Possibilities to Improve Water and Land Productivity in Central Asia on Example of the Project "Water Productivity at Plot Level"

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For productive use of irrigation water, coordination between all water use levels from the main canal to field is essential. The reforms implemented in irrigated agriculture of the Central Asian region should definitely be aimed at the meeting of irrigation water needs of the end user, the farmer in this case and meeting of the crop water requirements.

Improvement of irrigation systems, institutions structures at both the river basin, large canal and the inter-farm network level should be carried out on the base of actual conditions and demands of water users. These systems and structures should be subjected to actual conditions and should be oriented to gaining maximum possible productivity of delivered water as well as to the maximum farmer's profit.

At present, too much water is used for crop irrigation. Most water losses are observed not only in irrigation system, but also in irrigated field due to poor organization of irrigation. Water wastage is observed along the whole chain from head intake structure to irrigated field.

Water distribution among users has irregular pattern: each user uses irrigation water in his\her discretion, without any control, discipline, agreement or order. The organizations that plan water supply are not able to control the time and volume of water use, while users have no possibility to get timely and needed volume of irrigation water; this particularly applies to those located downstream not only within canals but also laterals. As a result, conflicts arise between farmers, and the lowest level in the water management hierarchy – Water user association – operates until offtakes, and further, where farmers' fields are located, neither organizational, nor engineering issues are addressed.

Assessment and analysis of actual irrigation water use indicates that most farms have reserves and real potential to enhance the effectiveness of irrigation water use. The effectiveness can be enhanced without additional investments at field level and specific planning of water distribution at the farm level.
In this context, of importance are the development of most simple and accessible methods of irrigation water use rate setting at the field level and the dissemination of best practices on water and land productivity improvement among farms.