

THE HANDBOOK ON WATER INFORMATION SYSTEMS

ADMINISTRATION, PROCESSING AND EXPLOITATION
OF WATER-RELATED DATA

March 2018



*(Cont'd)***Discovering groundwater monitoring networks**

Data come from more than 70,000 representative monitoring stations scattered all over the country. These stations measure key components of groundwater quality (qualitometers), and groundwater levels (piezometers). Some stations can insure both measurements. The ADES data bank gives access to descriptive data sheets for all of the monitoring stations: geographical coordinates, location on a map, station operators (water agencies, local and regional authorities, decentralized state administrative authorities, the French geological survey –BRGM, etc.), measurement frequencies, aquifers monitored, etc.

#Carrying out an effective search

The ADES data bank proposes several ways to access observation stations, technical data sheets, and data on quality (chemical analyses results) and/or groundwater levels (piezometric head). It features numbered buttons for quick access.

- Quick access, by entering free expression in empty boxes with localization, type of data you are looking for (monitoring station, parameter, water level);
- Advanced search page: you can select by location on a map, or by specific network, company, aquifer, groundwater body or national code (BSS1).

Whatever the access route, the results can be stored for later use.

Access, view, data export

The ADES website provides access to export sets of data and offers users various features such as:

- Maps and photos;
- Graphs: plot two chemical parameters for the same qualitometer on the same chart, and up to five for a piezometric station.
- Reliable indicators that are up-to-date, comparable and meet the needs of end-users.

The website also offers an indicator on the hydrogeological situation of a piezometer for a long period (minimum 10 years), with tables, graphs and maps.

Case study 39: SDC project/ Water Accountability in Transboundary Chu-Talas River Basins [17]

The project “Water Accountability in Transboundary Chu-Talas River Basins” financed by SDC, aims to promote modern, sustainable and transparent water resources management in the Chu-Talas River Basins that can serve as a blueprint for effective transboundary resources management at national and regional level.

This project focuses on the complete modernization of bottom-up demand scheduling and a top-down supply-driven water distribution system in the Chu-Talas River Basins. It includes:

- Full digitization and automation of the accounting procedures in place with state-of-the-art information technology;
- Development of new capabilities for planning, effective operational analysis, as well as reporting and data/knowledge exchange.

Whereas in the existing system, data requests had in many cases to be laboriously communicated via fax and/or telephone, thanks to a modern digital WIS-type system, stakeholders will be able to immediately query selected data on their computer terminals and/or tablets safely and securely.

The data will be available for operational use and / or for reporting etc. and prepared in a way that it is easily accessible and understandable for all stakeholders, from the WUA level up to the national and transboundary scales.

The activities led by IOWater in collaboration with hydrosolutions Ltd. and local expert consultants, mainly aim to increase water delivery effectiveness through better on-time data management, processing, and information production and dissemination. Among the main results it is particularly expected that thanks to the improvement of the water data management procedures:

- At local level, the authority in charge of water allocation for irrigation will have the capacity to follow online (on a tablet) the status of water allocation on a daily basis;

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- At basin and national level, the national and basin authority will have access to new national information services (reports, indicators, bulletins, maps) facilitating the analysis of water allocation efficiency per sector and per canal;
- At transboundary level, transboundary data sharing will be reinforced with regular production of transboundary bulletins on the water resource and water allocation situation.

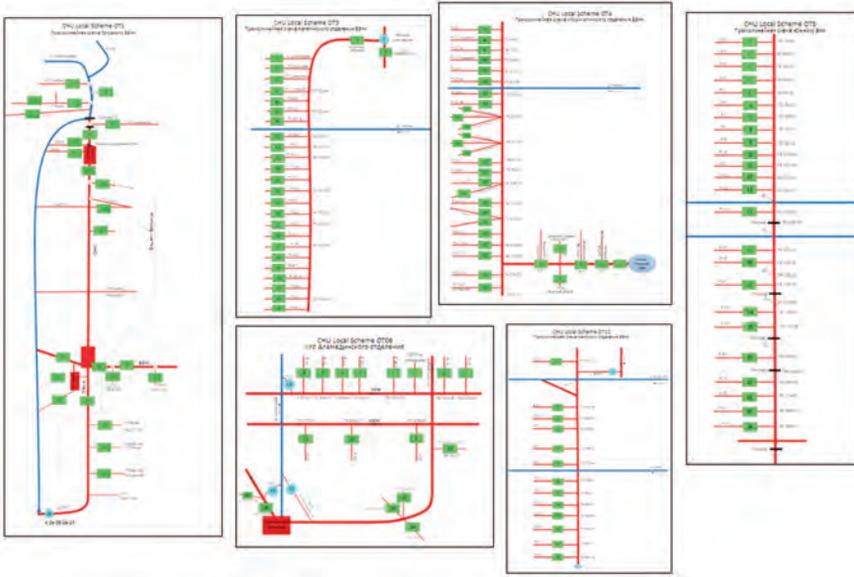


Figure 51: Example of interactive irrigation schemes on the Chu basin in Kirghizstan

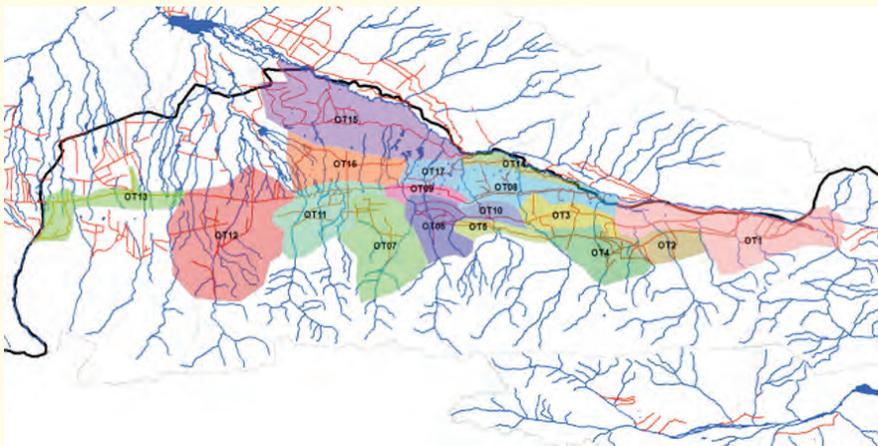


Figure 52: Draft georeferenced delineation of irrigation unit on the Chu basin in Kirghizstan