

## Technology Fact Sheet

### Melioration of salinized soils<sup>i</sup>

- 1) **Sector:** Agriculture
- 2) **Subsector:** Soil degradation
- 3) **Technology Name:** Melioration of salinized soils
- 4) **Recommended option of technology:** Salinized soils melioration at the lowland meadows of R. Alazani
- 5) **Scale:** Area with salinized soils in East Georgia (Dedoplistskaro and Signakhi administrative districts)
- 6) **Availability:** The technology is a very expensive measure, local farmers and agrofirms practically would not be able to meliorate the salinized soils, therefore the introduction of this technology should be the state prerogative
- 7) **Background/notes (short description of the technology option)**

The melioration of meadows salinized soils requires their capital washing off at the background of horizontal draining. Before the capital washing down, the soil cultivation technology includes ordinary ploughing and plaining of plot surface. After this the deep (1m) moulding of soil must be carried out and the chemical meliorates-gypsum, ferrous sulphate and other compounds must be applied. Further the meliorative tillage of soils should be undertaken with the IITH-40 plough and systematic deep tillage between the washing off procedures

- 8) **Implementation assumptions (how the technology will be implemented and diffused across the sub-sector)**

The recommended technology is less accessible to farmers, as it is a very expensive measure and, hence, its practical introduction is impossible for individual farmer. Besides, it requires good knowledge of technical norms and relevant experience. This technology was not applied traditionally in Georgia, so that its adverse effect is not studied properly

- 9) **Impact statements**

- **Social development priorities:** The technology is important to tackle such social problems as the eradication of poverty and holding up of ecomigration
- **Economic development priorities:** The technology is important for the development of such priority sector of country's economy as the agriculture is. The quality and productivity of land is of major importance for the development of agriculture
- **Environmental development priorities:** The salinization of soils in the above mentioned regions is caused by the Soviet period. For its turn, the irrigation demand is determined by the growth of temperature at the background of precipitation decrease,

that is already revealed at the mentioned territories. The combat against the adverse effects of climate change is one of priorities for the Georgia Ministry of Environment Protection and for country's Environmental Action Plan in general. One of the most important resources, vulnerable to climate change, is the agricultural land.

- **Other factors:** The machinery for the implementation of recommended technology is available at the international market

#### 10) Costs (US\$)

- **Effectiveness of technology:** The application of recommended technology will increase the fertility of salinized soils and rise the crop productivity
- **Barriers**
  - The melioration of salinized soils is a large-scale and highly expensive measure. Hence, its implementation by individual farmers is almost impossible.
  - This technology is not traditional for Georgia; Therefore it would be necessary to consult with international experts on the possible collateral effects, especially in the Dedoplistskaro region, which is reach in underground waters.
  - The machinery to implement this technology is not available at the Georgian market.

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<sup>i</sup> This fact sheet has been extracted from TNA Report - Adaptation for Georgia. You can access the complete report from the TNA project website <http://tech-action.org/>