0	0	0	79
Gujrat Total		199	0	0	0	0	199
Lahore	Kasur	83	0	0	0	0	83
Lahore	Lahore	23	0	0	0	0	23
Lahore	Nankana Sahib	50	0	0	0	0	50
Lahore	Sheikhupura	99	0	0	0	0	99
Lahore Total		255	0	0	0	0	255
Multan	Khanewal	123	0	0	0	0	123
Multan	Lodhran	154	0	0	0	0	154
Multan	Multan	153	0	0	0	0	153
Multan	Vehari	132	0	0	0	0	132
Multan Total		562	0	0	0	0	562
Sahiwal	Okara	136	0	0	0	0	136
Sahiwal	Pakpattan	121	0	0	0	0	121
Sahiwal	Sahiwal	145	0	0	0	0	145
Sahiwal Total		402	0	0	0	0	402
Sargodha	Bhakkar	183	0	0	0	0	183
Sargodha	Khushab	80	0	0	0	0	80
Sargodha	Mianwali	146	0	0	0	0	146
Sargodha	Sargodha	146	0	0	0	0	146
Sargodha Total		555	0	0	0	0	555
Grand Total		3762	0	0	0	0	3762

ANNEXURE-G: PUNJAB - WST DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress		Overall
			Work Order Issued	Work Order Pending	
Bahawalpur	Bahawalnagar	51	0	0	51
Bahawalpur	Bahawalpur	42	0	0	42
Bahawalpur	Rahim Yar Khan	67	0	0	67
Bahawalpur Total		160	0	0	160
Dera Ghazi Khan	Dera Ghazi Khan	33	0	0	33
Dera Ghazi Khan	Layyah	18	0	0	18
Dera Ghazi Khan	Muzaffargarh	21	0	0	21
Dera Ghazi Khan	Rajanpur	10	0	0	10
Dera Ghazi Khan Total		82	0	0	82
Faisalabad	Chiniot	8	0	0	8
Faisalabad	Faisalabad	35	0	0	35
Faisalabad	Jhang	31	0	0	31
Faisalabad	Toba Tek Singh	55	0	0	55
Faisalabad Total		129	0	0	129
Gujranwala	Gujranwala	2	0	0	2
Gujranwala	Sialkot	4	0	0	4
Gujranwala Total		6	0	0	6
Gujrat	Gujrat	26	0	0	26
Gujrat	Hafizabad	13	0	0	13
Gujrat	Mandi Bahauddin	2	0	0	2
Gujrat Total		41	0	0	41
Lahore	Kasur	7	0	0	7
Lahore	Lahore	2	0	0	2
Lahore	Nankana Sahib	3	0	0	3
Lahore	Sheikhupura	2	0	0	2
Lahore Total		14	0	0	14
Multan	Khanewal	22	0	0	22
Multan	Lodhran	14	0	0	14
Multan	Multan	17	0	0	17
Multan	Vehari	14	0	0	14
Multan Total		67	0	0	67
Rawalpindi	Attock	79	0	0	79
Rawalpindi	Chakwal	155	0	0	155
Rawalpindi	Jhelum	63	0	0	63
Rawalpindi	Rawalpindi	71	0	0	71
Rawalpindi Total		368	0	0	368
Sahiwal	Okara	19	0	0	19
Sahiwal	Pakpattan	15	0	0	15
Sahiwal	Sahiwal	5	0	0	5
Sahiwal Total		39	0	0	39
Sargodha	Bhakkar	19	0	0	19
Sargodha	Khushab	28	0	0	28
Sargodha	Mianwali	3	0	0	3
Sargodha	Sargodha	35	0	0	35
Sargodha Total		85	0	0	85
Overall		991	0	0	991

ANNEXURE-H: PUNJAB - PLL DATA SUBMISSION – SUMMARY

Division	District	Delivered	Under Progress	Overall
Bahawalpur	Bahawalnagar	283	0	283
Bahawalpur	Bahawalpur	246	0	246
Bahawalpur	Rahim Yar Khan	259	0	259
Bahawalpur Total		788	0	788
Dera Ghazi Khan	Dera Ghazi Khan	127	0	127
Dera Ghazi Khan	Layyah	165	0	165
Dera Ghazi Khan	Muzaffargarh	225	0	225
Dera Ghazi Khan	Rajanpur	120	0	120
Dera Ghazi Khan Total		637	0	637
Faisalabad	Chiniot	160	0	160
Faisalabad	Faisalabad	257	0	257
Faisalabad	Jhang	236	0	236
Faisalabad	Toba Tek Singh	191	0	191
Faisalabad Total		844	0	844
Gujranwala	Gujranwala	232	0	232
Gujranwala	Sialkot	190	0	190
Gujranwala	Narowal	138	0	138
Gujranwala Total		560	0	560
Gujrat	Gujrat	114	0	114
Gujrat	Mandi Bahauddin	160	0	160
Gujrat Total		274	0	274
Lahore	Kasur	232	0	232
Lahore	Lahore	94	0	94
Lahore	Nankana Sahib	137	0	137
Lahore	Sheikhupura	225	0	225
Lahore Total		688	0	688
Multan	Khanewal	184	0	184
Multan	Lodhran	145	0	145
Multan	Multan	126	0	126
Multan	Vehari	193	0	193
Multan Total		648	0	648
Sahiwal	Okara	203	0	203
Sahiwal	Pakpattan	178	0	178
Sahiwal	Sahiwal	207	0	207
Sahiwal Total		588	0	588
Sargodha	Bhakkar	171	0	171
Sargodha	Khushab	111	0	111
Sargodha	Mianwali	140	0	140
Sargodha	Sargodha	207	0	207
Sargodha Total		629	0	629
Rawalpindi	Attock	188	0	188
Rawalpindi Total		188	0	188
Grand Total		5844	0	5844

ANNEXURE-I: KP - WATERCOURSE DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress			Pending		Overall I
			1st Milestone	2nd Milestone	Work Order Issued	TS Pending	Work Order Pending	
Bajaur Agency	Bajaur	64	0	0	13	6	0	83
Bajaur Agency Total		64	0	0	13	6	0	83
Bannu	Bannu	110	0	0	0	0	0	110
Bannu	Lakki Marwat	122	0	0	0	0	0	122
Bannu Total		232	0	0	0	0	0	232
D.I. Khan	D.I. Khan	507	3	0	0	0	0	510
D.I. Khan	Tank	67	0	0	0	0	0	67
D.I. Khan Total		574	3	0	0	0	0	577
Hazara	Abbottabad	30	0	1	0	0	0	31
Hazara	Battagram	49	0	0	0	0	0	49
Hazara	Haripur	74	0	0	0	0	0	74
Hazara	Lower Kohistan	7	0	0	13	1	0	21
Hazara	Mansehra	129	0	14	0	0	0	143
Hazara	Torghar	40	0	0	1	0	0	41
Hazara	Upper Kohistan	9	0	0	0	8	0	17
Hazara	Kolai Pallas	2	0	0	0	0	0	2
Hazara Total		340	0	15	14	9	0	378
Khyber Agency	Khyber	20	0	0	5	2	0	27
Khy Agency Total		20	0	0	5	2	0	27
Kohat	Hangu	62	0	0	4	1	0	67
Kohat	Karak	82	0	0	0	0	0	82
Kohat	Kohat	92	0	0	0	0	0	92
Kohat Total		236	0	0	4	1	0	241
Kurram Agency	Kurram	10	0	0	0	1	0	11
Kurram Agency Total		10	0	0	0	1	0	11
Malakand	Buner	109	0	0	0	1	0	110
Malakand	Chitral	94	0	0	0	0	0	94
Malakand	Lower Dir	109	0	2	25	4	1	141
Malakand	Malakand	106	0	0	1	1	0	108
Malakand	Shangla	54	2	1	1	1	1	60
Malakand	Swat	283	0	1	0	0	0	284
Malakand	Upper Dir	121	2	0	0	1	0	124
Malakand Total		876	4	4	27	8	2	921
Mardan	Mardan	150	0	0	2	0	0	152
Mardan	Swabi	130	0	2	1	21	0	154
Mardan Total		280	0	2	3	21	0	306
M. Agency	Upper	66	0	0	0	0	0	66

Division	District	Completed	Under Progress			Pending		Overall I
			1st Milestone	2nd Milestone	Work Order Issued	TS Pending	Work Order Pending	
	Mohmand							
M. Agency	Lower Mohmand	25	0	0	0	0	0	25
M. Agency Total		91	0	0	0	0	0	91
Orakzai Agency	Orakzai	1	0	0	0	0	0	1
Orakzai Total		1	0	0	0	0	0	1
Peshawar	Charsadda	148	0	0	0	1	0	149
Peshawar	Nowshera	127	0	0	1	2	0	130
Peshawar	Peshawar	74	0	0	1	3	0	78
Peshawar Total		349	0	0	2	6	0	357
S.W Agency	S.W Agency	37	0	0	0	0	0	37
S.W Agency Total		37	0	0	0	0	0	37
N.W Agency	N.W Agency	5	0	0	0	6	0	11
N.W Agency Total		5	0	0	0	6	0	11
Overall		3115	7	21	68	60	2	3273

ANNEXURE-J: KP - WST DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress			Pending	Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Bajaur Agency	Bajaur	17	0	0	1	3	21
Bajaur Agency Total		17	0	0	1	3	21
Bannu	Bannu	12	0	0	0	1	13
Bannu	Lakki Marwat	35	0	0	0	0	35
Bannu Total		47	0	0	0	1	48
Dera Ismail Khan	Dera Ismail Khan	83	1	1	5	0	90
Dera Ismail Khan	Tank	32	0	0	0	0	32
Dera Ismail Khan Total		115	1	1	5	0	122
Hazara	Abbottabad	18	1	0	0	0	19
Hazara	Battagram	26	0	0	4	0	30
Hazara	Haripur	40	0	0	0	0	40
Hazara	Kolai Pallas	2	0	0	2	0	4
Hazara	Lower Kohistan	0	0	0	0	1	1
Hazara	Mansehra	42	0	5	1	0	48
Hazara	Torghar	17	0	0	1	0	18
Hazara	Upper Kohistan	7	0	0	0	6	13
Hazara Total		152	1	5	8	7	173
Khyber Agency	Khyber	10	0	0	6	6	22
Khyber Agency Total		10	0	0	6	6	22
Kohat	Hangu	12	0	0	0	0	12
Kohat	Karak	73	0	0	0	0	73
Kohat	Kohat	5	0	0	0	0	5
Kohat Total		90	0	0	0	0	90
Kurram Agency	Kurram	2	0	0	0	0	2
Kurram Agency Total		2	0	0	0	0	2
Malakand	Buner	43	0	0	0	0	43
Malakand	Chitral	21	0	0	0	0	21
Malakand	Lower Dir	21	2	4	11	1	39
Malakand	Malakand	24	0	0	0	0	24
Malakand	Shangla	43	0	0	0	1	44
Malakand	Swat	163	0	0	0	1	164
Malakand	Upper Dir	47	1	1	0	1	50
Malakand Total		362	3	5	11	4	385
Mardan	Mardan	34	0	0	0	0	34
Mardan	Swabi	22	0	1	0	9	32

Division	District	Completed	Under Progress			Pending	Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
Mardan Total		56	0	1	0	9	66
Mohmand Agency	Lower Mohmand	31	0	0	0	0	31
Mohmand Agency	Upper Mohmand	79	0	0	0	0	79
Mohmand Agency Total		110	0	0	0	0	110
Orakzai Agency	Orakzai	2	0	0	0	0	2
Orakzai Agency Total		2	0	0	0	0	2
Peshawar	Charsadda	13	0	0	1	0	14
Peshawar	Nowshera	71	0	0	0	0	71
Peshawar	Peshawar	53	0	0	3	0	56
Peshawar Total		137	0	0	4	0	141
S.W Agency	S.W Agency	32	0	0	0	0	32
S.W Agency Total		32	0	0	0	0	32
N.W Agency	N.W Agency	8	0	0	5	4	17
N.W Agency Total		8	0	0	5	4	17
Overall		1140	5	12	40	34	1231

ANNEXURE-K: KP - PLL DATA SUBMISSION – SUMMARY

Division	District	Delivered	Under Progress	Overall
D.I Khan	D.I Khan	50	0	50
Overall		50	0	50

ANNEXURE-L: BALOCHISTAN - WATERCOURSE DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress			Pending	Overall
			1st Milestone	2nd Milestone	TS Issued	TS Pending	
Kalat	Awaran	150	0	0	0	1	151
Kalat	Kalat	281	0	0	0	1	282
Kalat	Khuzdar	165	0	0	0	0	165
Kalat	Lasbela	154	0	0	35	0	189
Kalat	Mastung	191	0	0	6	1	198
Kalat	Surab	0	0	0	19	23	42
Kalat Total		941	0	0	60	26	1027
Loralai	Barkhan	64	0	0	0	0	64
Loralai	Duki	0	0	0	43	0	43
Loralai	Loralai	335	0	0	0	5	340
Loralai	Musakhail	187	0	0	0	32	219
Loralai Total		586	0	0	43	37	666
Makran	Gwadar	23	0	0	0	0	23
Makran	Kech	59	0	0	9	64	132
Makran	Panjgur	121	0	0	33	0	154
Makran Total		203	0	0	42	64	309
Nasirabad	Jaffarabad	141	0	0	0	0	141
Nasirabad	Jhal Magsi	27	0	0	0	0	27
Nasirabad	Kachi	4	0	0	97	1	102
Nasirabad	Nasirabad	55	0	0	86	28	169
Nasirabad	Sohbatpur	79	0	0	0	0	79
Nasirabad Total		306	0	0	183	29	518
Quetta	Killa Abdullah	110	0	0	0	0	110
Quetta	Pishin	186	0	0	0	1	187
Quetta	Quetta	83	0	0	1	0	84
Quetta Total		379	0	0	1	1	381
Rakhshan	Chaghi	77	0	0	0	0	77
Rakhshan	Kharan	26	0	0	2	40	68
Rakhshan	Nushki	4	0	0	61	36	101
Rakhshan	Washuk	18	0	0	0	2	20
Rakhshan Total		125	0	0	63	78	266
Sibi	Dera Bugti	99	0	0	0	0	99
Sibi	Harnai	42	0	0	0	0	42
Sibi	Kohlu	58	0	0	0	0	58
Sibi	Sibi	60	0	0	0	0	60
Sibi	Ziarat	71	0	0	1	0	72
Sibi Total		330	0	0	1	0	331
Zhob	Killa Saifullah	235	0	0	0	0	235
Zhob	Sherani	51	0	0	0	18	69
Zhob	Zhob	80	0	0	1	0	81
Zhob Total		366	0	0	1	18	385
Overall		3236	0	0	394	253	3883

ANNEXURE-M: BALOCHISTAN - WST DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress			Pending	Overall
			1st Milestone	2nd Milestone	TS Issued	TS Pending	
Kalat	Awaran	84	0	0	1	2	87
Kalat	Kalat	177	0	0	2	0	179
Kalat	Khuzdar	139	0	0	0	0	139
Kalat	Lasbela	105	0	0	39	6	150
Kalat	Mastung	99	0	0	8	0	107
Kalat	Surab	0	0	0	29	0	29
Kalat Total		604	0	0	79	8	691
Loralai	Barkhan	54	0	0	0	0	54
Loralai	Duki	0	0	0	29	0	29
Loralai	Loralai	113	0	0	0	0	113
Loralai	Musakhel	26	0	0	0	11	37
Loralai Total		193	0	0	29	11	233
Makran	Gwadar	7	0	0	0	0	7
Makran	Kech	35	0	0	18	46	99
Makran	Panjgur	46	0	1	121	1	169
Makran Total		88	0	1	139	47	275
Nasirabad	Jaffarabad	17	0	0	0	0	17
Nasirabad	Jhal Magsi	30	0	0	0	0	30
Nasirabad	Kachi	36	0	0	46	0	82
Nasirabad	Nasirabad	0	0	0	17	0	17
Nasirabad	Sohbatpur	14	0	0	0	0	14
Nasirabad Total		97	0	0	63	0	160
Quetta	Killa Abdullah	55	0	0	0	1	56
Quetta	Pishin	107	0	0	10	2	119
Quetta	Quetta	75	0	1	0	0	76
Quetta Total		237	0	1	10	3	251
Rakhshan	Chaghi	33	0	0	0	14	47
Rakhshan	Kharan	15	0	0	13	8	36
Rakhshan	Nushki	0	0	0	53	9	62
Rakhshan	Washuk	4	0	0	8	2	14
Rakhshan Total		52	0	0	74	33	159
Sibi	Dera Bugti	38	0	0	1	0	39
Sibi	Harnai	21	0	0	0	0	21
Sibi	Kohlu	35	0	0	0	0	35
Sibi	Sibi	23	0	0	0	0	23
Sibi	Ziarat	21	0	0	0	0	21
Sibi Total		138	0	0	1	0	139
Zhob	Killa Saifullah	117	0	0	0	0	117
Zhob	Sherani	25	0	0	0	0	25
Zhob	Zhob	85	0	0	0	0	85
Zhob Total		227	0	0	0	0	227
Overall		1636	0	2	395	102	2135

ANNEXURE-N: BALOCHISTAN - PLL DATA SUBMISSION – SUMMARY

Division	District	Delivered	Under Progress	Overall
Kalat	Lasbela	4	0	4
Makran	Panjgur	5	0	5
Makran	Turbat	6	0	6
Nasirabad	Jaffarabad	12	0	12
Nasirabad	Jhal Magsi	1	0	1
Nasirabad	Sohbatpur	3	0	3
Quetta	Killa Abdullah	1	0	1
Sibi	Sibi	2	0	2
Overall		34	0	34

ANNEXURE-O: GB - WATERCOURSES DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress		Overall
			TS Issued	TS Pending	
Gilgit	Astore	44	0	0	44
Gilgit	Diamer	125	0	0	125
Gilgit	Ghizer	102	0	0	102
Gilgit	Gilgit	109	0	0	109
Gilgit	Hunza	35	0	0	35
Gilgit	Nagar	30	0	0	30
Gilgit Total		445	0	0	445
Skardu	Ghanche	113	0	0	113
Skardu	Kharmang	42	0	0	42
Skardu	Shigar	68	0	0	68
Skardu	Skardu	141	0	0	141
Skardu Total		364	0	0	364
Overall		809	0	0	809

ANNEXURE-P: GB - WST DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress		Overall
			TS Issued	TS Pending	
Gilgit	Astore	19	0	0	19
Gilgit	Diamer	50	0	0	50
Gilgit	Ghizer	45	0	0	45
Gilgit	Gilgit	60	0	0	60
Gilgit	Hunza	12	0	0	12
Gilgit	Nagar	14	0	0	14
Gilgit Total		200	0	0	200
Skardu	Kharmang	24	0	0	24
Skardu	Shigar	49	0	0	49
Skardu	Skardu	55	0	0	55
Skardu Total		128	0	0	128
Overall		328	0	0	328

ANNEXURE-Q: AJK- WATERCOURSES DATA SUBMISSIONS – SUMMARY

Division	District	Completed	Under Progress			Pending		Overall
			1st Milestone	2nd Milestone	Work Order Issued	TS Pending	Work Order Pending	
MZD	MZD	103	0	0	13	7	0	123
	Jhelum	28	1	0	12	0	1	42
	Neelum	61	6	1	7	0	0	75
MZD Total		192	7	1	32	7	1	240
Poonch	Poonch	43	0	0	11	0	0	54
	Bagh	29	1	0	8	1	0	39
	Haveli	10	1	0	4	0	0	15
	Sudhnoti	23	0	0	14	0	2	39
Poonch Total		105	2	0	37	1	2	147
Mirpur	Mirpur	77	0	0	9	0	14	100
	Bhimber	121	0	0	36	0	0	157
	Kotli	42	0	0	8	0	3	53
Mirpur Total		240	0	0	53	0	17	310
Overall		537	9	1	122	8	20	697

ANNEXURE-R: AJK - WST/WHs DATA SUBMISSIONS – SUMMARY

Division	District	Completed	Under Progress			Pending		Overall
			1st Milestone	2nd Milestone	Work Order Issued	TS Pending	Work Order Pending	
MZD	MZD	144	1	0	16	0	0	161
	Jhelum	24	0	0	1	2	0	27
	Neelum	0	0	0	1	1	0	2
MZD Total		168	1	0	18	3	0	190
Poonch	Poonch	58	0	1	14	0	0	73
	Bagh	48	0	0	31	0	0	79
	Haveli	29	0	0	5	2	0	36
	Sudhnoti	24	1	0	24	0	0	49
Poonch Total		159	1	1	74	2	0	237
Mirpur	Mirpur	12	0	0	4	0	0	16
	Bhimber	12	0	0	8	0	0	20
	Kotli	36	0	0	8	0	14	58
Mirpur Total		60	0	0	20	0	14	94
Overall		387	2	1	112	5	14	521

ANNEXURE-S: ICT - WATERCOURSE DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress				Overall
			1st Milestone	2nd Milestone	Work Order Issued	Work Order Pending	
ICT	ICT	41	0	0	0	0	41
Overall		41	0	0	0	0	41