



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

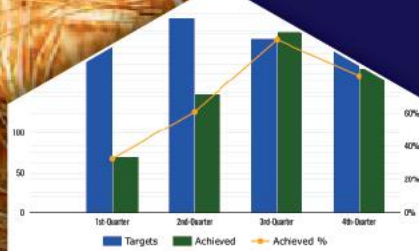
# NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN PHASE-II: (NPIWC-II)

## MONITORING, EVALUATION AND IMPACT EVALUATION CONSULTANTS



## MONTHLY MONITORING REPORT

JUNE 2024



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



In Association with **S&S Associates**





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

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

## **MONTHLY MONITORING REPORT**

### **JUNE 2024**

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## ACRONYMS

ADA	Assistant Director Agriculture
AES	Agriculture Extension Services
AF	Acre-Feet
AJK	Azad Jammu & Kashmir
AOSM	Adjustable Orifice Semi-Module
AWPB	Annual Work Plan and Budget
AWPs	Annual Work Plans
BCR	Benefit Cost Ratio
CFT	Cubic Feet
CMS	Content Management System
CSRD	Center for Social Research and Development
DAES	Director Agriculture Extension Services
DDA	Deputy Director Agriculture
DGA	Director General Agriculture
DTL	Deputy Team Leader
EAs	Executing Agencies
EIRR	Economic Internal Rate of Return
FCR	Financial Completion Report
FCRs	Final Completion Reports
FMFSR	Framework for Federal Financial Management System
FOs	Farmers Organizations
FPMU	Federal Project Management Unit
FTI	Field Team In charge
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
MINFSR	Ministry of National Food Security and Research
MMR	Monthly Monitoring Report
MT	Monitoring Template

MTE	Mid-Term Evaluation
NESPAK	National Engineering Services Pakistan
NPC	National Project Coordinator
NPIWC	National Program for Improvement of Watercourses
NPV	Net Present Value
NWMC	National Water Management Consultants
ODK	Open Data Kit
OFWM	On-Farm Water Management
PC-1	Planning Commission-(Form-One)
PDO	Project Development Objectives
PIC	Project Implementation Committee
PIES	Project Impact Evaluation Study
PQC	Pre-Qualification Committee
QM&ER	Quarterly Monitoring and Evaluation Report
RBM	Results-Based Management
RFT	Running Feet
RWD	Responsive Web Design
SFT	Square Feet
SOPs	Standardized Operating Procedures
SPSS	Statistical Package for Social Sciences (Software)
SSCs	Supply and Service Companies
TABs	Tablets
TL	Team Leader
TOR	Terms of Reference
TPV	Third Party Validation
TWRD	Tail-Water Recovery Ditch
WG	Women Group
WST	Water Storage Tank
WUAs	Water Users Associations

## EXECUTIVE SUMMARY

The “Monitoring and Evaluation Report for June 2024” comprises of five chapters:

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

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

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

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

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

**Chapter-3** explains the purpose of the Monthly Monitoring Report (MMR). The current MMR covers the period from 1<sup>st</sup> June 2024 to 30<sup>th</sup> June 2024.

This chapter also covers the activities of ME&IE Consultants, carried out during the reporting period. These are summarized below:

- Regular Monitoring of the Interventions in the Field
- Baseline & Endline Impact survey field visits
- Data verification and analysis of baseline and impact surveys
- Monitoring of online data collection and Data entry.
- Data collection of interventions in MIS/GIS database.
- Submitted the MMR for May 2024.
- Meetings of ME&IE Consultants with the respective Stakeholders about Project Progress / Issues in hand and its prospects.

**Chapter-4** highlights the quarterly work plan for the period of 1<sup>st</sup> April 2024 to 30<sup>th</sup> June 2024. The work plan consists of the following activities:

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

The detailed time for the 4<sup>th</sup> quarter of year 2023-2024 is provided in the Tentative Work Plan **Annex-A**.

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

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

No.	Activities Planned for the Reporting Quarter		Status
<b>1</b>	<b>Pre-Field Activities</b>		
1.1	Refresher Training of Field Staff for Baseline Survey & End Line Impact Survey		Accomplished
<b>2</b>	<b>Field Activities:</b>		
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 survey Field visits		In Progress
2.4	Online data entry in android-based application		In Progress
<b>3</b>	<b>ICT Assignment:</b>		
3.1	Improvement/Updation of website of NPIWC-II		Accomplished
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 entry, Data cleaning, Data processing & data analysis.		In Progress
<b>4</b>	<b>Coordination</b>		
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
<b>5</b>	<b>Deliverables:</b>		
5.1	Monthly Monitoring Reports (MMRs)	39 <sup>th</sup> MMR (Mar 2024)	Submitted
		40 <sup>th</sup> MMR (Apr 2024)	Submitted
		41 <sup>st</sup> MMR (May 2024)	Submitted
		42 <sup>nd</sup> MMR (June 2024)	Report in Hand
5.2	Quarterly Monitoring & Evaluation Report (QM&ER)	QM&ER Jan-Mar 2024	Submitted
		QM&ER Apr-Jun 2024	Will be submitted on the stipulated time

## CHAPTER-1: PROJECT INTRODUCTION

### 1.1 PROJECT PROFILE

This section covers the following detail of the project:

**Project Name:** National Program for Improvement of Watercourses in Pakistan Phase-II (NPIWC-II)

**Project Areas:** Punjab, Khyber Pakhtunkhwa, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir, and Islamabad Capital Territory (ICT)

**Sponsoring Agency** Ministry of National Food Security & Research

**Executing Agencies (EAs):** Following are different EAs:  
Federal Project Management Unit (FPMU),  
i. DGA OFWM Punjab  
ii. DG OFWM KP  
iii. DGA OFWM Baluchistan  
iv. Director Irrigation and Small Dams, AJ&K  
v. Director WM, GB  
vi. Director Agriculture Extension Services (AES) ICT

**Project Period:** 5 Year (2019-2024)

**Total Project Cost:** Rs. 154,542.355 million (Umbrella PC-1, including Sindh)

**ME&IE Consultancy Period:** 4 years

**ME&IE Consultant:** JV of G3 Engineering Consultants (Pvt.) Ltd., EASE PAK Engineering Services (Pvt.) Ltd., Centre for Social Research and Development (CSR), ADA Consultants Inc. Canada, and S&S Associates.

**ME&IE Consultant Mobilized:** November 07, 2020

### 1.2 PROJECT DESCRIPTION

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

#### 1.2.1 Project Development Objectives

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

#### 1.2.2 Project Objectives – General & Quantitative

The following are the project's general and quantitative:

##### 1) General Objectives:

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

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

##### 2) Quantitative Objectives' Outputs and Impacts:

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

##### Project outputs

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



with a 60% subsidy through cost-sharing arrangements with the expectation to save about 50% of irrigation water for wheat and about 68% of irrigation water for paddy crops.

#### **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 the generation of employment.
- vii) Self-sufficiency in food through water-saving, including 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 manuals and operational guidelines.

#### **1.2.3 Project Beneficiaries**

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

benefitting is expected to be 8.34 million people.

#### **1.2.4 Project Components**

The NPIWC-II project comprises four components.

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

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

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

##### **C2: WATERCOURSE IMPROVEMENTS:**

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

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

##### **C3: CONSTRUCTION OF WATER STORAGE TANKS:**

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

- i) Store water during the rainy season and times of no use in the commands of perennial / non-perennial canals for subsequent

- ii) irrigations at the critical crop growth stages, Provide flexibility for storage of plentiful canals and rainfall runoff water for its more expedient use subsequently,
- iii) Collect, store and filter water from:
  - Small Dams, springs, streams, mullahs etc.
  - Rainfall runoff over agricultural catchment during rainy season
  - Tube-wells and dug wells of low flows
  - Tail-waters from agricultural fields
- iv) Regulate the flows so that it can be used efficiently when needed at large flow rates.

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

Provision of 11,610 Laser Land Leveling (LLL) units to the farmers; the component is strengthening LLL services in the country through the provision of LLL Units to farmers/service providers at 50% subsidized rates.

#### 1.2.5 Project Targets

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

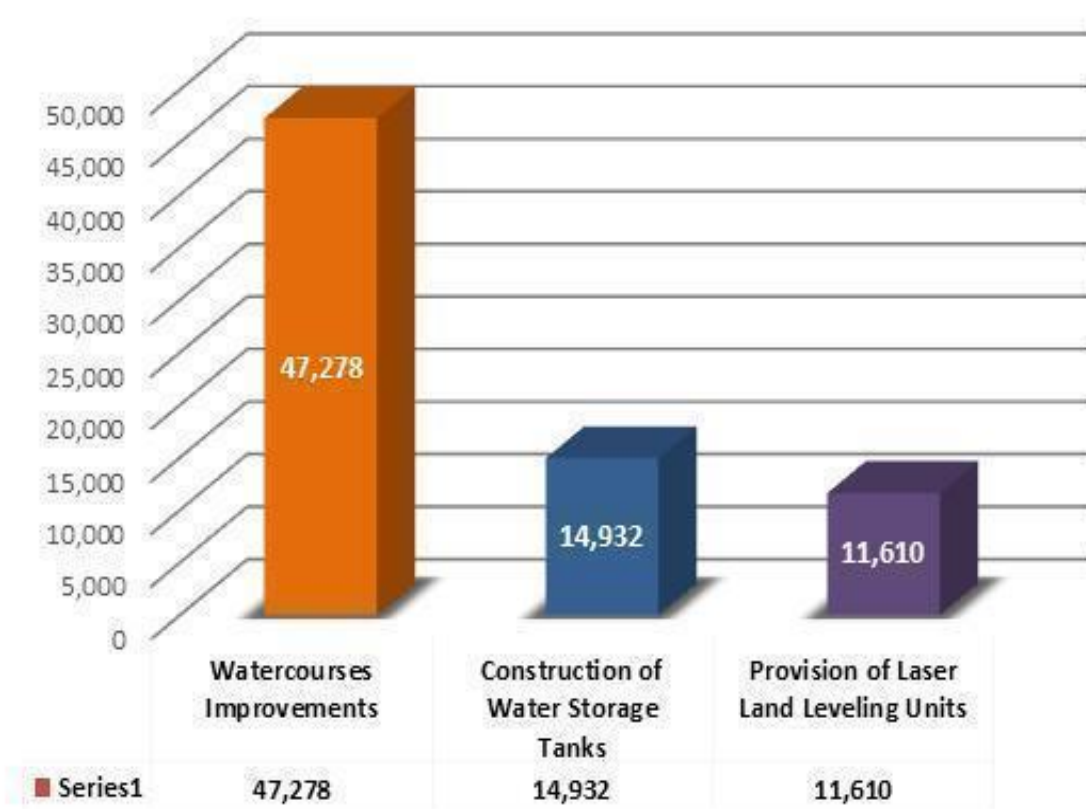


Figure 1.1: NPIWC-II Project WCs, WSTs, and LLL Targets in Pakistan

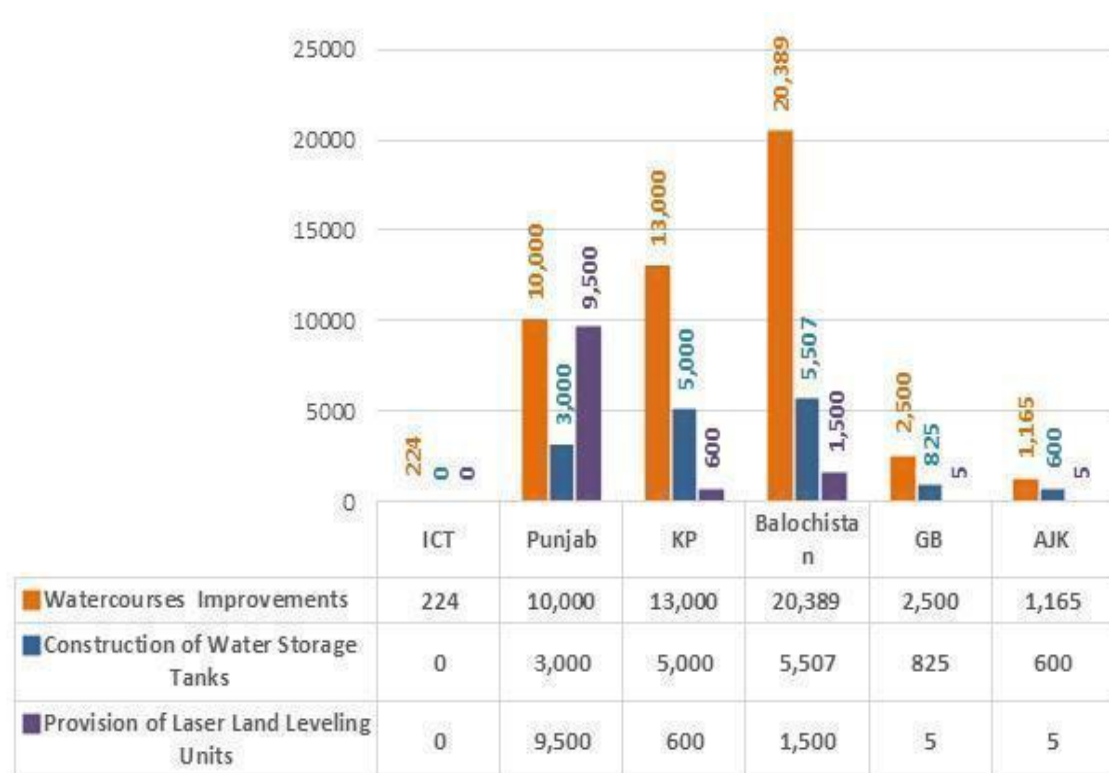


Figure 1 2: Zone-Wise WCs Improvement, WSTs, and LLL Target

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

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

### 2.1 OBJECTIVES OF CONSULTING SERVICES

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

### 2.2 SCOPE OF CONSULTING SERVICES

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

- i. Undertake baseline, midline, and 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 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. The 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, laser Levelers database, etc. (while the project's IT 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 updation / upgradation 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 an application interface.
- Development of an 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.
- The application should generate custom-designed reports and analyses as per user-defined requirements.
- The application should generate alerts (SMS, email, web notifications) to the user on the non-conformance of the project's key indicators; the application should have the provision to custom define alert levels and desired notifications.



## 2.3 MONITORING STRATEGY OF CONSULTANTS

The monitoring strategy planned to be followed by ME&IE Consultants is briefly described in **Table-2.2**.

However, detailed methodology and procedures to

carry out the ME&IE of the project interventions were explained in Chapter 6 of the Inception Report.

**Table 2.2: Monitoring Strategy for ME&IE Activities**

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

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

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
		Socio-Economic Expert	<p>estimated. It is benefitted towards food security</p> <ul style="list-style-type: none"> <li>Project costs and benefits will be compared in economic and financial terms to carry out economic and financial analysis.</li> <li>Parameters like IRR, NPV, and BCR will be estimated.</li> </ul>
7	Impact evaluation on the stakeholders	Team Leader, Agricultural Economist, and Socio-Economic Expert	Analysis as in serial 6 will be carried out concerning various stakeholders, like community, government, farmers, etc.
8	Spot checking	Team Leader, Deputy Team Leaders & Field teams/Engineers	During the field visits for WUAs baselines impacts of Watercourses, WSTs and laser land leveling units, the interventions will be spot checked for quality of construction, material, functioning, and beneficiaries' satisfaction, etc.
9	Process monitoring	Field Teams of Agriculture Dept., Project Consultants, ME&IE Consultants & ICT/Technology Specialist	<ul style="list-style-type: none"> <li>The processed data for all the interventions will be fed to the MIS/GIS database.</li> <li>Client's field staff and field teams of consultants will furnish data of their activities.</li> <li>The ME&amp;IE will assist in developing mobile application for this purpose</li> <li>From this data reports will be generated for process monitoring</li> <li>All interventions will be fully (100%) covered.</li> </ul>
10	Project website and MIS/GIS dashboard development	ICT / Technology Specialist (Including all other core team staff will also coordinate in completing data for the MIS/GIS	<ul style="list-style-type: none"> <li>The State-of-the-art MIS / Progress Monitoring Model will be developed for NPIWC-II.</li> <li>Customized forms will be developed to collect data from the implementing teams on-site for progress monitoring</li> <li>These forms will be made available to the teams on smart phones through an Android application</li> <li>The teams will be adequately trained to use the application</li> <li>Data on physical and financial stages with dates will be fed to the system for process monitoring</li> <li>GIS coordinates for watercourses, WSTs, laser units (if available) and WUAs offices will be uploaded to the system and could be viewed / reached by the management online</li> <li>The system will be maintained on GOOGLE server so that it is accessible by the management from anywhere in Pakistan and abroad</li> <li>Custom reports will be possible as the user demands / desires</li> <li>The results could be displayed on small as well as large screens.</li> </ul>
11	Development of Android-based application	ICT / Technology Specialist	All the data collection forms / tools will be executed through customized developed Android-based applications accessible with smart phones / TABs.

#### 2.4 FRAMEWORK AND RESULTS-BASED MONITORING (RBM) INDICATORS

The framework and Results-Based Monitoring (RBM) Indicators are identified in **Table-2.2** of Inception Report. The indicators are further being enhanced

and refined in consultation with the client as well as the stakeholders.

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

## CHAPTER 3: CONSULTANTS' ACTIVITIES DURING THE REPORTING MONTH

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

### 3.1 SUBMISSION OF MONTHLY MONITORING REPORT (MMR)

As per contractual obligation, the consultants have submitted the forty-first MMR (May 2024). While the forty-second MMR (the Report in hand) for June 2024 (1<sup>st</sup> June 2024 to 30<sup>th</sup> June 2024) is being submitted.

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

### 3.2 ACTIVITIES OF ICT UNIT – JUNE 2024

An overview of the significant tasks accomplished, observed and assessed by the ME&IE consultants from the ICT- Unit, National Office Islamabad during the last month of the completing NPIWC-II project, June 2024. The salient details are outlined below:

- Field visits for baseline and impact surveys, along with regular monitoring and spot checks, have been conducted for two WST schemes in District Bagh and one WST scheme in Poonch District.
- Data verification and analysis of baseline and impact surveys;
- Submitted the deliverable report, MMR for the month of May-2024 after editing, verifying,

and processing through the respective stakeholders;

- Worked on the compilation of obligatory reports viz., Annual Monitoring & Evaluation Report (1st July-2023 to 30th June 2024) and Quarterly Monitoring Evaluation Report (April to June 2024); and
- Routine Admin and Financial liabilities were supervised by the Team Leader and Deputy Team Leader of the ICT-Unit as well as National Office at Islamabad.

#### 3.2.1 Overall Progress:

ME & IE consultants' ICT-Zone has successfully covered overall more than 5% Sample Size of the targeted population in ICT – Zone that constituted at least 5% sample size in each district of AJK as well as Punjab Barani-Zone. The ICT unit has achieved significant milestones, notably reaching 5% of the sampling target across the sampled districts. This accomplishment underscores the team's diligent efforts in conducting thorough baseline assessments, impact evaluations, and regular/ spot checking monitoring activities. Consequent upon successfully covering the targeted percentage entrusted by the FPMU office in respect of the Project's targeted population in both AJK and Punjab Barani Zones respectively, the project has laid a strong foundation for broader data collection and analysis in order to arrest the likely representative sample size of the targeted population.

#### Updated Achievements:

Baseline and Impact Assessments completed in all designated districts by achieving a 5% target from the stipulated sampling frame. Regular Monitoring Visits were consistently conducted as per the informed and shared schedule with the cooperating departments as well as the beneficiaries.

From inception to date, the ME&IE Consultants ICT field team conducted baseline vis-a' vis impact surveys of **46** watercourses in AJK (**39**) & ICT (**7**) as well as baseline vis-a'-vis impact surveys of **25** 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.

#### Data Collection:

Quality data and allied information were collected from all sampled districts of the project area, ensuring valid and reliable information to realize the impact assessments based on the respective baselines.



As the project draws towards its closing milestone, we celebrate its successful culmination marked by diligent efforts and steadfast dedication. Resultantly through its meticulous planning, rigorous monitoring, and impactful assessments, the team of ME&IE consultants have strived to achieve the targeted goals and hopefully surpassed the client's expectations. The collaborative spirit in coordination with diversified organizations (OFWM, Agriculture Extension, Small Dams Irrigation department and NPC Office) and unwavering commitment of M&E consultants have ensured that every milestone was met with precision and excellence. Since this effort reflects on the project's journey, every member of the team take pride in the manifestation of the positive impact created and lessons learned out of the working of this project, surely paving the way for the future course of endeavors with full confidence and expertise.

### 3.2.2 Field Visits to AJK

<b>Date of Visit:</b>	3-06-2024
<b>Scheme:</b>	Water Harvesting Structure
<b>WUA Chairman Name:</b>	Raja Manzoor Khan
<b>Name of village:</b>	Choor Chalari
<b>District :</b>	Bagh
<b>Source of irrigation:</b>	Rainfall
<b>Shape of WST</b>	Rectangular
<b>Command area of WHS</b>	10.5 Acres



Picture of WHS in District Bagh, AJK



ME&IE field team taking measurements of the Scheme



Group Photo of the Beneficiary and ME&IE Consultants

#### Before Intervention:

Prior to the construction of the water harvesting structure, farmers' livelihoods on the agriculture farming where the crop productivity was significantly constrained to the unreliable water access. Farmers are dependent on erratic rainfall patterns led to seasonal fluctuations in yielding agricultural outputs, limiting income opportunities and food security. Crop diversification was restricted, thus the farmers were unable to cultivate high-value crops due to water scarcity against the desired delta of water requirements for the potential crops. The farmers were used to grow only maize crop and few seasonal vegetables. Before launching of the intervention, farmers used to keep 40% of the land as fallow due to non-availability of sufficient water supply, thus they could only manage crops cultivation up to 60% of the land.

#### After Intervention:

Consequent upon the introduction of the intervention through following the construction of the water harvesting structure, farmers experienced notable improvements in livelihoods through fetching the higher crop yields. For example, the maize crop yield was increased by 12 % (i.e., from 36 to 41maunds per acre). As a result of introduction of the intervention, availability of irrigation water enabled the farmers to plant diversified crops for their respective crop seasons. Moreover, the productivity of the crops also increased by applying the judicious water requirement to the potential crops. Farmers started cultivating high value crops including fruits and vegetables corresponding to the Rabi and Kharif crop seasons. Farmers entered into the venture of cultivating of cash crops based on the market driven commodities that provided an opportunity for them to generate additional income with higher profit margins. Enhanced access to water resources also facilitated to the farmers in rearing more livestock and raising agro forestry for producing fire and timber wood as well as fodder for

animal feeding. It created an opportunity for the beneficiaries to further diversify livelihood options. Moreover, community members reported enhanced food security and reduced vulnerability to climate-related shocks/ threats, highlighting the transformative impact of the water harvesting structure on farmers' livelihood through enhanced agricultural productivity, and promoting sustainable land use.

#### Monitoring Log:

#### Key Findings:

##### • Water Quantity:

The Choor Chalari water harvesting structure has established successfully the capacity of 10 gallons of water, the depth of this WHS was 8 feet and its present status was fully filled with water. The water collected and stored was fulfilling the current crop needs.

The water was suitable for irrigating the crops and its source of water is only rainfall.

##### • Structural Integrity:

The WHS was according to the sanctioned design and was well maintained, no leakage or damage found anywhere in the WHS.

##### • Vegetation Management:

There was no vegetation/ weeds found at the surrounding of the structure. Proper vegetation management is necessary to prevent obstruction of water flow and avoid potential structural damage.

##### • Overflow and Spillage:

The observation of the structure found to be effectively managing excess water without any instances of overflow or spillage during the M&E team visit.

##### • Water Usage:

Data regarding the utilization of harvested water indicates primarily being used for irrigation purposes but to a limited extent for domestic usage.

##### • Farmers' Feedback:

Feedback from the beneficiaries regarding the water harvesting structure was positive, however, they had been confronted difficulty in collecting the subsidy amount in time. The farmers on their own expenses constructed the WHS and then reimburse the expenses at very late period.

<b>Date of Visit:</b>	3-06-2024
<b>Scheme:</b>	Water Storage Tank
<b>Name of village:</b>	Ghazi Abad Kals
<b>District :</b>	Bagh
<b>Source of irrigation:</b>	Rainfall
<b>Shape of WST</b>	Square
<b>No of beneficiaries:</b>	-



WST Ghazi Abad kalsin District Bagh, AJK



ME&IE team with beneficiaries in District, Bagh

#### Monitoring Log:

The WST Ghazi Abad kals was well maintained, there was no leakage found, the tank was closed from the top and was being filled through pipeline.

#### Observations:

##### 1. Infrastructure and Functionality:

- The water storage tank is well-constructed and appeared in good condition.
- Plumbing and distribution systems connected to the tank are functioning effectively, providing consistent water supply.

##### 2. Community Impact:

- Local residents in the project area expressed high level of satisfaction with the availability of sufficient water since the tank's installation.



- Improved access to water has reduced the time spent by the farmers on water collection, yielding increased crops productivity in the area.

#### Suggestions and Limitations Impression:

This version of the MMR is being written at the verge of completion of the NPIWC-II, Project. We the ME&IE consultants appreciate the coordination and cooperation of all the project building departments including OFWM, Agricultural Extension and Small Dams Irrigation, as well as, the support of Client Office, National Project Coordinator, FPMU, MoFS&R for successfully meeting the intended tasks. On top of all efforts, this assignment was never performed amicably without the congenial, cooperative and friendly office working environment in placed by the team efforts from the top to the bottom tiers of the officials including professionals and support staff. We must salute mutually and exclusively in reciprocal at the good omen of winding of this project.

Besides all, the outstanding liabilities are pending both on the part of client office as well as consultancy firms to fulfill the expected interests/ rights of the employees, as well as both between client and consultancy firms. It is suggested that mutual dialogues may be facilitated to sort out discrepancies if a conflicting case arises amongst the vested interest parties.

### 3.3 ACTIVITIES OF PUNJAB ZONE – JUNE 2024

During the month of June 2024, impact field visits of LLLs were 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 the following activities:

The consultants' activities generally spin around the conduction of their usual functions as under:

- Pre-Field Activities
- Field Activities
- Post Field Activities
- Meeting with Stakeholders/Beneficiaries

#### 3.3.1 Pre-Field Activities

The main point for discussion was of review the past performance and designing strategy for the future working. The OFWM Data / Information reviewed the target and achievement of ME&IE consultants were studied again upcoming field activities.

The other activities were focused on in house activities relevant to training of field staff, updating of monitoring tools, etc.

#### 3.3.2 Field Activities

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 **306** PLL interventions.

The monitoring / Field survey pertained to the provision of laser land levelers during the month under review. The data collection activities for this intervention were carried out by three field teams under the supervision and guidance of the deputy team leader Punjab zone Lahore.

#### PLL ACHIEVEMENTS OF ME&IE CONSULTANTS DURING THE CURRENT SURVEY JUNE 2024

Sr. No.	Ecological Zone	District	Achievements
1	Partial Irrigated Barani Zone	Bhakkar	5
		Mianwali	7
2	Irrigated (Rice Zone)	Gujranwala	5
		Hafizabad	5
		Kasur	2
		Nankana Sahib	2
3	Irrigated (Mixed Zone)	Faisalabad	3
		Toba Tek Singh	1
4	Irrigated (Cotton Zone)	Rahim Yar Khan	13
		Rajanpur	6
		Bahawalnagar	4
		Bahawalpur	12
		Muzaffargarh	12
		Khanewal	2
		Mandi Bahauddin	8
Total			87

#### 3.3.3 Post Field Activities

The activities were related to the data verification and cleaning of baseline and impact surveys, and data validation WUA's Improvement of Water Courses and Construction of Water Storage Tank/Ponds for PMIS Dash Board.

#### 3.3.4 Coordination / Meetings with Stakeholders / Beneficiaries

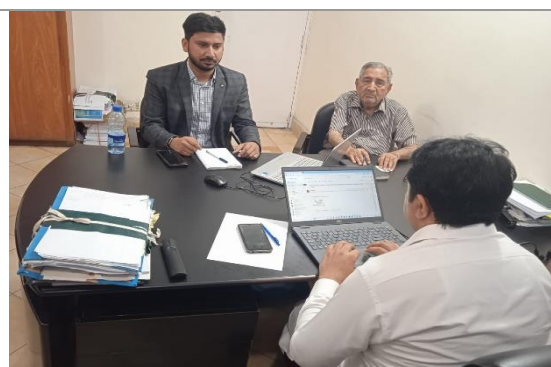
The coordination meetings with stakeholders / beneficiaries of the project were necessary to know the operational activities of OFWM and collection of required information/data. It was a regular practice of ME&IE consultants being followed every month.

A meeting at the Director General Agri (OFWM) office was held, with the Focal person of D.G office and the Focal person of ME&IE Consultants.

#### Meeting Held at DG OFWM Lahore

<b>Date</b>	<b>04-06-2024</b>
<b>Venue</b>	<b>Director General Agriculture, HQ OFWM, Davis Road, Lahore</b>
<b>Participants</b>	
i. Tahir Mehmood, Focal Person DGA OFWM/DDA Headquarter (OFWM) and DDA climate change	
ii. Muhammad Yousaf Bhatti, Deputy Team Leader, ME&IE Consultants	
iii. Muhammad Rizwan Suleman, Field Team In Charge	
<b>Discussion &amp; Decision:</b>	
1- As per Commitment, Focal person of ME&IE Consultant gave presentation on dashboard data and shared update on PLL data which was incorporated on Dashboard.	
2- Moreover, Focal Person of ME&IE Consultant raised issues about missing and incorrect information in the data regarding PLL and Watercourse.	
3- Focal Person to D.G office assigned task regarding Provision of PLL data to Dr. Moin Ahsan who will Contact with Focal Person of ME&IE Consultant and ensure Provision of Dashboard data till 14-June-2024 as per said Format.	
4- During the meeting, it was mutually decided that Focal Person of ME & IE Consultant will share all previous missing data to Focal Person to DGA office on immediate basis and data regarding dashboard will be provided as soon as possible.	
5- Focal Person to DG office did Commitment that he will provide all data as per the format shared by Focal Person of ME&IE Consultant which was developed by mutual Consensus.	
6- Focal person to DGA Office asked focal person of ME&IE Consultant to take PSC targets rather than PC-1 Targets because funds are issued on the basis of PSC targets not as per PC-1. So, this Comparison would not be feasible. Focal Person of ME&IE Consultant did Commitment that he will share his Consent after discussion with Management with Consultation of both focal persons, it was decided that Focal Person to DGA Office will Visit Punjab Zonal office on Thursday and Conduct meeting	

with Focal Person of ME&IE Consultant in the presence of IT Team and address all the quarries regarding Dashboard.



**Meeting of ME&IE Consultant with Focal Person in DG office, Mr. Tahir Mahmood**

#### PLL CASE STUDY:

Visit of PLL Village Balloshabal at Tehsil and District Jhang

Farmer Name: Muhammad Shafi S/O Jewan

Total area of this Village is 360 Maraba (9000 Acre) and the number of lasers delivered in this area is two which are quite insufficient to Level this land.

This Laser was delivered in 2022 and till now it levelled an area of 2000 Acre. Owner has hired a driver who worked day and night in order to get fruitful Income.

#### Cost benefit Analysis of PLL:

Total Cost of Laser: Rs. 650,000 (Farmer share was 4 Lac and Govt share was 2.5 Lac PKR.)

Total Initial Farmer Investment: 4 lacs PKR

No of Hours laser operated in Field in 2 years= 1429 hours

Profit Calculation for one Year:

No of Hours laser operated in Field in one year = 714.5 hours

Cost of PLL per operation = Rs. 3500/hour

Total Earning from PLL= 25,00750 Rs. / Year

Diesel and Oil Change Cost= -8,33500 Rs/Year

Driver Salary Paid = -180,000 Rs/Year

Total Profit Service provider (farmer) got this year after subtracting all his expenditures =

Total Profit= 1487,250 Rs / Year\* (excluding wear and tear costs)



Farmer recovered more than 2 times of his investment in one Year.

#### Recommendations of ME and IE Consultants:

- 1- Laser quota should be fixed for each Company this will reduce burden on other Companies. (Companies should be bound to take orders as per Quota).
- 2- While investigating, it came in our Knowledge that last year Hanzala Traders booked 32 Lasers in tehsil Jhang. But due to high demand Company didn't deliver laser on time due to which farmers had to suffer.
- 3- Department should have powers and penalties should be imposed if Companies do not deliver laser on time.
- 4- The Provision of PLL at each site should be increased
- 5- This policy amendment will help farmers to cater the Monopoly of a few Service Providers at the Sites. Because most of the service providers demand their own price which have caused an extra burden on the shoulders of the beneficiaries in the Nearby Vicinity.



A View of Visit of ME&IE Team at PLL Site, ADA, OFWM Jhang also accompanied s during the Visit



A view of PLL Meter operated in 2 years

#### WATERCOURSE SUCCESS STORIES

##### A Success Story of a Farmer at the Tail of an Improve Watercourse:

Gone are the days now when there were conflicts on water thefts and unequitable distribution of water. All the Farmers are now quite happy and satisfied with the parabolic water courses which have increased the conveyance efficiency of the water supply to the lands commands and resultantly elevated the yields of the crops.

##### Changing Farmers' Lives "An Improved community Watercourse"

The problem of water scarcity and the need for efficient water management is not a recent phenomenon in Pakistan. This has been a major challenge since the creation of the country as the fresh water resources' availability has become a scarce commodity. Over the last decade and it continues an alarming state of affairs. It is becoming clear that efficient water use management techniques are the need of the hour as more than 90% of water is being used for irrigation.

A watercourse is a community irrigation channel used for sharing water among shareholders through a weekly rotation system called "warabandi". Community watercourses are connected to farmers' fields through a complex system of channels and ditches. Water losses in watercourses are estimated to the tune of 40 percent, mainly through spillage, seepage, side leakage, evaporation, etc. which result in significant shortage of irrigation water at the farm level, particularly in tail reaches that compel the farmers to use groundwater for irrigation purposes.

As a matter of fact, the groundwater is not fit for irrigating crops in this area of the Punjab and causing degradation of productive/fertile soils. To minimize the water loss and improve the conveyance efficiency at the farm level, watercourse lining becomes the most feasible solution as it helps to improve conveyance efficiency up to 80 percent along with other benefits.

Water Management wing of the Punjab Agriculture Department has introduced Precast Concrete Parabolic Segment (PCPS) technology to improve community watercourses for enhancing their conveyance efficiency.

The improvement of watercourses is a community-driven activity that is being undertaken through a participatory approach with the active involvement of Water Users Associations (WUAs), organized and registered on each watercourse. This community-

based development model is helping the poor and small land holders to improve their living standards.

Here is a success story of a Chairman of Watercourse Mr. Abdul Jabbar a farmer having this land holding at the tail of a watercourse.



Visit of Watercourse with Mr. Abdul Jabbar (Chairman of WUAs)

Brief profile of Watercourse is given as under:

WC. ID	23400/L
Category	Additional
Year of Improvement	2021-22
*Already Lined	250 meters
New Lining	1341 meter (50%)
Name of Chairman	Abdul Jabbar
Contact No.	0304-5898750
Name of Treasure/Farmer	Abdul Jabbar
Minor/Distributary	Chinna Distributary
Contact No.	0304-5898750
Mouza/Qasba	Matta
Tehsil	Kot Radha Kishan
District	Kasur

\*Improved during 2015-2016 under various phases of PIP.

The community of Water Course# 23400/L, Village Matta, Tehsil Kot Radha Kishan, District Kasur were facing huge water losses problem due to seepage, side leakage and spillage since long and experiencing acute water shortage at their farms as they were unable to use groundwater because of its severe poor quality for irrigation and very costly to pump out the ground water.

While searching for solution, the community learnt about the government facility for watercourse improvement and approached the OFWM staff for rescue. The OFWM staff suggested the farmers for re-organizing a water user association for improvement of the watercourse. The community availed the facility being provided by the Government which has changed their lives. This

watercourse has more than 37 shareholders and irrigating the command area of about 345 acres.

Another member of the Water Users Association, Ch. Ibrahim shared excitedly that “our watercourse has improved during 2021-22 under the umbrella of National Program for improvement of watercourse (NPIWC-II). Before improvement, majority of the farmers of this village used to irrigate their lands through the means of canal water as well as with Tube well, and they had to spend a lot of money to irrigate their crops. Now their input cost has been reduced and they are getting more net profit per acre”.



Chairman of the Water Users Association, Mr. Abdul Jabbar and other member recording their views about improved watercourse during site visit at village Matta, Tehsil Kot Radha Kishan, District Kasur

According to Mr. Abdul Jabbar:

“Before the improvement of a watercourse, my whole land (100 Acres) was uncultivated because of the location at tail and water shortage and water theft. After improvement resulted in to the water course, now all of my land (100 Acres) is cultivated due to proper reach of water”

Mr. Abdul Jabbar, the shareholder of the watercourse and treasure of the WUA, shared the benefits of improved watercourse. He added that “conflicts/disputes have also been reduced significantly. Major conflicts among the farmers were due to water theft and side leakage of the water which used to damage the crops of other farmers having lands adjacent to the watercourse”.

In reply to the questions on benefits of such improvement of watercourse he replied that improved watercourse enabled us to irrigate more land with the same quantity of water. It also helps us to save labor expenses as 5-10 more workers were required for irrigation purposes before the improvement of the watercourse. Now one worker is enough for the purpose. He further shared that “another major benefit is better crop harvest with

canal water since the groundwater is not fit for the growth of crops and causes lower yields. Before watercourse improvement, the shareholders quit growing sugarcane due to water shortage and the land of some farmers had become almost barren owing to shortage of water leading to use of poor-quality groundwater but now they have not only started to grow sugarcane but their wheat and other crops' yield has also been doubled.

Mr. Abdul Jabbar's face reflects the happiness about this intervention when asked how much benefits are expected, he claimed the benefits are distinct but how much, time in near future will tell it.



Field Team interviewing the Chairman of WC # 23400/L Mr. Abdul Jabbar

"Mr. Abdul Jabbar says, we are very thankful to the government for providing this opportunity and advised other farmers to take full advantage of this scheme of the government."

### WUA SUCCESS STORIES

- I. Success Story of a Water user Association's Intervention paradigm
- II. The Project National Program for Improvement of Water Courses (NPIEC-II) In Punjab
- III. Water Users Association "A Backbone of Water Course Improvement"

"Gone are the days now when there were conflicts on water thefts and unequitable distribution of water. All the Farmers are now quite happy and satisfied with the parabolic water courses which have increased the irrigation rate of the lands and elevated the yields of the crops."

### The Intervention

Establishment of a Water Users Association is a pre requisite for another intervention that is improvement of the watercourse. Water user association allows the participation of farmers democratically and effective participation in the execution business for the improvement of the watercourse with the technical assistance of OFWM

department. The Farmer said that improved watercourse enabled us to irrigate about 50 % more land with same quantity of water. It also helped us to save labor expenses as 10-15 more workers were required for irrigation before improvement of watercourse. Now one worker is enough for the purpose. He further shared that "another major benefit is better crops with canal water since groundwater is not fit for the growth of crops and causes lower yields. Before watercourse improvement, the shareholders stopped to grow sugarcane due to water shortage, furthermore, the land of some farmers had become almost barren owing to shortage of water leading to use of poor-quality groundwater but now they have not only started to grow sugarcane, but also their wheat and other crops' yield has been doubled.

### Brief Profile of Watercourse and Association

Brief profile of Watercourse is given as under:

WC. ID	1400/R
Category	Additional
Year of Improvement	2021-22
*Already Lined	300 meters
New Lining	2264 meter (50%)
Name of Chairman	Ali Muhammad Khan
Contact No.	0333-8124651
Name of Treasure/Farmer	Amjad
Minor/Distributary	Chinna Distry.
Contact No.	-
Mouza/Qasba	Raja Jang
Tehsil	Kasur
District	Kasur

The Water User Association was organized as per the procedure of the OFWM department. A description about the beneficiary as an association member is given as under:

They were facing a dilemma of water shortage due to water theft and a continuous rupture/ breach of katcha watercourse. This dilemma had a great impact on their yields and was not able to cultivate and irrigate the remaining part of their lands due to less share of water. Ultimately it also had an impact on their income.

The farmers in this predicament, relying on the golden rule "every man for himself" appointed some surveillance duties to the respective people. But this was also in vain, as the theft of water was still unfolded. While searching for solution, the community learnt about the government facility for



watercourse improvement and approached the OFWM staff for rescue. The OFWM staff suggested the farmers to construct an elevated watercourse with PCPS for smooth flow of water to all the fields in the entire command areas. Given the severity of the issue, the community availed the facility being provided by the Punjab Government which has changed their lives.

#### Collaboration in Organization WUA

Under the umbrella of NPIWC-II, rehabilitation and construction of watercourses along with other interventions was started in Punjab. Mr. Amjad along with other fellow farmers got together and formed WUA mutually. OFWM guided that by using the (PCPS) watercourses the theft of the watercourses is minimized by using concreted controlled structures and the flow of the watercourse is maximized.



Interviewing the Chairman and Fellows of WC # 1400/R

#### Impact of the Intervention

While searching for solution, the community learnt about the government facility for watercourse improvement and approached the OFWM staff for rescue. The OFWM staff suggested the farmers to construct an elevated watercourse with PCPS for smooth flow of water to all the fields in the entire command. Given the severity of the issue, the community availed the facility being provided by the Punjab Government which has changed their lives.

While interviewing the chairman and other beneficiaries of the water course, all had same positive thoughts about the construction of the water course. The benefits mainly were that the flow had now increased and was distributed in an equitable manner to the land which was long spread through head middle and tail of the water course. Land was now irrigated from 3 / 4 acres to 8 / 9 acres. The water theft issue had now been resolved.



A Pleasing view of Parabolic Watercourse showing Impact view of watercourse

#### 3.4 ACTIVITIES OF KP ZONE – JUNE 2024

During the month of June, the ME&IE Consultants kept close contact with On Farm Water Management (OFWM) Department Khyber Pakhtunkhwa and other stake holders so that to achieve the desired objectives and to get acquaintance about the on-going activities /schemes of OFWM Department under the project NPIWC-II. Data verification and data cleaning activities were also performed. Where necessary, visits were also paid to the concerned departments. KP zonal office staff visited the OFWM, Directorate in connection with the Dashboard data entry of various schemes launched under the NPIWC-II, and meetings with the concerned staff of OFWM department. The following activities were performed by the KP zonal office staff, Peshawar during the month of June 2024.

The major activities by the ME&IE Consultants, KP Zone includes:

- ❖ Meetings with the OFWM Department, KP Officials
- ❖ Digital communication with relevant officials
- ❖ Monitoring of data
- ❖ Data verification, cleaning and analysis of baseline and impact surveys
- ❖ Verification of WC and WSTs through Google Earth
- ❖ Writing of MMR of May 2024

#### Meetings:

Regular routine meetings were held with the OFWM Department's relevant official to discuss various issues raised from time to time to the ME&IE Consultants. This is the normal activity of every month. Physical and digital contacts were exercised for collection of relevant information of undergoing schemes. June was the closing time for the financial year 2023-24; the OFWM staff was very busy in closing down the financial transactions of the year 2023-24. 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.

In addition to these, informal meetings were also held with the Focal Person of NPIWC at OFWM Directorate to discuss various issues relating to the data entry to the Dashboard.

**Meeting with the Focal Person NPIWC-II KP.** The ME&IE Consultants, KP Zone always considered it important to keep in touch with the Focal Person of NPIWC-II to maintain cordial relations with the OFWM Department, KP. During the month of **June 2024** two courtesy visits were paid to the Focal person's office for general discussion about the on-going activities under the NPIW-II programme of the OFWM Department.

During these visits general discussion was made on the data entry by the OFWM officials to the dashboard. The ME&IE consultants offered their services for assisting the concerned staff of the OFWM in data entry to the Dashboard.

**Monitoring of data:** Monitoring of the data entry is a routine activity of the consultants. The ME&IE Consultants have trained the officials of the OFWM Department for data entry to the Dashboard. Now, they are directly entering the data on android application. The ICT Manager, KP zone strictly monitoring the data entries and make necessary rectification by guiding the concerned staff of the various districts of KP on a daily basis. The ICT/Technology Specialist, KP, shares the updated status of dashboard data/schemes with the Focal person of NPIW-II, OFWM-KP and discusses the strategy to complete the data on the dashboard. **The worth mentioning point is that more than ninety percent of the data have been entered to the Dashboard of the schemes by the concerned officials of the OFWM Department KP.**

- **Verification of WC and WSTs through Google Earth:** ME&IE consultants, KP zone made verification of all watercourses, and water storage tank schemes and coordinate through Google Earth and identified incorrect coordinates.
- **Writing of MMR of May 2024:** Writing of the MMR of each month is mandatory for the ME&IE Consultants. Like the previous month MMR for the month of May 2024 was drafted and submitted to the concerned quarters.

### 3.4.1 Description of Progress:

During the consultants' visits in the month of June 2024 the OFWM Department staff extended all possible help and cooperation 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 NPIW-II, project during the current reporting month. 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 NPIW-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 the benefits of 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 irrigating time saving. Moreover the demand for the construction/renovation from the farmers' side is continuously increasing every year.

### 3.4.2 Field Activities:

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 surveys are carried out from time to time as a part of regular activity of ME&IE Consultants. Moreover, 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 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 the month of June 2024, KP ICT Team validated the GPS locations for hundreds of schemes of KP province. The activity was distributed among different team members with the help of ICT team of KP. OFWM directorate extends their usual support and provided all the relevant information.

### Assisting/Guidance to the OFWM staff on Android Application

The ICT team of the ME&IE consultants has 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 somewhere offices. However, some time they stuck 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 paid number of visits to the 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.

### 3.4.3 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.

### 3.4.4 Suggestions:

For the Smooth operations of field activities following are suggested.

- 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.

## 3.5 ACTIVITIES DONE BY BALOCHISTAN ZONE – JUNE 2024

### 3.5.1 Updated Progress of ME&IE Consultants – Balochistan

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 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 June 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	-

Sr. #	District	Baseline Survey		Impact Assessment Survey		Impact Survey (LLL)
		WC	WST	WC	WST	
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	-
<b>Sub-Total</b>		<b>203</b>	<b>148</b>	<b>203</b>	<b>148</b>	<b>7</b>

### 3.5.2 Updated Status of Technical Sanctions.

The DG of OFWM issued numerous Technical Sanctions (TS) for different zones in the month of January 2024. The details of TS issuance district-wise are mentioned below:

Detail of TS Shared with Mr. Shumail in May. 2024.

S. No,	District	Year
1	Mosa Khail	21-22
2	Harnai	21-22
3	Mosa Khail	22-23
4	Washuk	21-22
5	Chaghi	22-23
6	Zhob	21-22
7	Lasbella	21-22
8	Quetta	22-23
9	Kharan	22-23
10	Sherani	21-22
11	Sibi	22-23
12	Harnai	22-23
13	Panjgor	21-22
14	Pishin	21-22

### 3.5.3 Updated Status of Dashboard of Balochistan

The DTL, Balochistan zone has diligently undertaken several visits to the DG, OFWM Office, and these efforts have attained positive results with the

OFWM staff responding positively and cooperatively.

Furthermore, the Office of Water and Flood Management (OFWM) staff has been extremely supportive, demonstrating a commendable level of responsiveness. Their cooperation has been instrumental in providing the necessary data, covering the fiscal year 2020-21 comprehensively.

The significant data forward in achieving our objectives performed for the Dashboard of Balochistan.

The worthy DG, OFWM, Balochistan is requested to direct the concerned officials to expedite the data validation process of the last three financial years i.e. 2019-20, 2020-21, and 2021-22, and provide the necessary support and resources they require. It is also requested give the necessary direction to all DDs and concerned staff to upload the beneficiary data on "Dashboard, Balochistan" through the Android Based data application of the F.Y. 2022-23 and 2023-24.

The updated progress of Dashboard, Balochistan, district-wise is stated below:

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

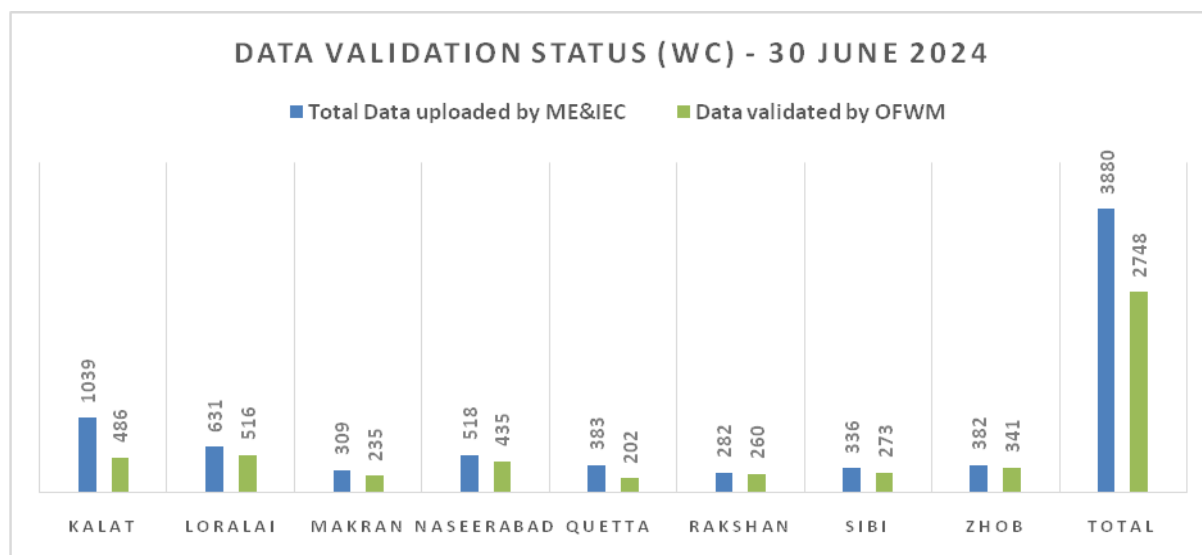
Division	District	2019-20		2020-21		2021-22		TOTAL	
		Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM	Total Data uploaded by ME&IEC	Validated by OFWM
Kalat	Awaran	140	76	22	22	0	0	162	98
Kalat	Kalat	97	0	28	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
<b>Total</b>		<b>608</b>	<b>189</b>	<b>143</b>	<b>62</b>	<b>288</b>	<b>235</b>	<b>1039</b>	<b>486</b>
<b>(%)</b>		<b>31%</b>		<b>43%</b>		<b>82%</b>		<b>47%</b>	
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
<b>Total</b>		<b>346</b>	<b>283</b>	<b>148</b>	<b>102</b>	<b>137</b>	<b>131</b>	<b>631</b>	<b>516</b>
<b>(%)</b>		<b>82%</b>		<b>69%</b>		<b>96%</b>		<b>82%</b>	
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
<b>Total</b>		<b>204</b>	<b>141</b>	<b>56</b>	<b>45</b>	<b>49</b>	<b>49</b>	<b>309</b>	<b>235</b>
<b>(%)</b>		<b>69%</b>		<b>80%</b>		<b>100%</b>		<b>76%</b>	
Nasirabad	Jaffarabad	53	53	32	32	56	56	141	141
Nasirabad	Jhal Magsi	16	0	6		5	0	27	0
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
<b>Total</b>		<b>216</b>	<b>148</b>	<b>111</b>	<b>105</b>	<b>191</b>	<b>182</b>	<b>518</b>	<b>435</b>
<b>(%)</b>		<b>69%</b>		<b>95%</b>		<b>95%</b>		<b>84%</b>	
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
<b>Total</b>		<b>246</b>	<b>122</b>	<b>51</b>	<b>2</b>	<b>87</b>	<b>78</b>	<b>384</b>	<b>202</b>
<b>(%)</b>		<b>50%</b>		<b>4%</b>		<b>90%</b>		<b>53%</b>	
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
<b>Total</b>		<b>128</b>	<b>110</b>	<b>58</b>	<b>55</b>	<b>95</b>	<b>94</b>	<b>281</b>	<b>259</b>
<b>(%)</b>		<b>86%</b>		<b>95%</b>		<b>99%</b>		<b>92%</b>	
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
<b>Total</b>		<b>185</b>	<b>128</b>	<b>59</b>	<b>53</b>	<b>92</b>	<b>92</b>	<b>336</b>	<b>273</b>
<b>(%)</b>		<b>69%</b>		<b>90%</b>		<b>100%</b>		<b>81%</b>	
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
<b>Total</b>		<b>232</b>	<b>197</b>	<b>69</b>	<b>66</b>	<b>81</b>	<b>78</b>	<b>382</b>	<b>341</b>
<b>(%)</b>		<b>85%</b>		<b>96%</b>		<b>96%</b>		<b>89%</b>	
<b>GRAND TOTAL</b>		<b>2165</b>	<b>1318</b>	<b>695</b>	<b>490</b>	<b>1020</b>	<b>939</b>	<b>3880</b>	<b>2747</b>
<b>(%)</b>		<b>61%</b>		<b>71%</b>		<b>92%</b>		<b>71%</b>	



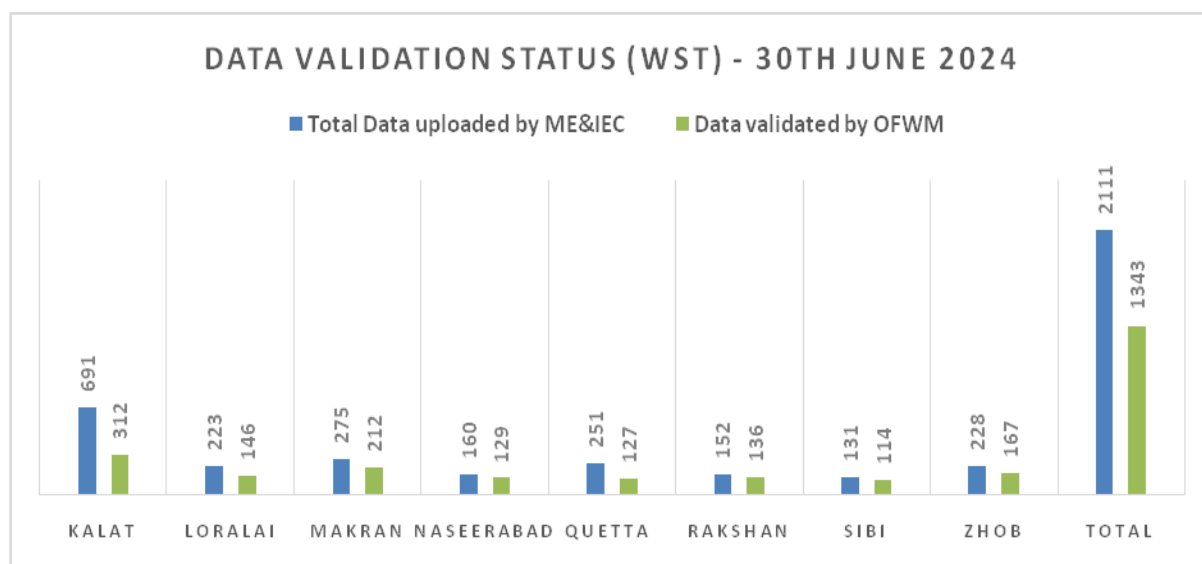
• **District-wise Progress of Dashboard, Balochistan (Water Storage Tanks)**

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
<b>Total</b>		<b>95</b>	<b>35</b>	<b>154</b>	<b>70</b>	<b>442</b>	<b>207</b>	<b>691</b>	<b>312</b>
<b>(%)</b>		<b>37%</b>		<b>45%</b>		<b>47%</b>		<b>45%</b>	
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
<b>Total</b>		<b>55</b>	<b>40</b>	<b>57</b>	<b>28</b>	<b>111</b>	<b>78</b>	<b>223</b>	<b>146</b>
<b>(%)</b>		<b>73%</b>		<b>49%</b>		<b>70%</b>		<b>65%</b>	
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
<b>Total</b>		<b>50</b>	<b>36</b>	<b>57</b>	<b>25</b>	<b>168</b>	<b>151</b>	<b>275</b>	<b>212</b>
<b>(%)</b>		<b>72%</b>		<b>44%</b>		<b>90%</b>		<b>77%</b>	
Nasirabad	Jaffarabad	0	0	8	8	9	9	17	17
Nasirabad	Jhal Magsi	7	0	0	0	23	0	30	0
Nasirabad	Kachi	18	18	24	24	40	40	82	82
Nasirabad	Nasirabad	0	0	8	8	9	9	17	17
Nasirabad	Sohbatpur	4	4	8	8	2	1	14	13
<b>Total</b>		<b>29</b>	<b>22</b>	<b>48</b>	<b>48</b>	<b>83</b>	<b>59</b>	<b>160</b>	<b>129</b>
<b>(%)</b>		<b>76%</b>		<b>100%</b>		<b>71%</b>		<b>81%</b>	
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
<b>Total</b>		<b>53</b>	<b>31</b>	<b>87</b>	<b>33</b>	<b>111</b>	<b>93</b>	<b>251</b>	<b>127</b>
<b>(%)</b>		<b>58%</b>		<b>38%</b>		<b>84%</b>		<b>51%</b>	
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
<b>Total</b>		<b>16</b>	<b>12</b>	<b>45</b>	<b>33</b>	<b>44</b>	<b>44</b>	<b>152</b>	<b>136</b>
<b>(%)</b>		<b>75%</b>		<b>73%</b>		<b>100%</b>		<b>89%</b>	
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
<b>Total</b>		<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>61</b>	<b>44</b>	<b>131</b>	<b>114</b>
<b>(%)</b>		<b>100%</b>		<b>100%</b>		<b>72%</b>		<b>87%</b>	
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
<b>Total</b>		<b>49</b>	<b>34</b>	<b>62</b>	<b>62</b>	<b>117</b>	<b>71</b>	<b>228</b>	<b>167</b>
<b>(%)</b>		<b>69%</b>		<b>100%</b>		<b>61%</b>		<b>73%</b>	
<b>GRAND TOTAL</b>		<b>382</b>	<b>245</b>	<b>545</b>	<b>334</b>	<b>1137</b>	<b>747</b>	<b>2111</b>	<b>1343</b>
<b>(%)</b>		<b>64%</b>		<b>61%</b>		<b>66%</b>		<b>64%</b>	

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



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



### 3.6 SOCIAL & GENDER IMPACT REPORT – JUNE 2024

Impact on the lives of farmers and landless farmers, including:

- 1. Increased crop yields:** Improved irrigation systems have enabled farmers to cultivate crops more efficiently, resulting in higher yields and better crop quality.
- 2. Enhanced food security:** Increased crop production has improved food availability, reducing hunger and malnutrition among farming communities.
- 3. Boost in income:** Higher yields and better crop quality have led to increased income for farmers, enabling them to improve their livelihoods and support their families.
- 4. Reduced poverty:** The programme has helped in reducing poverty among farming communities, enabling them to access better education, healthcare, and other essential services.
- 5. Improved livelihoods for landless farmers:** The programme has provided landless farmers with opportunities for employment and income generation, improving their overall livelihoods.

6. **Empowerment of rural communities:** The programme has empowered rural communities, particularly women, by providing them with training and resources to manage water resources and improve agricultural productivity.
7. **Environmental benefits:** Improved water management practices have reduced water waste and conserved this vital resource, contributing to environmental sustainability.
8. **Increased access to markets:** Farmers have gained better access to markets, enabling them to sell their produce at competitive prices and improve their economic stability.
9. **Improved water management skills:** Farmers have acquired improved water management skills, enabling them to optimize water use and reduce waste.
10. **Community development:** The programme has fostered community development, promoting collaboration and social cohesion among farmers and other stakeholders.

By improving irrigation systems and promoting efficient water management practices, the National Water Courses Improvement Programme has had a profound impact on the lives of farmers and landless farmers, contributing to food security, poverty reduction, and sustainable rural development.

Women farmers in areas of Dera Ghazi Khan face numerous challenges, including:

#### Issues:



1. **Water scarcity:** Limited access to clean water for drinking, irrigation, and household use.
2. **Malnutrition:** Poor access to nutritious food, leading to high rates of malnutrition and triggered related health issues.
3. **Low income:** Limited economic opportunities and low income, making it difficult to meet basic needs.

4. **No access to resources:** Inadequate access to healthcare, education, and other essential services.
5. **No skill development:** Limited opportunities for skill development and training, hindering economic empowerment.

#### Suggestions to resolve these issues:

1. **Water harvesting and conservation:** Implement rainwater harvesting systems and promote water-saving practices.
2. **Nutrition education and support:** Provide nutrition training and support, and establish community-based nutrition counseling programs.
3. **Economic empowerment:** Offer vocational training, microfinance opportunities, and support for entrepreneurship and small business development.
4. **Access to resources:** Establish community centers providing healthcare, education, and other essential services.
5. **Skill development:** Provide training and capacity-building programs for women, focusing on agriculture, livestock management, and income-generating skills.
6. **Community engagement and mobilization:** Engage with local communities to raise awareness and promote gender equality.
7. **Support for girls' education:** Encourage and support girls' education to address the root causes of gender inequality.
8. **Health services:** Improve access to healthcare services, including reproductive health and maternal healthcare.
9. **Agricultural support:** Provide training and support for women farmers, including access to credit and markets.
10. **Policy advocacy:** Advocate for policies and programs addressing the specific needs of women in hill torrent areas.

By addressing these issues and implementing these suggestions, women in the hill torrent areas of Dera Ghazi Khan can improve their lives, increase their empowerment, and contribute to the overall development of their communities.

### 3.7 ICT TEAM ASSIGNMENTS

#### 3.7.1 Implementation of MIS Dashboard

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

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	130	439	582	1151

Total **1151** 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	2022-23	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 under progress 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	18	23	17	12	73
Bannu	73	36	94	27	0	230
D.I Khan	446	10	110	9	11	586
Hazara	85	64	142	76	7	374
Khyber	6	13	0	1	20	40
Kohat	98	40	57	28	18	241
Kurram	3	5	5	0	0	13
Malakand	179	174	478	87	44	962
Mardan	105	64	88	26	25	308
Mohmand	4	42	17	30	0	93
N.W Agency	2	3	5	1	0	11
Orakzai	0	1	0	0	0	1
Peshawar	139	87	86	41	14	367
S.W Agency	3	12	15	7	0	37
Overall	1146	569	1120	350	151	3336

As of now, we've received a total of **3,336** watercourse datasets from the KP zone, all of which are live on the GIS Dashboard. Out of these, **3,240** watercourses have been lined, while work is underway for the remaining **44** watercourses at various stages, including 1st Milestone, 2nd Milestone, and after Work Order Issuance. Additionally, there are **52** watercourses awaiting approval for Work Orders. It's important to note that these figures have been revised due to data rectification (Detailed Summary attached as **Annex-I**).

KP – WST Data Summary						
Division	2019-20	2020-21	2021-22	2022-23	2023-24	Overall
Bajaur	1	9	6	1	0	17
Bannu	12	10	23	2	0	47
D.I Khan	79	7	34	0	5	125
Hazara	28	45	76	20	1	170
Khyber	1	9	0	0	7	17
Kohat	27	17	32	14	0	90
Kurram	1	1	0	0	0	2
Malakand	74	95	188	20	13	390
Mardan	16	9	26	4	18	73
Mohmand	1	42	71	0	0	114
Orakzai	0	2	0	0	0	2
Peshawar	36	26	64	17	16	159
S.W Agency	0	15	15	2	0	32
N.W Agency	0	8	12	1	0	21
Overall	276	295	547	81	60	1259

In total, there have been **1,259** submissions of Water Storage Tank data. Among these, **1,225** Water Storage Tanks have been completed, and work is ongoing for **13** others. Additionally, **21** Water Storage Tanks have pending Work Orders. It's worth noting that these figures for Water Storage Tanks have been revised due to data rectification Detailed Summary attached as **Annex-J**.

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

be submitted promptly to address the backlog on the PMIS Dashboard.

So far, Total **50** PLLs 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 **3,883** Watercourses data has been received from Balochistan zone of which **3,236** 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 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
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 Balochistan Zone was last updated on October 24, 2023. However, since then, there has been no further data input received from Balochistan Zone's enumerators via the Android Application. There is still a significant amount of pending data on their end. That needs to

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** PLLs 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	50	246
Poonch	33	32	30	8	48	151
Mirpur	37	96	72	21	74	300
Overall	100	212	155	58	172	697

A total of **697** Watercourse data sets have been received from the AJK zone. Among these, **570** Watercourses have been lined, while **17** are currently pending at the TS & Work Order Stage. Additionally, there are **110** watercourses currently under progress. It's important to note that these figures have been revised due to data rectification 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	92	242
Mirpur	2	15	31	6	46	100
Overall	50	112	154	49	167	532

A total of **532** Water Storage Tank data has been received from AJK zone of which **406** Water Storage Tank have been lined, **17** Water Storage Tanks are pending at TS Stage, **109** Water Storage Tanks are under progress. It's important to note that these figures have been revised due to data rectification Detailed Summary attached as **Annex-R**.

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

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

### 3.7.2 On-Going Data Validation & Cleaning

The data submission process is ongoing and will persist until the project concludes. Zonal Field Staff in KP and AJK are consistently inputting data via customized Android Application which has been provided and trained by the ICT team of ME&IE consultants. Concurrently, the ICT team is continuously engaged in cleaning and validating the received data, and any errors are promptly communicated to the respective Zonal DDs/ADs for correction.

## CHAPTER 4: QUARTERLY WORK PLAN- ACTIVITIES (APRIL 2024 TO JUNE 2024)

The ME&IE Consultants' activities initiating during the 4<sup>th</sup> Quarter of the year 2023-2024 (1<sup>st</sup> April 2024 to 30<sup>th</sup> June 2024) are listed below. A tentative Work Plan for the 4<sup>th</sup> Quarter of the year 2023-2024 (1<sup>st</sup> April 2024 to 30<sup>th</sup> June 2024) showing period detail is given as **Annex-A**.

### 4.1 PRE-FIELD-ACTIVITIES

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

### 4.2 FIELD ACTIVITIES

- Regular Monitoring of Interventions in the field
- Data collection of the interventions in the field
- Field activities regarding Endline Impact surveys
- Online data entry in Android-based application

### 4.3 ICT ASSIGNMENT

- Improvement/Updation of website of NPIWC-II
- Monitoring online data collection and data entry
- Monitoring Android based Mobile Application under implementation by field staff.
- Data collection of interventions in MIS/GIS database
- Capacity Building Trainings / Refresher of Departments
- Data entry, Data cleaning, Data processing & data analysis.

### 4.4 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

### 4.5 DELIVERABLES

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

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-	Submitted

Document	Status
Second (FEB 2021)	
Monthly Monitoring Report-Third (MAR 2021)	Submitted
Quarterly Monitoring & Evaluation Report (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 (APR-JUN 2021)	Submitted
Annual Monitoring & Evaluation Report (1 <sup>st</sup> )	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 (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 year 2021 (OCTOBER – DECEMBER 2021)	Submitted
Monthly Monitoring Report-Thirteenth (JANUARY 2022)	Submitted
Monthly Monitoring Report-Fourteenth (FEBRUARY 2022)	Submitted
Monthly Monitoring Report-Fifteen (MARCH 2022)	Submitted
Quarterly Monitoring & Evaluation Report- year 2022 (JANUARY – MARCH 2022)	Submitted
Monthly Monitoring Report-Sixteen (APRIL 2022)	Submitted
Monthly Monitoring Report-Seventeenth (MAY 2022)	Submitted
Monthly Monitoring Report-Eighteenth (JUNE 2022)	Submitted
Quarterly Monitoring & Evaluation Report- year 2022 (APRIL – JUNE	Submitted

Document	Status
2022)	
Annual Monitoring & Evaluation Report (2 <sup>nd</sup> ) 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- 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
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- 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 <sup>st</sup> Quarter year 2023 (Jul – Sep 2023)	Submitted
Monthly Monitoring Report-Thirty Fourth (October 2023)	Submitted
Monthly Monitoring Report-Thirty Fifth (November 2023)	Submitted
Monthly Monitoring Report-Thirty Sixth (December 2023)	Submitted
Quarterly Monitoring & Evaluation Report-2 <sup>nd</sup> Quarter year 2023-24 (Oct – Dec 2023)	Submitted
Monthly Monitoring Report-Thirty	Submitted

Document	Status
Seventh (January 2024)	
Monthly Monitoring Report-Thirty Eighth (February 2024)	Submitted
Monthly Monitoring Report-Thirty Ninth (March 2024)	Submitted
Quarterly Monitoring & Evaluation Report-3 <sup>rd</sup> Quarter year 2023-24 (Jan – Mar 2024)	Submitted
Monthly Monitoring Report-Fortieth (April 2024)	Submitted
Monthly Monitoring Report-Forty First (May 2024)	Submitted
Monthly Monitoring Report-Forty Second (June 2024)	Report in hand
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)	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) 9) Water Saving Through NPIWC-II Project Interventions 10) Special Report on Monitoring	Submitted



Document	Status
and Impact Evaluation of Precision (Laser) Land Leveling 11) Monitoring, Evaluation, and Impact Analysis of The Project "NPIWC-II".	

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

#### vi.1 MATRIX OF RESPONSIBILITIES

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

## 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.
- While reviewing Dashboard during our in-house exercise, we have witnessed some stuck-up cases. Following are different levels/stages in terms of days and 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 have crossed the third level which is execution agency DG, therefore, you are hereby intimated for your intervention to sort out these stuck ups.

We have already pointed out the 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 was observed from FPMU vide its Letter dated 12 July 2023 and raised the issue with executing agencies to settle the issue on a priority basis.

# ANNEXES A to S



## ANNEXURE A: TENTATIVE WORK PLAN FOR THE QUARTER OF 2024 (APR-JUN 2024)

TENTATIVE WORK PLANNED FOR THE QUARTER (April 2024 To June 2024)												Legend	
												Activity starts	↓
												Activity Ends	↓
												Activity Span	---
No.	ACTIVITIES	3 Months-Year 2024 (Weeks)											
		April				May				June			
		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	<b>Pre-Field Activities</b>												
	1.1 Refresher Trainings of Field Staff for Endline Impact Surveys												
2	<b>Field Activities</b>												
	2.1 Regular Monitoring of Interventions in the field												
	2.2 Data collection of the interventions in the field												
	2.3 Field activities regarding Endline Impact surveys												
	2.4 Online data entry in android-based application												
3	<b>ICT Assignment</b>												
	3.1 Improvement/Updation 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 entry, Data cleaning, Data processing & data analysis.												
4	<b>Coordination</b>												
	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	<b>Deliverable</b>												
	5.1 Monthly Monitoring Report												
	5.2 Quarterly Monitoring & Evaluation Report (Jan-Mar 2024)												

## ANNEXURE B: MATRIX OF RESPONSIBILITIES

### MATRIX OF RESPONSIBILITIES

LEGEND	
●	Primary Responsibility
○	Secondary Responsibility
○	Assistance

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

## ANNEXURE C: MONITORING LOG-FRAME

Project Sub-components	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
<b>C1: Organization of Water Users' Associations (WUAs)</b>	Reactivation of existing / organization of water users' associations. Ensuring one on each target watercourse. Total WUAs ensured 47,278.	i. Community mobilization at 47,278 watercourses	i. Total 47,278 WUAs reactivated / established/registered	i. Right of way of 47,278 watercourses available ii. Skilled and unskilled labor required for watercourse improvement available iii. Construction material for civil works of watercourses procured iv. Alternate arrangement for water conveyance during construction made v. Watercourse improved	i. Disputes among the water users settled ii. Farmers branched improved iii. Water allocation made amicably iv. Maintenance of watercourses, WST and laser units done v. Cooperation among farmers increased	i. 47,278 watercourses improved and 15 percentage points conveyance losses reduced ii. Litigation among farmers reduced	i. The functioning of the WUAs will be established through sample interview surveys of WUAs members twice during the project period
<b>C2: Watercourses Improvements</b>	Improvement of 47,278 watercourses on cost sharing basis: 40% farmers in terms of labor, and	i. Establishment of 47,278 Water users' associations (WUAs); ii. Registration of	i. 47,278 WCAs established; ii. 47,278 WCAs registered; iii. 47,278 watercourses	i. Conveyance losses for improved watercourses decreased by about 15	i. Increase in cropping intensity on improved watercourses by 5-24%;	i. Increase in farm income; ii. Increase in employment for farm	i. The water flow measurements will be carried out at before

60% funded by project.	<p>47,278 WUAs;</p> <p>iii. Improvement and realignment of earthen section of 47,278 watercourses;</p> <p>iv. Lining of up to 50% length of 47,278 watercourses either by:</p> <p>v. Precast concrete parabolic lining (PCPL) segments, or</p> <p>vi. Rectangular brick masonry, or any other method as approved by the project</p>	improved and lined;	<p>percentage points.</p> <p>ii. 1.654 million households benefited from the activity;</p> <p>iii. 11.347 million acres served with improved watercourses</p>	<p>ii. Increase in crop yields.</p> <p>iii. Increase in irrigated area</p> <p>iv. Increase in agriculture output per unit of water by about 37%</p>	<p>labor;</p> <p>iii. Reduction in poverty;</p> <p>iv. Enhanced food security for the country.</p>	<p>and after watercourse improvement on 2-5% sample basis;</p> <p>ii. Agriculture survey before and after watercourse improvement on 2-5% sample basis;</p> <p>iii. The survey will determine:</p> <p>iv. Cropping pattern before and after the improvement;</p> <p>v. Cropping intensities before and after improvement;</p> <ul style="list-style-type: none"> <li>● Before and after crop yields;</li> <li>● Before and</li> </ul>
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							after employment ;
							vi. 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.
<b>C3: Construction of Water Storage Tanks (WSTs)</b>	i. Construction of 14,932 water storage tanks	i. 14,932 small farmers mobilized to construct water storage tanks for irrigation ii. They agree to contribute 40% of the cost iii. Agree to first construct the tank with	i. 14,932 WSTs constructed ii. 14,932 WSTs operated and maintained	i. Water which was otherwise largely going to be wasted is saved i. Irrigation provided at critical stages of the crops ii. Flexibility achieved for irrigation	i. More area irrigated ii. Increased cropping intensities	i. Increased crop yields ii. Increased total crop output quantum iii. Increased farm income iv. Increased farm employmen	i. 2-5% sample of WSTs will be surveyed iii. A data collection form will be designed to measure water saving due to WSTs iv. The forms used for

		his/her own funds and then received subsidy at 40% on issuance of FCR				t	baseline and impact surveys in case of watercourses will also be used for WSTs v. Same data analysis will be carried out here as in case of watercourses.
<b>C4: Provision of Land Leveling Units</b>	i. 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.	i. 11,610 laser units provided to farmers / service providers; ii. Farmers trained in using the units.	i. 11,610 farmers / service providers received PLL units; ii. Farmers / service providers received training in using the units.	i. Land leveled on Farmers' / service providers' farms; vi. Land leveled on fellow farmers on rent; vii. Total 3.483million acres leveled by 11,610 units.	i. Water application efficiency increased at field level; viii. Even germination of seed. ix. Field application losses reduced by 10 percentage points x. Water productivity increased by 24%	i. Increased area under irrigated crops; ii. Enhanced crop yields iii. Increased farm income	i. The land leveling 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

							<p>agriculture sample surveys.</p> <p>xi. 2-4% sample units will be visited by ME&amp;IE Consultants teams after one years of delivery</p> <p>xii. The unit will be verified</p> <p>xiii. Area treated during the year will be collected</p> <p>xiv. Farmers' feedback collected on quality of the unit, quality of the after-sale service, etc.</p>
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## ANNEXURE D: DELIVERABLES / REPORTING REQUIREMENTS

### Deliverables/Reporting Requirements

Sr. No.	Document	Copies	Due
1	Draft Inception Report	8	45 days after the effectiveness of the Consulting services Agreement.
2	Final Inception Report	15	One week after the issuance of comments by the Client on Draft Inception Report
3	Monthly Monitoring Report	10	10 <sup>th</sup> of the following month
4	Baseline Survey Report	10	4 months after start of the assignment
5	Midline Survey Report	10	In the middle of the assignment
6	End line Survey Report	10	At the end of the End line survey
7	Quarterly Monitoring and Evaluation Report	10	10 <sup>th</sup> of the first month of following quarter
8	Annual Monitoring and Evaluation Report	10	During the 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 WISE ACHIEVEMENTS OF M&E CONSULTANT OF VARIOUS INTERVENTIONS IN PUNJAB ZONE

Ecological Zone Wise Achievement of Watercourses by ME&IE Consultants Till 30-06-2024					
Ecological zone	Districts	W.C Completed By OFWM till 30-06-2024	Sample Size 5% ME&IE Consultants	Achievement of ME&IE Consultants	Remaining Part
Partial Irrigated Barani Zone	Bhakkar	183	9	11	-2
	Mianwali	146	7	4	3
Sub Total		329	16	15	1
Irrigated (Rice Zone)	Gujranwala	101	5	7	-2
	Hafizabad	85	4	10	-6
	Gujrat	35	2	6	-4
	Narowal	16	1	1	0
	Sialkot	84	4	5	-1
	Mandi Bahu Din	79	4	4	0
	Lahore	23	1	2	-1
	Kasur	83	4	6	-2
	Sheikhupura	99	5	8	-3
	Nankana Sahib	50	3	3	0
Sub Total		655	33	52	-19
Irrigated (Mixed Zone)	Sahiwal	145	7	8	-1
	Okara	136	7	15	-8
	Pakpatan	121	6	6	0
	Faisalabad	130	7	9	-2
	Jhang	99	5	5	0
	Chiniot	34	2	3	-1
	Toba Tek Singh	124	6	6	0
	khushab	80	4	8	-4
	Sargodha	146	7	8	-1
Sub Total		1015	51	68	-17
Irrigated (Cotton Zone)	Multan	153	8	9	-1
	DG Khan	118	6	9	-3
	Bahawalpur	154	8	9	-1
	Bahawalnagar	220	11	22	-11
	Rahim Yar Khan	331	17	18	-1
	Lodhran	154	8	15	-7
	khanewal	123	6	7	-1
	Rajanpur	119	6	6	0
	Muzaffargarh	133	7	6	1
	Layyah	126	6	8	-2
	Vehari	132	7	6	1
Sub Total		1763	88	115	-27
Grand Total		3762	189	250	-61
Updated Figure provided by Punjab OFWM Department (Completed WC till 30-06-2024)		4063	203	250	-47

Ecological Zone Wise Achievement of WSTs by ME&IE Consultants Till 30-06-2024					
Ecological zone	Districts	W.S.T Completed By OFWM till 30-06-2023	Sample Size 5% ME&IE Consultants	Achievement of ME&IE Consultants	Remaining Balance
Barani	Rawalpindi	71	4	4	0
	Attock	79	4	6	-2
	Jhelum	63	3	2	1
	Chakwal	155	8	7	1
Sub Total		368	18	19	-1
Partial Irrigated Barani Zone	Bhakkar	19	1	5	-4
	Mianwali	3	0	1	-1
Sub Total		22	1	6	-5
Irrigated (Rice Zone)	Gujranwala	1	0	1	-1
	Hafizabad	13	1	3	-2
	Gujrat	27	1	2	-1
	Narowal	0	0		0
	Sialkot	4	0	1	-1
	Mandi Bahu Din	2	0	2	-2
	Lahore	2	0	1	-1
	Kasur	7	0	2	-2
	Sheikhupura	2	0	2	-2
	Nankana Sahib	3	0	2	-2
Sub Total		61	3	16	-13
Irrigated (Mixed Zone)	Sahiwal	5	0	1	-1
	Okara	19	1	1	0
	Pakpattan	15	1	1	0
	Faisalabad	35	2	2	0
	Jhang	31	2	2	0
	Chiniot	8	0	1	-1
	Toba Tek Singh	55	3	3	0
	khushab	28	1	2	-1
	Sargodha	35	2	2	0
Sub Total		231	12	15	-3
Irrigated (Cotton Zone)	Multan	17	1	5	-4
	DG Khan	33	2	3	-1
	Bahawalpur	42	2	1	1
	Bahawalnagar	51	3	3	0
	Rahim Yar Khan	67	3	4	-1
	Lodhran	14	1	1	0
	khanewal	22	1	2	-1
	Rajanpur	10	1	1	-1
	Muzaffargarh	21	1	2	-1
	Layyah	18	1	1	0
	Vehari	14	1	1	0
Sub Total		309	15	24	-9
Grand Total		991	50	80	-30

Ecological Zone Wise Achievement of LLL Units by ME&IE Consultants Till 30-06-2024					
Ecological zone	Districts	Total No of Laser Land Levelling units Delivered By OFWM till 30-06-2023	Sample Size 5% ME&IE Consultants	Achievement of ME&IE Cosultants	Remaining Balance
Partial Irrigated Barani Zone	Bhakkar	191	10	10	0
	Mianwali	146	7	7	0
	<b>Sub Total</b>	<b>337</b>	<b>17</b>	<b>17</b>	<b>0</b>
Irrigated (Rice Zone)	Gujranwala	235	12	12	0
	Hafizabad	188	9	10	-1
	Gujrat	115	6	6	0
	Narowal	139	7	7	0
	Sialkot	196	10	5	5
	Mandi Bahu Din	163	8	8	0
	Lahore	97	5	6	-1
	Kasur	240	12	12	0
	Sheikhupura	228	11	7	4
	Nankana Sahib	140	7	7	0
<b>Sub Total</b>		<b>1741</b>	<b>87</b>	<b>80</b>	<b>7</b>
Irrigated (Mixed Zone)	Sahiwal	208	10	8	2
	Okara	203	10	7	3
	Pakpatan	180	9	11	-2
	Faisalabad	275	14	14	0
	Jhang	253	13	15	-2
	Chiniot	159	8	15	-7
	Toba Tek Singh	206	10	9	1
	khushab	118	6	8	-2
	Sargodha	219	11	6	5
<b>Sub Total</b>		<b>1821</b>	<b>91</b>	<b>93</b>	<b>-2</b>
Irrigated (Cotton Zone)	Multan	139	7	8	-1
	khanewal	187	9	9	0
	Vehari	199	10	8	2
	Lodhran	149	7	8	-1
	Bahawalpur	257	13	12	1
	Bahawalnagar	282	14	15	-1
	Rahim Yar Khan	264	13	14	-1
	DG Khan	123	6	8	-2
	Rajanpur	123	6	6	0
	Muzaffargarh	235	12	12	0
	Layyah	166	8	16	-8
<b>Sub Total</b>		<b>2124</b>	<b>106</b>	<b>116</b>	<b>-10</b>
<b>Grand Total</b>		<b>6023</b>	<b>301</b>	<b>306</b>	<b>-5</b>

## ANNEXURE F: PUNJAB - WATERCOURSE DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress				Overall
			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
<b>Bahawalpur Total</b>		<b>705</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>705</b>
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	Rajapur	119	0	0	0	0	119
<b>Dera Ghazi Khan Total</b>		<b>496</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>496</b>
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
<b>Faisalabad Total</b>		<b>387</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>387</b>
Gujranwala	Gujranwala	101	0	0	0	0	101
Gujranwala	Narowal	16	0	0	0	0	16
Gujranwala	Sialkot	84	0	0	0	0	84
<b>Gujranwala Total</b>		<b>201</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>
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
<b>Gujrat Total</b>		<b>199</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>199</b>
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
<b>Lahore Total</b>		<b>255</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>255</b>
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
<b>Multan Total</b>		<b>562</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>562</b>
Sahiwal	Okara	136	0	0	0	0	136
Sahiwal	Pakpattan	121	0	0	0	0	121
Sahiwal	Sahiwal	145	0	0	0	0	145
<b>Sahiwal Total</b>		<b>402</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>402</b>
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
<b>Sargodha Total</b>		<b>555</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>555</b>
<b>Grand Total</b>		<b>3762</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3762</b>



## ANNEXURE G: PUNJAB - WSP 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
<b>Bahawalpur Total</b>		<b>160</b>	<b>0</b>	<b>0</b>	<b>160</b>
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
<b>Dera Ghazi Khan Total</b>		<b>82</b>	<b>0</b>	<b>0</b>	<b>82</b>
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
<b>Faisalabad Total</b>		<b>129</b>	<b>0</b>	<b>0</b>	<b>129</b>
Gujranwala	Gujranwala	2	0	0	2
Gujranwala	Sialkot	4	0	0	4
<b>Gujranwala Total</b>		<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>
Gujrat	Gujrat	26	0	0	26
Gujrat	Hafizabad	13	0	0	13
Gujrat	Mandi Bahauddin	2	0	0	2
<b>Gujrat Total</b>		<b>41</b>	<b>0</b>	<b>0</b>	<b>41</b>
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
<b>Lahore Total</b>		<b>14</b>	<b>0</b>	<b>0</b>	<b>14</b>
Multan	Khanewal	22	0	0	22
Multan	Lodhran	14	0	0	14
Multan	Multan	17	0	0	17
Multan	Vehari	14	0	0	14
<b>Multan Total</b>		<b>67</b>	<b>0</b>	<b>0</b>	<b>67</b>
Rawalpindi	Attock	79	0	0	79
Rawalpindi	Chakwal	155	0	0	155
Rawalpindi	Jhelum	63	0	0	63
Rawalpindi	Rawalpindi	71	0	0	71
<b>Rawalpindi Total</b>		<b>368</b>	<b>0</b>	<b>0</b>	<b>368</b>
Sahiwal	Okara	19	0	0	19
Sahiwal	Pakpattan	15	0	0	15
Sahiwal	Sahiwal	5	0	0	5
<b>Sahiwal Total</b>		<b>39</b>	<b>0</b>	<b>0</b>	<b>39</b>
Sargodha	Bhakkar	19	0	0	19
Sargodha	Khushab	28	0	0	28
Sargodha	Mianwali	3	0	0	3
Sargodha	Sargodha	35	0	0	35
<b>Sargodha Total</b>		<b>85</b>	<b>0</b>	<b>0</b>	<b>85</b>
<b>Overall</b>		<b>991</b>	<b>0</b>	<b>0</b>	<b>991</b>

## 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
<b>Bahawalpur Total</b>		<b>788</b>	<b>0</b>	<b>788</b>
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
<b>Dera Ghazi Khan Total</b>		<b>637</b>	<b>0</b>	<b>637</b>
Faisalabad	Chiniot	160	0	160
Faisalabad	Faisalabad	257	0	257
Faisalabad	Jhang	236	0	236
Faisalabad	Toba Tek Singh	191	0	191
<b>Faisalabad Total</b>		<b>844</b>	<b>0</b>	<b>844</b>
Gujranwala	Gujranwala	232	0	232
Gujranwala	Sialkot	190	0	190
Gujranwala	Narowal	138	0	138
<b>Gujranwala Total</b>		<b>560</b>	<b>0</b>	<b>560</b>
Gujrat	Gujrat	114	0	114
Gujrat	Mandi Bahauddin	160	0	160
<b>Gujrat Total</b>		<b>274</b>	<b>0</b>	<b>274</b>
Lahore	Kasur	232	0	232
Lahore	Lahore	94	0	94
Lahore	Nankana Sahib	137	0	137
Lahore	Sheikhupura	225	0	225
<b>Lahore Total</b>		<b>688</b>	<b>0</b>	<b>688</b>
Multan	Khanewal	184	0	184
Multan	Lodhran	145	0	145
Multan	Multan	126	0	126
Multan	Vehari	193	0	193
<b>Multan Total</b>		<b>648</b>	<b>0</b>	<b>648</b>
Sahiwal	Okara	203	0	203
Sahiwal	Pakpattan	178	0	178
Sahiwal	Sahiwal	207	0	207
<b>Sahiwal Total</b>		<b>588</b>	<b>0</b>	<b>588</b>
Sargodha	Bhakkar	171	0	171
Sargodha	Khushab	111	0	111
Sargodha	Mianwali	140	0	140
Sargodha	Sargodha	207	0	207
<b>Sargodha Total</b>		<b>629</b>	<b>0</b>	<b>629</b>
Rawalpindi	Attock	188	0	188
<b>Rawalpindi Total</b>		<b>188</b>	<b>0</b>	<b>188</b>
<b>Grand Total</b>		<b>5844</b>	<b>0</b>	<b>5844</b>

## ANNEXURE I: KP - WATERCOURSE DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress			Pending		Overall
			1st Milestone	2nd Milestone	Work Order Issued	TS Pending	Work Order Pending	
Bajaur Agency	Bajaur	73	0	0	0	0	0	73
<b>Bajaur Agency Total</b>		<b>73</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>
Bannu	Bannu	108	0	0	0	0	0	108
Bannu	Lakki Marwat	122	0	0	0	0	0	122
<b>Bannu Total</b>		<b>230</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>
D.I. Khan	D.I. Khan	478	1	0	0	29	1	509
D.I. Khan	Tank	77	0	0	0	0	0	77
<b>D.I. Khan Total</b>		<b>555</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>1</b>	<b>586</b>
Hazara	Abbottabad	31	0	0	0	0	0	31
Hazara	Battagram	49	0	0	0	0	0	49
Hazara	Haripur	74	0	0	0	0	0	74
Hazara	Mansehra	138	0	5	0	0	0	143
Hazara	Torghar	37	0	0	0	0	0	37
Hazara	Kohistan	38	1	1	0	0	0	40
<b>Hazara Total</b>		<b>367</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>374</b>
Khyber Agency	Khyber	28	0	0	12	0	0	40
<b>Khyber Agency Total</b>		<b>28</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>40</b>
Kohat	Hangu	64	1	0	2	0	0	67
Kohat	Karak	82	0	0	0	0	0	82
Kohat	Kohat	92	0	0	0	0	0	92
<b>Kohat Total</b>		<b>238</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>241</b>
Kurram Agency	Kurram	13	0	0	0	0	0	13
<b>Kurram Agency Total</b>		<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>
Malakand	Buner	114	0	0	0	0	0	114
Malakand	Chitral	115	1	0	0	1	0	117
Malakand	Lower Dir	132	1	0	14	0	1	148
Malakand	Malakand	106	0	0	0	0	0	106
Malakand	Shangla	58	0	0	0	1	0	59
Malakand	Swat	290	1	1	0	2	0	294
Malakand	Upper Dir	124	0	0	0	0	0	124
<b>Malakand Total</b>		<b>939</b>	<b>3</b>	<b>1</b>	<b>14</b>	<b>4</b>	<b>1</b>	<b>962</b>
Mardan	Mardan	152	0	0	0	1	0	153
Mardan	Swabi	151	0	0	1	3	0	155
<b>Mardan Total</b>		<b>303</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>308</b>
M. Agency	Upper Mohman	67	0	0	0	1	0	68
M. Agency	Lower Mohman	25	0	0	0	0	0	25
<b>M. Agency Total</b>		<b>92</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>93</b>
Orakzai Agency	Orakzai	1	0	0	0	0	0	1
<b>Orakzai Agency Total</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
Peshawar	Charsadda	145	1	0	1	6	0	153
Peshawar	Nowshera	136	0	0	0	0	0	136
Peshawar	Peshawar	78	0	0	0	0	0	78
<b>Peshawar Total</b>		<b>359</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>367</b>
S.W Agency	S.W Agency	37	0	0	0	0	0	37
<b>S.W Agency Total</b>		<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>
N.W Agency	N.W Agency	5	0	0	0	6	0	11
<b>N.W Agency Total</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>11</b>
<b>Overall</b>		<b>3240</b>	<b>7</b>	<b>7</b>	<b>30</b>	<b>50</b>	<b>2</b>	<b>3336</b>

## ANNEXURE J: KP - WST DATA SUBMISSION – SUMMARY

Division	District	Completed	Under Progress			Pending		Overall
			1st Milestone	2nd Milestone	Work Order Issued	TS Pending	Work Order Pending	
Bajaur Agency	Bajaur	17	0	0	0	0	0	17
<b>Bajaur Agency Total</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>
Bannu	Bannu	12	0	0	0	0	0	12
Bannu	Lakki Marwat	35	0	0	0	0	0	35
<b>Bannu Total</b>		<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47</b>
D.I Khan	D.I Khan	76	0	0	0	11	3	90
D.I Khan	Tank	35	0	0	0	0	0	35
<b>Dera Ismail Khan Total</b>		<b>111</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>125</b>
Hazara	Abbottabad	20	0	0	0	0	0	20
Hazara	Battagram	26	0	0	4	0	0	30
Hazara	Haripur	40	0	0	0	0	0	40
Hazara	Kohistan	18	0	0	0	0	0	18
Hazara	Mansehra	45	0	3	0	0	0	48
Hazara	Torghar	14	0	0	0	0	0	14
<b>Hazara Total</b>		<b>163</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>170</b>
Khyber Agency	Khyber	17	0	0	0	0	0	17
<b>Khyber Agency Total</b>		<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>
Kohat	Hangu	12	0	0	0	0	0	12
Kohat	Karak	73	0	0	0	0	0	73
Kohat	Kohat	5	0	0	0	0	0	5
<b>Kohat Total</b>		<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>
Kurram Agency	Kurram	2	0	0	0	0	0	2
<b>Kurram Agency Total</b>		<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
Malakand	Buner	44	0	0	0	0	0	44
Malakand	Chitral	22	0	0	0	1	0	23
Malakand	Lower Dir	37	0	0	2	1	0	40
Malakand	Malakand	24	0	0	0	0	0	24
Malakand	Shangla	40	0	0	0	0	0	40
Malakand	Swat	168	0	0	0	0	1	169
Malakand	Upper Dir	50	0	0	0	0	0	50
<b>Malakand Total</b>		<b>385</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>390</b>
Mardan	Mardan	34	0	0	0	0	0	34
Mardan	Swabi	38	0	0	0	1	0	39
<b>Mardan Total</b>		<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>73</b>
Mohmand Agency	Lower Mohmand	32	0	0	0	0	0	32
Mohmand Agency	Upper Mohmand	82	0	0	0	0	0	82
<b>Mohmand Agency Total</b>		<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>114</b>
Orakzai Agency	Orakzai	2	0	0	0	0	0	2
<b>Orakzai Agency Total</b>		<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
Peshawar	Charsadda	13	0	0	0	0	0	13
Peshawar	Nowshera	88	0	0	1	0	0	89
Peshawar	Peshawar	57	0	0	0	0	0	57
<b>Peshawar Total</b>		<b>158</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>159</b>
S.W Agency	S.W Agency	32	0	0	0	0	0	32
<b>S.W Agency Total</b>		<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>
N.W Agency	N.W Agency	15	0	0	3	2	1	21
<b>N.W Agency Total</b>		<b>15</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>21</b>
<b>Overall</b>		<b>1225</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>16</b>	<b>5</b>	<b>1259</b>



## 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
<b>Kalat Total</b>		<b>941</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>26</b>	<b>1027</b>
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
<b>Loralai Total</b>		<b>586</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>37</b>	<b>666</b>
Makran	Gwadar	23	0	0	0	0	23
Makran	Kech	59	0	0	9	64	132
Makran	Panjgur	121	0	0	33	0	154
<b>Makran Total</b>		<b>203</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>64</b>	<b>309</b>
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
<b>Nasirabad Total</b>		<b>306</b>	<b>0</b>	<b>0</b>	<b>183</b>	<b>29</b>	<b>518</b>
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
<b>Quetta Total</b>		<b>379</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>381</b>
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
<b>Rakhshan Total</b>		<b>125</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>78</b>	<b>266</b>
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
<b>Sibi Total</b>		<b>330</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>331</b>
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
<b>Zhob Total</b>		<b>366</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>385</b>
<b>Overall</b>		<b>3236</b>	<b>0</b>	<b>0</b>	<b>394</b>	<b>253</b>	<b>3883</b>

## 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
<b>Kalat Total</b>		<b>604</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>8</b>	<b>691</b>
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
<b>Loralai Total</b>		<b>193</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>11</b>	<b>233</b>
Makran	Gwadar	7	0	0	0	0	7
Makran	Kech	35	0	0	18	46	99
Makran	Panjgur	46	0	1	121	1	169
<b>Makran Total</b>		<b>88</b>	<b>0</b>	<b>1</b>	<b>139</b>	<b>47</b>	<b>275</b>
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
<b>Nasirabad Total</b>		<b>97</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>0</b>	<b>160</b>
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
<b>Quetta Total</b>		<b>237</b>	<b>0</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>251</b>
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
<b>Rakhshan Total</b>		<b>52</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>33</b>	<b>159</b>
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
<b>Sibi Total</b>		<b>138</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>139</b>
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
<b>Zhob Total</b>		<b>227</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>227</b>
<b>Overall</b>		<b>1636</b>	<b>0</b>	<b>2</b>	<b>395</b>	<b>102</b>	<b>2135</b>

## 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
<b>Gilgit Total</b>		<b>445</b>	<b>0</b>	<b>0</b>	<b>445</b>
Skardu	Ghanche	113	0	0	113
Skardu	Kharmang	42	0	0	42
Skardu	Shigar	68	0	0	68
Skardu	Skardu	141	0	0	141
<b>Skardu Total</b>		<b>364</b>	<b>0</b>	<b>0</b>	<b>364</b>
<b>Overall</b>		<b>809</b>	<b>0</b>	<b>0</b>	<b>809</b>

## 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
<b>Gilgit Total</b>		<b>200</b>	<b>0</b>	<b>0</b>	<b>200</b>
Skardu	Kharmang	24	0	0	24
Skardu	Shigar	49	0	0	49
Skardu	Skardu	55	0	0	55
<b>Skardu Total</b>		<b>128</b>	<b>0</b>	<b>0</b>	<b>128</b>
<b>Overall</b>		<b>328</b>	<b>0</b>	<b>0</b>	<b>328</b>

## 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	32	0	0	10	0	1	43
	Neelum	71	2	0	7	0	0	80
MZD Total		206	2	0	30	7	1	246
Poonch	Poonch	48	1	0	8	0	0	57
	Bagh	31	0	0	7	0	0	38
	Haveli	10	1	0	2	0	0	13
	Sudhnoti	24	1	0	16	0	2	43
Poonch Total		113	3	0	33	0	2	151
Mirpur	Mirpur	84	0	0	2	0	2	88
	Bhimber	125	0	0	32	0	0	157
	Kotli	42	0	0	8	0	5	55
Mirpur Total		251	0	0	42	0	7	300
Overall		570	5	0	105	7	10	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	25	0	0	0	2	0	27
	Neelum	0	0	0	1	1	0	2
MZD Total		169	1	0	17	3	0	190
Poonch	Poonch	64	1	1	7	0	0	73
	Bagh	57	1	0	21	0	0	79
	Haveli	29	0	0	5	2	0	36
	Sudhnoti	25	1	0	28	0	0	54
Poonch Total		175	3	1	61	2	0	242
Mirpur	Mirpur	14	0	0	1	0	0	15
	Bhimber	12	0	0	8	0	0	20
	Kotli	36	0	0	17	0	12	65
Mirpur Total		62	0	0	26	0	12	100
Overall		406	4	1	104	5	12	532

## 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
<b>Overall</b>		<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>