

USAID's Central Asia Natural Resources Management Program

On-Farm Water Management and Development of Water Users Associations

Prepared by: NRMP Water Task Leader John Baxter

June 26-28, 2003

Khorog, Tajikistan





NRMP Demonstration Sites

Number of irrigated hectares and farmers at each WUA that NRMP works with

<u>Name of WUA</u>	<u>Irrigated Hectares</u>	<u>Backyards</u>	<u>Number of Private farms</u>	<u>Dehcan Farmers</u>	<u>Family members</u>
Ok Oltin WUA, Fergana Oblast, Uzbekistan	3180	180	139	720	2880
Ung Sokhil WUA, Navoi Oblast, Uzbekistan	1800	560	84	2240	8960
Ok Qoya, Syrdarya Oblast, Uzbekistan	2656	47	71	188	752
Kush Quloq, Syrdarya Oblast, Uzbekistan	1978	280	52	1120	4480
Berdakh, Karakalpakistan, Uzbekistan	1544	188	43	752	3008
Amir Timur, Khorezm Oblast, Uzbekistan	1727	210	58	840	3360
Andarsay Farmer Association, Khogent, Tadjikistan	1172	130	15	1350	5360
Ozod Shirkot, Andijan Oblast, Uzbekistan	1162	325	28	1300	5200
Case Demonstration Center, Tashkent Oblast, Uzbekistan	203	5			300
Sahydarya, Osh Oblast, Kyrgistan	1570	156	2	1115	4460
Abay Farmers Association, Maktarl Oblast, Kazakstan	3124	200	370		2322
Total hectares	20116	2281	862	9625	41082
* Note - Ozod has a Shirkot (cooperative) controlling 709 hectares, in addition there are 28 private farmers controlling another 128 hectares.					
* Note - Andarsay has 15 private farm groups. Each group is composed of many farmers (as many as 100).					



Collaborative Effort

- This is a participatory project, in which NRMP staff works together with government officials, farmers, and WUAs.

- Benefits are:
 - Reduced conflict between farmers;
 - Increases in crop yields;
 - Improved irrigation efficiency.





Objectives of Program

- Assist with the development of functioning Water User Associations based on democratic principles.
- Improve water management of on-farm canals.
- Improve water management on farm fields.





WUA Development Activities

- Organization based on democratic principles
- Assist the WUAs to develop needed managerial and organizational skills
- Assist WUAs to develop business plans





WUA Development Activities, continued...

- Assist the GOU and GOT to develop a legal framework and charter that will support WUAs.
- Recommendations to the GOU and GOT regarding sustainability, income, and tax status of WUAs.
- Training programs addressing crop production techniques.





Improve Water Management of On-Farm Canals

- Demonstrate methods of insuring that water is distributed equitably
- Demonstrate flow measuring devices
- Clean canals and drains
- Canal lining if necessary
- Training programs to evaluate canal losses
- Separation of backyard irrigation from on-farm systems





Improve Water Management of Farm Fields

- Demonstrate methods of proper furrow irrigation techniques along with furrow design training
- Demonstrations using siphons
- Demonstrations of land leveling on irrigation efficiencies and yield
- Demonstrations and training programs to evaluate soil moisture and plant water stress





Improve Water Management of Farm Fields, continued...

- Training in irrigation scheduling and Evapotranspiration monitoring
- Soil salinity monitoring and salinity control
- Demonstrations using disk plows rather than moldboard plows
- Monitoring and training to evaluate irrigation efficiency, application uniformity, etc.





Factors That Insure WUA Success



- Maintenance Imperative
- WUA ability to influence water delivery
- WUA operates in transparent and democratic manner
- Legal basis for WUA to operate and sanction members

