CONCLUSION

Systematized review of research registers within direction IV showed the following:
1. Achievement of potentially possible crop productivity and, thus, increase of irrigation water productivity are provided through well-known measures: drip irrigation, sprinkling, laser-leveling. These technologies allow to reduce crop water consumption by 10-40% as compared with practiced furrow irrigation. However, above listed methods of irrigation effectiveness increase requires considerable capital investments, which can be covered, by estimation of experts, through increase of crop productivity not less than 10-30%. Limited use (due to high capital investments and power consumption) of perfect irrigation methods must have the following priority areas:

- irrigation systems with permanent low water availability;
- schemes with expensive water lift;
- irrigated fields with high permeable soils or with high slope gradients and complex surface relief, where surface irrigation entails erosion processes.

2. Descriptions, characterizing proposed ways of improvement of the most popular surface irrigation methods, are of interest. Use of capital-intensive methods, such as sprinkler and drip irrigation (particularly, for tilled crops), requires estimations allowing for current economic tendencies, since potential water saving effects (reduction of irrigation water expenses per agricultural production) sometimes can not cover essential costs of high level operation of these relatively complex systems.
3. At present time, priority task for most lands of middle reaches is transition from hydromorphous regime to semi-automorphous one. This is accompanied by reduction of irrigation water expenses, decrease of loading on drainage, reduction of nutrients removal and chemical pollution of waterflows. Regulation of groundwater table should not be carried out through reduction of every possible operation water losses both in irrigation network and in the fields.
4. Real effect in most popular systems of furrow irrigation can be achieved through application in irrigated agriculture practices of optimized, for specific natural and economic conditions, irrigation technique elements and irrigation schedules connected with agrotechnical works (in this respect, developments of Tadjik researchers on organization of concentrated irrigation are noticeable). Through such improvements 1.5-2.0 th.m^3/ha of water can be, on average, saved as compared with current irrigation norms.
5. For raising the economic incentives of agricultural producers to increase effectiveness and productivity of irrigation water use and to reduce irrigation water expenses per agricultural production it is necessary to develop systems of soft crediting for measures related to reduction of irrigation water losses or favorable taxation for agricultural producers, who actually reduces water consumption under relatively high crop productivity.