

Water resources deficit and Uzbekistan's actions on effective and sustainable use of land and water

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The article is based on information obtained in the course of implementation of the GEF Grant for the ADB Loan Project "Land Improvement in the Bukhara, Kashkaradarya, and Navoi provinces".

The objectives of the GEF Grant's local and international consultants of this project are capacity building for ecological analysis and management in the agricultural sector, collector & drainage water management for future life sustenance and ecological benefits, monitoring with environmental impact assessment, as well as development of a number of incentives for identified benefits from sustainable land and water resources management. At that, all the results, conclusions and knowledge obtained during the GEF grant implementation will be studied, summarized, and, along with demonstration model and control sites, will be used during dissemination of modern resource-saving and environmentally friendly farming skills in the region in the course of training in farmer field schools.

In addition to these work, information is collected and summarized the on applied modern resource-saving and environmentally friendly technologies on each control and model site in the provinces mentioned and on control sites with traditional technologies in order to have full information about land and water productivities at the farm level.

In the local consultants' opinion, which is the same as that of the international consultants, in these provinces the most significant thing is lack of farmers' knowledge about water demands by crops. As a result, unpractical use of land resources and ineffective use of water resources, as well as water-logging and swamping of the area during leaching and vegetation irrigation take place in the provinces, which eventually conduces to increased agricultural land salinity and degradation. Some farmers, being short on irrigation water, construct artificial weirs and irrigate by highly saline collector and drainage water, having no idea of the consequences of such intervention into the soil formation process. It is also necessary to take into account that planning of the rate of water supply to WUA proceeds from hydromodule zoning which currently does not correspond to actual soil conditions. In this context, water and physical properties of the main, most common soil types, particularly on the control and model sites, will be studied, taking into consideration the present-day situation and soil conditions, irrigation water volume, groundwater salinity and table.

It also should be noted that crop irrigation is accompanied by huge water losses and considerable drainage discharge. This brings us to say of the necessity to train farmers in irrigation technique and technology and development of their fields in accordance with the up-to-date resource-saving farming technologies.

The material analyzed allows stating that it is possible to improve land and water resources productivity, while solving problems of farms.