

**INTERNATIONAL WORKSHOP ON WATERSHED  
MANAGEMENT AND LAND REHABILITATION IN  
NW FRONTIER REGION- PAKISTAN  
(6-8 DECEMBER, 2010)**

**Presentation  
on  
FATA Rural Development Project:  
Watershed Management from  
Rural Development perspective-  
A CASE STUDY  
  
ZAKIULLAH MIAN, FATA SECRETARIAT**



**In the Name of Allah The Most  
Gracious & Merciful**



## The Project

- **Project Area:** Khyber, Mohmand & Bajaur Agencies
- **Approval Forum:** ECNEC: 4<sup>th</sup> August, 2005
- **Administrative Approval:** 21<sup>st</sup> September, 2006
- **Closing Date** December 2011
- **Total Cost:** US \$60 Million (Rs. 3500 Million)

### Share of Financiers:

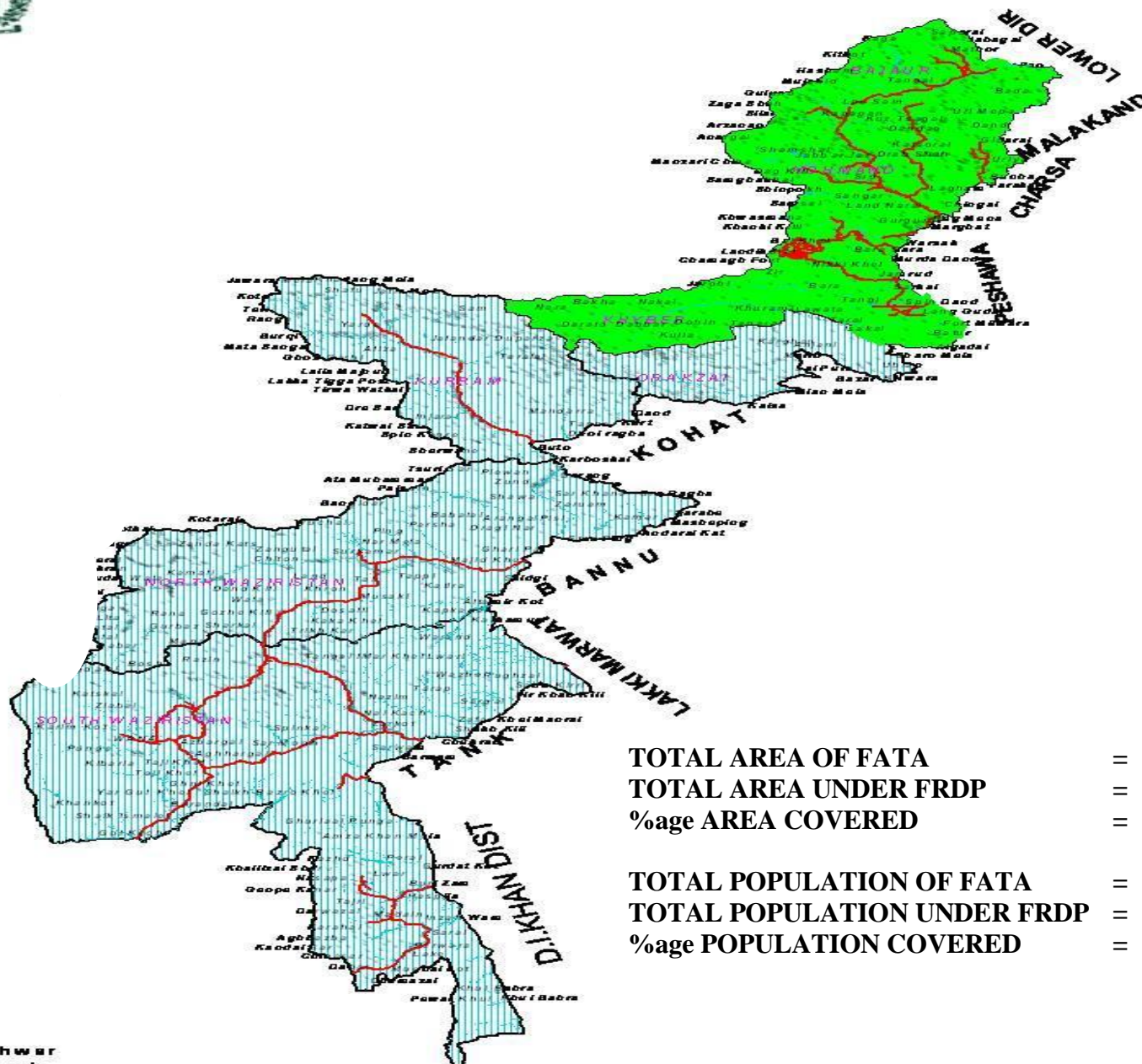
- **ADB:** (70%): US \$42 Million (Rs. 2450 Million)
- **GoP:** (25%): US \$15 Million (Rs. 875 Million)
- **Ben.:** (5%): US \$ 3 Million (Rs. 175 Million)



## **LOCATION MAPS**



**MAP OF FATA SHOWING FRDP AREA**

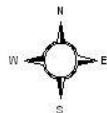


<b>TOTAL AREA OF FATA</b>	<b>=</b>	<b>27220 Sq Km</b>
<b>TOTAL AREA UNDER FRDP</b>	<b>=</b>	<b>6162 Sq Km</b>
<b>%age AREA COVERED</b>	<b>=</b>	<b>23%</b>
<b>-----</b>		
<b>TOTAL POPULATION OF FATA</b>	<b>=</b>	<b>3.180 MILLION</b>
<b>TOTAL POPULATION UNDER FRDP</b>	<b>=</b>	<b>1.480 MILLION</b>
<b>%age POPULATION COVERED</b>	<b>=</b>	<b>47%</b>

### LEGEND

-  Road  
 River/Khwar  
 Settlement  
 FRDP  
 FATA BOUNDARY





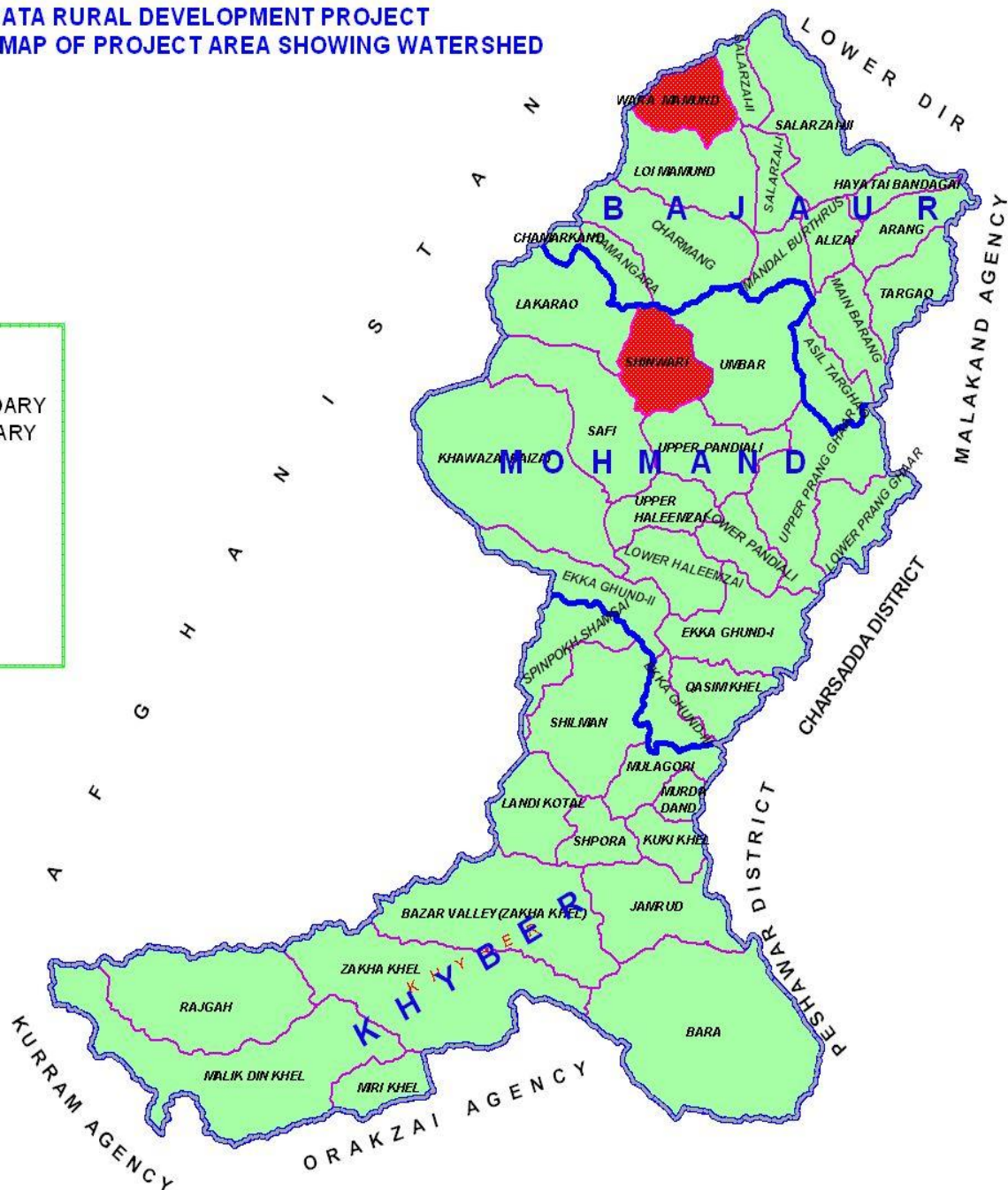
# FATA RURAL DEVELOPMENT PROJECT PLANNING MAP OF PROJECT AREA SHOWING WATERSHED

## LEGEND

- PROJECT BOUNDARY
- AGENCY BOUNDARY
- WATERSHED
- Already Planned
- Planned 2010-11

SCALE: 1: 550 000

10 0 10  
Kilometers





## Salient Features of Project Area

S. No.	Agency	Population*(Million)	Area Sq. Km*	No. of water sheds
1	Khyber	0.595	2576	14
2	Mohmand	0.554	2296	15
3	Bajaur	0.334	1290	15
	Total	1.483		
Total(23% area and 47% pop. Of total area of FATA is covered)				

(\*Source: 2007-08,BoS,KPK)

Bajaur Agency

Khyber Agency

Mohmand Agency



## Climatic Characteristics of Project Area

S. No.	Climatic Zones	No of watersheds
1	Semi arid sub tropical zone (295-642mm)	28(2B,11K,15M)
2	Sub humid sub tropical Zone (553-896mm)	13 (10B,03K)
3	Sub humid temperate Zone (730-1048 mm)	03 (B)
	Total	44





## **Topography of project area**

- **Mountainous Ridges & Intervening valleys**
- **Elevation ranges from 450-4750 meters**
- **Slope 13-80 percent**

## **Land Use Classes**

- **Rain fed Agriculture**
- **Irrigated Agriculture**
- **Range Land (Denuded Hills)**
- **Shrubs & Bushes**
- **Forest**



## **MAPS OF AGENCIES IN PROJECT AREA WITH WATERSHED BOUNDRIES**

# FATA Rural Development Project

## BAJAUR AGENCY



Bajaur Agency

Khyber Agency

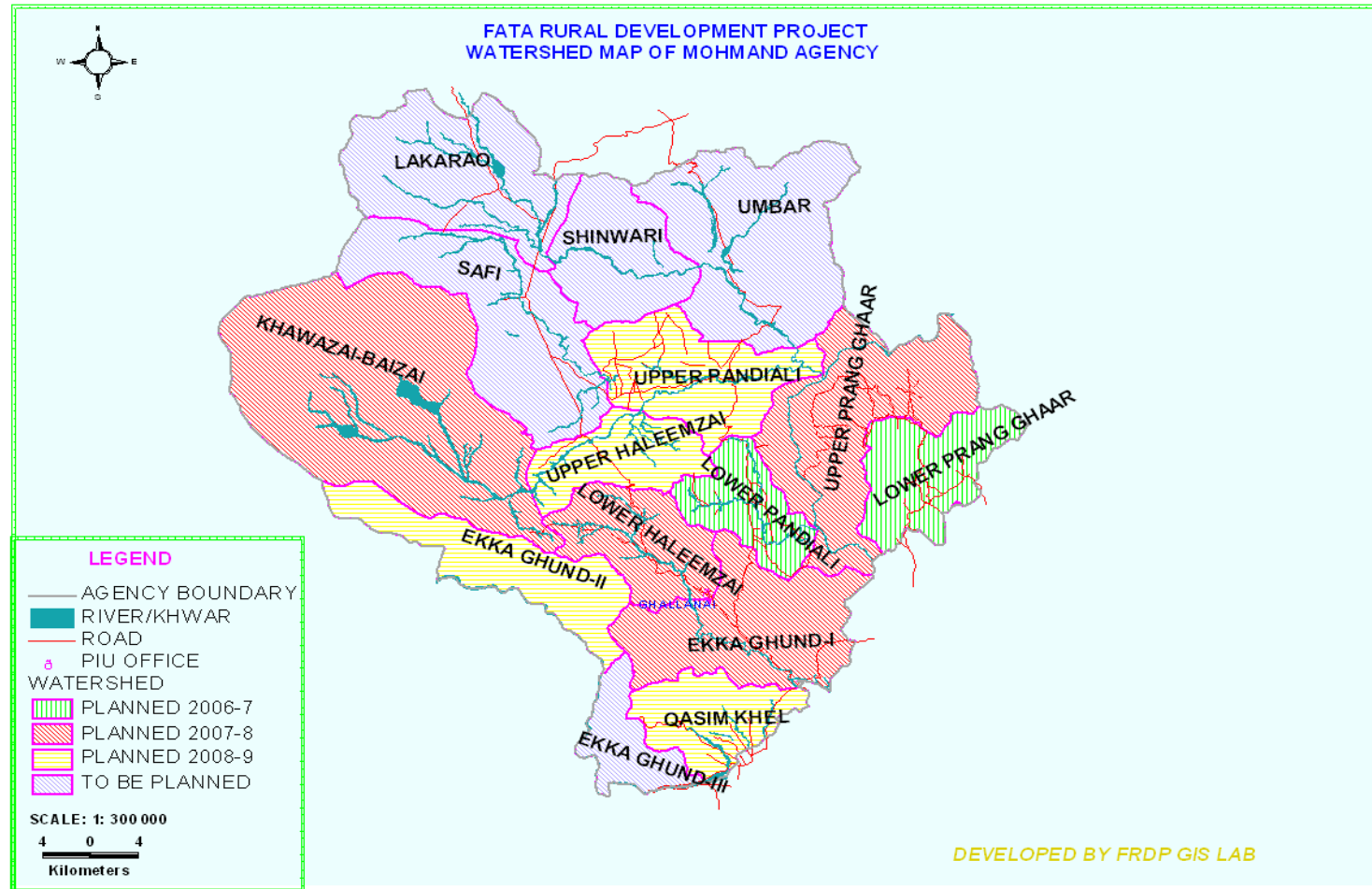
Mohmand Agency



# FATA Rural Development Project

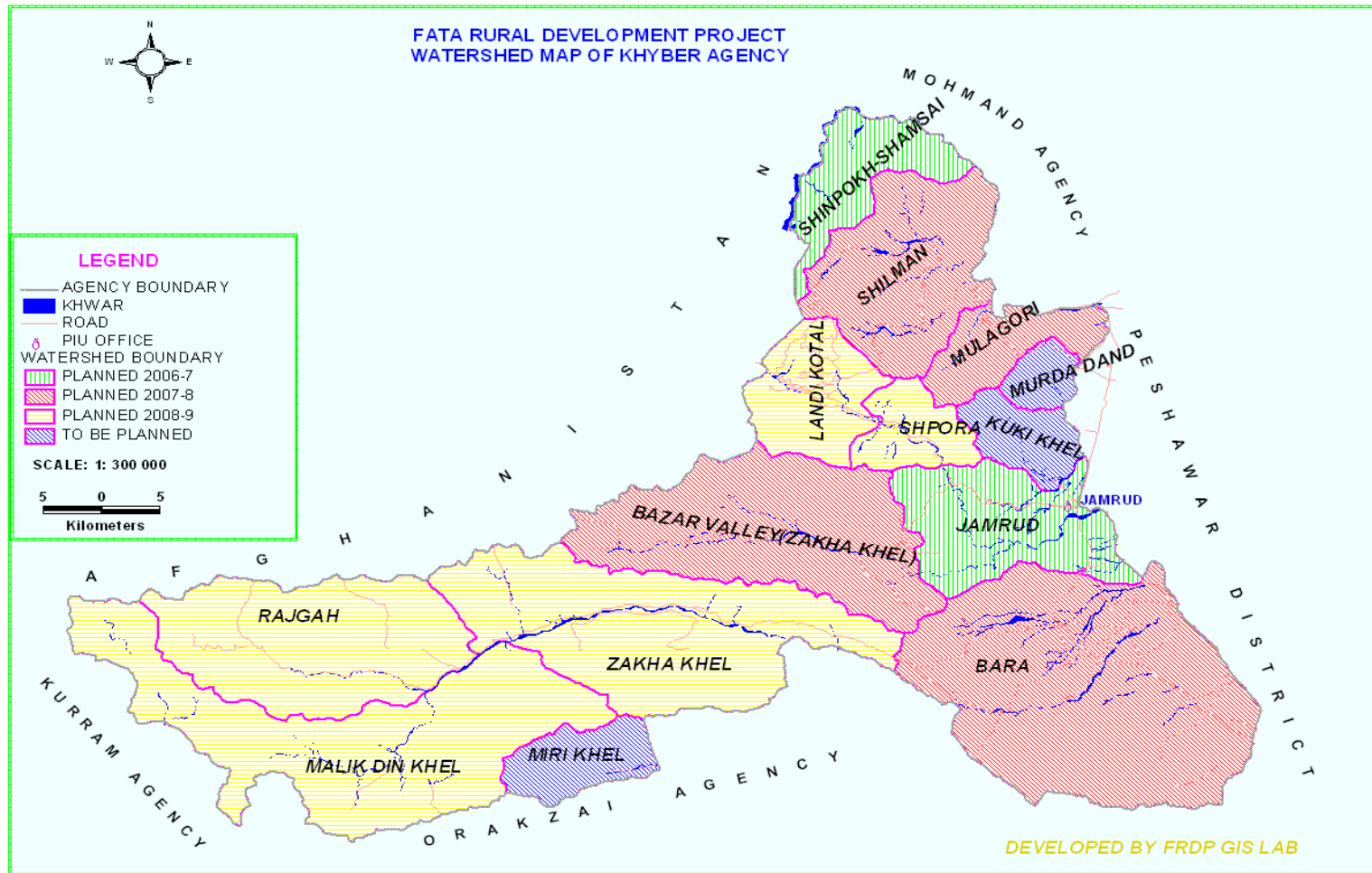


## MOHMAND AGENCY



# FATA Rural Development Project

## Khyber Agency



Bajaur Agency

Khyber Agency

Mohmand Agency





## **PROJECT OBJECTIVES**

- Improve the productive potential of watersheds
- Strengthen the capacity of the communities
- Support the implementing departments to operate in more socially inclusive manner



## KEY COMPONENTS

The project includes three components

- Integrated resource management
- Community infrastructure
- Project planning, management, and other support services



## **PROJECT APPROVAL FORA**

# FATA Rural Development Project



## PROJECT STEERING COMMITTEE

### COMPOSITION

• Additional Chief Secretary	Chairman
• Secretary P&D FATA	Member
• Secretary Finance FATA	Member
• Director General Projects, FATA	Member
• Representative of the Ministry of SAFRON	Member
• Political Agent Khyber	Member
• Political Agent Bajaur	Member
• Political Agent Mohmand	Member
• Representatives of all concerned line departments	Members
• Project Director	Member /Secretary

### FUNCTIONS

- Provide policy guidance and interpretations in the implementation of the Project
- Approve periodic consolidated annual work plans
- Review on semi annual basis the progress of the Project
- Coordinate and direct the activities of the Line Departments under the Project
- Recommend issues for consideration of the Project Review Board



## PROJECT SCHEME APPROVAL COMMITTEE

- Approval of schemes costing between **Rs 4.5 million and Rs 20.0 million**.
- The Committee comprises of the following members:

i)	Project Director FRDP	Chairman
ii)	Agency Project Managers FRDP	Secretary
iii)	Deputy Secretary P&D FATA	Member
iv)	Deputy Secretary Finance FATA	Member
v)	Assistant Political Agents concerned	Member
vi)	Heads of the concerned Directorates	Members
v)	Deputy Director (P&M) FRDP	Member
- Committee is also authorized to re-appropriate the targets within the approved annual work plans.



# FATA Rural Development Project



## AGENCY PROJECT BOARD

### COMPOSITION

- |                                       |           |
|---------------------------------------|-----------|
| • Concerned Political Agent           | Chairman  |
| • Agency Project Manager              | Secretary |
| • Representatives of Line Departments | Members   |
| • Two Agency Councillors              | Members   |
| • Two Agency Elders                   | Members   |

### FUNCTIONS

- Review and recommend annual work plans of the Agency



## AGENCY SCHEME APPROVAL COMMITTEE

- Approval of schemes costing up to **Rs 4.5 million** .
- The Committee comprises of the following members:

i) Agency Project Manager FRDP	Chairman
ii) Assistant Political Agent or Representative	Member
iii) Heads of Line Departments	Members
iv) Agency Planning and Finance Cell representative	Member
v) Community Program Manager	Member
vi) Planning and Monitoring Coordinator	Secretary



## **IMPLENETATION STRATEGY**



## STEPS OF IMPLEMENTATION STRATEGY

1. Maps preparation of area ( GIS Lab)
2. Selection of Watersheds as Planning units
3. Dialogue with Pol. Administration for Clearance
4. Formation and registration of MCOs
5. HH Survey by social development teams
6. Identification of sites for community works in consultation with PA
7. Implementation through MCOs up to Rs. 4.5 Million, Works : >Rs4.5 Million, through Line depts/Tenders
8. Capacity building of MCOs in different skills Development and technical trainings



## **DETAILS OF PROJECT COMPONENTS**





## Integrated resource management

- 1. Farming Systems and Crop Production Development in Watersheds**
- 2. Livestock and Fodder Development**
- 3. Community Forestry and Range Management**
- 4. Capacity Building of Farming communities/MCOs**



## Community infrastructure

1. **Surface irrigation**
2. **Dug Wells and Tube Wells**
3. **Delay Action Dams**
4. **Road development (low cost shingle roads and up gradation of link roads)**
5. **Community Drinking Water Supply Schemes**

# FATA Rural Development Project



## COMMUNITY MOBILIZATION & DEVELOPMENT

Name of Activity	Units	Total No of MCOs and HH covered as of June 2010.	
		MCOs	HH Covered
Formation of Community Organizations	No.	1714	7529
Formation of Village Organizations	No.	192	--
Office Bearers Trainings	No.	120	797
Managers Conference	No.	37	1453
Activists Training	No.	47	205
Skill Development Trainings	No.	1335	1785

Bajaur Agency

Khyber Agency

Mohmand Agency



## **WATER ASSESSMENT STUDY AND MANAGEMENT PLAN**

# FATA Rural Development Project



- It is a Watershed based assessment of water resources, having 05 Components
  - I Surface hydrology/hydrological study
  - II Ground water assessment study
  - III Consumption by human beings and livestock population in the area
  - IV Agriculture studies( estimation of Crop water Requirements through CROPWAT)
  - V Water balance model (watershed based)



# FATA Rural Development Project



## Agency and Watershed wise water balance model

SNo	Month	AVG. Rain fall(mm)	Inflow (MCM)		Out flow (MCM)				Available surface water (MCM)	Estimated ground water use (MCM)	Change (+, -) in Ground Water Storage (MCM)
			Net Perennial Flow	Estimated Vol of Rain water	Estimated R.Off	RET	Recharge to GW	Total outflow			

Bajaur Agency

Khyber Agency

Mohmand Agency



## **FINDINGS OF WATER ASSESSMENT STUDY -THE WAY FORWARD**

# FATA Rural Development Project



- Based on 30 years met Data use
- Surface Run Off has been categorized in .Wet, Average and Dry years
- Surface RO varies from Watershed to Watershed
- Estimated Run Off ranges from 2-21%of ARF
- Out of 44, only 17 Watersheds have potential for Ground water exploitation in Future
- Perspective water balance model estimation has been made for years 2015, 2025 and 2040



## Findings of WAS....Consumption

Year	Annual water consumption (mcm)
2008(Base year)	291.7
2015	318.7 (9% increase)
2025	368.4 (21% increase)
2040	480.5 (40% increase)





## RECOMMENDATIONS OF STUDY

- Ground water resource is under pressure due higher abstractions, unchecked run off and low recharge
- Only in a few watersheds has some potential for groundwater exploitation
- Delay action dams will help to recharge the ground water and address future/projected water consumption needs in the area
- A Comprehensive water monitoring plan must be adopted by all stakeholders in the area.



## **PROGRESS SNAPSHOTS**



# FATA Rural Development Project



Shingle Road construction

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Shingle Road Construction

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Shingle Road Construction

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Dugwell Irrigation

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Dugwell Drinking Water Supply

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Dugwell Pump House

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Hand Pump

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Surface Irrigation Scheme

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Surface Irrigation Scheme

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Irrigation Channel

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Departmental Nursery

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Wheat Demo Plot

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Wheat Demo Plot

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Maize Demo Plot

Bajaur Agency

Khyber Agency

Mohmand Agency



# FATA Rural Development Project



Vegetable Demo Plot

Bajaur Agency

Khyber Agency

Mohmand Agency

**Thank You**