Federal Project Management Unit (FPMU)
Ministry of National Food Security & Research, Islamabad
Monitoring, Evaluation and Impact Evaluation (ME&IE) Consultants

TRAINING / WORKSHOP REPORT ON

Training of Field Staff - Monitoring, Evaluation and Impact Evaluation of Water Conservation in Barani Areas of KP

Conducted by:

- Dr. Usman Mustafa - Team Leader ME&IE Consultants WCBA KP
- Dr. Mansab Ali - Irrigation Agronomist ME&IE Consultants WCBA KP
- Mr. Afzal Hayat Khan - Social & Gender Specialist Team Leader ME&IE Consultants WCBA KP

Training Held on:
27 to 28 August 2021 & 8 to 10 September 2021

A Joint Venture of
G3 Engineering Lead Firm
Consultants (Pvt.) Ltd.
EASE-PAK
ADA Consultants Inc.
In Association with S&S Associates

Contents

1. Introduction of Project:

The common features of rainfed (Barani areas) and arid lands are; low precipitation, high temperature, high evaporation, low humidity, poor rain water efficiency, water percolation and low productivity. These lands can be made more productive for cultivation and crop production through soil and water conservation activities, as this is need of the hour to overcome scarcity of water and food for the human as well as for livestock. Barani areas are facing huge shortage of water. Therefore, to overcome this shortage Government of Pakistan has established Provincial Soil & Water Conversation Departments. These Departments are providing services to the farmers for agricultural purpose through district governments. Main tasks of Soil & Water Conservation which are considered important are following:

- *To contain soil erosion process in the cultivable area and the adjoining uncultivated lands and to save these areas from further degradation.*
- *To make maximum use of run-off water by conserving it into the field by various moisture conservation measures.*
- *To bring more area under cultivation through reclamation and gully control techniques.*
- *Exploitation of water resource through various means of providing assured water supply for irrigation purposes (mini dams and ponds)*

Some of the works being undertaken for soil and water conservation are:

- *Construction of Mini Dams*
- *Water Storage Tanks*
- *Construction of Water Outlet Structures*
- *Retaining Walls*
- *Land Reclamation through Gully Plugging*
- *Stream Bank Training*
- *Moisture Conservation Practices such as Terrace Forming & Deep Ploughing.*

2. Background & Objectives of the Project

The main objective of agriculture sector is to make the country self-sufficient in food grains and make raw' material available for agro based industries. The project "Water Conservation in Barani Areas of KP (WCBA)" has encouraged the farming community through financial assistance for water conservation for ensuring timely irrigation. The project has designed to achieve the following long-run objectives.

- *To conserve land and water resources through various interventions for supplemental irrigation, livestock, farm forestry and fish farming*
- *To increase cropping intensity and per unit of land and water productivity*
- *To improve livelihood standards of poor resource farmers*
- *To improve socio-economic stability*

The project objectives in quantifiable terms are as follows:

- *To induce aquifer/ground water recharge by pounding water in> 300 water storage reservoirs.*
- *To convert 15,032 acres of culturable wastelands into productive agriculture lands through development of 70 micro-watersheds.*
- *To reduce soil erosion by containing flash floods through provision of soil & water conservation structures and check gulley erosion by plugging gullies through 3,000 check dams.*
- *Minimize the adverse effects of drought by maximizing the irrigation water supplies through exploitation of sub-surface water from tube wells.*
- *Conversion of around 43,225 acres of rain fed land into irrigated land through installation of 300 agricultural tube wells and solarization of 700 existing/new tube wells.*
- *To enhance the capacity of the stakeholders in water harvesting and for sustainable use of land and soil resources for increased agriculture production.*
- *To improve the socio-economic status of the farmer community.*

3. Objectives of the Training / Workshop

Training is vital because it represents a good opportunity for employees to grow their knowledge base and improve their job skills to become more effective in the workplace. In this connection five days training was arranged for field enumerators at WCBA-KP, Peshawar office. The objectives of the training / workshop were to familiarize the field

staff with project objectives & its various interventions, & enhance capacity building of field staff. Few of the specific objectives of the training / workshop are given below:

- Enable field staff to undertake monitoring of interventions independently
- To undertake various field surveys e.g. Base line surveys
- Familiarize/Refresh participants' knowledge about the basic concepts, principles, components and approaches.

4. Structure of the Workshop

The training was divided into two parts; the first two days training (27 - 28 August 2021) which was mainly consisting of theoretical part i.e. introduction, basic terminology, sampling and its procedure and followed by three days' session (8-10 September 2021). Major events were mock sessions, presentations, field visits & post training assessments session to evaluate the training /workshop theme.

5. Participants

Participants of the workshop were field teams of ME&IE Consultants WCBA – KP; while training was given by ME&IE Consultants;

- Dr. Usman Mustafa, Team Leader;
- Dr. Mansab Ali, Irrigation Agronomist &
- Mr. Afzal Hayat Khan Social & Gender Specialist,

Trainees were field staff including Field team Incharge & Enumerators.

6. Organization of the Workshop

The training workshop was organized on the basis of three main conspectuses; as under:

- Presentations and interactive discussion among the workshop participants especially dealing with the field surveys, regular monitoring
- Mock sessions, Field visit of nearby intervention to evaluate monitoring tools associated with it and based on the findings; suggest a way forward to incorporate in the survey questionnaire
- Share the findings of field experience with all participants.

7. Proceedings of the Workshop

First part of five days training planned on (27-28 august), proceeding started with introduction to objective of trainings, & mock session regarding field activities. Followed by this, second part was planned on (8-10 September) which include presentations, filed visits, validation of baseline & monitoring questionnaires & post trainings assessment session.

7.1 Day One; Opening of the Workshop

The workshop was opened by Dr. Usman Mustafa, Team Leader (WCBA – KP) with the name of Allah. Brief round of introduction of the workshop participants followed his opening and welcome address. To make training useful, productive and interactive a pre-training assessment session was held to evaluate the knowledge of the participants on the subject matter. This will help trainers in delivering lectures according to the level of participants and will enable trainers in assessing the effectiveness of the training course. Further 40 minutes' session was planned for introduction of WCBA- KP project, Baseline Survey. Just after the tea break Dr. Mansab Ali, Irrigation Agronomist did a long lecture on land utilization and agriculture terminologies including project zones, cultivable command area, cultivable area, uncultivated area, net area sown, cropping intensity, land use intensity etc.

Figure 1.1 Opening day of workshop

7.2 Day Two; Brainstorming & Mock Sessions

Mr. Afzal Hayat khan, Social & Gender Specialist took start of second day with brief introduction of role in project & importance of women participation and empowerment in agricultural based activities.

Figure 1.2 Mock Session second day of workshop

Thereafter, mock session was organized for field teams for in-house exercise for filling of monitoring tools, how this team can use MT's in the field effectively. Dr. Usman Mustafa gave briefing to the participants about this exercise; three groups were formed, having 3 members in each group. The ultimate purpose of this exercise was to familiarize field enumerators with these questionnaires. All Field Enumerators did exercise for effective & prompt use of MT's keeping in mind all field experiences. Further he briefed that work on overall field survey questionnaire on macro and micro activities has been finalized. Most of the suggestions received from various stake holders have been incorporated. These baseline and monitoring tools were shared with different stakeholders for comments to make the questionnaire more workable & took 100 percent input from beneficiaries.

7.3 Day Three; Presentations

Third day was planned for presentations from Trainers; brief detail of each presentation is also summarized below:

Presentation 1:
"Overview to importance of Project, history, Components of Project, Baseline Survey by Dr. Usman Mustafa"

Dr. Usman Mustafa Team Leader briefed the participants about need & importance of this project, as Pakistan is ranked 3rd in the world among countries facing acute water shortage. He explains how without being properly utilized, water runoff adversely affects human and animal life in rain fed areas.

Figure 1.3 Dr. Usman Mustafa presenting his Presentation

This project is under umbrella of Prime Minister Emergency program under various other water management projects have been launched to conserve and increase productivity of water. Further he gave outline on history of the project, its administrative approvals, total cost, its implementation period e.g. July 2019 – June 2024 & project objective. Further he briefed the participants about 13 project interventions one by one e.g. Water ponds, Check dams, Water reservoir, Stream bank stabilization, Gated field Inlet Outlet/Spillway, Development of land terracing, Development of micro-watershed areas, Development of water Seepage harvesting Galleries, Agronomic low-cost interventions, Sand dunes stabilization, Capacity Building of farmers, Construction of Solar pumping system / Tube Wells & training of farmers in adaptation of new techniques for pumping sub-surface water.

Moreover, he briefed participants about baseline survey concept "how it will be acted as foundation for evaluation and impact studies" & its needs "how we evaluate the project with and without the project involvements". Lastly Dr. Usman Mustafa gave outline on set of qualities to be an efficient field enumerator.

Presentation 2;
"Overview of the Project Zone Wise Distribution & basic Agriculture related terminologies" by Dr. Mansab Ali

Dr. Mansab Ali, Irrigation Agronomist summarized the zone wise distribution of project area that whole project area is divided into five zones. Thereafter, he gives understanding to team regarding assessment of land area utilization terminologies e.g. geographical area, total area reported, forest area, area not cultivated for cultivation, culturable waste, cultivated area, current fallow, net area sown, area sown more than once, total cropped area, cultivable command area, copping intensity & crop rotation.

Figure 1.4 Dr. Mansab Ali presenting his presentation

Further he gave understanding of irrigation sources in project area which feds the crops, information about seasonal crops in project area & detailed understanding about measuring units used in field.

Presentation 3;
by Mr. Afzal Hayat Khan "Overview of Gender its approaches & Gender Socialization"

Mr. Afzal Hayat Khan, Social & Gender Specialist gave introductory note about concept of gender, approaches of gender development & difference between socialization & gender socialization. Further he gave understanding about concept of gender stereotyping. Followed by introductory session, he gave comprehensive note on concepts central to gender and development thinking's e.g. culture gender relations, gender discrimination, gender division of labour, gender awareness, gender equality / Equity & Women's Empowerment.

7.4 Day Four; Field Visit

In the first half of fourth day of Training/workshop a field visit was planned in nearby interventions. Therefore, two field visits were arranged, one field Team visited Imran and Noor Zaman Water Ponds, and second team visited Haji Wazir Muhammad s/o Niaz Muhammad Mohallah, Shamshato Peshawar. Field teams took interviews from beneficiaries by using baseline & monitoring questionnaires.

Figure 1.5 visited Imran and Noor Zaman Water Ponds, Shamshato Peshawar

Second half of fourth day was planned for assessment of filled baseline & monitoring questionnaires by field teams. The ultimate goal of this exercise was to check their ability to undertake interviews in field and improve capability of field enumerators. Further Dr. Usman Mustafa discussed any shortcoming, recommendation with field enumerators & deliver detailed session on do's & don'ts in field.

7.5 Day Five; Post Training/Workshop Evaluation

Feedback of the participants is valuable in helping us to assess the degree of success of the training and make it more beneficial and effective in the future. In last day of training/workshop a "**Training Evaluation Performa**" was also shared with the trainees consisting of conduct, place, logistic, food, venue, major learning, future direction, etc. questions were asked. Overall participants were

very much satisfied from the training and developed a lot of learning and field confidence.

Figure 1.6: A group photo of training of the enumerators

The average pre-assessment score was 4.5 while post training assessment score was 8.5. Therefore, the gain in overall knowledge due to training was 4 out of 10 or 40 percent. After the successful completion of the training, Dr. Usman Mustafa, TL, Dr. Mansab Ali, IA, and Mr. Afzal Hayat distributed certificates & field carry-on bags among the participants in ending ceremony.

Figure 1.7: Team Leader, Irrigation Agronomist and Social & Gender Specialist distributing Field Carry-on Bags to Trainnes

8. Quantitative Analysis of Training Session

Feedback of participants was evaluated in shape of quantitative analysis; few are quoted below.

8.1 Evaluation of the Training by Enumerators

Table below shows participants views about different indicators. First indicator was duration of the training, 88 % refer this Good & 22 % refer this too long. Moreover, regarding schedule of training 88 % refer its relaxing & 22 % refer its too tight. Further Quantam of discussions held 100 % refer this as too much. Lastly regarding quality of training 100 % refer as excellent.

Indicator	Too short	Fair	Good	Too long
Duration of the training	-	-	7	2
Indicator	**Too tight**		**To relax**	
Schedule of the training	2		7	
Indicator	**Too Much**		**Too Little**	
Quantam of discussions held	9		-	
Indicator	**Poor**	**Fair**	**Good**	**Excellent**
Quality of training	-	-	-	9

8.2 Physical Resources and Facilities

The below data shows participants views on physical resources provided by management during training/workshop. Participants gave rating from very poor to very good to different facilities provided during workshop.

Sr.No	Indicator	*Very Poor*	*Poor*	*Fair*	*Good*	*Very Good*
1	Training venue	-	-	-	7	2
2	Setting of the training room	-	-	-	2	7
3	Light arrangements	-	-	-	8	1
4	Suitability of training room	-	-	-	7	2
5	Teaching aid facilities	-	-	-	1	8
6	Computer lab. facilities	-	-	-	1	8
7	Air conditioning	-	-	-	1	8
8	Quality of meals	-	-	-	2	7
10	Others (please specify)	-	-	-	-	-

8.3 Participants Involvement in Training session

Regarding participants opinion about imortance of training ,100 % refer this is very important, & regarding indication about what they have achieved in training , 88 % refer to mostly achieved & 12 % refers to fully achieved the objective of training.

Indicator	1= Not important	2= Least important	3= Somewhat important	4 = Important	5= Very important
To indicate your opinion about importance	-	-	-	-	9

Indicator	1 = Not achieved	2 = Achieved a little	3 = Somewhat achieved	4 = Mostly achieved	5 = Fully achieved
To indicate your opinion about achievement	-	-	-	8	1

8.4 Trainers evaluation by Enumerators

Below table shows participants views about resource persons in this training program. Participants gave rating from excellent to average to trainers as per their level of understanding.

Name	Excellent	Good	Average	Poor	Very Poor
Dr. Usman Mustafa	7	2	-	-	-
Dr. Mansab Ali	5	4	-	-	-
Mr. Afzal Hayat Khan	1	4	4	-	-

9. Pictorial View

ANNEX – A: Activity Schedule

Five Days Training Workshop of Field Staff
Water Conservation in Barani Area, KP
Activity Schedule

First Day

No.	Activity	Resource Person	Timing
A	**Inauguration Session**		
1	Registration		9:00 to 10:00 am
2	Recitation from Holly Quran		10:01 to 10:05 am
3	Pre - Training Assessment		10:6 to 10:20 am
4	Introduction WC- KP, Baseline Survey, and about the training workshop	UM*, MA, and AHK*	10:20 to 11:00 am
Tea Break			11:00 to 11:30 pm
B	**First Technical Session**		
1	Land Utilization and Agriculture terminology	MA	11:30 to 12:15 am
2	Gender Role in WCBA - KP	AHK*	11:30 to 13: 00 am
Lunch and Jumma Prayer Break			13:00 to 14:15 pm
D	**Second Technical Session**		
1	Farmer General Questionnaire	UM, MA, and AHK	14:15 to 15:00pm
Tea Break			15:00 to 15:30
E	**Third Technical Session**		
1	Water pond, water reservoirs, Stream bank stabilizer (SBS), Field-spillways/ Gated Filled Inlet Outlets (GFIO/Spillway)	UM, MA, and AHK	15:30 to 16:30
2	Tube Wells, Solar Pumping System	UM, MA, and AHK	16:30 to 17:00 pm

Second Day: Tools in House Exercise

1	Briefing about exercise	UM	9:00 to 10:00 am
2	Exercise	Field Enumerators	10:00 to 11:00 am
Tea Break			11:00 to 11:30 am
3	Continue of Exercise	UM, MA, and AHK	11:30 to 13:00 pm
Lunch and Prayer Break			13:00 to 14:00 pm
4	Discussion of Exercise	UM, MA, and AHK	14:00 to 17:00 pm

Third Day: Tools in House Exercise

1	Review of Previous Day Activity	UM, MA, and AHK	9:00 to 10:00 am
2	Mock Exercise	Field Enumerators	10:00 to 11:00 am
Tea Break			11:00 to 11:30 am
3	Discussion on Mock Exercise	UM, MA, and AHK	11:30 to 13:00 pm
Lunch and Prayer Break			13:00 to 14:00 pm
4	Discussion on Mock Exercise	UM, MA, and AHK	14:00 to 16:00 pm
5	Briefing about field – do and don't do	UM	16:00 to 17:00 pm

Fourth Day: Field Exercise

1	Review of Previous Day Activity	UM, MA, and AHK	9:00 to 10:00 am
2	Field Visit	Field Enumerators	10:00 am to 17:00 pm

Fifth Day: Field Experience, Training Evaluation and Distribution of Field Bags

1	Review of Previous Day Activity	UM, MA, and AHK	9:00 to 10:00 am
2	Sharing of Field Experience	Field Enumerators	10:00 to 11:00 am
Tea Break			11:00 to 11:30 am
3	Discussion on Field Learning and Improvement in Baseline Questionnaire and Monitoring tools	UM, MA, and AHK	11:30 to 13:00 pm
Lunch and Prayer Break			13:00 to 14:00 pm
4	Continuing of Section 3	UM, MA, and AHK	14:00 to 15:00 pm
5	Training Evaluation and Distribution of Training Bags	UM, MA, and AHK	16:00 to 17:00 pm

* UM = Dr. Usman Mustafa, MA = Dr. Mansab Ali, and AHK, Mr. Afzal Hayat Khan

ANNEX – B: Questionnaires

WATER CONSERVATION IN BARANI AREAS OF KHYBER PAKHTUNKHWA (WC-KP)

QUESTIONNARE

A) Baseline Survey ---------- B) Monitoring Survey---------- C) Impact Survey----------

SR. #	DESCRIPTION	
IDENTIFICATION:		
1.	Questionnaire Unique ID	
2.	Division	
3.	District	
4.	Tehsil	
5.	Union Council	
6.	Village	
RESPONDENT INFORMATION:		
7.	Name of Respondent	
8.	Age (Years) (In Completed Years)	
9.	Level of Education (Completed Years)	
10.	Occupation	
11.	Tribe / cast	
12.	Family Members? (adult equivalent)	
13.	Male-Member full time available for farming (adult equivalent)	
14.	Female-Member full time available for farming (adult equivalent)	
15.	Male-Member part time available for farming (adult equivalent)	
16.	Female-Member part time available for farming	

SR. #	DESCRIPTION				
	(adult equivalent)				
17.	Male-Permanent hired labor (PHL) (adult equivalent)				
18.	Female-Permanent hired labor (PHL) (adult equivalent)				
WATER FROM WC ACTIVITY USED FOR					
19.	Crop production/irrigation		Yes	No	
20.	Livestock drinking		Yes	No	
21.	Human / community consumption		Yes	No	
22.	If Yes in Q 21 - distance & time for fetching water	Before		After	
		Distance (km)	Time (hrs)	Distance (km)	Time (hrs)
LAND UTILIZATION:					
23.	Total gross area (acres) a) Owned b) Shared Cropped c) Rented in d) Rented out	Before Improvement --- --- --- ---		After Improvement --- --- --- ---	
24.	Total culturable area (acres)				
25.	Total Cultivated area (acres) a) Irrigated (Source of irrigation): Tube well = 1, Tank = 2, Pond = 3, Other = 4 b) Non-irrigated	Before Improvement ---		After Improvement ---	
26.	Tenure Status and area (acres): a) Own (O) b) Tenant (T)	Before Improvement ---		After Improvement ---	

SR. #	DESCRIPTION		
	c) Owner Cum Tenant (OCT)	----------	----------
		----------	----------
		----------	----------

27.	Cropped area (acres)	Before Improvement	After Improvement
	a) Irrigated	----------	----------
	b) Non-irrigated	----------	----------
	c) Rabi area	----------	----------
	Wheat (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Barley (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Fodder (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Oilseeds (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Pulses (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Other (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	d) Kharif area	----------	----------
	Maize (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Rice (Area and yield)	-----(Acre)------(Mds	-----(Acre)------(Mds)
	Fodder (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Oilseeds (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Pulses (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	Other (Area and yield)	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	e) Vegetable area	----------	----------
	i. Rabi	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	ii. Kharif	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	f) Sugarcane area	----------	----------
	i. Fresh	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	ii. Ratoon	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	g) Orchard area	-----(Acre)------(Mds)	-----(Acre)------(Mds)
	h) Intercrop/mix crop	-----(Acre)------(Mds)	-----(Acre)------(Mds)

FARM INPUTS & YIELD

28.	Tractor use for ploughing	Hours/acre	Rate (Rs. /hrs)
	a) Deep ploughing	----------	----------
	b) Seed bed preparation ploughing	----------	----------
29.	Harvesting & threshing	Hours/acre	Rate (Rs. /hrs)
	a) Reaper use for harvesting	----------	----------
	b) Thresher use for harvesting	----------	----------
	c) Combine use for harvesting	----------	----------
30.	Labour wages	Hours/acre	Rate (Rs. /hrs)
	a) Male	----------	----------
	b) Female	----------	----------

Name of crop	Area(Acres)	31. Land preparation		32. Seedbed preparation		33. Seed sowing / nursery transplanting															34. Seed treatment cost				35. Farm yard manure (FYM)		
		Hr/ acre	Rate/ hr	Hr/ acre	Rate/ hr	Use of seed		Seedling cost/acre		Sowing Broad cast		Sowing Drill			Transplantation (nursery)			Plantation (orchard)			Cost acre	Labour Cost		No. of trollies/ acre)	Cost per trolley (Rs / trolley)	Labour (No.) (Man days)	Labour cost (Rs / acre)
						Kg/ acre	Rs./ kg	Home Grown	Bought (Rs/ac)	Male (MD)	Female (MD)	Cost Rs/acre	Male (MD)	Female (MD)	Cost Rs/acre	Male (MD)	Female (MD)	Cost Rs/acre	Male (MD)	Female (MD)		Male (MD)	Female (MD)				
Rabi wheat																										
Rabi barley																										
Rabi Fodder																										
Rabi Oilseeds																										
Rabi Pulses																										
Rabi Vegetables																										
Other																										
Kharif Maize																										
Kharif Rice																										
Kharif Fodder																										
Kharif Oilseeds																										
Kharif Pulses																										
Kharif Vegetables																										
Sugarcane																										
Orchard																										
Intermix cropping																										
Other																										

Name of crop	36. Use of Fertilizers (No. of bags/acre & price per bag)												37. Number of hoeing/ thinning			38. Mulching / pruning / stalking			39. taxes per crop	40. Tube well irrigation		
	Urea		DAP		Potash (SOP)		NP (23-23)		Other Name		Cost of hired labour		No.	CHL Rs.		No.	CHL Rs.			Hour/acre	Cost/hour	Area irrigated
	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Qty bags	Rs/ bag	Male (MD)	Female (MD)		Male (MD)	Female (MD)		Male (MD)	Female (MD)				
Rabi wheat																						
Rabi barley																						
Rabi Fodder																						
Rabi Oilseeds																						
Rabi Pulses																						
Rabi Vegetables																						
Other																						
Kharif Maize																						
Kharif Rice																						
Kharif Fodder																						
Kharif Oilseeds																						
Kharif Pulses																						
Kharif Vegetables																						
Sugarcane																						
Orchard																						
Intermix cropping																						
Other																						

Name of crop	41. Spray to control weeds (weedicide)			42. Spray to control diseases (fungicide etc.)			43. Spray to control insects (insecticide)			44. Picking of Cotton / Orchard / Vegetables			45. Harvesting/ picking							46. Crop yield & prices					
	No. of spray (per acre)	Cost of sprays	Cost of hired labour	No. of spray (per acre)	Cost of sprays	Cost of hired labour	No. of spray (per acre)	Cost of sprays	Cost of hired labour	No. of picking	CHL Rs.		Harvest material Cost (Rs)	CHL Rs.		Cost of Reaper (Rs)	Cost of Threshing or Combine harvesting	CHL Rs.		Area (acre)	Yield		Prices		In case sold as such Rs. /acre for fruit plants only
											Male (MD)	Female (MD)		Male (MD)	Female (MD)			Male (MD)	Female (MD)		Product (40 Kgs)	By-product (40 Kgs)	Product price (Rs./ 40 Kg)	By-Product (Rs. /40 Kg)	
Rabi wheat																										
Rabi barley																										
Rabi Fodder																										
Rabi Oilseeds																										
Rabi Pulses																										
Rabi Vegetables																										
Other																										
Kharif Maize																										
Kharif Rice																										
Kharif Fodder																										
Kharif Oilseeds																										
Kharif Pulses																										
Kharif Vegetables																										
Sugarcane																										
Orchard																										
Intermix cropping																										
Other																										

SOCIAL MOBILIZATION THROUGH CAPACITY BUILDING OF WATER CONSERVATION ASSOCIATION (WCA), REDUCTION IN WATER DISPUTES, MOTIVATION / PARTICIPATION OF FARMERS:					
47.	Is WCA formed at your Water Sources (WS)? Yes / No. If No move to Q 73.	[ ]			
48.	Name of Chairman				
49.	Contact # of Chairman				
50.	Who contributed for improvement of intervention	Govt.	Farmer	Both	
51.	Has the WS been useful to you, a) Yes, b) No.	[ ]			
52.	If no, what in your view is lacking in WS? a) Personal property, b) Far away, c) Not available/ accessible) Any other pl. specified	[ ]			
53.	Are you a member of (WCA)? a) Yes, b) No.	[ ]			
54.	Is there any female member in WCA? a) Yes, b) No.	[ ]			
55.	Are female members involved in decision making? a) Yes, b) No.	[ ]			
56.	Was your participation voluntary? a) Yes, b) No.	[ ]			
57.	Who motivated you to be a member?	WCA Member	S&W Ag Engineering	Neighbor Farmer	
58.	Did you pay any membership contribution to become member of WCA? Yes / No.	[ ]			
59.	Do all the WCA members are water users? a) Yes, b) No.	[ ]			
60.	How many water disputes solved by WCA till to-date? (numbers)	[ ]			
61.	Is there any grievances re-dressal committee regarding water disputes? a) Yes, b) No.	[ ]			
62.	Are you willing to contribute your labor or in case affordable money towards the work to be carried out by the organization for the development of your area? a) Yes, b) No., c) Don't Know	[ ]			
63.	Does WCA hold regular meetings of the association? a) Yes, b)	[ ]			

	No.			
64.	Do you participate in the WCA meetings? a) Yes, b) No.		[ ]	
65.	Do you know that the minutes are recorded and got approved in the next meeting? a) Yes, b) No.		[ ]	
66.	To what extent are you satisfied with the maintenance of the irrigation system?	Not at all	To some extent	To large extent
67.	Do decisions make democratically? a) Yes, b) No.			[ ]
68.	Do majority of the members participate in the meetings? a) Yes, b) No.			[ ]
69.	What is the frequency of WCA meetings?	Every month	Quarterly	Once a year	As per need arises
70.	Do you aware about functions and responsibilities of the Association? a) Yes, b) No.			[ ]
71.	Do you think WCA helps in solving your farming problems? a) Yes, b) No.			[ ]
72.	Do you Know that your water conservation structure is going to be newly constructed/additionally constructed/ reconstructed? a) Yes, b) No.			[ ]

SOCIAL INFORMATION AND WOMEN PARTICIPATION:				
73.	Do women participate in farming activities? a) Yes, b) No.			[ ]
74.	Have you (female) heard about WC-KP Project? a) Yes, b) No.			[ ]
75.	Do you (female) know about WC-KP. a) Yes, b) No.			[ ]
76.	Are you (female) member of WCA a) Yes, b) No.			[ ]
77.	Do (female) participate in WCA meetings? a) Yes, b) No.			[ ]
ENVIRONMENTAL ISSUES:				
78.	Total number of trees on the Water Conservation Structure (WCS) before activity?	(Start) [ ]	(Middle) [ ]	(End) [ ]

79.	Will any tree be cut down on this WCS? a) Yes, b) No.			[ ]
80.	No. of trees to be cut down on this WCS?	(Start) [ ]	(Middle) [ ]	(End) [ ]
81.	No. of trees planted on this WCS after the activity	(Start) [ ]	(Middle) [ ]	(End) [ ]
REDUCTION IN WATER LOGGING AND SALINITY, MINIMIZATION OF CONVEYANCE LOSSES, EQUITY IN WATER DISTRIBUTION:				
82.	Do you know the depth of Water table of your land? a) Yes, b) No.			[ ]
83.	How much depth of water table was 01 year ago			[ ]
LIVESTOCK/ ANIMALS:				
	Entity*	**Number**	**Value (Rs)**	
84.	Buffaloes			
85.	Cows			
86.	Bullocks			
87.	Sheep			
88.	Goats			
89.	Camels			
90.	Poultry			
91.	Horses			
92.	Donkeys			
* Two small animal count one				

INCOME & EXPENSES (Rs in thousands)		
93.	Income from crops from whole year	
94.	Income from livestock from whole year	

95.	Income from labor (from outside farm) per annum					
96.	Any other source----------					
97.	Total income (Per year)					
98.	Total family expenditure (Per Year)					
99.	If expenditure more than income how you manage?		Yes	No		
100.	If Yes Q 99 please respond accordingly	Loan (relative)	Loan (friend)	Loan (banks)	Sale of assets	Any other

HOW MANY TIMES HAVE THE FOLLOWING AGENTS OR REPRESENTATIVES OF THE AGENCIES VISITED YOUR FARM OR YOU VISITED THEM DURING THE LAST TWO SEASONS?			
101.	a) S&WC Directorate representative	No of times [ ]	Benefit achieved Yes [ ], No [ ]
102.	b) Agri. Engineering representative	No of times [ ]	Yes [ ], No [ ]
103.	c) AGES Consultants representative	No of times [ ]	Yes [ ], No [ ]
104.	d) Agriculture extension agent	No of times [ ]	Yes [ ], No [ ]
105.	e) Pesticides company agent	No of times [ ]	Yes [ ], No [ ]
106.	f) Fertilizer company representative	No of times [ ]	Yes [ ], No [ ]
107.	g) Agriculture credit officer	No of times [ ]	Yes [ ], No [ ]

AGRICULTURE EQUIPMENTS:			
108.	Do you own a Tractor? a) Yes, b) No.	[ ]	If Yes value Rs----------

109.	Do you own Thresher? a) Yes, b) No.	[ ]	If Yes value Rs----------
110.	Do you own Seed drill? a) Yes, b) No.	[ ]	If Yes value Rs----------
111.	Do you own Rotavator? a) Yes, b) No.	[ ]	If Yes value Rs----------
112.	Do you own Reaper? a) Yes, b) No.	[ ]	If Yes value Rs----------

WATER CONSERVATION & AGRI ENGINEERING ACTIVITIES			
1.	Water Pond	Yes	No, go to next activity
2.	Check Dam	Yes	No, go to next activity
3.	Water Reservoir	Yes	No, go to next activity
4.	Stream Bank Stabilization (SBS)	Yes	No, go to next activity
5.	Gated Field Inlet Outlets / Spillways (GFIO&S)	Yes	No, go to next activity
6.	Terracing	Yes	No, go to next activity
7.	Micro-Watershed Development (MWD)	Yes	No, go to next activity
8.	Water Seepage Harvesting Galleries (WSHG)	Yes	No, go to next activity
9.	i. Agronomic Low-Cost Interventions	Yes	No, go to next activity
	ii. Low-Cost Brush Wood Check Dam	Yes	No, go to next activity
	iii. Loose Stone Check Dam	Yes	No, go to next activity
10.	Sand Dunes Stabilization	Yes	No, go to next activity
11.	Capacity Building	Yes	No, go to next activity
12.	Installation of Tube Wells	Yes	No, go to next activity
13.	Solarization of Tube Wells	Yes	No, go to next activity

Interviewed By: ----------

Checked By: ----------

ACTIVITY 1. WATER POND

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Water Pond Location	Address ----------	GPS ----------	Coordinate ----------	
2	Water Pond Number				
3	Source of Water & harvested from	Runoff		Perennial springs	
4	Water Pond Size (feet)	Length----	Width ---	Depth ------	
5	Water Pond Shape	Rectangular	Square	--------	-------
6	Water Pond Structure	Cemented	Earthen	---------	-------
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No		

Water Used For				
8	Crop production / irrigation	Yes	No	
9	Command area of pond (acre)			
10	Community & Livestock Drinking	Yes	No	
11	If Yes in Q 10 (distance & time) for fetching for water	Before	Distance Decrease (km)	Time Reduced (hours)
12.	Ground Water Recharge	Yes	No	

Fish Rearing					
13.	Fish Rearing	Yes	No, go to Q 22		
14	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia etc.)				
15	Fish Feed	Roughage	Cow dung	Poultry waste	Other
16	Total cost	----------Rs per year			
17	Production	----------kg per year			
18	Price	----------Rs per Kg			
19	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home(kg) After-----	

20	Problems/issues in fish farming: Plz rank	Yes	Rank	No
	i. Availability of fingerlings, seedlings etc.	----------	----------	----------
	ii. Diseases	----------	----------	----------
	iii. Manuring / feeds	----------	----------	----------
	iv. Marketing	----------	----------	----------
	v. Any other	----------	----------	----------

EMPLOYMENT ENGAGED IN FISH FARMING			
21	Employment	Before	After
	i. Permanent	----------	----------
	ii. Casual	----------	----------
	iii. Daily wages	----------	----------

BENEFICIARY FEED BACK				
22	After submission of application, how much period took to complete the water pond?	Months		Days
23	The Water Pond was completed as per approved standards and specifications	Yes		No
24	If No in Q 23 than any variations in specifications and	Yes		No
25	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No comment
27	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
28	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment
29	How you feel maintenance of Water Pond	Easy	Difficult	No comment
30	Do you think Water Pond encourages mosquito population	Yes	No	No comment
31	If yes what measures you take to control it	Sprays	None	No comment
32	Any comment/observation you want to share?			

MT-01: WATER POND (WP) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Water Pond (WP) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Water Pond (WP)**
3.1	**Shape of Water Pond (WP)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the WST using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from WST**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply

4	Improve water quality/less salty water
5	Reduce soil erosion
6	Better control on water supply
7	Any other, Specify
4.3	**The WP was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the WP, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in WP exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No

4.10	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
If yes in Q# 4.10 then continue with Q# 4.10.1	**Otherwise go to End**
4.10.1	**Is the testing of Joints welded parts done before filling the Water Pond (WP)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 2. CHECK DAM

DEMOGRAPHIC, DIMENSIONS & STRUCTURE										
1	Check Dam Location									
2	Check Dam Number									
3	Source of Water & harvested from					Ditches	Stream	Channels	Gullies	Other
4	Check Dam Type					Land filled		Stone Masonry		
5	Check Dam Purpose	Productive - farming	Flood control – flood water	Intercepting sediments-	Water storage- irrigation	Rock check- stabilizing vegetation or reducing bed gradient		Gully check- control gully development		Others
6	Check Dam Structure					Cemented	Gravel bags	Sand bags	Stone Masonry	-------
7	Soil Reclamation (acres)									
8	a. Approval by S&WC Directorate b. Validated by Consultant (AGES)					Yes Yes		No No		
	BENEFICIARY FEED BACK									

9	After submission of application, how much period took to complete the check dam?		Months	Days
10	The Check dam was completed as per approved standards and specifications		Yes	No
11	If No in Q 23 than any variations in specifications		Yes	No
12	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
13	How you assess survey and design process	Fast Track	Lengthy	No comment
14	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
15	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment
16	How you feel maintenance of Check Dam	Easy	Difficult	No comment

17	Do you think Check Dam encourages mosquito population	Yes	No	No comment
18	If yes what measures you take to control it	Sprays	None	No comment
19	Any comment/observation you want to share?			

MT-02: CHECK DAM (CD) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Check Dam (CD) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Check Dam (CD)**
3.1	**Shape of Check Dam (CD)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Check Dam (CD) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Check Dam (CD)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply

4	Improve water quality/less salty water
5	Reduce soil erosion
6	Better control on water supply
7	Any other, Specify
4.3	**The Check Dam (CD) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Check Dam (CD), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Check Dam (CD) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No

4.10	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
If yes in Q# 4.10 then continue with Q# 4.10.1	**Otherwise go to End**
4.10.1	**Is the testing of Joints welded parts done before filling the Check Dam (CD)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 3. WATER RESERVOIR

DEMOGRAPHIC, DIMENSIONS & STRUCTURE							
1	Water Reservoir Location	Address ----------		GPS ----------		Coordinate ----------	
2	Water Reservoir Number						
3	Source of Water & harvested from	Rainfall /runoff		Flowing water /perennial springs			
4	Water Reservoir Type	Cemented		Earthen			
5	Water Reservoir Shape	Rectangular	Square	Irregular	-------		
6	Water Reservoir Structure	Stone		Masonry			
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes		No No			
Water Used For							
8	Crop production / irrigation	Yes		No			
9	Command area of pond (acre)						
10	Community & Livestock Drinking	Yes		No			
11	If Yes in Q 10 (distance & time) for fetching for water	Before	Distance Decrease	Time Reduced (hours)			
12.	Water table (feet)	Before (-------)		After (-------)			
Fish Rearing							
13.	Fish Rearing	Yes		No, go to Q 22			
14	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia etc.)						
15	Fish Feed	Roughage	Cow dung	Poultry waste	Other		
16	Total cost	----------Rs per year					
17	Production	----------kg per year					
18	Price	----------Rs per Kg					
19	Fish Consumption per year	----------Rs Sold		Home (kg) Before-----		Home(kg) After-----	
20	Problems/issues in fish farming: Please rank Availability of fingerlings, seedlings etc. Diseases Manuring / feeds Marketing Any other	Yes		Rank		No	
EMPLOYMENT ENGAGED IN FISH FARMING							

21	Employment Permanent Casual Daily wages	Before	After
BENEFICIARY FEED BACK			
22	After submission of application, how much period took to complete the water reservoir?	Months	Days
23	The Water Pond was completed as per approved standards and specifications	Yes	No
24	If No in Q 23 than any variations in specifications and	Yes	No

25	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No comment
27	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
28	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment
29	How you feel maintenance of Water Reservoir	Easy	Difficult	No comment
30	Any comment/observation you want to share?			

MT-03: WATER RESERVOIR (WR) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Water Reservoir (CD) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Water Reservoir (CD)**
3.1	**Shape of Water Reservoir (CD)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Water Reservoir (CD) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Water Reservoir (CD)**
1	Reduce ground water consumption
2	Reduce water bills

3	Extend water supply
4	Improve water quality/less salty water
5	Reduce soil erosion
6	Better control on water supply
7	Any other, Specify
4.3	**The Water Reservoir (CD) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Water Reservoir (CD), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Water Reservoir (CD) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes

2	No
4.10	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No

If yes in Q# 4.10 then continue with Q# 4.10.1	**Otherwise go to End**
4.10.1	**Is the testing of Joints welded parts done before filling the Water Reservoir (CD)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 4. STREAM BANK STABILIZATION (SBS)*

DEMOGRAPHIC, DIMENSIONS & STRUCTURE						
1	Stream Bank Stabilization (SBS) Location	Address ----------	GPS ----------	Coordinate ----------		
2	SBS Number					
3	Source of Water & harvested from	Rainfall /runoff	Flood water			
4	SBS Type	a. Vegetative	b. Structural i. Protection bunds ii. Spurs etc.	Combination a & b		
5	SBS Structure	Stone	Gravel bags	Sand bags	Masonry	Any other --------
6	SBS Purpose	To reduce erosion especially in rainy season				
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No			
Water Used For						
8	Erosion control	Yes	No			
9	How much land is protected (Acres)					
BENEFICIARY FEED BACK						
10	After submission of application, how much period took to complete the SBS?	Months	Days			
11	The SBS was completed as per approved standards and specifications	Yes	No			
124	If No in Q 11 than any variations in specifications and	Yes	No			
13	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment		
14	How you assess survey and design process	Fast Track	Lengthy	No comment		
15	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment		
16	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment		
17	How you feel maintenance of SBS	Easy	Difficult	No comment		

18	Any comment/observation you want to share?	_____ _____ _____

* Protection wall for erosion control

MT-04: STREAM BANK STABILIZATION (SBS) MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Stream Bank Stabilization (SBS) Construction?**
1	Technical Sanction (SBS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Stream Bank Stabilization (SBS)
3.1	Shape of Stream Bank Stabilization (SBS)?
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the** Stream Bank Stabilization (SBS) **using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Stream Bank Stabilization (SBS)**
1	Stop soil erosion
2	Reduce pollution

3	Maintaining the flow or storage capacity of the channel or impoundment.
4	Improving or enhancing the stream corridor for fish and wildlife habitat, aesthetics, and recreation.
5	Reducing the downstream effects of sediment resulting from bank erosion.
6	Better control on water supply
7	Any other, Specify
4.3	**The SBS was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the SBS, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Stream Bank Stabilization (SBS) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**

1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 5. GATED FIELD INLET OUTLETS/ SPILLWAYS

DEMOGRAPHIC, DIMENSIONS & STRUCTURE				
1	Gated field inlet outlets (GFIO) & Field Spillways Location	Address ----------	GPS ----------	Coordinate ----------
2	GFIO & Field Spillways Number			
3	Source of water & harvested from	Rainfall/ Rod-Kohi		Mountains/ Sailaba
4	GFIO & Field Spillways Structure	Cemented		Masonry
5	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes		No No

Water Used For			
6	Crop production / irrigation	Yes	No
7	Command area of GFIO (acre)		
8.	Ground Water Recharge due to GFIO	Yes	No

BENEFICIARY FEED BACK				
9	After submission of application, how much period took to complete the GFIO?		Months	Days
10	The GFIO was completed as per approved standards and specifications		Yes	No
11	If No in Q 10 than any variations in specifications and material used		Yes	No
12	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment
13	How you assess survey and design process	Fast Track	Lengthy	No comment
14	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
15	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment
16	How you feel maintenance of GFIO	Easy	Difficult	No comment
17	Any comment/ observation you want to share?	_____ _____ _____		

MT-05: GATED FIELD INLET OUTLETS/ SPILLWAYS MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Gated Field Inlet Outlets/ Spillways (GFIO) Construction?**
1	Technical Sanction (GFIO) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Gated Field Inlet Outlets/ Spillways (GFIO)
3.1	Shape of Gated Field Inlet Outlets/ Spillways (GFIO)?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Depth
4.1	**The farmer completed the GFIO using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Gated Field Inlet Outlets/ Spillways (GFIO)**
1	Stop soil erosion
2	Harvest runoff water
3	Reduced the velocity of runoff water
4	Improving or enhancing the stream corridor for fish and wildlife habitat, aesthetics, and recreation.
5	Reducing the downstream effects of sediment resulting from bank erosion.
6	Better control on water supply
7	Any other, Specify
4.3	**The GFIO was completed as per approved standards and specifications?**

1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the GFIO, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Gated Field Inlet Outlets/ Spillways (GFIO) exceed 5 feet?**
1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 6. TERRACING

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Terracing Location	Address ----------	GPS ----------	Coordinate ----------	
2	Terracing Activity Field Number				
3	Terracing Type	Contour	Bench	Broad	Etc. …….
4	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes		No No	
Land Used For					
5	Crop production	Yes	No		
6	How much area brought under terracing (acre)				
BENEFICIARY FEED BACK					
7	After submission of application, how much period took to complete the terracing?	Months	Days		
8	The terracing was completed as per approved standards and specifications	Yes	No		
9	If No in Q 8 than any variations in specifications and material used	Yes	No		
10	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment	
11	How you assess survey and design process	Fast Track	Lengthy	No comment	
12	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment	
13	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment	
14	How you feel maintenance of terracing	Easy	Difficult	No comment	
15	Any comment/observation you want to share?				

MT-06: TERRACING MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Terracing Construction?**
1	Technical Sanction Terracing Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Terracing
3.1	Shape of Terracing?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Depth
4.1	**The farmer completed the Terracing using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Terracing?**
1	Stop land sliding
2	Harvest runoff water
3	Retained the nutrients in the soil otherwise washed away with runoff water
4	Reducing the downstream effects of sediment resulting from bank erosion.
5	Better control on water supply
6	Any other, Specify
4.3	**The Terracing was completed as per approved standards and specifications?**
1	Yes

2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the terracing, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No
4.9	**Financial Year**
5.1	**Supervisor Confirmation?**
5.2	**Select Submission Status**
5.3	**Comments of interviewer? (if any) (optional)**

ACTIVITY 7. MICRO-WATERSHED DEVELOPMENT (MWD)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE								
1	Micro-Watershed Development (MWD) Location	Address ----------		GPS ----------		Coordinate ----------		
2	MWD Number							
3	Source of Water & Harvested from	Rainfall/runoff			Flowing water /perennial springs			
4	MWD Type	Small (< 1 acre)		Medium (> 1 acres)		Large (1000 Sq Km)		
5	MWD Purpose	Soil Conservation		Water Conservation		Both		
6	Micro-Watershed Consist of	Water ponds	Mini dams	Check dams	Protection bunds	Spurs	Contour ploughing	Etc.
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)					Yes Yes	No No	
MWD Used For								
8	Land /crop production	Yes		No				
9	How much area converted to agriculture land							
BENEFICIARY FEED BACK								
10	After submission of application, how much period took to complete the MWD?	Months		Days				
11	The MWD was completed as per approved standards and specifications	Yes		No				
12	If No in Q 11 than any variations in specifications and material used	Yes		No				
13	How your application was attended by S&WC staff	Promptly		Took lot of time		No Comment		
14	How you assess survey and design process	Fast Track		Lengthy		No comment		
15	Quality of S&WC staff behavior	Friendly / supportive		Indifferent		No comment		
16	The subsidy was paid	Within reasonable time		Required lot of efforts		No comment		
17	How you feel maintenance of MWD	Easy		Difficult		No comment		

18	Any comment/observation you want to share?	

MT-07: MICRO-WATERSHED DEVELOPMENT (MWD) MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Micro-Watershed Development (MWD)?**
1	Technical Sanction of Micro-Watershed Development (MWD) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of **Micro-Watershed Development (MWD), if available - Aerial**
3.1	Shape of **Micro-Watershed Development (MWD)**?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Hight
4.1	**The farmer/association completed the Micro-Watershed Development (MWD) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Micro-Watershed Development (MWD)?**
1	Water conservation
2	Soil conservation
3	Better control on water supply
4	Any other, Specify
4.3	**The Terracing was completed as per approved standards and specifications?**
1	Yes
2	No

4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the terracing, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**What Watershed Development activities?**
1	Terracing
2	Water pond
3	Mini dam
4	Check dam
5	Any other
4.9	**Financial Year**
5.1	**Supervisor Confirmation?**
5.2	**Select Submission Status**
5.3	**Comments of interviewer? (if any) (optional)**

ACTIVITY 8. WATER SEEPAGE HARVESTING GALLERIES

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Water Seepage Harvesting Galleries (WSHG) Location	Address ----------	GPS ----------	Coordinate ----------	
2	WSHG Number				
3	Source of Water & harvested from	Sub-surface ground water collection system (tank) with perforated pipes			
4	WSHG Type	Shallow in depth	Constructed in a sloppy area		
5	WSHG Purpose	Irrigation	Drinking		
6	.Approval by S &WC Directorate Validated by Consultant (AGES)	Yes Yes	No No		
WSHG Used For					
7	Land /crop production	Yes	No		
8	How much area converted to agriculture land				
BENEFICIARY FEED BACK					
9	After submission of application, how much period took to complete the WSHG?	Months	Days		
10	The WSHG was completed as per approved standards and specifications	Yes	No		
11	If No in Q 10 than any variations in specifications and material used	Yes	No		
12	How your application was attended by S&WC staff	Promptly	Took lot of time	No Comment	
13	How you assess survey and design process	Fast Track	Lengthy	No comment	
14	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment	
15	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment	
16	How you feel maintenance of WSHG	Easy	Difficult	No comment	
17	Any comment/observation you want to share?	_____ _____ _____			

MT-08: WATER SEEPAGE HARVESTING GALLERIES (WSHG) MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Water Seepage Harvesting Galleries (WSHG)?**
1	Technical Sanction of Water Seepage Harvesting Galleries (WSHG) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of Water Seepage Harvesting Galleries (WSHG)
3.1	Shape of Water Seepage Harvesting Galleries (WSHG)?
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Hight
4.1	**The farmer/association completed the Water Seepage Harvesting Galleries (WSHG) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Water Seepage Harvesting Galleries (WSHG)?**
1	Water conservation
2	Soil conservation
3	Better control on water supply
4	Any other, Specify
4.3	**The Water Seepage Harvesting Galleries (WSHG) was completed as per approved standards and specifications?**
1	Yes

2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the terracing, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Financial Year**
4.9	**Supervisor Confirmation?**
5.1	**Select Submission Status**
5.2	**Comments of interviewer? (if any) (optional)**

ACTIVITY 9 i. AGRONOMIC LOW-COST INTERVENTION (ALCI)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Agronomic Low-cost Intervention (ALCI) Location	Address ----------	GPS ---------- -	Coordinate ----------	
2	ALCI Number				
3	Cover Crops	Legume cover crops (peas, peanut, gram, beans etc.)	Non-legume cover crops (wheat, barley, rye etc.)	Mustard, radish, turnip etc.	Etc.
4	Cover Crops Availability		Yes	No	
5	ALCI Improve	Livelihood	Conserve soil	Conserve water	All
6	ALCI Purpose	Cover soil surface & control soil erosion			
7	a. Approval by S&WC Directorate b. Validated by Consultant (AGES)		Yes Yes	No No	

Cover Crops to			
8	Conserve soil & water	Yes	No
9	Control soil erosion	Yes	No
10	Increased yield	Yes	No
11	Improve livelihood	Yes	No

BENEFICIARY FEED BACK				
12	After submission of application, how much period took to complete the Agronomic Low-Cost Intervention?	Months	Days	
13	The Agronomic Low-Cost Intervention was completed as per approved standards and specifications	Yes	No	
14	If No in Q 13 than any variations in specifications and material used	Yes	No	
15	The duration of subsidy paid	Within reasonable time	Required lot of efforts	No comment
16	How you assess survey and design process	Fast Track	Lengthy	No comment
17	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
18	How you feel adoption of Agronomic Low- Cost Intervention	Easy	Difficult	No comment
19	Do you think Agronomic Low-Cost	Yes	No	No comment

	Intervention encourages insect/disease spread			
20	If yes what measures you take to control it	Sprays	None	No comment
21	Any comment/ observation you want to share?			

MT-09i: AGRONOMIC LOW-COST INTERVENTION (ALCI) MONITORING TEMPLATE	
IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Agronomic Low-Cost Intervention (ALCI)?**
1	Technical Sanction of **Agronomic Low-Cost Intervention (ALCI)** Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	Take Picture of **Agronomic Low-Cost Intervention (ALCI)**
3.1	Shape of **Agronomic Low-Cost Intervention (ALCI)?**
1	Length-1 (Feet)?
2	Length-2 (Feet)?
3	Width 1
4	Width 2
5	Height
4.1	**The farmer/association completed the Agronomic Low-Cost Intervention (ALCI) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Agronomic Low-Cost Intervention (ALCI)?**
1	Water conservation
2	Soil conservation
3	Better control on water supply
4	Any other, Specify
4.3	**The Agronomic Low-Cost Intervention (ALCI) was completed as per approved standards and specifications?**
1	Yes

2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the ALCI, the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Financial Year**
4.9	**Supervisor Confirmation?**
5.1	**Select Submission Status**
5.2	**Comments of interviewer? (if any) (optional)**

ACTIVITY 9 ii. LOW COST BRUSH WOOD CHECK DAM (LCBWCD)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE					
1	Low-cost Brush Wood Check Dam (LCBWC) Location	Address ----------	GPS ----------	Coordinate ----------	
2	LCBWC Dam Number				
3	Material Used	Bushes	trees	--------	
4	LCBWC Structure	Posts		Brush	
5	LCBWC Dam Improve	Livelihood	Conserve soil	Conserve water	All
6	LCBWC Dam Purpose	Hold fine material carried by flowing water in the gully			
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)	Yes Yes	No No		
Low-cost Brush Wood Check Dam to					
8	Conserve soil & water	Soil	Water	Both	
9	Control soil erosion	Yes	No		
10	Increased yield	Yes	No		
11	Improve livelihood	Yes	No		

BENEFICIARY FEED BACK				
12	After submission of application, how much period took to complete the Agronomic Intervention?		Months	Days
13	The Agronomic Intervention was completed as per approved standards and specifications		Yes	No
14	If No in Q 13 than any variations in specifications and material used		Yes	No
15	The duration of subsidy paid	Within reasonable time	Required lot of efforts	No comment
16	How you assess survey and design process	Fast Track	Lengthy	No comment
17	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
18	How you feel maintenance of Low-Cost Brush Wood Check Dam	Easy	Difficult	No comment
19	Any comment/ observation you want to share?	_____ _____ _____		

MT-09ii: LOWCOST BRUSH WOOD CHECK DAM (LCBWCD) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of** Low-cost Brush Wood Check Dam (LCBWC) **Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of** Low-cost Brush Wood Check Dam (LCBWC)
3.1	**Shape of** Low-cost Brush Wood Check Dam (LCBWC)**?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the** Low-cost Brush Wood Check Dam (LCBWC) **using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Low-cost Brush Wood Check Dam (LCBWC)**

1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Reduce soil erosion
6	Better control on water supply
7	Any other, Specify
4.3	**The Low-cost Brush Wood Check Dam (LCBWC) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Low-cost Brush Wood Check Dam (LCBWC), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Low-cost Brush Wood Check Dam (LCBWC) exceed 5 feet?**

1	Yes
2	No
4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No
4.10	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
If yes in Q# 4.10 then continue with Q# 4.10.1	**Otherwise go to End**
4.10.1	**Is the testing of Joints welded parts done before filling the Low-cost Brush Wood Check Dam (LCBWC)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 9 iii. LOOSE STONE CHECK DAM (LSCD)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE							
1	Loose Stone Check Dam Location	Address ----------		GPS ----------		Coordinate ----------	
2	Loose Stone Check Dam Number						
3	Material Used	Stones				----------	
4	Loose Stone Check Dam Area Catchment	100m		<2 ha		--------	
5	Large Stone Check Dam Working / used for	Initial	Small gullies		Gully network	------	
6	Loose Stone Check Dam Purpose	Control channel erosion along gully bed		Stop water fall erosion by stabilizing gully heads		Both	
7	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)			Yes Yes		No No	

Loose Stone Check Dam to Control			
8	Channel erosion	Yes	No
9	Waterfall erosion	Yes	No
10	Increased yield	Yes	No
11	Improve livelihood	Yes	No

BENEFICIARY FEED BACK				
12	After submission of application, how much period took to complete Loose Stone Check	Months		Days
13	The Loose Stone Check Dam was completed as per approved standards and specifications	Yes		No
14	If No in Q 13 than any variations in	Yes		No
15	The duration of subsidy paid	Within reasonable time	Required lot of efforts	No comment
16	How you assess survey and design process	Fast Track	Lengthy	No comment
17	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
18	How you feel maintenance of Loose Stone Check Dam	Easy	Difficult	No comment

19	Do you think Loose Stone Check Dam encourages insect/disease spread	Yes	No	No comment
20	If yes what measures you take to control it	Sprays	None	No comment
21	Any comment/ observation you want to share?			

MT-09iii: LOOSE STONE CHECK DAM (LSCD) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Loose Stone Check Dam (LSCD) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Loose Stone Check Dam (LSCD)**
3.1	**Shape of Loose Stone Check Dam (LSCD)?**
1	Trapezoidal
2	Rectangular
3	Brick/Masonry
4	Geo-membrane
5	PCC
6	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Loose Stone Check Dam (LSCD) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Loose Stone Check Dam (LSCD)**
1	Reduce ground water consumption
2	Reduce water bills

3	Extend water supply
4	Improve water quality/less salty water
5	Reduce soil erosion
6	Better control on water supply
7	Any other, Specify
4.3	**The Loose Stone Check Dam (LSCD) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Loose Stone Check Dam (LSCD), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Loose Stone Check Dam (LSCD) exceed 5 feet?**
1	Yes
2	No

4.9	**Is the geo-membrane thickness minimum 0.5 mm?**
1	Yes
2	No
4.10	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
If yes in Q# 4.10 then continue with Q# 4.10.1	**Otherwise go to End**
4.10.1	**Is the testing of Joints welded parts done before filling the Loose Stone Check Dam (LSCD)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 10. SAND DUNES STABILIZATION (SDS)

DEMOGRAPHIC, DIMENSIONS & STRUCTURE				
1	Sand Dunes Stabilization Location	Address ----------	GPS ----------	Coordinate ----------
2	Sand Dunes Stabilization Number			
3	Stabilization of sand dunes methods	Herbaceous plantation	Kana (Saccharum mujga L.)	----------
4	Stabilization of sand dunes purpose	Controlling of sand dunes through plantation		
5	Stabilization of sand dunes increased	Crop Yield	Value addition (home made items)	----------
6	a. Approval by S &WC Directorate b. Validated by Consultant (AGES)		Yes Yes	No No

Land Used For			
7	Crop production	Yes	No
8	Fruit / Forest	Yes	No
9	Livestock	Yes	No
10	Community	Yes	No

BENEFICIARY FEED BACK			
11	After submission of application, how much period took to complete Sand Dunes Stabilization?	Months	Days
12	The Sand Dunes Stabilization was completed as per approved standards and specifications	Yes	No
13	If No in Q 12 than any variations in specifications and material used	Yes	No

13	The duration of subsidy paid	Within reasonable time	Required lot of efforts	No comment
14	How you assess survey and design process	Fast Track	Lengthy	No comment
15	Quality of S&WC staff behavior	Friendly / supportive	Indifferent	No comment
16	How you feel maintenance of Stabilization of sand dunes	Easy	Difficult	No comment

17	Do you think Stabilization of sand dunes encourages insect / disease spread	Yes	No	No comment
18	If yes what measures you take to control it	Sprays	None	No comment
19	Any comment/ observation you want to share?			

MT-10: SAND DUNES STABILIZATION (SDS) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Sand Dunes Stabilization (SDS) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Sand Dunes Stabilization (SDS)**
3.1	**Material/species used for Sand Dunes Stabilization (SDS)?**
1	Kana plant
2	Herbaceous plant
3	Marram grass
4	Any other
3.1.1	Length-1 (Feet)?
3.1.2	Length-2 (Feet)?
3.1.3	Width 1
3.1.4	Width 2
3.2	Depth
4.1	**The farmer completed the Sand Dunes Stabilization (SDS) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Sand Dunes Stabilization (SDS)**
1	Natural coastal protection against storm surge and high waves
2	Reduce sand erosion
3	Any other, Specify
4.3	**The Sand Dunes Stabilization (SDS) was completed as per approved standards and specifications?**
1	Yes

2	No
4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Sand Dunes Stabilization (SDS), the WC-KP staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8.1	**Is the testing of Joints welded parts done before filling the Sand Dunes Stabilization (SDS)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 11. CAPACITY BUILDING (CB)

1	Capacity Building Location					
2	Capacity Building Number					
3	Number of Participants					
4	Trainee	Farmers	Field staff	Officer/Official	mixed	
5	Resource Person (RP)	Local/district	Provincial	National		
6	Quality of Delivery of RP	Excellent	Good	Average	Poor	Very Poor
7	Capacity Building Type	Training	Exposure visit	----------		
8	Capacity Building in Soil & Water Conservation Techniques	Highway water harvesting	Ground water recharging wells	Sub-surface check dams	Mini dams	--- --- ---
9	Capacity Building to Solar Pump/TW	a. Solar Pump	b. Tube Well	Both: a+b		
10	How would you rate the trainings?	Excellent	Good	Average	Poor	Very Poor
11	Do you find contents/brochures of the training relevant to your farming and use of technology(s) demonstrated?	Yes	No			
12	Has training enhanced your technical capacity for service provision?	Yes	No			
13	Do you think the training influence adoption of demonstrated technology(s) in this area?	Yes	No			
14	What is the potential within the community for income generating activities using demonstrated technology(s)?	V. High	High	Average	Poor	V. Poor
15	Would this technology resolve Farmers' problems if adopted?	Yes	No			
16	Do you think that demonstrated technology(s) is feasible for your area?	Yes	No			
17	Do you think the technology(s) demonstrated could increase crop productivity and farm income?	Yes	No			
18	Would you invest on your own to adopt the demonstrated technology(s) at your own	Yes	No			
19	What is role of women in using this demonstrated technology(s)?					
20	Do you think that technology is feasible for your area?					

21	Do you think the technology demonstrated could increase crop productivity and farm income?			Yes	No
22	What type of facilitation is available for adoption?				
23	If facilitation is not available, then what type of facilitation is required for adoption	Technical	Loan	Subsidy	Other
24	After attending this training/workshop are you able to install technology by yourself		Yes	No	
25	What are the constraints for adoption?				
26	Are the materials required for installation of ----------available in your area?			Yes	No
27	Do you face any problem regarding your technology?			Yes	No
28	Please explain your problem				

MT-11: CAPACITY BUILDING (CB) MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Capacity Building (CB)?**
1	Approval Issued
2	Final Training Report (FTR) prepared
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the list of all participants and resource person with mobile number**
2.2	**Take Picture of Capacity Building (CB) group or activity**
3.1	**Type of Capacity Building (CB)?**
1	Personal
2	Baseline survey
3	Sampling
4	Management
5	Project formulation
6	Any other
3.1.1	Duration?
3.1.2	Place/location?
4.1	**The farmer completed the** training **used his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from training**
1	Increase in knowledge
2	Skill
3	Performance/efficiency
4	Interaction
5	Linkages with line department
6	Any other, Specify

4.3	**The training was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Training evaluation was done as per standard practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the evaluated and find it as satisfactory?**
1	Yes
2	No
4.6	**Before the training), the WC-KP staff conducted training need assessment?**
1	Yes
2	No
4.7	**Any variations in the training objectives?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates before training?**
1	Yes
2	No
4.8	**Financial Year**
4.9	**Supervisor Confirmation?**
5.1	**Select Submission Status**
5.2	**Comments of interviewer? (if any) (optional)**

ACTIVITY 12. INSTALLATION OF TUBE WELLS (ITW)

DIMENSIONS & STRUCTURE							
1	Tube Well Location	Address ----------	GPS ----------	Coordinate ----------			
2	Tube Well Number						
3	Source of Power	Diesel	Peter pump	Tractor	Electric	Solar	--------
4	Suction pipe diameter (inch)	----------					
5	Depth of water level (boring)	----------					
6	Water discharge	Normal	Below normal	Above normal	-----		
7	Water Re-charge	Sufficient	Insufficient	Delay			
8	a. Approval by Directorate of Agriculture Engineering b. Validated by Consultant (AGES)	Yes Yes	No No				

Water Used For					
9	Crop Production	Yes	No		
10	Orchard / Forest				
11	Community & Livestock Drinking	Yes	No		
12	If Yes (distance & time)	Before	Distance	Time Reduced (hours)	
13	Fish Rearing	Yes	No, go to Q 22		

Fish Rearing					
14	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia, etc.)				
15	Fish Feed	Roughage	Cow dung	Poultry waste	Other
16	Total cost	----------Rs per year			
17	Production	----------kg per year			
18	Price	----------Rs per Kg			
19	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home(kg) After-----	
20	Problems/issues in fish farming: Plz rank f) Availability of fingerlings, seedlings etc. g) Diseases h) Manuring/ feeds i) Marketing j) Any other		Yes	Rank	No

EMPLOYMENT ENGAGED IN FISH FARMING			
21	Employment iv. Permanent v. Casual vi. Daily wages	Before (No.)	After (No.)

BENEFICIARY FEED BACK				
22	After submission of application, how much period took to complete the Tube Well installation?		Months	Days
23	The Tube Well installation was completed as per approved standards and specifications		Yes	No
24	If No in Q 23 than any variations in specifications and material used		Yes	No
25	How your application was attended by Agriculture Engineering staff	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No comment
27	Quality of Directorate of Agriculture Engineering staff behavior	Friendly / supportive	Indifferent	No comment
28	The subsidy was paid	Within reasonable time	Required lot of efforts	No comment
29	How you feel maintenance of Tube Well	Easy	Difficult	No comment
30	Do you think cropping intensity increased on your farm after Tube Well	Yes	No	No comment
31	Do you think your crops / orchards yield increased after Tube Well	Yes	No	No comment
32	Any comment/ observation you want to share?			

MT-12: INSTALLATION OF TUBE WELLS (ITW) MONITORING TEMPLATE	
1.IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Installation of Tube Wells (ITW) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2.SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Installation of Tube Wells (ITW)**
3.1	**Shape of Installation of Tube Wells (ITW)?**
1	Depth
2	Diameter
3	Any other
3.2	Depth
4.1	**The farmer completed the Tube Wells (ITW) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Tube Wells (ITW)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Better control on water supply
6	Any other, Specify
4.3	**The Tube Wells (ITW) was completed as per approved standards and specifications?**
1	Yes
2	No

4.4	**Excavation was done as per standard engineering practices?**
1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Tube Wells (ITW), the AGES staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Tube Wells (ITW) exceed standard feet?**
1	Yes
2	No
4.9	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
4.10.1	**Is the testing of Joints welded parts done before filling the Tube Wells (ITW)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ACTIVITY 13. SOLARIZATION OF TUBE WELLS (STW)

DIMENSIONS & STRUCTURE							
1	Solar Pumping System (SPS) Location	Address ----------	GPS ----------	Coordinate ----------			
2	SPS Number						
3	Source of Power (Solar)	Existing/upgraded	New	Combine			
4	Optimum discharge depends on	Panel type ----------	Panel size ----------	Motor type ----------	Motor size ----------		
5	Suction pipe diameter (inch)	----------					
6	Depth of water level (boring)	----------					
7	Water discharge	Normal	Below normal	Above normal	----------		
8	Water Re-charge	Sufficient	Insufficient	Delay			
9	a. Approval by Directorate of Agriculture Engineering b. Validated by Consultant (AGES)	Yes Yes	No No				

Water Used For					
10	Cropping	Yes	No		
11	Orchard / Forest				
12	Community & Livestock Drinking	Yes	No		
13	If Yes (distance &	Before	Distance Decrease	Time Reduced (hours)	
14	Fish Rearing	Yes	No, go to Q 22		

Fish Rearing						
15	Fish Type (Catla, Rohu, Common, Chinese, Silver & Salmon Crap, Trout, Tilapia, etc.)					
16	Fish Feed	Roughage	Cow dung	Poultry waste	Other	
17	Total cost	----------Rs per year				
18	Production	----------kg per year				
19	Price	----------Rs per Kg				
20	Fish Consumption per year	----------Rs Sold	Home (kg) Before-----	Home (kg) After-----		
21	Problems/issues in fish farming: Plz rank k) Availability of fingerlings, seedlings etc. l) Diseases m) Manuring / feeds n) Marketing o) Any other	Yes	Rank	No		

EMPLOYMENT ENGAGED IN FISH FARMING			
22	Employment vii. Permanent viii. Casual ix. Daily wages	Before	After

BENEFICIARY FEED BACK				
23	The Tube Well installation was completed as per approved standards and specifications	Yes	No	
24	If No in Q 23 than any variations in specifications and material used	Yes	No	
25	How your application was attended by Agriculture Engineering staff	Promptly	Took lot of time	No Comment
26	How you assess survey and design process	Fast Track	Lengthy	No Comment
27	Quality of Directorate of Agriculture Engineering staff behavior	Friendly / supportiv	Indifferent	No Comment
28	The subsidy was paid	Within reasonabl e time	Required lot of efforts	No Comment
29	How you feel maintenance of Tube Well	Easy	Difficult	No Comment
30	Do you think cropping intensity increased on your farm after Tube		Yes	No
31	Do you think your crops / orchards yield increased after Tube Well		Yes	No
32	Any comment/observation you want to share?	_____ _____ _____		

MT-13: SOLARIZATION OF TUBE WELLS (STW)MONITORING TEMPLATE	
1. IDENTIFICATION	
Q#	**Field Name**
1.1	**Status of Installation of Solarization of Tube Wells (ITW) Construction?**
1	Technical Sanction (TS) Issued
2	Final Completion Report (FCR) Issued
1.2	**Name of Beneficiary/Owner**
2. SPOT CHECK	
2.1	**Collect the coordinates**
2.2	**Take Picture of Solarization of Tube Wells (ITW)**
3.1	**Shape of Installation of Solarization of Tube Wells (ITW)?**
1	Depth
2	Diameter
3	Any other
4.1	**The farmer completed the Tube Wells (ITW) using his/her own funds before subsidy?**
1	Yes
2	No
4.2	**What benefits you can expect from Solarization of Tube Wells (ITW)**
1	Reduce ground water consumption
2	Reduce water bills
3	Extend water supply
4	Improve water quality/less salty water
5	Better control on water supply
6	Any other, Specify
4.3	**The Solarization of Tube Wells (ITW) was completed as per approved standards and specifications?**
1	Yes
2	No
4.4	**Excavation was done as per standard engineering practices?**

1	Yes
2	No
4.5	**The AGES Consultants inspected the excavation and quality of geo-membrane and certified as satisfactory?**
1	Yes
2	No
4.6	**Before filling the Solarization of Tube Wells (ITW), the AGES staff prepared the completion report?**
1	Yes
2	No
4.7	**Any variations in specifications and material used?**
1	Yes
2	No
If yes in Q# 4.7 then continue with Q# 4.7.1	**Otherwise go to Q# 4.8**
4.7.1	**Subsidy was paid as per cost estimates based on geo-membrane design?**
1	Yes
2	No
4.8	**Does the water depth in Solarization of Tube Wells (ITW) exceed standard feet?**
1	Yes
2	No
4.9	**Do all joints weld through fusion welding or other similar techniques?**
1	Yes
2	No
4.10.1	**Is the testing of Joints welded parts done before filling the Solarization of Tube Wells (ITW)?**
1	Yes
2	No
5.1	**Financial Year**
5.2	**Supervisor Confirmation?**
5.3	**Select Submission Status**
5.4	**Comments of interviewer? (if any) (optional)**

ANNEX – C: List of Participants

Sr.No	NAME	Designation	Contact	Email Address
1.	Inamullah Khan	Field Team Incharge	0346-7872046	inamgul143@yahoo.com
2.	Mumtaz ullah Khan	Field Team Incharge	0343-9172860	mumtaz.ullah@hotmail.com
3.	Mahmood Ul Hassan	Field Team Incharge	0348-5478707	mahmoodulhassan1991@gmail.com
4.	Fawad Ali	Field Team Engineer/Technician	0333-9696386	befawad@gmail.com
5.	Aftab Ahmed,	Field Team Engineer/Technician	0315-4962226	aftab4unsr@gmail.com
6.	Matloob Hussain	Field Team Engineer/Technician	0307-5314722	matloob_ch@yahoo.com
7.	Arsalan Bashir	Field Team Engineer/ Technician	0314-4452697	arslanbashir0097@gmail.com
8.	Abdul Rauf	Field Team Engineer/Technician	0300-0417720	ucest@outlook.com
9.	Farhan Tayyab	Field Team Engineer/Technician	0310-9311575	farhantayyab52@gmail.com

ANNEX – D: Pre-Testing Assessment

PRE-TESTING ASSESSMENT
Water Conservation in Barani Area, KP
"Five Days Training Workshop of Field Staff"
August – September, 2021

1. Pre-Training Assessment

We welcome you to the ***"Training Workshop"*** course at WC- KP, ME&IE Consultants. We will try our best to make this training useful, productive and interactive. We would like to conduct a pre-training assessment of the knowledge of the participants on the subject matter. Please, remember this is not a test or examination of individual but a reflection of participation about to the subject. This will help us deliver lectures according the level of participants and will enable us in assessing the effectiveness of the training course.

Q1. Geographical area is calculated by:
a) Pakistan Agricultural Research Council
b) Survey of Pakistan
c) Agriculture Department, KP
d) None of the above

Q2. Cultivated area is:
a) The cropped area
b) Net area sown + current fallow
c) Area sown once in the year
d) All of above

Q3. One hectare is equal to:
a) 1.561 acres
b) 16.231 kanals
c) 2.471 acres
d) 20.471 marlas

Q4. Crops sown in October / November are:
a) Perennial crops
b) Kharif crops
c) Rabi crops
d) None of the above

Q5. Cropping intensity is:
a) Net sown area + current fallow
b) Net sown area/total cropped area *100
c) Area sown in kharif and Rabi season
d) All of the above

Q6. Pakistan is a water stressed country and ranks:
a) 1st
b) 2nd
c) 3rd
d) 4th

Q7. Bringing more area under high value crops using innovative technologies / interventions we may be able to achieve four pillars of food security:
a) Accountability, accessibility, utilization and success-ability

b) Productivity, accountability, utilization and stability
c) Availability, accessibility, utilization and stability
d) None of above

Q8. A Check Dam is:

a) Productive dams
b) Flood control dams
c) Water-storage dams
d) All of above

Q9. Field spillways/ Gated Filled Inlet Outlets (GFIO/Spillway) are:

a) Area provides the controlled release of excess flow of water.
b) Channel provides the controlled release of excess flow of water
c) Mini dam provides the controlled release of excess flow of water
d) Structure provides the controlled release of excess flow of water from field to a downstream area.

Q10. What is Terracing?

a) Bunds
b) Small reservoirs
c) Water storage tanks in a hill
d) Field steps in a slope

ANNEX – E: Post Training Assessment

Post Training Assessment - EVALUATION PERFORMA

Water Conservation in Barani Areas of KP (WC-KP)
ME&IE Consultants
Training Course on
"Baseline and M&E Tools"

We have just completed the training. Now we would like you to indicate us about your feelings on what has been presented. This information is valuable in helping us to assess the degree of success of the training and making it more objective and effective in future. The questions can be answered by circling a number on the scale to the right of each question. Where you intend giving additional information, please write your reply/response clearly and precisely in the space provided for the purpose.

- ***STRUCTURE AND ORGANIZATION:***

S#	Indicators					
1	***Duration of the training***	***Too Short***	***Short***	***Fair***	***Long***	***Too Long***
2	***Schedule of the training***	**Too Tight**	**Tight**	**Fair**	**Relax**	**Too Relax**
3	***Amount of discussions held***	***Too Much***	***Sufficient***	***Fair***	***Little***	***Too Little***
4	***The quality of training***	***Very Poor***	***Poor***	***Satisfactory***	***Good***	***Excellent***

- ***PHYSICAL RESOURCES AND FACILITIES***

S#	Indicator	*Very Poor*	*Poor*	*Fair*	*Good*	*Very Good*
1	Training venue					
2	Setting of the training room					
3	Light arrangements					
4	Suitability of training room					
5	Teaching aid facilities					
6	Computer lab. facilities					
7	Air conditioning					
8	Quality of meals					
10	Others (please specify)					

- ***OBJECTIVES OF THE TRAINING:***

After completing this training course, the participants would be able to:

- *Understand & appreciate "Baseline Survey and M&E Tools" and practices for the management of project effective and efficiently, and*
- *Use of various theories, tools, techniques and approaches in Baseline Survey and M&E.*

To indicate your opinion about importance, circle:	*To indicate your opinion about achievement, circle:*
1 = Not important 2 = Least important 3 = Somewhat important 4 = Important 5 = Very important	1 = Not achieved 2 = Achieved a little 3 = Somewhat achieved 4 = Mostly achieved 5 = Fully achieved

- ***RESOURCE PERSONS:***

In general, how do you evaluate resource *persons in this training program.*

Name	*Excellent*	*Good*	*Average*	*Poor*	*Very Poor*
Dr. Usman Mustafa					
Dr. Mansab Ali					
Mr. Afzal Hayat Khan					

- ***KNOWLEDGE & SKILLS:***

Name three new concepts that you have learned from this course

_____
_____
_____

Name three new skills that you have learned from this course.

_____
_____
_____

Any other suggestion/recommendation do you think can make this course more useful and attractive

_____
_____
_____

ANNEX – F: Presentation by Team Leader

"Water Conservation In Barani Areas of KP"

Dr. Usman Mustafa
Team Leader, ME&IE Consultants

Way Forward

- Importance of WC-KP/Baseline study
- Objectives of the Study/Baseline
- Conducting Primary Research
- Objective, Tools, Descriptive of Tool
- Top 10 Qualities of an Efficient Data Enumerator

Importance of WC - KP

- Pakistan is a water stressed country. Pakistan ranks 3rd in the world among countries facing acute water.
- Water is the ↓ factor in the rain fed Districts of KP → ↓ crop production & adversely affects human and animal life – ↑ ↑ amount of water ↓ - runoff without being utilized, carrying with if fertile top-soil + Flood.
- Bringing more area under high value crops using innovative technologies / interventions we may be able to achieve four pillars of food security including; availability, accessibility, utilization and stability.
- Prime Minister Emergency program various water management projects have been launched to conserve and increase Productivity of water.

Importance of Baseline Survey

- Vital for any project or intervention.
- It is obtained preceding to or at the commencement of a study or project (e.g., before introduction of an intervention).
- Serves as a foundation for evaluation and impact studies
- Helpful in assessing the effects of particular intervention or treatment i.e. evaluating a project with and without the project involvements.

WC - KP

- Water Conservation in Barani Areas of Khyber Pakhtunkhwa (WCBA) was Approved By ECNEC On August 29, 2019
- Capital cost of the project is Rs. Rs.14.178 billion
- Administrative Approval issued on 1st October 2019
- Implementation period: July 2019 – June 2024

Project Objectives

- To conserve land and water resources through various interventions for supplemental irrigation, livestock, farm forestry and fish farming
- To increase cropping intensity and per unit of land and water productivity
- To improve livelihood standards of poor farmers,
- To improve socio-economic stability

Objective of Baseline Study

- To measure the Water flow in the WC -Activities.
- To find the agriculture output per unit of acre.
- To study agricultural practices, particularly Water usage.
- To assess the social mobilization through capacity building of Water Users Associations.
- To estimate the area under various crops and determine the cropping intensity and cropping pattern.
- To find the area under cultivation and measure land use intensity.
- To determine the area under water logging and salinity.
- To monitor the activities of WC activities i.e. construction, tasks completed at the time of survey.
- Identify the level of employment of farm families.

Project Components and Activities ...

Component 1 - Directorate General Soil & Water Conservation, KP	
S.#	Input
1.	Construction of 5,000 water ponds
2.	Construction of 3,000 Check dams
3.	Construction of 330 Water Reservoir
4.	Construction of 2,500 Stream bank stabilization
5.	Construction of 1,000 Gated field Inlet Outlet/Spillway
6.	Development of 370 acres land for terracing
7.	Development of 70 numbers of micro-watershed areas
8.	Constructing 370 numbers of water Seepage harvesting Galleries
9.	800 numbers of Agronomic low-cost interventions

Project Components and Activities

S.#	Input
10.	230 acres of Sand Dunes stabilization
11.	500 Nos. Capacity Building

Component II - Directorate of Agricultural Engineering , KP	
12	Procurement and installation of 700 Solar, pumping system and 300 Tube Wells
13	700 on-site training of farmers in adaptation of new techniques for pumping sub-surface water.

1. Water Storage Ponds

- A pond is a body of standing water that is usually smaller than a lake.
- It may be cemented or earthen, depending on the site and location.
- Water storage ponds serve as source of water, harvested from runoff or perennial springs.
- Typically, the water storage capacity of a pond is 5 to 10 acre feet.

2. Check Dam

- Generally a vertical barrier constructed on ditches, small streams, channels and gullies.
- Often formed by the erosive activity of water.
- These structures are commonly constructed using
- stone, gravel bags, sand bags or masonry etc.
- These can include:
  - ✓ productive dams for creating farm lands,
  - ✓ flood control dams for preventing flood water and intercepting sediments,
  - ✓ water-storage dams for irrigation,
  - ✓ rock check dams for stabilizing vegetation or reducing bed gradient and
  - ✓ gully check dams for controlling gully development.

- Each check dam is expected to control a limited drainage area; however, a series of check dams can be constructed if the drainage area is large.

3. Mini Dam/Water Reservoir

- Natural or artificial place where water is collected and stored for the use of a community or irrigating land, furnishing power etc.
- Water reservoir may be a small dam or a large dam.
- These small dams are constructed in the areas where rainfall water is collected.
- The collected water can be used for livestock, irrigation and for drinking purpose also after purification.

- Many districts of KP have feasible sites for constructing thousands of small dams.
- These dams will not only fulfill the requirement of water but also recharge aquifers and increase in the esthetic value of the areas.

4. Stream Bank Stabilization (SBS)

- A vegetative, structural or combination treatment of streams designed to stabilize the stream and reduce erosion is called stream bank stabilization.
- Stream banks are more susceptible to erosion with running water.
- During rainy season, this process accelerates and hence loses precious land of the farmers. In KP, this happens too much due to its topography and climatic conditions.
- In case of stream bank stabilization, we use both vegetation and engineering structures like protection bunds, spurs etc

5.Field spillways/ Gated Filled Inlet Outlets (GFIO/Spillway)

- A structure used to provide the controlled release of excess flow of water from field to a downstream area.
- In the rod-kohi area of southern Districts of KP, the sailaba water from mountains is harvested in large tracts of land to allow it to percolate for crop production and improve ground water recharge.
- These are structures where soil is protected from being lost with excess of runoff water.
- Field spillways not only harvests flood water in fields but also trap soil sediments to increase soil fertility and enhance crop productivity

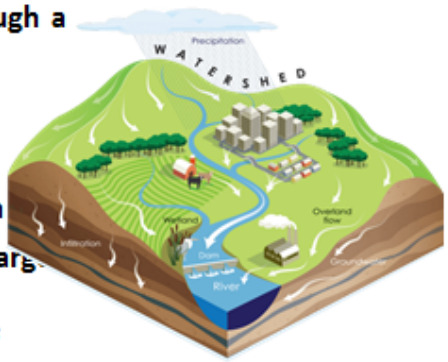
6. Terracing

- A terrace is a piece of sloped plane that has been cut into a series of successively receding flat surfaces or platforms, which resemble steps, for the purposes of more effective farming.
- This method of farming uses "steps" that is built into the side of a mountain or hill.
- On each level, various crops are planted.
- When it rains, instead of washing away all of the nutrients in the soil, the nutrients are carried down to the next level.

- Additionally, these steps prevent land sliding that would take plants with it and destroy all of the crops on the hillside.
- This type of landscaping is therefore called terracing.

7. Micro Watershed Development (MWD)

- Watershed is defined as any surface area from which runoff resulting from rainfall is collected and drained through a common point.
- It is synonymous with a drainage basin or catchment area.
- Some watersheds are very small (less than one acre) while other watersheds are very large of square miles.
- Any place where you stand can be part of many watersheds of varying sizes



8. Water Seepage Harvesting Galleries (WSHG)

- Water seepage harvesting galleries are sub-surface groundwater collection system (tank) with perforated pipes, typically shallow in depth, constructed in a sloppy area.
- These underground water collecting tanks can be built alone in a gully or inside a check dam.
- These tanks will receive seepage water from the adjacent wet soil.
- The tanks are connected with external pipes from where water continuously discharges by the force of gravity.
- The discharged water can be used for both irrigation or drinking purposes.
- This is a low cost intervention where we can get pure and continuous supply of water

9. Agronomic Low Cost Intervention

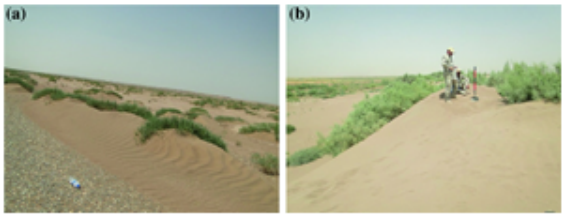
- Agronomic low cost interventions includes cover crops like gram, peanuts etc.
- These crops are locally available and have the ability to cover soil surface, thus protecting the soil from the direct effect of rain drops which ultimately help in controlling soil erosion.

10. Low Cost Brush Wood Check Dam

- Brushwood check dams made of posts and brush are placed across the gully.
- This type of soil conservation activity is highly economical where plenty of the bushes, trees etc are locally available.
- The main objective of brushwood check dams is to hold fine material carried by flowing water in the gully.
- Small gully heads, no deeper than one meter, can also be stabilized by brushwood check dams.

11. Sand Dunes Stabilization (SDS)

- Sand dune is a ridge of sand created by the wind, found in deserts or near lakes and oceans.
- Sand dunes can be stabilized by a number of methods in which herbaceous plantation method is the best one in which these plants are grown at a distance for effective control of sand dunes.



- Few distracts of KP Karak, D. I. Khan, Lakki Marwat have sand dunes.
- Kana (Saccharum Mujga L.) plantation etc. will be done in these districts to stabilize sand dunes. These plants require less water and care. These plants not only help in stabilization of sand dunes but also a source of income for the local community by making house made items from the stems Kana plants

12. Capacity Building

Capacity building or capacity development is the process by which individuals and organizations obtain, improve, and retain the skills, knowledge, tools, equipment and other resources needed to do their jobs competently or to a greater capacity

13. Tube Wells

- A Tube Well is a device which is constructed to draw ground water contained in an aquifer.
- Its design varies with the geological conditions of the formation and the purpose for which ground water is to be used.
- Tube wells are installed to supply water for irrigation and water supply.
- The required depth of Tube Well depends upon the depth.
- Solar powered wells also bring clean water of the water table

Baseline, Midline and End-line Surveys

Collection of information in Project Interventions area

- BASELINE
  - Area under cultivation
  - Cropping pattern
  - Cropping intensity
  - Yield per acre/hectare
  - Water availability
  - No of persons employed per acre/hectare
  - Environment/Plantation
  - Socio economic information
  - ➢ Questionnaire developed for collection of baseline information – all stake holder involved

Contd...

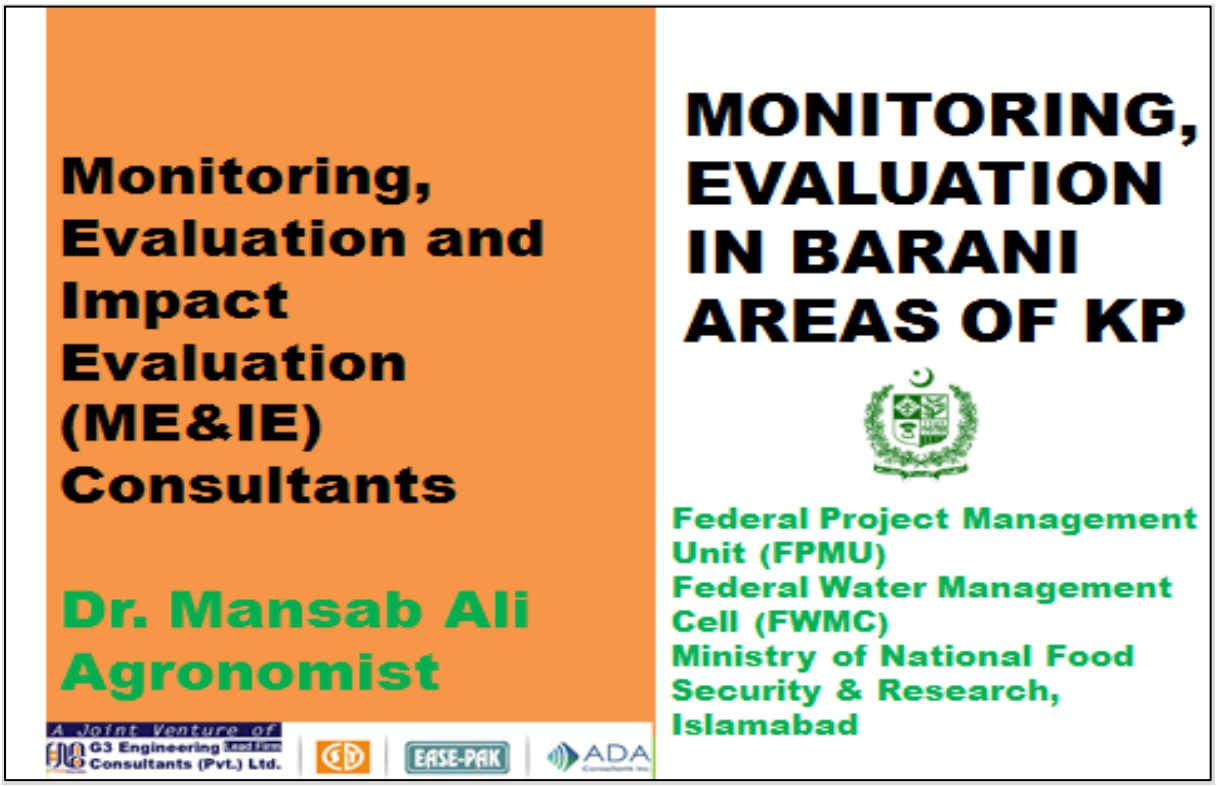
Conducting Primary Research

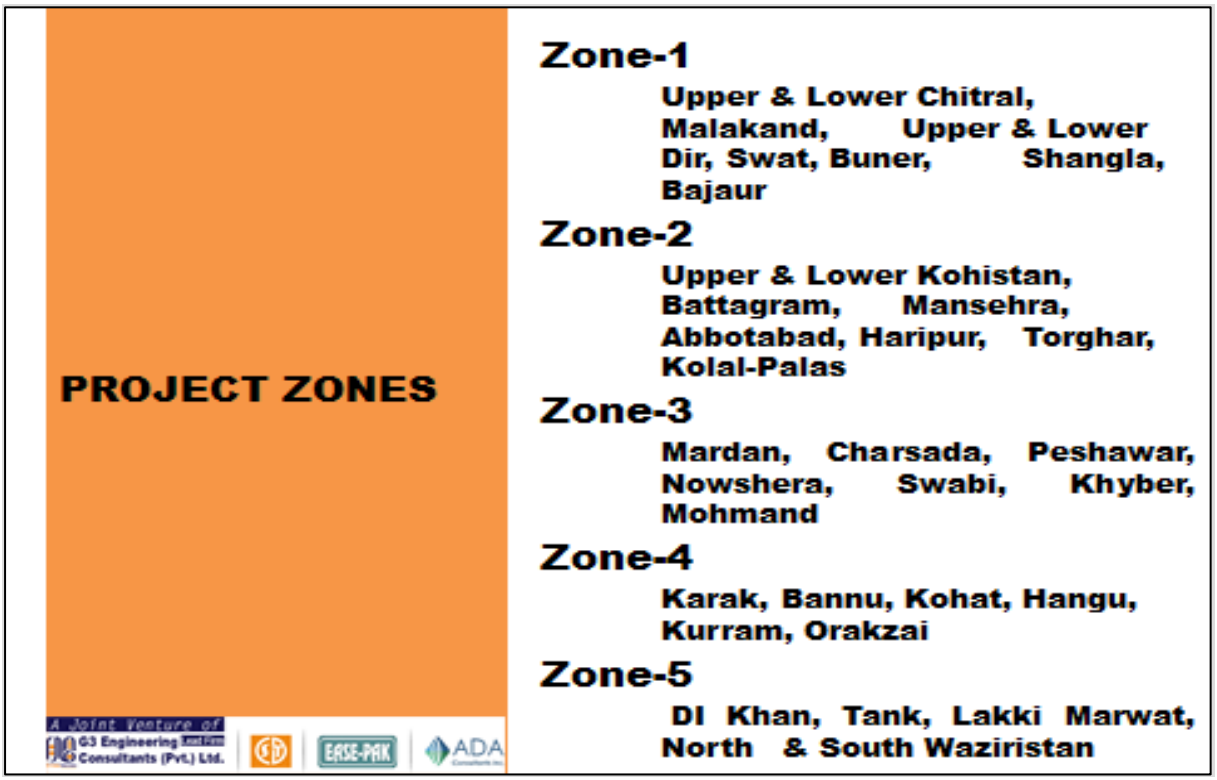
- Interviews,
- Surveys,
- Focus Groups and
- Observations.

Top 10 Qualities of an Efficient Data Enumerator

1) Honest.
2) Clear voice.
3) Adaptation / open.
4) Motivation power.
5) Spontaneous.
6) Modest.
7) Patience.
8) Knowledgeable.
9) Extrovert behavior
10) Physical stamina

ANNEX – G: Presentation by Irrigation Agronomist





LAND UTILIZATION

GEOGRAPHICAL AREA
is that area which has been surveyed and calculated by the Survey of Pakistan.

TOTAL AREA REPORTED
is the total physical area of the village/deh, tehsil or district etc.

FOREST AREA
is the area of any land classed or administered as forest under any legal enactment dealing with forests. Any cultivated area which may exist within such forest should be excluded (and shown under heading cultivated area).

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LAND UTILIZATION

AREA NOT AVAILABLE FOR CULTIVATION
is that uncultivated area of the farm which is under farm home-steads, farm roads and other connected purposes and therefore not available for cultivation.

CULTURABLE WASTE
is that uncultivated farm area which is fit for cultivation but was not cropped during the year under reference nor in the year before that.

CULTIVATED AREA
is that area which was sown at least during the year under reference or during the previous year. Cultivated Area = Net Area sown + Current Fallow

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LAND UTILIZATION

CURRENT FALLOW
is that area which is vacant during the year under reference but was sown at least once during the previous year.

NET AREA SOWN
is that area which is sown at least once during (Kharif & Rabi) the year under reference

AREA SOWN MORE THAN ONCE
is the difference between the total cropped area and the net area sown.

TOTAL CROPPED AREA
means the aggregate area of crops raised in a farm during the year under reference including the area under fruit trees.

CCA & CROPPING INTENSITY

Culturable Command Area (CCA)
is the area in which a crop is grown at a particular time or crop season.
Gross Command Area = Cultivable Command Area + Uncultivable Area.

CROPPING INTENSITY (CI)
Raising of a number of crops from the same field during one agricultural year.
CI = Net Sown Area / total Cropped Area x 100.

Crop Rotation
is growing two or three different crops in a year on a piece of land.

AREA BY IRRIGATION SOURCE

IRRIGATED

- Canals
- Tube well
- Ponds
- Rodh Kohi

NON-IRRIGATED

- Barani / Rainfed Area
  - Low rain: 150-300 mm
  - Medium rain: 300-500 mm
  - High rain: 500-1000 mm

CROPS BY SEASON

KHARIF CROPS (Apr-Sep)

Rice, maize, Fodder (maize, sorghum, millet), Pulses (mung, mash), Oilseed (sunflower, soybean), Cotton, Vegetables (potato, onion, chili, tomato, okra, eggplant, gourds etc.)

RABI CROPS (Oct-Mar)

Wheat, Fodder (oat, berseem, lucerne), Pulses (gram, lentil), Oilseed (Rapeseed & mustard, sesame), Tobacco, Vegetables (potato, garlic, spinach, peas, radish, carrot, turnip, cauliflower etc.)

PERENNIAL CROPS (Annual)

Sugarcane (Fresh & ratoon), Orchard (citrus, dates, apple, guava, melon, pomegranate, mulberry, pear, peach, plum, almond, pistachio, walnut fig, persimmon etc.)

MEASURING UNITS

Land

One hectare= 2.4711 acres
One acre= 8 Kanals
One Kanal= 20 marlas
One acre= 160 marlas

Weight

One tonne= 26.79 maunds
One maund= 37.5 Kg
Cotton bale (170.09kg) = 4.55 maunds

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ANNEX – H: Presentation by Social & Gender Specialist

OUTLINE

- What is gender and sex.
- What is gender and development .
- Women and development
- Gender and development
- Gender socialization
- Gender Stereotyping
- Gender and Development thinking

GENDER CONCEPTS

- **Gender** refers to social differences between men and women
- Gender refers to the socially determined roles/ ideas and practices of what it is to be female or male
- **Sex**
- Sex refers to the biological characteristics that categories someone as either female or male;

"SEX IS A BIOLOGICAL CHARACTERISTICS
GENDER IS A SOCIAL CHARACTERISTICS

Sex	Gender
•Categories as male and female	•Masculinity and femininity
•Biological	•Social cultural and historical determined
•Fixed at birth	•Learned through socialization
•Does not change across time and space	•Various over time and space
•Equally valued	•Unequal valued

Gender	Sex
Not universal (It depend in Social Culture, Religious &Political view, Economic factor etc.)	Universal
Gender = masculine and feminine	Sex = male and female

Gender & Development

TWO APPROACHES

1) **Women in Development**

2) **Gender and Development**

WOMEN IN DEVELOPMENT) APPROACH

- The WID (or Women in Development) approach calls for greater attention to women in development policy and practice, and emphasises the to integrate nee into the development process

GENDER AND DEVELOPMENT

- Gender and Development approach focuses on the socially constructed basis of differences between men and women and emphasises the need to challenge existing gender roles and relations.

GENDER SOCIALIZATION

- **Socialization**
- It is the process by which social norms, roles and expectations are learned and internalized.
- **Gender Socialization**
- It is the process by which norms and expectations in relation to gender are learned by women and men.

GENDER STEREOTYPING

- a form of prejudgment, bias or limitation given to roles and expectations of males and females.

GENDER STEREOTYPE IN CAPACITIES WOMENMEN

- MEN
- good in Math and Science •
- Physically strong •
- Firm decision-makers

- WOMEN
- good in arts and less intellectual pursuits
- Wishy-washy or fickle
- Physically weaker
- minded in decision-making

GENDER STEREOTYPES IN TRAITS AND CHARACTERISTICS MEN WOMEN

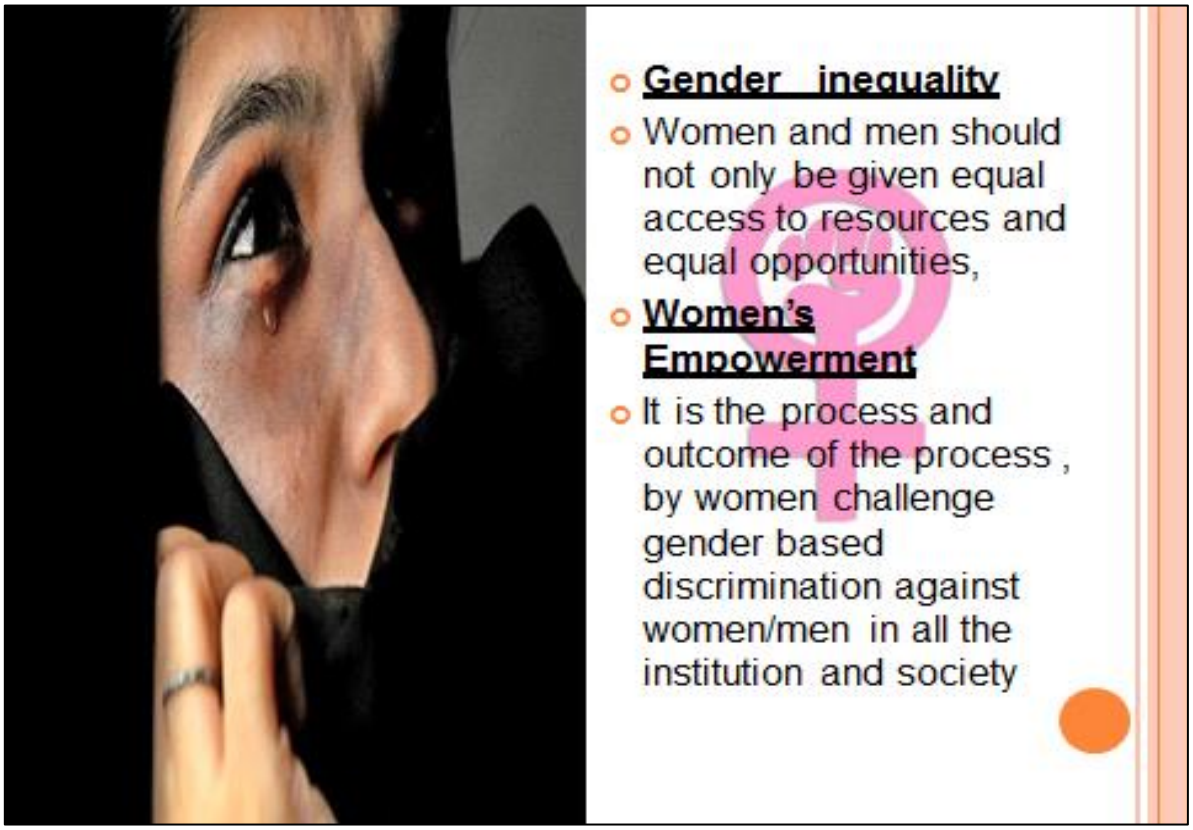
Men	Women
active	Passive
aloof	Loving
Aggressive	Peaceful
Independent	Dependent
brave	Fearful

SELECTED CONCEPTS CENTRAL TO GENDER AND DEVELOPMENT THINKING

- Culture
- Gender Relations
- Gender Discrimination
- Gender Division of labour
- Gender Awareness
- Gender Equality and Equity
- Women's Empowerment

- **Culture**
- The patterns of ideas, beliefs, and norms which characterise the way of life and relations of a society or group within a society
- **Gender Relations**
- Hierarchical relations of power between women and men that tend to disadvantage women
- **Gender Discrimination**
- The systematic, unfavourable treatment of individuals on the basis of their gender,

- **Gender Division of labour**
- Divisions of work based on gender
- Productive/economic/"outside"men
- Household/reproductive/"inside women
- **Gender Awareness**
- The recognition that the life experiences, expectations, and needs of women and men are different, that many times they involve inequity,
- **Gender Equality and Equity**
- Gender equality refers to equal access to social goods, services and resources and equal opportunities in all spheres of life for both men and women.


Gender inequality
Women and men should not only be given equal access to resources and equal opportunities,
Women's Empowerment
It is the process and outcome of the process , by women challenge gender based discrimination against women/men in all the institution and society


Let's take them out of the darkness of life
Individual efforts are appreciable,
But not sufficient

- For well-balanced and sustainable social development, men and women must have equal rights, responsibilities and opportunities.
- *Women don't need charity.*
- *Women want Education and Opportunity*

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WCKP
WATER CONSERVATION IN BARANI AREAS OF KHYBER PAKHTUNKHWA

TRAINING CERTIFICATE

This certifies that Mr. _____ has sucessfully completed five days training

on **Monitoring Evaluation and Impact Evaluation of Water Conservation in Barani Areas of KP.**

Held at **Peshawar** during **27th to 28th August & 8th to 10th September** 2021

Director General	Team Leader	Director
Soil & Water Conservation	ME&IEC - WCKP	Agriculture Engineering
Khyber Pakhtunkhwa	G3 Engineering Lead Firm Consultants (Pvt.) Ltd.	Khyber Pakhtunkhwa