

Evaluation of remediation recommendations: Stakeholder Workshop 3

Dzhanibek, Russia

1. Introduction

The “Dzhanibek” study area is situated on the territory of Pallasovsky District, Volgograd Region, and geographically belongs to Elton Lake Province of steppe Zavolzhie, which is classified as desertification province of dry steppe, situated at left bank of lower part of Volga River valley. Three quarters of water resources for irrigation are provided by water supply channels and a quarter by local water sources. The local irrigation system is composed of two systems: i) several hundred kilometers of water supply channels pumping water from Volga River or from its tributaries, ending in artificial ponds; and ii) local water harvesting from melted snow and soil water conservation techniques.

Water resources scarcity is a growing socio-economic & environmental problem in the area, closely linked to spacio-temporal climate variability, change of seasonal patterns of hydrological regime and as consequence land use transformation. Land degradation in the study area focuses around ground water logging, secondary soil salinization and non-uniform irrigated soil properties. To tackle these problems, the following technologies were trialed during WB4:

- Drip irrigation of vegetables instead of furrow irrigation; and
- Precision irrigation of forage instead of “overall” irrigation.

2. Priority Remediation Strategies

Both priority remediation strategies were selected with the aim of coping with growing regional water scarcity. Drip irrigation was selected for testing/adaptation as unknown at household level technology promoting minimal fresh water to grow vegetables for domestic use and in consequence increase household fresh water availability for livelihood purposes at villages with scarce fresh water resources.

Field trial results showed that drip irrigation is:

- The most water efficient irrigation technology at household level;
- Easily adapted to the regional socio-cultural environment;
- Easily applied at household level with minimal investment, workload and time consuming; and
- Helping to increase household water availability for living and irrigation purposes at villages with scarce fresh water resources.

As such, drip irrigation was the top priority for workshop participants (Table 1).

Table 1: Ranking of remediation options before (based on findings from Elton village) and after field trials and modelling in Dzhanjbek, Russia

Rank	Technologies ranked in WB3 workshop	Technologies ranked in WB4-5 workshop
1	Grazing land management by rotation introducing	Drip irrigation
2	Drip irrigation	Impermeability of the bed of water storage capacities
3	Forest, apple tree plantation or shrub belt planting	
4	Contour planting and gully control	

3. How can we enable priority remediation options to be adopted?

After expert discussion to expand drip irrigation at household level of Pallasovsky District regional and local administrations should advertise it in mass media and encourage its using as a newest technology helping cope with fresh water scarcity at high-tech level with minimal affordable investment, and at the same time allowing enrich by vitamins traditional meat-based family diet.

4. Next steps

The following next steps were agreed:

- Workshop results in local newspaper (October 2011)
- Report on results of final project (October 2011)
- Presentation of DESIRE project results at meeting of Federal level Date (Moscow, November 2011) with aim to promote drip irrigation supporting at household level use