Cross-sectoral Integration of Water Users (Horizontally)

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There is an impression that the cross-sectoral co-ordination is needed only during periods of water shortage, and while a water deficit is absent each sector can regulate its own rules for water use. However, it is far from the truth. By way of example, we review the Chirchik River basin – sub-basin of the Syr Darya River that was studied in the frame of the project "RIWERTWIN" (www.cawater-info.net/rivertwin). As a whole, this river basin has excessive water resources, which in average years considerably exceed the water needs of all consumers – hydropower, irrigation, natural complex, water supply, and industry. A surplus of water resources reaches three cubic kilometers; but, at the same time, some irrigation schemes suffer from insufficient water delivery due to lack of co-ordination of different sectoral interests.

The question is that even under the availability of excessive water resources, should the integration of interests of different sectoral water users be implemented taking into consideration a regime of water releases and water supply, requirements to maintaining water quality in rivers and other water bodies, and provision of regular operation of the basin complex? By way of example, we describe the experience learned in the Rhine River basin where, under general excess of water, upstream industrial enterprises, especially factories of the chemical industry and the cellulose industry, released so much harmful ingredients with their waste water, that the river has lost its fisheries and recreational functions. Signing a special agreement and 20-years of joint work were needed in order to rehabilitate the "ecological health" of this river.

From the point of view cross-sectoral (horizontal) integration, water management organizations should fairly represent the interests of all water users in different economic sectors and provide a priority of water saving and eco-system preservation within the boundaries of each hydro-geographical unit. As mentioned, above, the problem is that different departments manage the use of different kinds of waters. For example, surface water is managed by the Ministries and Departments of Water Resources, first of all, in the interests of irrigated farming, and, at the same time, by the Departments of Energy in the interests of power generation etc. At the same time, all the above-mentioned public departments and ministries, as a rule, do not co-ordinate their activity with each other. If during the Soviet period there were statistics on water use in all sectors (Form "2-TP Vodkhoz"), currently nobody has even general information, and this form of reporting is maintained only in some departments and ministries.

Gathering all economic sectors under "a single organizational roof" is not needed at all. Furthermore, as noted correctly in the GWP handbook [31], this approach can be even harmful since a sectoral professional specialization is important for an effective activity of specific production. However, the main basis for cross-sectoral integration is the co-ordination of sectoral interests in the process of joint use of available water resources according to agreed schedules, and use of wastewater derived in one sector by other sectors. At the same time, the mechanisms for conflict settlement should be developed to integrate contradicting interests. It may be achieved by involving the representatives from different sectors in public governance at any level of the water management hierarchy. The public bodies established on an equal footing should provide consensus based on mutually acceptable regulations. There are the following instruments for co-ordination:

- Overall planning and co-ordination of water resources use;
- Coordinating the economic growth of sectors;
- Information exchange; and

- Participation in material and financial inputs of mutual interest

Relevant public conciliation bodies play a positive role in co-ordination, (the participation of representatives of such sectors as hydropower engineering, nature management, agriculture, and water supply in the Basin Water Councils, and correspondingly the participation of representatives of administrative districts and large water users in the Irrigation System Councils, as well as water users in the WUA boards). In many countries, the National Water Councils, consisting of leaders of all sectors interested in the use of water resources as well as key scientists and water professionals, were established under the direct guidance of Prime Ministers of these countries.