



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

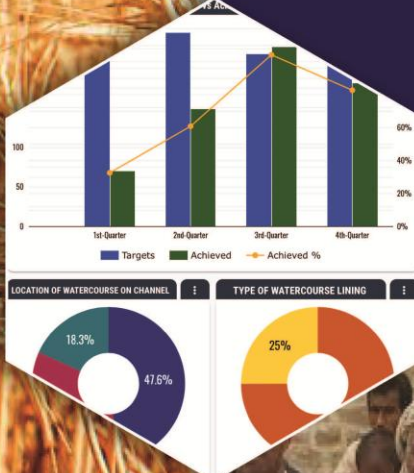
# NATIONAL PROGRAM FOR IMPROVEMENT OF WATERCOURSES IN PAKISTAN PHASE-II: (NPIWC-II)

## MONITORING, EVALUATION AND IMPACT EVALUATION CONSULTANTS



## MONTHLY MONITORING REPORT

APRIL 2021



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



**EASE-PAK**

**ADA**  
Consultants Inc.





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

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

## **MONTHLY MONITORING REPORT APRIL 2021**

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## ACRONYMS

ADA	Assistant Director Agriculture
AES	Agriculture Extension Services
AF	Acre-Feet
AJK	Azad Jammu & Kashmir
AWPB	Annual Work Plan and Budget
AWPs	Annual Work Plans
BCR	Benefit Cost Ratio
CFT	Cubic Feet
CMS	Content Management System
CSRD	Center for Social Research and Development
DAES	Director Agriculture Extension Services
DDA	Deputy Director Agriculture
DGA	Director General Agriculture
DTL	Deputy Team Leader
EAs	Executing Agencies
EIRR	Economic Internal Rate of Return
FCR	Financial Completion Report
FCRs	Final Completion Reports
FMFSR	Framework for Federal Financial Management System
FOs	Farmers Organizations
FPMU	Federal Project Management Unit
FWMC	Federal Water Management Cell
GAP	Gender Action Plan
GB	Gilgit Baltistan
G3EC	G3 Engineering Consultants
GIS	Geographic Information System
HEIS	High Efficiency Irrigation System
IAs	Implementing Agencies
ICR	Interim Completion Report
ICT	Islamabad Capital Territory
IRR	Internal Rate of Return
ICT	Information & Communication Technology
JV	Joint Venture
KP	Khyber Pakhtunkhwa
LLL	Laser Land Leveler
LPS	Liter Per Second
M&E	Monitoring and Evaluation
MAF	Million Acre Feet
ME&IE	Monitoring, Evaluation and Impact Evaluation
MIS	Management Information System
MNFSR	Ministry of National Food Security and Research
MMR	Monthly Monitoring Report
MT	Monitoring Template
MTE	Mid-Term Evaluation
NESPAK	National Engineering Services Pakistan
NPC	National Project Coordinator

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

## EXECUTIVE SUMMARY

The report in hand, “Monthly Monitoring Report for the month of April 2021” is comprises six sections.

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

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

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

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

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

**Section-3** covers the details about Monthly Monitoring Report. This fourth Monthly Monitoring Report (MMR) covers the period from April 01, 2021 to April 30, 2021.

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

- The Third Monthly Monitoring Report, March 01, 2021 to March 31, 2021 was submitted to the Client within stipulated time on April 10, 2021.
- The First Quarterly Monitoring and Evaluation Report, Jan 01, 2021 to March 31, 2021 was submitted to the Client within stipulated time on April 10, 2021.
- Functional of Zonal Offices (ICT, Punjab, KP & Balochistan)
- Establishment/Operational Field Offices in Punjab, KP & Balochistan Zones
- Hiring/mobilization of Field Team in ICT, Punjab, KP & Balochistan Zones
- Hiring/mobilization of Supporting Staff in ICT, Punjab, KP & Balochistan Zones
- Meetings and Visits of ME&IE Consultants
- Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring
- Training of Field Staff on MTs & Survey Manual
- Refinement of Monitoring Tools
- Development of the web site of NPIWC-II.
- Development of Android based Mobile Application.
- Testing of Monitoring tools on an Android based system.
- Data collection of interventions in MIS/GIS database.
- Designing of dashboard of Project Interventions.

**Section-5** of this report covers the detail of ME&IE Consultants activities initiating during the Second Quarter 2021 (April 1, 2021 to June 30, 2021) are listed below. Time span detail is mentioned in the Tentative Work Plan. **Annex-A.**

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

**Section-6:** Due to non-availability of data from NWMC (NESPAK) & respective Directorates and resources from Client, ME&IE Consultants have been facing constraints for timely initiating the activities.



## 1. INTRODUCTION TO NPIWC-II

### 1.1 PROJECT PROFILE

<b>Project Name</b>	National Program for Improvement of Watercourses in Pakistan Phase-II ( <b>NPIWC-II</b> )
<b>Project Areas</b>	Punjab, KP, Balochistan and Gilgit Baltistan, Azad Jammu & Kashmir and Islamabad Capital Territory (ICT)
<b>Sponsoring Agency</b>	Ministry of National Food Security & Research
<b>Executing Agencies (EAs)</b>	1. Federal Project Management Unit (FPMU), 2. DGA OFWM Punjab 3. DGA OFWM KP 4. DGA OFWM Balochistan 5. Director Irrigation and Small Dams, AJ&K 6. Director WM, GB 7. Director Agriculture Extension Services (AES), ICT
<b>Project Period</b>	5 Year (2019-2024)
<b>Total Project Cost</b>	154,542.355 million (Umbrella PC-1, including Sindh)
<b>ME&amp;IE Consultancy Period</b>	4 year.
<b>ME&amp;IE Consultant Mobilized</b>	November 20, 2020

### 1.2 PROJECT DESCRIPTION

#### 1.2.1. Project Development Objectives

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

#### 1.2.2. Project Objectives – General & Quantitative

##### 1) General Objectives:

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

- i) Social mobilization through capacity building of WUAs/ FOs,

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

### 2) Quantitative Objectives:

The quantitative objectives of the Project are as under:

#### Project outputs

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

#### Project impacts

- v) Reduction in Water Logging and salinity in project areas to the extent of 10%.
- vi) Cropping intensity is expected to increase by 5-20%.
- vii) Crop's yield is estimated to increase by 10-15%.
- viii) Equity in water distribution increased by about 30%.
- ix) Reduction in water disputes/thefts and litigation amongst the Farmers over water distribution by

about 80%.

- x) Help poverty reduction through generation of employment.
- xi) Self-sufficiency in food through utilization of water saved for edible oil seed production.

#### Project indirect benefits to industry/economic activities

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

#### Awareness support to farmers

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

### 1.2.3. Project Beneficiaries

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

around 3.336 million households. However, net beneficiaries are expected to be 1.668 million.

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

### 1.2.4. Project Components

The NPIWC-II comprises four components.

- i) **C1: ORGANIZATION OF WATER USERS ASSOCIATIONS:** Establishment/ reactivation of Water Users Associations (WUAs) through community driven implementation approach.
- ii) **C2: WATERCOURSE IMPROVEMENTS:** 47,278 Watercourses are planned to be improved /reconstructed and lined.
- iii) **C3: CONSTRUCTION OF WATER STORAGE TANKS:** Construction of 14,932 Water Storage Tanks (WSTs).
- iv) **C4: PROVISION OF LASER LAND LEVELING UNITS:** Provision of 11,610 Laser Land Leveling units to the farmers.

All the project activities are planned to be implemented on a cost sharing basis.

### 1.2.5. Project Targets

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

Table-1.1: Project Targets (in numbers)

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

## 2. ME&IE CONSULTANTS FOR NPIWC-II

A Joint Venture of G3 Engineering Consultants (Pvt.) Ltd., Ease-Pak Engineering services (Pvt.) Ltd., Centre for Social Research and Development (CSR D) and ADA Consultants Inc. Canada has been selected through a competitive bidding process as ME&IE Consultants. An Agreement was signed by the Joint Venture and the NPC FPMU-FWMC NPIWC-II on October 26, 2020. The consultants were mobilized on November 20, 2020.

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

### 2.1 SCOPE OF THE SERVICES

The general scope of the ME&IE Consultants services is to:

- i) Undertake baseline, midline and endline surveys for the project activities/interventions.
- ii) Develop monitoring strategy, framework and Result-Based Monitoring (RBM) indicators.
- iii) Preparation of monthly, quarterly and annual monitoring & evaluation reports.
- iv) Assessing the water saving per annum on watercourses, water storage tanks and field levels.
- 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 the command area of watercourses and water storage tanks.
- vii) Assessing the extent of community mobilization, financial and administrative sustainability of water users' associations and ensuring the maintenance of watercourses, water storage tanks and laser land Levelers.
- viii) Economic impact of project interventions.

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

The ME&IE Consultants services period comprises over four years (2020-21 to 2023-24).

### 2.2 MONITORING STRATEGY

The monitoring strategy planned to be followed by ME&IE Consultants is briefly described in the following Table-2.1. However, detailed methodology and procedures to carry out the Monitoring, Evaluations and Impact Evaluations of the project interventions are explained in Chapter 6 of Inception Report. The strategy aims to be finalized and implemented in close coordination with the client and active participation of the beneficiaries as well as the project stakeholders.



**Table-2.1: Monitoring Strategy for ME&IE Activities**

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

Sr. No.	Monitoring Activity	ME&IE Team Responsible	Monitoring Strategy
			<p><b>Water Savings on WSTs</b></p> <ul style="list-style-type: none"> <li>Since WSTs will be filled and emptied on a continuous basis, the water savings will be assessed on the basis of water pumped from the tank to irrigate the fields.</li> <li>The assessment will be done either by readings on the pump gauge or periodic interviewing the farmer.</li> <li>Based on water savings on sample WSTs, total water savings will be estimated for all project WSTs. The savings will be reported per WST, per annum and aggregate for the project in LPS and in Acre feet.</li> </ul> <p><b>Water savings due to Laser Land Leveling</b></p> <ul style="list-style-type: none"> <li>Water savings at field level will be assessed through farmers' interviews.</li> <li>The impact survey form will include questions to be asked from the farmers who got their land levelled: <ul style="list-style-type: none"> <li>In how much time an acre was irrigated before watercourse improvement and land leveling</li> <li>In how much time an acre is irrigated after watercourse improvement with land leveling</li> </ul> </li> </ul> <p>The difference will be water saving due to laser land leveling</p>
			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 the surveys same forms will be used and same sampled farmers will be interviewed</li> <li>Data on variables such as crop yields, irrigated area, cropping pattern, cropping intensity, farm income and employment will be collected and analyzed</li> <li>The difference between before and after situations minus natural growth will be assumed as economic benefits to the agriculture</li> </ul>
6	Impact evaluation-on the economy	Team Leader, Agricultural Economist and Socio-Economic Expert	<ul style="list-style-type: none"> <li>The results of the baseline and impact surveys will be used to quantify impact on the economy</li> <li>Additional food produced due to the project will be estimated. It is benefit towards food security</li> <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>

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

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

The framework and Results-Based Monitoring (RBM) Indicators are identified in Table-2.2 below. The indicators will be further enhanced and refined in consultation with the client as well as stakeholders. They will also get improved as the project implementation progresses as in the light of real and on the ground situations.

The draft log-frame of the project inputs, outputs, outcomes and impacts with ME&IE methodologies is placed at **Annex-C**.



### 3. MONTHLY MONITORING REPORT

#### 3.1 INTRODUCTION

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

#### 3.2 OBJECTIVE OF MONTHLY MONITORING REPORT

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

#### 3.3 REPORTING PERIOD

This Fourth Monthly Monitoring Report (MMR) covers the period from April 01, 2021 to June 30, 2021.

The Fourth Monthly Monitoring Report (MMR) has prepared under the guidance and supervision of Mr. Saif Ullah Ejaz Chaudhry, Director G3 Engineering Consultants authorized representative of ME&IE Consultants. The following core team of NPIWC-II participated in the preparation of this Report:

1. Dr. Muhammad Abdul Quddus, Team leader
2. Dr. Sarwar Zahid, DTL (Islamabad) ICT&AJK
3. Mr. Muhammad Yousaf Bhatti, DTL (Lahore) Punjab
4. Dr. Humayun Khan DTL (Peshawar) KP&GB
5. Mr. Rizwan Ahmad, DTL (Quetta) Balochistan
6. Dr. Fateh Muhammad Chaudhry, Irrigation Agronomist
7. Mrs. Munaza Bashir Tarar, Social & Gender Specialist
8. Mr. Waseem Ahmad Masood, FM Specialist
9. Mr. Rizwan Saleem, ICT/Technology Specialist

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

#### 4. ACTIVITIES COMPLETED DURING THE REPORTING PERIOD

The ME&IE Consultants were mobilized on November 20, 2020. The detail of activities carried out by the ME&IE Consultants during the reporting period are:

##### 4.1 THIRD MONTHLY MONITORING REPORT

The Third Monthly Monitoring Report, March 01, 2021 to March 31, 2021 was submitted to the Client within stipulated time on April 10, 2021. The Report described the achievement during the period under discussions and also gave a work plan for the First Quarter 2021 (January 1, 2021 to March 31, 2021).

##### 4.2 FIRST QUARTERLY MONITORING AND EVALUATION REPORT

The First Quarterly Monitoring and Evaluation Report, Jan 01, 2021 to March 31, 2021 was submitted to the Client within stipulated time on April 10, 2021. The Report described the achievement during the period under discussions.

##### 4.3 FUNCTIONAL OF ZONAL OFFICES

After establishment and renovation, The National office Islamabad and all zonal offices of ME&IE Consultants are now functional. The detail is given below:-

###### 4.3.1 Project National Office Islamabad

The renovation of ME&IE Consultants National office has been completed and the office is functional. Address: House No. 6-A, F-6/4, Embassy Road, Islamabad.



Figure-4.1: Front view of National Office Islamabad



Figure-4.2: External view of National Office Islamabad

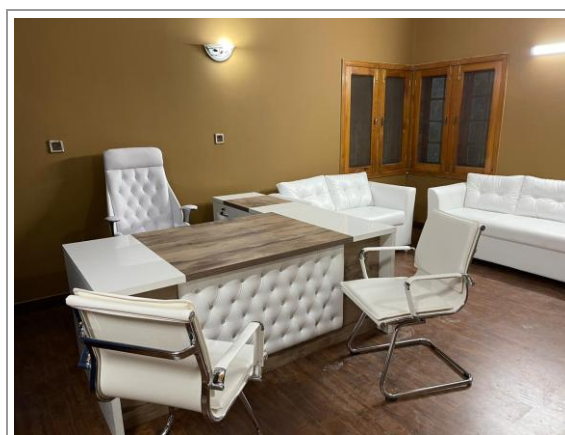


Figure-4.3: Internal view of National Office Islamabad



Figure-4.4: Team Leader ME&IE in National Office



Figure-4.5: Internal view of National Office Islamabad

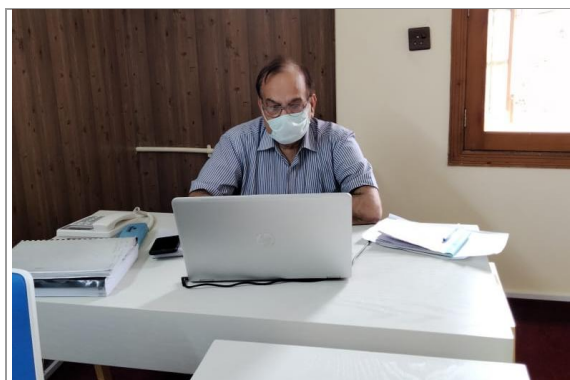


Figure-4.6: Internal view of National Office Islamabad

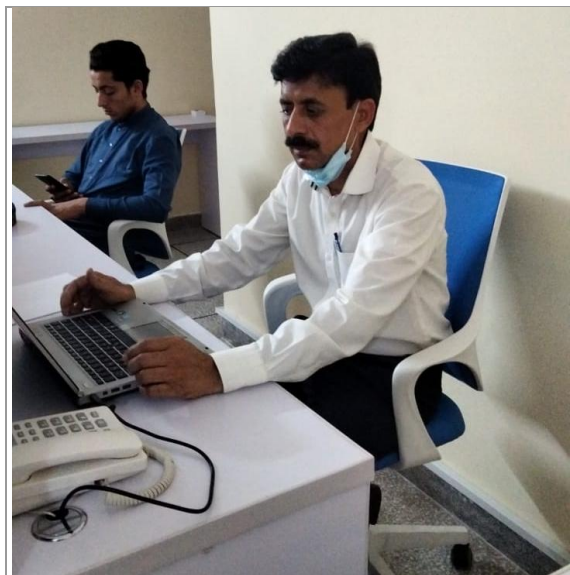


Figure-4.7: Internal view of National Office Islamabad



Figure-4.8: Internal view of National Office Islamabad

#### 4.3.2 Zonal Office - Punjab

The renovation of ME&IE Consultant zonal office Lahore has been completed and it has become operational.

Address: First Floor, Orchard Heights, Arena Commercial, Bahria Orchard, Raiwind Road Lahore.



Figure-4.9: Front View of Orchard Heights



Figure-4.10: View of Punjab Zonal Office at 1<sup>st</sup> Floor



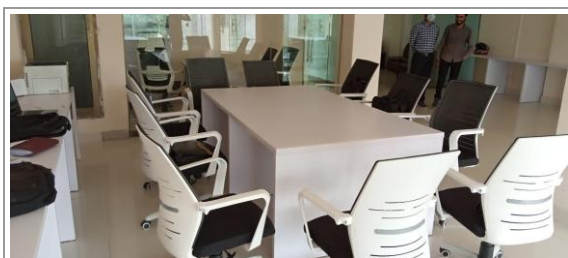


Figure-4.11: Internal View of Punjab Zonal Office



Figure-4.16: Deputy Manager (Admin) Punjab Zonal office

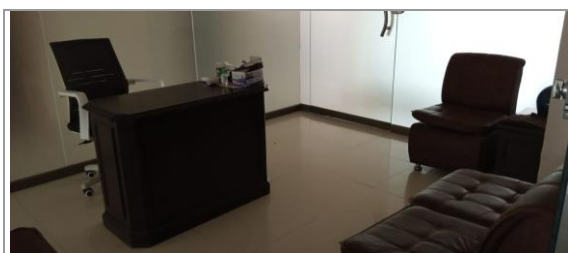


Figure-4.12: Internal View of Punjab Zonal Office



Figure-4.17: Office Assistant Punjab Zonal Office



Figure-4.13: DTL Punjab Zone Mr. Yousaf Bhatti

#### 4.3.3 Zonal Office -Khyber Pakhtunkhwa & Gilgit Baltistan

The renovation of ME&IE Consultants Khyber Pakhtunkhwa & Gilgit Baltistan Zonal office has been completed and the office is functional.

Address: # 72-D Jamal-ud-din Afghani Road, University town, Peshawar.

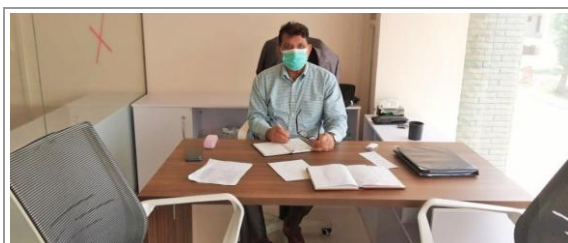


Figure-4.14: Manager Admin and Accounts Punjab Zonal office



Figure-4.18: External View of KP Zonal Office

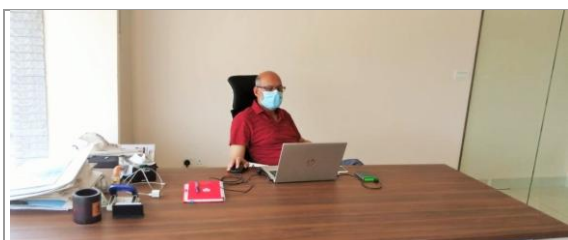


Figure-4.15: Internal View of Punjab Zonal Office



Figure-4.19: Internal View of KP Zonal Office



Figure-4.20: Internal View of KP Zonal Office



Figure-4.21: Internal View of KP Zonal Office

#### 4.3.4 Zonal Office -Balochistan

The renovation of ME&IE Consultants Balochistan Zonal office has been completed and the office is functional.

Address: Bungalow # 543/03 Chiltan Road Quetta Cantt, Quetta.

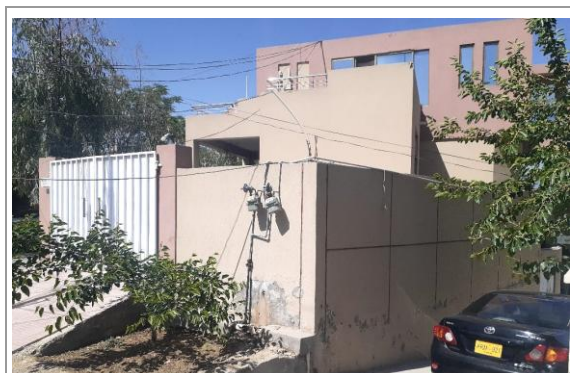


Figure-4.22: External View of Balochistan Zonal Office

#### 4.4 ESTABLISHMENT / OPERATIONAL FIELD OFFICES IN PUNJAB, KP AND BALOCHISTAN ZONES

The establishment of field offices in Punjab, KP and Balochistan is completed whom the renovation works is about to complete. After that these offices will be fully operational.

#### 4.5 HIRING/MOBILIZATION OF FIELD TEAM IN ICT, PUNJAB, KP AND BALOCHISTAN ZONES

The hiring and mobilization of all the ME&IE field team members in ICT, Punjab, KP & Balochistan Zones has been completed. Now all Zonal offices are operational almost to all aspects and field teams can move in the field at any moment for field activities. The documents of all the hired field staff of all zones have been submitted to Client which includes Joining Reports, CVs, CNIC and educational documents of the hired staff.

Only a few professional positions are under process which are expected to be mobilized shortly. Now the Zonal office is operational almost to all aspects and field teams can move in the field at any moment for field activities.

#### 4.6 HIRING / MOBILIZATION OF SUPPORTING STAFF IN ICT, PUNJAB, KP AND BALOCHISTAN ZONES

The hiring and mobilization of almost all the ME&IE support staff in ICT, Punjab, KP & Balochistan Zones has been completed and are mobilized as well.

The documents of all the hired support staff of all zones have been submitted to Client which includes Joining Reports, CVs, CNIC and educational documents of the hired staff.

#### 4.7 MEETINGS AND VISITS OF ME&IE CONSULTANTS - PUNJAB ZONE

<b>Date</b>	April 19,2021
<b>Venue</b>	Zoom meeting from National Office Islamabad
<b>Participants</b>	
i.	Ch. Saifullah Ejaz, Project Coordinator
ii.	Dr. Muhammad Abdul Quddus Team Leader
iii.	Muhammad Yousaf Bhatti Dy. Team Leader, Lahore
iv.	Rizwan Ahmad Dy. Team Leader, Quetta
v.	Other core team members
<b>Meeting Agenda/Points discussed:</b>	
Meeting was held by the Team Leader on Zoom to discuss the achievements during the last quarter and the planning / implementation of the Baseline Survey. All DTLs gave suggestions and shared strategies to initiate the Baseline Survey in their respective zones.	

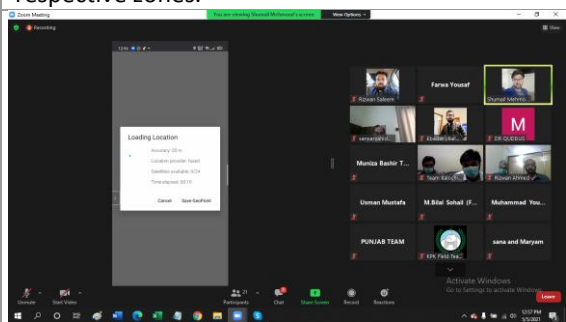


Figure-4.23: Zoom Meeting

<b>Date</b>	April 19,2021
<b>Venue</b>	Zoom meeting from National Office Islamabad
<b>Participants</b>	
i.	Dr. Muhammad Abdul Quddus Team Leader
ii.	Muhammad Yousaf Bhatti Dy. Team Leader, Lahore
iii.	Rizwan Ahmad Dy. Team Leader, Quetta
iv.	Dr. Zahid Sarwar Dy. Team Leader Islamabad
<b>Meeting Agenda/Points discussed:</b>	
Meeting was held by the Team Leader on Zoom to discuss the various strategies and options for starting Baseline Survey-I immediately after training on the Android Based system. The Chair asked all the DTLs to send their logistic and field team members requirements immediately and be ready for field survey in their respective zones at any time.	

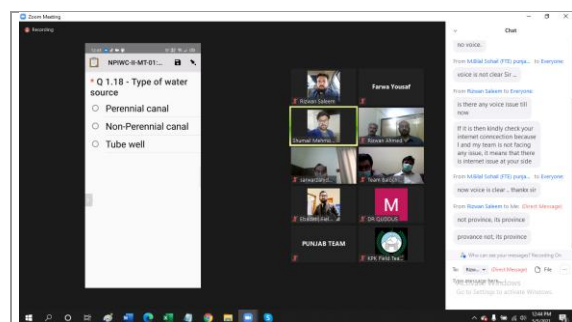


Figure-4.24: Zoom Meeting

<b>Date</b>	April 27,2021
<b>Venue</b>	Punjab Zonal Office Lahore
<b>Participants</b>	
i.	Dr. Muhammad Abdul Quddus Team Leader
ii.	Muhammad Yousaf Bhatti Dy. Team Leader, Lahore
iii.	Rizwan Ahmad Dy. Team Leader, Quetta
iv.	Dr. Zahid Sarwar Dy. Team Leader Islamabad
<b>Meeting Agenda/Points discussed:</b>	
Dr Muhammad Abdul Quddus team leader Monitoring Evaluation & Impact Evaluation specialist visited office and review the Progress of Punjab zone. He also conducted one on one meetings with entire field team members.	



Figure-4.25: Progress Review Meeting at Lahore office

#### 4.8 MEETINGS AND VISITS OF ME&IE CONSULTANTS – KP & GB ZONE

<b>Date</b>	April 19 and 20, 2021
<b>Venue</b>	Office of the PD OFWM Peshawar
<b>Participants</b>	
i.	Dr. Rab Nawaz Khan DD OFWM Peshawar
ii.	Muhammad Bilal ME&IE Consultants
iii.	Fawad Ahmad ME&IE Consultants
<b>Meeting Agenda/Points discussed:</b>	
This meeting was carried out to introduce Fawad Ahmad with Project Director of NPIWC-II KP for further coordination. He was introduced as a key person who will be responsible for all the data of KP and he will remain in close coordination with the OFWM Directorate.	



The meeting was also carried out to receive the data from the OFWM Office regarding their schemes being under implementation or completed to finalize the samples for baseline surveys.

The Project Director extended his support, however, he asked the ME&IE consultants to elaborate their activities and working mechanism with him through a presentation.

He further advised that whenever ME&IE consultants wish to brief him about their working mechanism and coordination, they may set a meeting with him through dropping an email.

He later called Mr. Jamil (GIS and data incharge and introduced the ME&IE team with him for further coordination with him for any data collection and queries.

The data was later shared by Mr. Jamil with ME&IE consultants, which was forwarded to ICT specialists at Islamabad Office.

#### 4.9 MEETINGS AND VISITS OF ME&IE CONSULTANTS – BALOCHISTAN ZONE

Date	April 07, 2021
Venue	Zoom meeting.
<b>Participants</b>	
i.	Ch. Saifullah Ejaz, Project Coordinator
ii.	Dr. Muhammad Abdul Quddus Team Leader
iii.	Muhammad Yousaf Bhatti Dy. Team Leader, Lahore
iv.	Rizwan Ahmad Dy. Team Leader, Quetta
<b>Meeting Agenda/Points discussed:</b>	
A meeting was held by the Team Leader on Zoom to discuss the planning / implementation of Baseline Survey. All DTLs gave suggestions and shared strategies to initiate the Baseline Survey on their zones.	
The DTLs shared required logistic support for the Baseline Survey at the end of the National Office.	

Date	April 13, 2021
Venue	Office of Director General, OFWM, Balochistan, Sariab Road, Quetta.
<b>Participants</b>	
i.	Mr. Wali Muhammad, Deputy Director, Technical, OFWM, Quetta.
ii.	Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta.

iii. Mr. Qaisar Tareen, M&E Officer, ME&IE Consultants

#### Meeting Agenda/Points discussed:

A meeting was held with Deputy Director, Tech. and Agriculture Officer of OFWM regarding collection of data / inventory. The DD Technical asked the M & E Office that ME&IE Consultants may contact Deputy Directors at district levels to get such data.

The Deputy Director and Agriculture Officer shared the list of all Deputy Directors with their cell numbers for further coordination. However they assured to M&E Consultants for their support at all levels.

Date	April 13, 2021
Venue	Office of Deputy Team Leader, NWMC (NESPAC), Marri Street, Arbab Karam Khan Road, Quetta.
<b>Participants</b>	
i.	Mr. Khalid Mehmood, Dy Team Leader, NWMC, NESPAC
ii.	Mr. Rehmatullah, Senior Field Engineer, Project Consultants, NESPAC
iii.	Mr. Rizwan Ahmed, Dy Team Leader, ME&IE Consultants, Balochistan
<b>Meeting Agenda/Points discussed:</b>	
A meeting was attended at the office of Deputy Team Leader, NWMC NESPAC. The DTL, NESPAC requested to provide beneficiary / Farmer data of 2020-21 as the ME&IE Consultants are going to start the Baseline Survey. The DTL, NESPAC provided the data of 08 districts i.e. Quetta, Killa Abdullah, Pishin, Chagai, Loralai, Naseerabad, Washuk and Kharan partially. The DTL, NESPAC told DTL, ME&IE Consultants that rest of districts are under progress as soon as the feasibility of these sites is done the same will be provided to ME&IE Consultants.	



Figure-4.26: Meeting with DTL of NWMC



Date	April 14, 2021
Venue	Telephonic discussion / meeting
Participants	
i.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants
ii.	Mr. Sikandar Shah, Deputy Director, OFWM, Kalat
iii.	Mr. Barkat Buledi, Deputy Director, OFWM, Jaffarabad
iv.	Mr. Muhammad Yousaf, Deputy Director, Khuzdar
v.	Mr. Rizwan Ahmed, Deputy Team Leader, ME&IE Consultants, Consultants, Balochistan
Meeting Agenda/Points discussed:	
A telephonic discussion / meeting was held by Deputy Team Leader, Balochistan regarding collection of data / inventory of 2020-21 works. The DDs shared the data with ME&IE Consultants and extended their full support and cooperation at all levels.	

Date	April 29, 2021
Venue	Zoom meeting from National Office Islamabad.
Participants	
i.	Dr. Muhammad Abdul Quddus Team Leader
ii.	Muhammad Yousaf Bhatti Dy. Team Leader, Lahore
iii.	Rizwan Ahmad Dy. Team Leader, Quetta
iv.	Dr. Sarwar Zahid, Dy. Team Leader, Islamabad
v.	Mr. Bilal, Acting DTL, Peshawar
Meeting Agenda/Points discussed:	
A meeting was held by Team Leader, ME&IE Consultants with DTLs to discuss the plan for Baseline Survey at Zonal levels. The DTLs shared the progress regarding data / inventory collection from Client and Project Consultants till to date. The DTL, Balochistan shared the status of hiring field teams at zonal level.	

Date	April, 30 2021
Venue	Office of Director General, OFWM, Balochistan, Sariab Road, Quetta.
Participants	
i.	Mr. Behram Mulghani, Agriculture Officer, OFWM, Quetta
ii.	Mr. Rizwan Ahmed, Dy Team Leader, ME&IE Consultants, Balochistan
Meeting Agenda/Points discussed:	

A meeting was held with Mr. Behram Mulghani, Agriculture Officer OFWM. The Agriculture Officer was requested to provide the data / inventory of all 33 districts (2020-21), so that the site selections for Baseline Survey could be done accordingly. He had a busy schedule that day, however, he told Dy. Team Leader, ME&IE Consultants that the required data/information will be provided as soon as possible.

#### 4.10 MEETINGS AND VISITS OF ME&IE CONSULTANTS – ICT ZONE

Date	April 26, 2021
Venue	Committee room of B-Block-Pak-Secretariat, Islamabad.
Participants	
i.	Secretary, Ministry of Food Security and Research.
ii.	Muhammad Tahir Anwar National Project Coordinator
iii.	Ch. Saif Ul Ejaz Authorized Representative G3JV
iv.	Saif Ul Islam Dy. National Project Coordinator
v.	Dr. Usman Mustafa Team Leader (KP-Barani Project)
vi.	Dr. Muhammad Abdul Quddus Team Leader-ME&IE Consultants
vii.	Rizwan Saleem ICT Specialist
Meeting Agenda/Points discussed:	
On April 26, 2021 a presentation was given to the Secretary, Ministry of Food Security and Research. At 9.30 a.m. Saif ul Ejaz (Project Director) started the presentation giving a brief history about the G3-EC, then Dr. Muhammad Abdul Quddus briefly explained the objectives of the study, the Monitoring Strategy, Monitoring Framework as well as Result Based Monitoring (RBM). In addition the Baseline field survey and its strategy.	
Saif Ul Ejaz- Authorized Representative G3JV highlighted the importance of Android Based System, Management Information System and the detailed processing of the Data on Dashboard. Secretary, Ministry of Food Security and Research recognized the full worth of the Dashboard Activity introduced by ME&IE Consultants. The Secretary, Ministry of Food Security and Research desired that the ME&IE Consultants lend a helping hand to the Ministry for the updating of their Web Site, which was welcomed and agreed by Project Director-Saif Ul Ejaz categorically.	

#### National Project Coordinator Visited the National Office, Islamabad

After the presentation presented to the Secretary, National Project Coordinator, Dy. National Project Coordinator visited the ME&IE Consultants National Office, H. NO.6, F-6/4, Islamabad. He appreciated the office along with all the prerequisites available there.

<b>Date</b>	April 27, 2021
<b>Venue</b>	Office of Director Agriculture Extension (ICT).

#### Participants

- viii. Mr. Waqar Anwar, Director Agriculture Extension (ICT).
- ix. Dr. Sarwar Zahid, DTL ICT Zone
- x. Mr. Ebadat-ur-Rehman Field Team In-charge (ICT & AJK)

#### Meeting Agenda/Points discussed:

Meeting of Deputy Team Leader, Dr. Sarwar Zahid & Field Team In-charge (ICT & AJK) Mr. Ebadat-ur-Rehman with the Director Agriculture Extension (ICT) Mr. Waqar Anwar regarding baseline survey of NPIWC-II was held in his office on 27- 4 2021 to discuss the baseline study in detail. The Director extended full cooperation and deputed one of his Officer Mr. Mubeen with Islamabad office. Mr. Mubeen supplied data for 9 watercourses in ICT on which work is completed and after taking samples these samples will be included in the study. Similarly, data from AJK (lists of completed and ongoing schemes have been obtained and samples will be taken before going into the field for study.



**Figure-4.27: Meeting with Director Agriculture Extension (ICT)**

#### 4.11 DETAIL OF COLLECTIVE MEETINGS OF ME&IE CONSULTANTS

<b>Date</b>	April 15, 2021
<b>Venue</b>	Zoom meeting from G3EC Head office Lahore

#### Participants

- i. Ch. Saif Ul Ejaz, Authorized Representative G3JV
- ii. Dr. Abdul Quddus Malik, Team Leader
- iii. All DTLs of 4 Zones
- iv. All Core Team Members

#### Meeting Agenda/Points discussed:

The meeting was conducted by the Authorized Representative G3EC Lead JV firm with the Core Team of ME&IE Consultants from his good office located at Head Office G3 Engineering Consultants (Pvt.) Ltd on Zoom to review the progress of the project. The Chair critically evaluated the project progress. He instructed that all team members must perform their duties with full spirit, focusing on project milestones and timelines with coordination and cooperation with each other for successfully completion of the NPIWC-II project.

<b>Date</b>	April 30, 2021
<b>Venue</b>	Zoom meeting from G3EC Head office Lahore

#### Participants

- i. Ch. Saif Ul Ejaz, Authorized Representative G3JV
- ii. Dr. Abdul Quddus Malik, Team Leader
- iii. All DTLs of 4 Zones
- iv. All Core Team Members

#### Meeting Agenda/Points discussed:

The follow-up meeting was conducted by the Authorized Representative G3EC Lead JV firm with Core team of ME&IE Consultants from his good office located at Head Office G3 Engineering Consultants (Pvt.) Ltd on Zoom to review the progress and the preparations of field teams to start Baseline survey activity after one week. The meeting was concluded with the vote of thanks by meeting chair Ch. Saif Ullah Sb. for providing all possible facilities to staff.

#### 4.12 TRAINING OF FIELD STAFF ON MTS & SURVEY MANUAL

##### Punjab Zone

During the 3 days training session from 26<sup>th</sup> to 28<sup>th</sup> April 2021 the teams were briefed by the Deputy Team Leader / in charge. Punjab Zone Mr. Muhammad Yousaf Bhatti in respect of following:

- 1) Monitoring and evaluation tools being used for data Collection
- 2) Various terms used in various tools and survey manual
- 3) Procedure/strategy to collect data for baseline survey
- 4) Procedure/ way to contact for OFWM staff, and WUA chairman and other respondents

Each field team in charge was given a copy of:

- Final of final Version of Monitoring and Evaluation Tools
- Copy of survey manual
- Copy of sample size
- Copy of executive summary of inception report for understanding the project.
- Copy of Telephonic contacts of OFWM department (DDA, ADA tehsil level)

Finally upload and Submit data on android based system to dashboard for further processing / Analysis.

The Overall Session was useful in understanding questions asked in tools as explained in the survey manual. The field Team Members showed their keen interest in collecting the data from the field under the Guidelines given.



**Figure-4.28: Training Session of Field Teams on MTs & Survey Manual held During April 26 to 28 April 2021.**



**Figure-4.29: Training Session of Field Teams on MTs & Survey Manual held During April 26 to 28 April 2021.**



**Figure-4.30: Training Session of Field Teams on MTs & Survey Manual held During April 26 to 28 April 2021.**

##### Khyber Pakhtunkhwa Zone

The session started from 22<sup>nd</sup> April and continued till 30<sup>th</sup> April. The training was mainly focused on Monitoring tools and terminologies being used in monitoring tools.

Teams were briefed about the total targets of OFWM for the next 4 years. The following general topics were covered during training:

1. What is agriculture?
2. What is a watercourse?
3. Types of watercourse lining.
4. Categories of watercourse lining.
5. Water storage tanks.
6. Water Users Association.
7. Beneficiaries and their data.
8. Social and gender data.
9. Spot Check of Watercourse and Water Storage Tanks
10. Cropping information.



**Figure-4.31: Training Session of Field Teams on MTs & Survey Manual held During April 22 to 30 April 2021.**





**Figure-4.32: Training Session of Field Teams on MTs & Survey Manual held During April 22 to 30 April 2021.**

### Balochistan Zone

The Field Team member has given a training by Deputy Team Leader of 03 days from 21<sup>st</sup> to 23<sup>rd</sup> April 2021. The field staff were trained about the total project activities, role of OFWM, Project Consultants, and other stakeholders. The staff were briefed about Monitoring Tools so that they get well understanding of the monitoring system and take the data from the field as per TORs. The training were covered following topics:

1. Project briefing
2. Session of Monitoring Tools.
3. Briefing on Survey Manual
4. Guidelines to conduct Baseline Surveys.
5. Monitoring Strategy at Field Level.
6. Give a session on Regular Monitoring/Spot Checking



**Figure-4.33: Training Session of Field Teams on MTs and Survey Manual held from 21 to 23 April 2021**



**Figure-4.34: Training Session of Field Teams on Project Briefing from 21 to 23 April 2021**

### ICT Zone

A training session was attended by the Zonal Team of ICT and AJK. The training was given by Mr. Rizwan Saleem and attended by Team In charge Mr. Ebadat ur Rehman, ME&IE officers Hafiza Maryam Iqbal and Syeda Sana Gull. In the training they learned different types of watercourses and how to spot check WC.

Work the planning / implementation of baseline surveys. The TL gave suggestions and shared strategy to initiate the baseline survey at ICT & AJK. Brief report of the survey manual was given by the ME&IE officers.

Training of pre-designed Monitoring tools (WC, WST, LLL). MTs were reviewed and learned by the ME&IE officers and the field team In-charge (ICT & AJK).



**Figure-4.35: Training Session of Field Teams on MTs**

### **4.13 REFINEMENT OF MONITORING TOOLS**

The refinement of monitoring tools is completed in the light of pre-testing in the field. Final monitoring tools are attached as **Annex-E**.

### **4.14 DEVELOPMENT OF ANDROID BASED APPLICATION**

The development of an Android based application which was started in the second week of February 2021 has now completed at the end of April 2021.

### **4.15 WEBSITE DEVELOPMENT OF NPIWC-II**

The development of Website of NPIWC-II has been started in the first week of February 2021. The following activities are completed:-

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

The Revision/up-dation of the Project website based on observations will continue this quarter.



#### 4.16 TESTING OF MONITORING TOOLS ON ANDROID BASED SYSTEM

To monitor and track the project's component wise progress, ME&IE Consultants' developed data input tool, which are configured with Android application. Testing of Monitoring Tools on an Android Based system has completed at the end of April 2021.

database is linked with the component's processes. As the processes will be finalized / communicated by Project Consultants' it will be integrated in the database structural design and the localization of these processes as per the zonal/unit based will also be integrated.

This activity is planned to be completed till the end of May 2021.

#### 4.17 DATA COLLECTION OF INTERVENTIONS IN MIS/GIS DATABASE

The activity of data collection of Interventions in MIS/GIS database is planned to be completed till first week of June 2021.

#### 4.18 DESIGNING OF DASHBOARD OF PROJECT INTERVENTIONS

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

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

The GIS based MIS will provide the means of:

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

The initial steps towards the development of MIS dashboard have been initiated in accordance with the ICT assignment TORs. MIS architecture design and database structural design are under process, meanwhile the UI (User Interface) design flows are also under creation. The MIS main structure of the

## 5. WORK PLAN-ACTIVITIES OF FIRST QUARTER

The ME&IE activities initiating during the Second Quarter 2021 (April 1, 2021 to June 30, 2021) are listed below. Time span detail is mentioned in the Tentative Work Plan. **Annex-A.**

### 5.1 PRE- FIELD ACTIVITIES

- i) Functional of Zonal Offices (ICT, Punjab, KP & Balochistan)
- ii) Establishment/Operational Field Offices in Punjab, KP & Balochistan Zones
- iii) Hiring/mobilization of Field Team in ICT, Punjab, KP & Balochistan Zones
- iv) Hiring/mobilization of Supporting Staff in ICT, Punjab, KP & Balochistan Zones
- v) Preparation of 3-months plan.

### 5.2 FIELD ACTIVITIES

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

### 5.3 ICT ASSIGNMENT

- i) Development of web site of NPIWC-II.
- ii) Development of Android based Mobile Application.
- iii) Testing of Monitoring tools on Android based system.
- iv) Data collection of interventions in MIS/GIS database.
- v) Designing of dashboard of Project Interventions.

## 5.4 COORDINATION

- i) Meeting of DTLs with respective DTL of NWMC.

## 5.5 MATRIX OF RESPONSIBILITIES

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

## 5.6 DELIVERABLES

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

Document	Status
Draft Inception Report	Submitted
Final Inception Report	Submitted
Monthly Monitoring Report (First)	Submitted
Monthly Monitoring Report (Second)	Submitted
Monthly Monitoring Report (Third)	Submitted
Quarterly Monitoring & Evaluation Report	Submitted
Monthly Monitoring Report (Fourth)	To be submitted on Stipulated time.

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

## 6. ISSUES NEED TO BE ADDRESSED

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

- Non-availability of complete up-to-date inventory / data of all interventions from Client, Provincial Agriculture departments & NWMC (NESPAK) till date.
- Due to non-availability of NWMC (NESPAK) deliverables/reports, ME&IE Consultants are facing hurdles to evaluate working of NWMC. In this regard the cooperation of NWMC and respective Directorates is required.
- Non-availability of resources in time from Client.

## ANNEXES A to D



## ANNEX-A: TENTATIVE WORK PLAN

## TENTATIVE WORK PLAN ME & IE CONSULTANTS - NPIWC-II

LEGEND	
ACTIVITY STARTS	↓
ACTIVITY ENDS	↑
ACTIVITY SPAN	---

NO.	ACTIVITIES	3 Months - Year 2021 (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 Functional of Zonal Offices (ICT, Punjab, KP & Balochistan)	↓	↑										
	1.2 Establishment/Operational Field Offices in Punjab, KP & Balochistan Zones			↓	↑								
	1.3 Hiring/mobilization of Field Team in ICT, Punjab, KP & Balochistan Zones			↓	↑								
	1.4 Hiring/mobilization of Supporting Staff in ICT, Punjab, KP & Balochistan Zones			↓	↑								
2	<b>Field Activities:</b>												
	2.1 Data collection from OFWM Department/NWMC for Baseline survey/regular monitoring	↓	↑										
	2.2 Training Session of field staff and Key staff on Survey Manual of MTs and Android Base System				↓	↑							
	2.3 Training of Measurement of water flow-Pygmy current meter						↓	↑					
	2.4 Determinants of Sample size at District/Tehsil levels with the assistance from ADA/DDA (OFWM)				↓	↑							
	2.5 Baseline survey field visit					7-11	17-21						
	2.6 Data entry, Data cleaning, Data processing & data Analysis						↓	↑					
	2.7 Regular Monitoring											↓	↑
3	<b>ICT Assignment:</b>												
	3.1 Development of web site of NPIWC-II.												
	3.2 Development of Android based Mobile Application.				↓								
	3.3 Testing of Monitoring tools on Android based system.				↓								
	3.4 Data collection of interventions in MIS/GIS database.											↓	↑
	3.5 Designing of dashboard of Project Interventions.							↓	↑				
4	<b>Coordination</b>												
	4.1 Meeting of DTLs with respective DTL of NWMC.												
5	<b>Deliverables:</b>												
	5.1 Monthly Monitoring Report (MMR)	↓	↑			↓	↑			↓	↑		
	5.2 Quarterly Monitoring & Evaluation Report (QM&ER)	↓	↑										
	5.3 Baseline Survey Report												↓

# ANNEX-B: MATRIX OF RESPONSIBILITIES

### MATRIX OF RESPONSIBILITIES

LEGEND	
●	Primary Responsibility
◉	Secondary Responsibility
○	Assistance

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



## ANNEX-C: MONITORING LOG-FRAME

### Monitoring Log-frame

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

Monitoring Log-frame							
Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
	cost sharing basis: 40% farmers in terms of labour, and 60% funded by project.	associations (WUAs); b) Registration of 47,278 WUAs; c) Improvement and realignment of earthen section of 47,278 watercourses; d) Lining of up to 50% length of 47,278 watercourse either by: <ul style="list-style-type: none"> <li>• Precast concrete parabolic lining (PCPL) segments, or</li> <li>• Rectangular brick masonry, or any other method as</li> </ul>	b) 47,278 WCAs registered; c) 47,278 watercourses improved and lined;	watercourses decreased by about 15 percentage points. b) 1.654 million households benefited from the activity; c) 11.347 million acres served with improved watercourses	improved watercourses by 5-24%; b) Increase in crop yields. c) Increase in irrigated area d) Increase in agriculture output per unit of water by about 37%	b) Increase in employment for farm labour; c) Reduction in poverty; d) Enhanced food security for the country.	out at before and after watercourse improvement on 2-5% sample basis; b) Agriculture survey before and after watercourse improvement on 2-5% sample basis; c) The survey will determine: <ul style="list-style-type: none"> <li>• Cropping pattern before and after the improvement;</li> <li>• Cropping intensities before and after improvement;</li> </ul>

Monitoring Log-frame							
Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
		approved by the project					<ul style="list-style-type: none"> <li>• Before and after crop yields;</li> <li>• Before and after employment;</li> </ul> <p>d) The difference between before and after will be considered the result of the intervention after netting out the contribution of the growth pattern of the crop sector otherwise.</p>
C3: Construction of Water Storage Tanks (WSTs)	a) Construction of 14,932 water storage tanks	a) 14,932 small farmers mobilized to construct water storage tanks for irrigation	a) 14,932 WSTs constructed b) 14,932 WSTs operated and maintained	a) Water which was otherwise largely going to be wasted is saved b) Irrigation provided at	a) More area irrigated b) Increased cropping intensities	a) Increased crop yields b) Increased total crop output quantum c) Increased farm income	a) 2-5% sample of WSTs will be surveyed b) A data collection form will be designed to



Monitoring Log-frame							
Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
		b) They agree to contribute 40% of the cost c) Agree to first construct the tank with his/her own funds and then received subsidy at 40% on issuance of FCR		critical stages of the crops c) Flexibility achieved for irrigation		d) Increased farm employment	measure water saving due to WSTs c) The forms used for baseline and impact surveys in case of watercourses will also be used for WSTs d) Same data analysis will be carried out here as in case of watercourses.
C4: Provision of Land Leveling Units	a) Provision of 11,610 laser land leveling units to farmers and service providers on a cost sharing basis: 50% by farmer / service	a) 11,610 laser units provided to farmers / service providers; b) Farmers trained in using the units.	a) 11,610 farmers / service providers received PLL units; b) Farmers / service providers received training in using the units.	a) Land levelled on Farmers' / service providers' farms; b) Land levelled on fellow farmers on rent; c) Total 3.483million	a) Water application efficiency increased at field level; b) Even germination of seed. c) Field application losses reduced	e) Increased area under irrigated crops; f) Enhanced crop yields g) Increased farm income	a) The land levelling is expected to save irrigation water and result in better and even germination of seeds which can enhance crop yields. The crop yields thus

Monitoring Log-frame							
Project subcomponents	Targets	Activities	Outputs	Outcome-1	Outcomes-2	Goals / Impact	Methodology for measuring results
	provider and 50% by the project.			acres levelled by 11,610 units.	by 10 percentage points d) Water productivity increased by 24%		<p>affected will be reflected in agriculture sample surveys.</p> <p>b) 2-4% sample units will be visited by ME&amp;IE Consultants teams after one years of delivery</p> <p>c) The unit will be verified</p> <p>d) Area treated during the year will be collected</p> <p>e) Farmers' feedback collected on quality of the unit, quality of the after-sale service, etc.</p>

## ANNEX-D: DELIVERABLES/REPORTING REQUIREMENTS

## DELIVERABLES/REPORTING REQUIREMENTS

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



## ANNEX-E: REFINED MONITORING TOOLS

## MT-1: Brief Profile

BRIEF PROFILE OF SAMPLED WATERCOURSE		
1. IDENTIFICATION		
DB.#	Q.#	Field Name
	1.1	Province/ Unit
	1.2	Division
	1.3	District
	1.4	Tehsil
	1.5	Field team
	1.6	Union council
	1.7	Village
	1.8	Name of chairman
	1.9	Contact # of chairman
	1.10	NA constituency
	1.11	Provincial constituency
	1.12	Watercourse name (2-L:Murad Minor) (RD-Pipe-29:Nara Canal)
	1.13	Watercourse location
	1	Canal area
	2	Non-Canal area
If 'Canal area' Selected in Q.#1.13 Then Continue with Q.#1.14		Otherwise Continue with Q#1.18
	1.14	Canal
	1.15	Branch
	1.16	Distributary
	1.17	Minor
	1.18	Type of water source
	1	Perennial canal
	2	Non-Perennial canal
	3	Tube well
	1.19	Category of watercourse to be improved
	1	Regular (New)

	2	20 Years Old
	3	Additional Lining
	<b>1.20</b>	<b>Type of watercourse</b>
	1	Rectangular/ Bricks
	2	Parabolic
	3	PVC 3"
	4	PVC 4"
	5	RCC Pipe
	6	Stone Masonry
	<b>1.21</b>	<b>Location of watercourse on the Minor/Canal</b>
	1	Head
	2	Middle
	3	Tail
If "20 Years Old/Additional Lining" Selected in Q.#-1.19 Then Continue with Q.#1.22		Otherwise Goto To Q.#1.25
	<b>1.22</b>	<b>Previous improvement scheme name (NPIW-1)</b>
	<b>1.23</b>	<b>Previous improvement lining length (1200)</b>
	<b>1.24</b>	<b>Year of improvement (List available) (2001)</b>
	<b>1.25</b>	<b>Designed discharge (LPS)</b>
	<b>1.26</b>	<b>Additional discharge?</b>
	1	Yes
	2	No
If "Yes" Selected in Q#-1.26 Then Continue with Q.#-1.27		Otherwise Goto To Q.#1.28
	<b>1.27</b>	<b>Additional discharge source</b>
	<b>1.28</b>	<b>Quality of ground water</b>
	1	Sweet
	2	Brackish
	<b>1.29</b>	<b>Total culturable command area (CCA) (Acres)</b>
	<b>1.30</b>	<b>Total water user's (No)</b>
	<b>1.31</b>	<b>Collect the coordinates at the moga point?</b>
	<b>1.32</b>	<b>Take Picture at the start of Moga Point?</b>
	<b>1.33</b>	<b>Collect the coordinates at the end of lined portion</b>

	1.34	Total lining length?
	1.35	Take the picture while standing at the end of lined portion (Facing towards Moga Point)
	1.36	Take the picture while standing at the end of lined portion (Facing towards the katcha portion)
	1.37	Collect the coordinates at the Tail of Katcha Portion (end point of watercourse)
	1.38	Total length of watercourse? (Meters)
	1.39	Take the Picture of Watercourse while standing at the end of Katcha Portion (Facing toward the moga point)
	1.40	Take Picture of the Measuring Wheel's Meter while standing at the end of Katcha Portion.
	1.41	Sanctioned lining length of watercourse (Meters)
	1.42	Date of technical sanction (TS)
	1.43	Sanctioned cost (Rupees)
	2	COMMENTS OF INTERVIEWER



## MT-2: List of Shareholders

LIST OF WATERCOURSE SHAREHOLDERS		
1.IDENTIFICATION		
DB#	Q#	Field Name
	1.1	Watercourse ID: _____
2.SHAREHOLDERS LIST		
	2.1	Name of Shareholder
	2.2	Gender
	1	Male
	2	Female
	2.3	Father Name
	2.4	Area Owned (Acres)
	2.5	Area Rented In (Acres)
	2.6	Area Rented out (Acres)
	2.7	Total Area operated (Acres)
	2.8	Status in association
	1	Chairman
	2	Treasurer
	3	Secretary
	4	Member
	5	Not Member
	2.9	Location on WC
	1	Head
	2	Middle
	3	Tail
	3	COMMENTS OF INTERVIEWER

### MT-3: List of Beneficiaries

LIST OF WATERCOURSE BENEFICIARIES/FARMERS		
1.IDENTIFICATION		
DB#	Q#	Field Name
	1.1	Watercourse ID:
2. BENEFICIARY/FARMER LIST		
	2.1	Name of Share Croppers / Harries / Tenant / etc.
	2.2	Gender
	1	Male
	2	Female
	2.3	Father Name
	2.4	Total area operated (Acres)
	2.5	Location on watercourse(WC)
	1	Head
	2	Middle
	3	Tail
	3	COMMENTS OF INTERVIEWER

## MT-4: Social Gender

QUESTIONNAIRE FOR SOCIAL STRUCTURE & GENDER		
1.IDENTIFICATION		
DB#	Q#	Field Name
	1.1	Watercourse ID: _____
	1.2	Name of Respondent
	1.3	Age (Years) (till to date)
	1.4	Level of Education
	1	Illiterate
	2	Primary
	3	Middle
	4	Matric
	5	Intermediate
	6	Graduate and above
	7	Madrassa Education
	8	Literate
	1.5	Occupation
	1	Housekeeping
	2	Agriculture
	3	Labor
	4	Govt./Private job
	5	Business
	6	If any other, Specify? _____
2.SOCIAL INFORMATION		
Land, Cultivation and Irrigation Information		
	2.1	Are you currently married?
	1	Yes
	2	No
	2.2	Do you own a piece of agricultural land?
	1	Yes
	2	No
	3	Do not Know

If "Yes" in Q.#2.2 then continue with Q.#2.3		Otherwise goto Q.#2.6
	<b>2.3</b>	<b>How many acres?</b>
	<b>2.4</b>	<b>How much land is as tenancy? (Acres)</b>
	<b>2.5</b>	<b>Who cultivates your land?</b>
	1	I myself
	2	My father
	3	My brother
	4	My husband
	5	Hari / Tenant
	6	Do not know
	<b>2.6</b>	<b>Does your family/husband own a piece of agri land or work as a tenant?</b>
	1	Owner Land
	2	Worked as tenant
	3	Both owner and tenant
	4	Do not Know
	<b>2.7</b>	<b>Do you participate in farming activities?</b>
	1	Yes
	2	No
	<b>2.8</b>	<b>Do you people face problems regarding the irrigation water?</b>
	1	Yes
	2	No
	3	Never asked
	<b>2.9</b>	<b>Are you consulted in making farming decisions regarding your land?</b>
	1	Always
	2	Rarely
	3	Never
	<b>2.10</b>	<b>Are you consulted in spending income in your household?</b>
	1	Always
	2	Rarely
	3	Never
	<b>2.11</b>	<b>Are you consulted on making household decisions?</b>
	1	Always

	2	Rarely
	3	Never
	<b>2.12</b>	<b>What household activities are performed by you?</b>
	1	Cooking
	2	Looking after elders
	3	Washing clothes and dishes
	4	Cleaning of house
	5	Caring of Children
	6	Bringing drinking water
	7	Bringing firewood
	8	If any other, Specify? _____
	<b>2.13</b>	<b>Have you heard about NPIWC-II Project?</b>
	1	Yes
	2	No
	<b>2.14</b>	<b>Do You know about WUA</b>
	1	Yes
	2	No
	<b>2.15</b>	<b>Are you member of WUA</b>
	1	Yes
	2	No
<b>If "Yes" in Q.#2.15 then continue with Q.#2.16</b>		<b>Otherwise goto Q.#2.17</b>
	<b>2.16</b>	<b>Do you participate in WUA meetings?</b>
	1	Always
	2	Never
	3	Never called
	<b>2.17</b>	<b>Do you wash clothes at washing pad at watercourse?</b>
	1	Yes
	2	No
	<b>2.18</b>	<b>Are Culverts sufficient for crossing at watercourse?</b>
	1	Yes
	2	No
	<b>3</b>	<b>COMMENTS OF INTERVIEWER</b>



## MT-5: Beneficiary Feedback

BENEFICIARY/FARMER FEEDBACK		
1.IDENTIFICATION		
DB#	Q#	Field Name
	1.1	Watercourse ID: _____
	1.2	Status of watercourse to be improved
	1	Technical Sanction (TS) Issued
	2	Interim Completion Report (ICR-1) Issued
	3	Interim Completion Report (ICR-2) Issued
	4	Final Completion Report (FCR) Issued
If "Technical Sanction Issued" in Q.#1.2, Then Start with Q.#1.3 & Covered Till Q.#3.11		
If "ICR-1/ICR-2 Issued" in Q.#1.2, Then Start with Q.#1.3 & Covered Till Q.#3.24		
If "FCR issued" In in Q.#1.2, Then Start with Q.#1.3 & Covered Till End		
	1.3	Beneficiary name?
	1.4	Location on watercourse?
	1	Head
	2	Middle
	3	Tail
	1.5	Total land holding (Acres)?
	1.6	Area operated (Acres)?
	1.7	Tenurial status?
	1	Owner
	2	Owner cum Tenant
	3	Tenant
FARMERS FEEDBACK: PART A, BEFORE CONSTRUCTION		
	2.1	Do you know about the Water User's Association (WUA)?
	1	Yes
	2	No
	3	No Response

If "Yes" in Q.#2.1 then continue with Q#2.2		otherwise goto Q#2.15
2.2	Are you a member of the Water User's Association (WUA)?	
1	Yes	
2	No	
3	Don't know	
If "Yes" in Q.#2.2 then continue with Q#2.3		Otherwise goto Q#2.15
2.3	Was your participation voluntary?	
1	Yes	
2	No	
3	No Response	
2.4	Who motivated you to be a member?	
1	Fellow farmers	
2	Big Landlord	
3	OFWM field team	
4	Any other (Specify)	
2.5	Did you pay any membership fee to become member of WUA?	
1	Yes	
2	No	
3	No Response	
2.6	Do all the WUA members are water user's ?	
1	Yes	
2	No	
2.7	Do WUA holds regular meetings of the association?	
1	Yes	
2	No	
3	To some Extent	
2.8	Do you participate in the WUA meetings?	
1	Always	
2	Occasionally	
3	Never	

	<b>2.9</b>	<b>Do you know that the minutes are recorded and got approved in next meeting?</b>
	1	Always
	2	Occasionally
	3	Never
	<b>2.10</b>	<b>Do Decisions make democratically?</b>
	1	Yes
	2	No
	3	To some Extent
	<b>2.11</b>	<b>Do Majority of the members participate in the meetings?</b>
	1	Yes
	2	No
	3	To some Extent
	<b>2.12</b>	<b>What is the frequency of WUA meetings?</b>
	1	Every month
	2	Quarterly
	3	Once a year
	4	As per need arises
	<b>2.13</b>	<b>Are you aware about the functions and responsibilities of the Association?</b>
	1	Labour Arrangement
	2	Resolve Disputes
	3	WCs Maintenance
	4	Funding for Accounts
	<b>2.14</b>	<b>Do you think WUA helps in solving your farming problems?</b>
	1	Always
	2	To some Extent
	3	Never

Farmer Feedback: Watercourse		
If "T.S" Selected in Q.#1.2 then continue with Q#2.15 and covered till Q.#3.11		otherwise skip Q.#2.15 to Q.#3.11
2.15	Do you Know that your watercourse is going to be newly lined/ additionally lined/reconstructed?	
1	Yes	
2	No	
3	Don't know	
If "Yes" in Q.#2.15 then continue with Q#2.16		Otherwise goto Q#2.17
2.16	Do you know that the lining will be up to 50% of the watercourse length?	
1	Yes	
2	No	
3	Don't know	
2.17	Do you think that watercourse lining up to 50% will benefit you?	
1	Yes	
2	No	
3	Don't know	
3. Feedback: Environment Baseline		
3.1	Will there be land required for the improvement / alignment of watercourse?	
1	Yes	
2	No	
3.2	Are the clothes washed on this watercourse?	
1	Yes	
2	No	
If "Yes" in Q.#3.2 then continue with Q#3.3		Otherwise go to Q#3.4
3.3	How many places and at what locations?	
3.3.1	How many at Head?	
3.3.2	How many at Middle?	
3.3.3	How many at Tail?	
3.4	Do washing bays required on this watercourse?	
1	Yes	

	2	No
If "Yes" in Q.#3.4 then continue with Q#3.5		Otherwise go to Q#3.6
	<b>3.5</b>	<b>How many places and at what locations?</b>
	3.5.1	How many at Head?
	3.5.2	How many at Middle?
	3.5.3	How many at Tail?
	<b>3.6</b>	<b>Will any trees be cut down on this watercourse?</b>
	1	Yes
	2	No
If "Yes" in Q.#3.6 then continue with Q#3.7		Otherwise go to Q#3.8
	<b>3.7</b>	<b>Number of Trees to be Cut Down?</b>
	<b>3.8</b>	<b>Will temporary diversion channel be needed?</b>
	1	Yes
	2	No
	<b>3.9</b>	<b>How the solid waste material will be disposed of?</b>
	1	Used in filling small depressions
	2	Used for dressing Inspection Path / Non Inspection Path
	3	Left unattended
	4	If any other, Specify
	<b>3.10</b>	<b>Will there be disruption to local routes?</b>
	1	Yes
	2	No
	<b>3.11</b>	<b>Will the local labour be hired for works on this watercourse?</b>
	1	Yes
	2	No



FARMER'S FEEDBACK: PART B, DURING CONSTRUCTION		
If "ICR-I/ICR-II" Selected in Q.#1.2 then continue with Q#3.12 and covered till Q.#3.24		otherwise skip Q.#3.12 to Q.#3.24
	<b>3.12</b>	<b>Do you know that this watercourse is being lined up to 50 percent?</b>
	1	Yes
	2	No
	<b>3.13</b>	<b>Was the land required for WC alignment provided by the land owners voluntarily?</b>
	1	Yes
	2	No
	<b>3.14</b>	<b>Are washing bays under construction as per technical sanction?</b>
	1	Yes
	2	No
If "Yes" in Q.#3.14 then continue with Q#3.125		otherwise skip Q.#3.16
	<b>3.15</b>	<b>How many places and at what locations?</b>
	3.15.1	How many at Head?
	3.15.2	How many at Middle?
	3.15.3	How many at Tail?
	<b>3.16</b>	<b>Were any trees cut down during watercourse improvement work?</b>
	1	Yes
	2	No
If "Yes" in Q.#3.16 then continue with Q#3.17		Otherwise go to Q#3.20
	<b>3.17</b>	<b>Number of Trees Cut Down?</b>
	<b>3.18</b>	<b>How many saplings have been planned to be planted against each tree cut down?</b>
	<b>3.19</b>	<b>Do the arrangements made for the protection of newly planted saplings?</b>
	1	Yes
	2	No
	<b>3.20</b>	<b>Were temporary diversion channel(s), if any, made?</b>
	1	Yes
	2	No

	<b>3.21</b>	<b>How the solid waste material was disposed of?</b>
	1	Used in filling small depressions
	2	Used for dressing Inspection Path / Non Inspection Path
	3	Lefty unattended
	4	If any, Specify
	<b>3.22</b>	<b>Was the disruption of local routes occurring?</b>
	1	Yes
	2	No
If "Yes" in Q.#3.21 then continue with Q#3.22		Otherwise goto Q#3.23
	<b>3.23</b>	<b>Were measures taken to restore the local routes properly?</b>
	1	Yes
	2	No
	<b>3.24</b>	<b>Was local labor hired for improvement works of the watercourse?</b>
	1	Yes
	2	No
<b>BENEFICIARY/FARMER FEEDBACK: PART C, AFTER CONSTRUCTION</b>		
If "FCR" Selected in Q.#1.2 then continue with Q#4.1 and covered till end		otherwise skip Q.#4.1 to Q.#4.29
	<b>4.1</b>	<b>Do you know that watercourse was lined upto 50%?</b>
	1	Yes
	2	No
	3	No Response
If "Yes" in Q.#4.1 Then Continue with Q.#4.2		Otherwise Skip The Questionnaire
	<b>4.2</b>	<b>Were disputes resolved during construction of the watercourse?</b>
	1	Yes
	2	No
	3	To some Extent
	<b>4.3</b>	<b>Were there issues relating to controlled structures/ nacca fixing were resolved?</b>
	1	Yes
	2	No

	3	To some Extent
	<b>4.4</b>	<b>Have you ever visited a watercourse site as it was being improved?</b>
	1	Yes
	2	No
	3	No Response
If "No" in Q.#4.4 then continue with Q.#4.5		Otherwise Goto Q.#4.6
	<b>4.5</b>	<b>Have you heard about the quality of work?</b>
	1	Yes
	2	No
	3	NA
	<b>4.6</b>	<b>Do you think work quality was?</b>
	1	Good
	2	Average
	3	Not good
	4	Don't know
If "Not Good" in Q.#4.6 then continue with Q.#4.7		Otherwise Goto Q.#4.8
	<b>4.7</b>	<b>If work quality is not good, then of which?</b>
	1	Bricks
	2	RCC/PVC pipe
	3	Cement
	4	Slab
	5	Control structure/Nacca
	6	Workmanship
	7	Any other (Specify)
	<b>4.8</b>	<b>Do you know that before the lining work was started, the watercourse was earthen, improved/renovated?</b>
	1	Yes
	2	No
	3	Don't know
If "Yes" in Q.#4.8 then continue with Q#4.9		Otherwise goto Q#4.10
	<b>4.9</b>	<b>How much in your view watercourse length was earthen improved / renovated?</b>

	1	Entire length
	2	Only Lining part
	3	Do not know
<b>Labour</b>		
	<b>4.10</b>	<b>Arranged skilled and unskilled labour for earthen improvement of the watercourse</b>
	1	Yes
	2	No
	3	To some Extent
	<b>4.11</b>	<b>Arranged skilled and unskilled labour for watercourse lining/ alignment</b>
	1	Yes
	2	No
	3	To some Extent
	<b>4.12</b>	<b>Did you participate in earthen improvement activity?</b>
	1	Yes
	2	No
	3	To some Extent
<b>If "Yes" in Q.#4.12 then continue with Q#4.13</b>		<b>Otherwise goto Q#4.14</b>
	<b>4.13</b>	<b>In what form?</b>
	1	Contributed labour
	2	Contributed in kind/money
	<b>4.14</b>	<b>Do you think that irrigation water availability has increased after the watercourse improvement at your farm?</b>
	1	Yes
	2	No
	3	Don't know
<b>If "Yes" in Q.#4.14 then continue with Q#4.15</b>		<b>Otherwise goto Q#4.16</b>
	<b>4.15</b>	<b>How much? (Please guess keeping in view difference in acreage irrigated before and after WC improvement)</b>
	1	Less than 5%
	2	5%
	3	10%

	4	20%
	<b>4.16</b>	<b>Did WUA Resolve disputes arising during construction of watercourse?</b>
	1	Yes
	2	No
	3	To some Extent
	<b>4.17</b>	<b>Did WUA Resolve issues relating to controlled structures/Nacca fixing?</b>
	1	Yes
	2	No
	3	To some Extent
	<b>4.18</b>	<b>The improved watercourse is properly maintained</b>
	1	Yes
	2	No
	3	To some Extent
<b>Environment</b>		
	<b>4.19</b>	<b>Were the washing bays constructed/completed?</b>
	1	Yes
	2	No
<i>If "Yes" in Q.#4.19 then continue with Q.#4.20</i>		<i>Otherwise goto Q.#4.21</i>
	<b>4.20</b>	<b>How many places, and at what locations?</b>
	4.20.1	How many at Head?
	4.20.2	How many at Middle?
	4.20.3	How many at Tail?
	<b>4.21</b>	<b>How many trees were cut down?</b>
<i>If "Greater than Zero" in Q.#4.21 then continue with Q.#4.22</i>		<i>Otherwise goto Q.#4.25</i>
	<b>4.22</b>	<b>How many saplings were planted against each tree cut down?</b>
	<b>4.23</b>	<b>Number of Survived Trees?</b>
	<b>4.24</b>	<b>Were the arrangements made for the protection of newly planted saplings?</b>
	<b>4.25</b>	<b>Were temporary diversion channel(s) restored?</b>
	1	Yes
	2	No

	<b>4.26</b>	<b>How the solid waste material was disposed of?</b>
	1	Used in filling small depressions
	2	Used for dressing Inspection Path / Non Inspection Path
	3	Left unattended
	4	If any other, Specify
	<b>4.27</b>	<b>Was the disruption of local routes occurring?</b>
	1	Yes
	2	No
	<b>4.28</b>	<b>Were measures taken to restore the local routes properly?</b>
	1	Yes
	2	No
	<b>4.29</b>	<b>Were the local labor hired for works on this watercourse?</b>
	1	Yes
	2	No
	<b>5</b>	<b>COMMENTS OF INTERVIEWER</b>



## MT-6: Farming Beneficiary of Watercourse

QUESTIONNAIRE FOR FARMING BENEFICIARY OF WATERCOURSE		
1. IDENTIFICATION		
DB#	Q#	Field Name
HH.1.1	1.1	Watercourse ID: _____
2. PROFILE OF BENEFICIARY		
HH.2.1	2.1	Name
HH.2.2	2.2	Gender
	1	Male
	2	Female
HH.2.3	2.3	Father's Name
HH.2.4	2.4	Village
HH.2.5	2.5	Location of Farm on Watercourse
	1	Head
	2	Middle
	3	Tail
3. FARM SIZE AND TENURIAL STATUS		
HH.3.1	3.1	Area Owned (Acres)
HH.3.2	3.2	Area Rented-In (Acres)
HH.3.3	3.3	Area Rented-Out (Acres)
HH.3.4	3.4	Total Farm Area (Acres)
HH.3.5	3.5	Area not Cultivated
HH.3.6	3.6	Area Cultivated
HH.3.7	3.7	Area under water logging and salinity
if "greater than 0" in Q.#.3.7 then continue with Q.#.3.8		Otherwise Continue with Q.#.3.9
HH.3.8	3.8	Reason for water logging and salinity
	1	Katcha WC
	2	Others
HH.3.9	3.9	Tenurial Status
	1	Owner

	2	Owner cum Tenant
	3	Tenant
<b>4. SOURCES OF IRRIGATION WATER</b>		
HH.4.1	4.1	<b>Main Sources</b>
	1	Canal
	2	Tube well
	3	Canal + Tube well
	4	Others Sources
if "Tube well/Canal + Tube Well " in Q.#.4.1 then continue with Q.#.4.2		Otherwise Continue with Q.#.4.4
HH.4.2	4.2	<b>Status of tube well water used</b>
	1	Owned
	2	Purchased
if "Purchased" in Q.#.4.2 then continue with Q.#.4.3		Otherwise Continue with Q.#.4.4
HH.4.3	4.3	<b>Cost of tube well water per hour Rs.</b>
HH.4.4	4.4	<b>Share of irrigation water percentage?</b>
HH.4.5	4.5	<b>Water used for Kharif crops?</b>
	1	Canal
	2	Tube well
	3	Others
HH.4.6	4.6	<b>Water used for Rabi crops</b>
	1	Canal
	2	Tube well
	3	Others
<b>5. FAMILY AND PERMANENT HIRED LABOR</b>		
HH.5.1	5.1	<b>Family Members</b>
HH.5.2	5.2	<b>Male-Member full time available for farming</b>
HH.5.3	5.3	<b>Female-Member full time available for farming</b>
HH.5.4	5.4	<b>Male-Member part time available for farming</b>
HH.5.5	5.5	<b>Female-Member part time available for farming</b>
HH.5.6	5.6	<b>Male-Permanent hired labor (PHL)</b>
HH.5.7	5.7	<b>Female-Permanent hired labor (PHL)</b>

HH.6.1		HH.10.1	HH.10.2	HH.10.3	HH.11.1	HH.11.2	HH.12.1	HH.12.2
Name of Crop		Seed Bed Preparation			Use of Seed		Seedling cost/acre	
		Acres	Hr/ Acre	Rate/hr			Home Grown	Bought
					Kg/ acre	Rs./ Kg		
	<b>Kharif Crops</b>							
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
	<b>Rabi Crops</b>							
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
	<b>Orchards</b>							
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
	<b>Vegetables</b>							
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH.6.1		HH.13.1	HH.13.2	HH.14.1	HH.14.2	HH.15.1	HH.15.2
Name of Crop		Seed Bed Treatment					
		Sowing (CHL)		Plantation (CHL)		Transplantation	
		Male (MD)	Female (MD)	Male (MD)	Female (MD)	Male (MD)	Female (MD)
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chilies						
34	Other (Names)						

HH.6.1		HH.16.1	HH.16.2	HH.16.3	HH.17.1	HH.17.2	HH.17.3	HH.17.4
Name of Crop		Seed Treatment cost						
		Cost. Per acre	Labour Cost		Urea		DAP	
			Male (MD)	Female (MD)	Qty Bags	Price per Bag	Qty Bags	Price per Bag
	<b>Kharif Crops</b>							
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
	<b>Rabi Crops</b>							
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
	<b>Orchards</b>							
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
	<b>Vegetables</b>							
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH.6.1		HH.17.5	HH.17.6	HH.17.7	HH.17.8	HH.17.9	HH.17.10
Name of Crop		Use of Fertilizers (No. of Bags)/Acre					
		Potash (SOP)		NP (23-23)		Other Name	
		Qty Bags	Price per Bag	Qty Bags	Price per Bag	Qty Bags	Price per Bag
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chillies						
34	Other (Names)						



HH.6.1		HH.17.11	HH.17.12	HH.18.1	HH.18.2	HH.18.3	HH.18.4	HH.18.5
Name of Crop				FYM				
		Cost of Hired Labour		Area treated	No. of Trolleys. /Acre	Cost per torily	Labour Cost	
		Male (MD)	Female (MD)				Male (MD)	Female (MD)
	<b>Kharif Crops</b>							
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
	<b>Rabi Crops</b>							
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
	<b>Orchards</b>							
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
	<b>Vegetables</b>							
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH.6.1		HH.19.1	HH.19.2	HH.19.3	HH.19.4	HH.20.1	HH.20.2
Name of Crop		Sprays				Canal irrigation Per Acre	
		No. of spray (per acre)	Cost of Sprays	Cost of Hired Labour		No. of irrigation per acre	Abyana & taxes per crop
				Male (MD)	Female (MD)		
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chilies						
34	Other (Names)						

HH.6.1		HH.21.1	HH.21.2	HH.21.3	HH.22.1	HH.22.2	HH.22.3
Name of Crop		Tube well irrigation			Picking of Cotton/Orchard/Vegetables		
		Hour/Acre	Cost/Hour	Area Irrigated	Number of Picking	CHL Rs.	
						Male (MD)	Female (MD)
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chilies						
34	Other (Names)						

HH.6.1		HH.23.1	HH.23.2	HH.23.3	HH.24.1	HH.24.2	HH.24.3
Name of Crop		Number of hoeing/thinning			Mulching/ Pruning/ Stalking		
		Number	CHL Rs.		Number	CHL Rs.	
			Male (MD)	Female (MD)		Male (MD)	Female (MD)
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chilies						
34	Other (Names)						

HH.6.1		HH.25.1	HH.25.2	HH.25.3	HH.25.4	HH.25.5
Name of Crop		Harvesting/ Picking				
		Harvest Material Cost (Wheat and Rice)	CHL Rs.		Cost of Labour for Harvesting in Rs.	Cost of Threshing
			Male (MD)	Female (MD)		
	<b>Kharif Crops</b>					
1	Rice (Fine)					
2	Rice (Coarse)					
3	Cotton (American)					
4	Cotton (Desi)					
5	Sugarcane (New)					
6	Sugarcane (Ratoon)					
7	Sugar Beet					
8	Maize					
9	Tobacco					
10	Kharif fodder					
11	Other Kharif Crops (Name)					
	<b>Rabi Crops</b>					
12	Wheat					
13	Sunflower					
14	Rapeseed, mustard, canola					
15	Other Edible Oils Seed					
16	Rabi fodder					
17	Other Rabi crops (Name)					
	<b>Orchards</b>					
18	Mango					
19	Dates					
20	Apple					
21	Lemon					
22	Citrus					
23	Guava					
24	Other (Name)					
	<b>Vegetables</b>					
25	Tomato					
26	Potato					
27	Peas					
28	Carrot					
29	Radish					
30	Cucumber					
31	Onion					
32	Lady Finger/ Okra					
33	Chillies					
34	Other (Names)					



HH.6.1		HH.25.6	HH.25.7	HH.26.1	HH.26.2	HH.26.3
Name of Crop				Crop		
		CHL Rs.		Area (Acres)	Yield	
		Male (MD)	Female (MD)		Product (40 Kgs)	By-product (40 Kgs)
	<b>Kharif Crops</b>					
1	Rice (Fine)					
2	Rice (Coarse)					
3	Cotton (American)					
4	Cotton (Desi)					
5	Sugarcane (New)					
6	Sugarcane (Ratoon)					
7	Sugar Beet					
8	Maize					
9	Tobacco					
10	Kharif fodder					
11	Other Kharif Crops (Name)					
	<b>Rabi Crops</b>					
12	Wheat					
13	Sunflower					
14	Rapeseed, mustard, canola					
15	Other Edible Oils Seed					
16	Rabi fodder					
17	Other Rabi crops (Name)					
	<b>Orchards</b>					
18	Mango					
19	Dates					
20	Apple					
21	Lemon					
22	Citrus					
23	Guava					
24	Other (Name)					
	<b>Vegetables</b>					
25	Tomato					
26	Potato					
27	Peas					
28	Carrot					
29	Radish					
30	Cucumber					
31	Onion					
32	Lady Finger/ Okra					
33	Chilies					
34	Other (Names)					

HH.6.1		HH.26.4	HH.26.5	HH.26.6
Name of Crop		Crop Yield & Prices		
		Prices		In case sold as such Rs. /Acre for fruit plants only
		Product Price per 40 Kg (Rs.)	By-Product (Rs. /40 Kg)	
	<b>Kharif Crops</b>			
1	Rice (Fine)			
2	Rice (Coarse)			
3	Cotton (American)			
4	Cotton (Desi)			
5	Sugarcane (New)			
6	Sugarcane (Ratoon)			
7	Sugar Beet			
8	Maize			
9	Tobacco			
10	Kharif fodder			
11	Other Kharif Crops (Name)			
	<b>Rabi Crops</b>			
12	Wheat			
13	Sunflower			
14	Rapeseed, mustard, canola			
15	Other Edible Oils Seed			
16	Rabi fodder			
17	Other Rabi crops (Name)			
	<b>Orchards</b>			
18	Mango			
19	Dates			
20	Apple			
21	Lemon			
22	Citrus			
23	Guava			
24	Other (Name)			
	<b>Vegetables</b>			
25	Tomato			
26	Potato			
27	Peas			
28	Carrot			
29	Radish			
30	Cucumber			
31	Onion			
32	Lady Finger/ Okra			
33	Chilies			
34	Other (Names)			



QUESTIONNAIRE FOR FARMING BENEFICIARY OF WATERCOURSE		
9. BENEFICIARY'S PERCEPTION ABOUT WATER SAVING		
DB#	Q#	Field Name
HH.27	27	Do you think the use of labour force increased on farm after improvement of watercourse?
	1	Yes
	2	No
If "Yes" in Q.#9.1 then continue with Q#9.2		Otherwise goto Q#9.3
HH.28	28	How much (%)
HH.29	29	Are you satisfied with the equity in distribution of water?
	1	Yes
	2	No
HH.30	30	How much your land was irrigated before lining in one go (%)?
HH.31	31	After lining, how much your land irrigated in one go (%) ?
HH.32	32	During the season have you faced any problem regarding water theft/ dispute or litigation?
	1	Yes
	2	No
HH.33	33	During and after watercourse improvement on OFWM staff has guided about the economic use of water?
	1	Yes
	2	No
HH.34	34	Have OFWM staff provided you any literature about economic use of water?
	1	Yes
	2	No
HH.35	35	General remarks of beneficiaries about watercourse improvement intervention
HH.36	36	COMMENTS OF INTERVIEWER

## MT-1: WST Identifications

WATER STORAGE TANK (WST)		
1. IDENTIFICATION		
DB#	Q#	Field Name
	1.1	Province / Unit
	1.2	Division
	1.3	District
	1.4	Tehsil
	1.5	OFWM Field Team
	1.6	Union Council
	1.7	Village
	1.8.1	NA Constituency
	1.8.2	Provincial Constituency
	1.9	Name of Farmer
	1.10	Gender
	1	Male
	2	Female
	1.11	Name of Father
	1.12	CNIC
	1.13	Cell #
	1.14	Sources of Irrigation System
	1	Perennial Canal
	2	Non-Perennial Canal
	3	Tube Well
	4	Perennial Canal + Tube Well
	5	Non-Perennial Canal + Tube Well
	6	Tail Water Recovery Ditch (TWRD)
	7	Stream
	8	Naala
	9	Spring
	10	Dug well
	1.15	Area Operated (Acres)

	1.16	<b>Land Topography</b>
	1	Even
	2	Uneven
	1.17	<b>Financial Year</b>
	1.18	<b>Comments</b>

## MT-2: WST Beneficiaries' Feedback

BENEFICIARIES' FEEDBACK FOR WATER STORAGE TANKS		
1. IDENTIFICATION		
DB#	Q#	Field Name
	1.1	WST ID _____
2. BENEFICIARY FEEDBACK		
	1.2	Name of Beneficiary / Owner
	1.3	Status of WST construction
	1	Technical Sanction(TS) Issued
	2	Final Completion Report (FCR) Issued
If "Technical Sanction Issued" in Q.#1.3, then covered till Q.#2.6		
If "FCR issued" in Q. #1.3, then covered till end		
PART A, BEFORE IMPROVEMENT		
	2.1	How was your application attended by OFWM staff?
	1	Promptly
	2	Took a lot of time
	2.2	How do you assess survey and design process?
	1	Fast track
	2	Lengthy
	2.3	Behavior of OFWM staff
	1	Friendly / Supportive
	2	Indifferent
	2.4	The subsidy was paid
	1	Within reasonable time
	2	Required a lot of time
	2.5	How do you feel about the maintenance of WST?
	1	Easy
	2	Difficult
If "TS Issued" in Q.#1.3, then continue with Q.# 2.6		Otherwise goto Comments of Interviewer

	<b>2.6</b>	<b>Will any trees be cut down on this WST?</b>
	1	Yes
	0	No
<b>PART B, AFTER IMPROVEMENT</b>		
	<b>2.7</b>	<b>Cropping intensity has increased on your farm after WST construction</b>
	1	Yes
	0	No
	3	To Some Extent
	<b>2.8</b>	<b>Crops / orchards yield has increased after WST</b>
	1	Yes
	0	No
	3	To Some Extent
	<b>2.9</b>	<b>Your area under cultivation has increased after WST construction</b>
	1	Yes
	2	No
	<b>2.10</b>	<b>Number of irrigation/ acres has increased after WST construction</b>
	1	Yes
	2	No
	<b>2.11</b>	<b>The improved WST is properly maintained</b>
	1	Yes
	2	No
	3	To some Extent
	<b>2.12</b>	<b>How many trees were cut down during construction?</b>
If "> 0" in Q.# 2.12, then continue with Q.# 2.13		Otherwise goto Comments of Interviewer
	<b>2.13</b>	<b>How many saplings were planted against each tree cut down?</b>
	<b>2.14</b>	<b>Number of Survived Trees?</b>
	<b>2.15</b>	<b>Were the arrangements made for the protection of newly planted saplings?</b>
	<b>2.16</b>	<b>COMMENTS OF INTERVIEWER</b>

### MT-3: WST Beneficiaries' Feedback

QUESTIONNAIRE FOR FARMING BENEFICIARY OF WATER STORAGE TANK		
1. IDENTIFICATION		
DB#	Q#	Field Name
WC-ID	1.1	WST ID: _____
2. PROFILE OF BENEFICIARY		
	2.1	Name?
	2.2	Gender?
	1	Male
	2	Female
	2.3	Father's Name?
	2.4	Village?
3. FARM SIZE AND TENURIAL STATUS		
	3.1	Area Owned (Acres)?
	3.2	Area Rented-In (Acres)?
	3.3	Area Rented-Out (Acres)?
	3.4	Total Farm Area (Acres)?
	3.5	Area not Cultivated?
	3.6	Area Cultivated?
	3.7	Tenurial Status?
	1	Owner
	2	Owner cum Tenant
	3	Tenant
4. SOURCES OF IRRIGATION WATER		
HH-Q-3.1	4.1	If there is any other source of water?
	1	Canal
	2	Tube well
	3	Canal + Tube well

	4	Others Sources
if "Tube well/Canal + Tube Well " in Q.#.4.1 then continue with Q.#.4.2		Otherwise Continue with Q.#.4.4
HH.4.2	4.2	Status of tube well water used
	1	Owned
	2	Purchased
if "Purchased" in Q.#.4.2 then continue with Q.#.4.3		Otherwise Continue with Q.#.4.4
HH.4.3	4.3	Cost of tube well water per hour Rs.
HH.4.4	4.4	Share of irrigation water percentage?
<b>5. FAMILY AND PERMANENT HIRED LABOR</b>		
	5.1	Family Members?
	5.2	Male-Member full time available for farming?
	5.3	Female-Member full time available for farming?
	5.4	Male-Member part time available for farming?
	5.5	Female-Member part time available for farming?
	5.6	Male-Permanent hired labor (PHL)?
	5.7	Female-Permanent hired labor (PHL)?



HH-5		HH-6	HH-7-1	HH-7-2	HH-7-3	HH-8-1	HH-8-2	HH-8-3
Name of Crop		Area (acres)	Land Preparation			Laser Land Leveling		
			Acres	Hr/ Acre	Rate/hr	Acres	Hr/ Acre	Rate/hr
	<b>Kharif Crops</b>							
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
	<b>Rabi Crops</b>							
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
	<b>Orchards</b>							
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
	<b>Vegetables</b>							
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH-5		HH-9-1	HH-9-2	HH-9-3	HH-10-1	HH-10-2	HH-11-1	HH-11-2	HH-12-1	HH-12-2
Name of Crop		Seed Bed Preparation			Seed Bed Treatment					
		Acres	Hr/ Acre	Rate/hr	Use of Seed		Seedling cost/acre		Sowing (CHL)	
					Kg/ acre	Rs./ Kg	Home Grown	Bought	Male (MD)	Female (MD)
	<b>Kharif Crops</b>									
1	Rice (Fine)									
2	Rice (Coarse)									
3	Cotton (American)									
4	Cotton (Desi)									
5	Sugarcane (New)									
6	Sugarcane (Ratoon)									
7	Sugar Beet									
8	Maize									
9	Tobacco									
10	Kharif fodder									
11	Other Kharif Crops (Name)									
	<b>Rabi Crops</b>									
12	Wheat									
13	Sunflower									
14	Rapeseed, mustard, canola									
15	Other Edible Oils Seed									
16	Rabi fodder									
17	Other Rabi crops (Name)									
	<b>Orchards</b>									
18	Mango									
19	Dates									
20	Apple									
21	Lemon									
22	Citrus									
23	Guava									
24	Other (Name)									
	<b>Vegetables</b>									
25	Tomato									
26	Potato									
27	Peas									
28	Carrot									
29	Radish									
30	Cucumber									
31	Onion									
32	Lady Finger/ Okra									
33	Chilies									
34	Other (Names)									

HH-5		HH-13-1	HH-13-2	HH-14-1	HH-14-2	HH-15-1	HH-15-2	HH-15-3
Name of Crop						Seed Treatment cost		
		Plantation (CHL)		Transplantation		Cost. Per acre	Labour Cost	
		Male (MD)	Female (MD)	Male (MD)	Female (MD)		Male (MD)	Female (MD)
	<b>Kharif Crops</b>							
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
	<b>Rabi Crops</b>							
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
	<b>Orchards</b>							
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
	<b>Vegetables</b>							
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH-5		HH-16-1	HH-16-2	HH-16-3	HH-16-4	HH-16-5	HH-16-6	HH-16-7	HH-16-8
Name of Crop		Use of Fertilizers (No. of Bags)/Acre							
		Urea		DAP		Potash (SOP)		NP (23-23)	
		Qty Bags	Price per Bag	Qty Bags	Price per Bag	Qty Bags	Price per Bag	Qty Bags	Price per Bag
	<b>Kharif Crops</b>								
1	Rice (Fine)								
2	Rice (Coarse)								
3	Cotton (American)								
4	Cotton (Desi)								
5	Sugarcane (New)								
6	Sugarcane (Ratoon)								
7	Sugar Beet								
8	Maize								
9	Tobacco								
10	Kharif fodder								
11	Other Kharif Crops (Name)								
	<b>Rabi Crops</b>								
12	Wheat								
13	Sunflower								
14	Rapeseed, mustard, canola								
15	Other Edible Oils Seed								
16	Rabi fodder								
17	Other Rabi crops (Name)								
	<b>Orchards</b>								
18	Mango								
19	Dates								
20	Apple								
21	Lemon								
22	Citrus								
23	Guava								
24	Other (Name)								
	<b>Vegetables</b>								
25	Tomato								
26	Potato								
27	Peas								
28	Carrot								
29	Radish								
30	Cucumber								
31	Onion								
32	Lady Finger/ Okra								
33	Chilies								
34	Other (Names)								

HH-5		HH-16-9	HH-16-10	HH-16-11	HH-16-12	HH-17-1	HH-17-2	HH-17-3	HH-17-4	HH-17-5
Name of Crop						FYM				
		Other Name		Cost of Hired		Area treated	No. of Trolleys /Acre	Cost per torlly	Labour Cost	
		Qty Bags	Price per Bag	Male (MD)	Female (MD)				Male (MD)	Female (MD)
	<b>Kharif Crops</b>									
1	Rice (Fine)									
2	Rice (Coarse)									
3	Cotton (American)									
4	Cotton (Desi)									
5	Sugarcane (New)									
6	Sugarcane (Ratoon)									
7	Sugar Beet									
8	Maize									
9	Tobacco									
10	Kharif fodder									
11	Other Kharif Crops (Name)									
	<b>Rabi Crops</b>									
12	Wheat									
13	Sunflower									
14	Rapeseed, mustard, canola									
15	Other Edible Oils Seed									
16	Rabi fodder									
17	Other Rabi crops (Name)									
	<b>Orchards</b>									
18	Mango									
19	Dates									
20	Apple									
21	Lemon									
22	Citrus									
23	Guava									
24	Other (Name)									
	<b>Vegetables</b>									
25	Tomato									
26	Potato									
27	Peas									
28	Carrot									
29	Radish									
30	Cucumber									
31	Onion									
32	Lady Finger/ Okra									
33	Chilies									
34	Other (Names)									



HH-5		HH-18-1	HH-18-2	HH-18-3	HH-18-4	HH-19-1	HH-19-2	HH-19-3
Name of Crop		Sprays				Picking of cotton/orchard/Vegetables		
		No. of spray (per acre)	Cost of Sprays	Cost of Hired		Number of Picking	CHL Rs.	
				Male (MD)	Female (MD)		Male (MD)	Female (MD)
<b>Kharif Crops</b>								
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
<b>Rabi Crops</b>								
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
<b>Orchards</b>								
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
<b>Vegetables</b>								
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH-5		HH-20-1	HH-20-2	HH-20-3	HH-21-1	HH-22-2	HH-22-3
Name of Crop		Number of hoeing/thinning			Mulching/ Pruning/ Stalking		
		Number	CHL Rs.		Number	CHL Rs.	
			Male (MD)	Female (MD)		Male (MD)	Female (MD)
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chilies						
34	Other (Names)						



HH-5		HH-23-1	HH-23-2	HH-23-3	HH-23-4	HH-23-5	HH-23-6	HH-23-7
Name of Crop		Harvesting/ Picking						
		Harvest Material Cost (Wheat and Rice)	CHL Rs.		Cost of Labour for Harvesting in Rs.	Cost of Threshing	CHL Rs.	
			Male (MD)	Female (MD)			Male (MD)	Female (MD)
	<b>Kharif Crops</b>							
1	Rice (Fine)							
2	Rice (Coarse)							
3	Cotton (American)							
4	Cotton (Desi)							
5	Sugarcane (New)							
6	Sugarcane (Ratoon)							
7	Sugar Beet							
8	Maize							
9	Tobacco							
10	Kharif fodder							
11	Other Kharif Crops (Name)							
	<b>Rabi Crops</b>							
12	Wheat							
13	Sunflower							
14	Rapeseed, mustard, canola							
15	Other Edible Oils Seed							
16	Rabi fodder							
17	Other Rabi crops (Name)							
	<b>Orchards</b>							
18	Mango							
19	Dates							
20	Apple							
21	Lemon							
22	Citrus							
23	Guava							
24	Other (Name)							
	<b>Vegetables</b>							
25	Tomato							
26	Potato							
27	Peas							
28	Carrot							
29	Radish							
30	Cucumber							
31	Onion							
32	Lady Finger/ Okra							
33	Chilies							
34	Other (Names)							

HH-5		HH-24-1	HH-24-2	HH-24-3	HH-24-4	HH-24-5	HH-24-6
Name of Crop		Crop Yield & Prices					
		Area (Acres)	Yield		Prices		In case sold as such Rs. /Acre for fruit plants only
			Product (40 Kgs)	By-product (40 Kgs)	Product Price per 40 Kg (Rs.)	By-Product (Rs. /40 Kg)	
	<b>Kharif Crops</b>						
1	Rice (Fine)						
2	Rice (Coarse)						
3	Cotton (American)						
4	Cotton (Desi)						
5	Sugarcane (New)						
6	Sugarcane (Ratoon)						
7	Sugar Beet						
8	Maize						
9	Tobacco						
10	Kharif fodder						
11	Other Kharif Crops (Name)						
	<b>Rabi Crops</b>						
12	Wheat						
13	Sunflower						
14	Rapeseed, mustard, canola						
15	Other Edible Oils Seed						
16	Rabi fodder						
17	Other Rabi crops (Name)						
	<b>Orchards</b>						
18	Mango						
19	Dates						
20	Apple						
21	Lemon						
22	Citrus						
23	Guava						
24	Other (Name)						
	<b>Vegetables</b>						
25	Tomato						
26	Potato						
27	Peas						
28	Carrot						
29	Radish						
30	Cucumber						
31	Onion						
32	Lady Finger/ Okra						
33	Chilies						
34	Other (Names)						

QUESTIONNAIRE FOR FARMING BENEFICIARY OF WATER STORAGE TANK		
9.BENEFICIARY'S PERCEPTION ABOUT WATER SAVING		
DB#	Q#	Field Name
	9.0	WST ID: _____
	9.1	Do you think the use of labour force increased on farm after construction of WST?
	1	Yes
	2	No
If "Yes" in Q.#9.1 then continue with Q#9.2		Otherwise goto Q#9.3
	9.2	How much (%)?
	9.3	How much your land was irrigated before WST construction (%)?
	9.4	How much your land was irrigated after WST construction (%)?
	9.5	During and after WST construction on OFWM staff has guided about economic use of water?
	1	Yes
	2	No
	9.6	Have OFWM staff provided you any literature about economically use of water?
	1	Yes
	2	No
	9.7	General remarks of beneficiaries about WST intervention?