Evaluation of remediation recommendations: Stakeholder Workshop 3 Novy, Russia

1. Introduction

The Novy study site administratively belongs to the territory of Marksovsky District, which belongs to the Saratov Region (Oblast) of the Russian Federation. Saratov Region is considered as a zone of risky agriculture where cultivation is impossible without irrigation. The predominant original and current land use type is cropland, specifically annual and perennial (non-woody) cropping. Marksovsky district is located in the zone prone to land degradation and which after FAO classification is a zone of very high land degradation.

Soil depletion and soil secondary salinity as well as pollution of local water bodies by nutrients, leading to a decline in agricultural productivity, are the main socio-environmental problems in the area. They are mainly caused by the use furrow irrigation that is inappropriate to local soil and inadequate management of sprinkler irrigation. In response to these challenges, the following remediation strategies were trialled in WB4:

- Drip irrigation of vegetables instead of furrow irrigation; and
- Precision irrigation of forage instead of overhead sprinkler irrigation (which uses excessive amounts of water).

Figure 1: Furrow irrigation in Marksovsky District, Saratov Region,Russia

2. Priority Remediation Strategies

Both priority remediating strategies were selected with aim to cope with growing regional problems linked to soil secondary salinization and depletion due to inappropriate to local soil property technologies. Drip irrigation was selected for testing/adaptation at agro farm level promoting minimal irrigation water percolation to groundwater as well as zero discharge to downhill water bodies.

Table 1: Ranking of remediation options before and after field trials and modelling in Novy, Russia

Rank	Technologies ranked in WB3 workshop	Technologies ranked in WB4-5 workshop
1	Precision irrigation of forage instead of overhead sprinkler irrigation (which uses excessive amounts of water)	Drip irrigation
2	Drip irrigation	Green manure
3	Reducing of the infiltration losses from water supply channels	Drainage of irrigated agricultural fields
4		Phytoreclamation of soil secondary salinity at agricultural fields

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

After expert discussion about factors that could help promote the use of drip irrigation (replacing furrow irrigation) at agro farm level of Marksovsky District, participants suggested that regional and local administrations should modify financial subsidies.

The development of human resources/capacity and technical infrastructure was deemed important to enable the management of eco-innovative sprinkler irrigation technology at a field level.

4. Next Steps

The following next steps were agreed:

- Dissemination of final 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 use