



A Source of Peace – Transboundary Water Management in Central Asia

Data management to support IWRM in selected basins and irrigation systems

Context

The monitoring and management of irrigation systems and water resources are poorly developed in Central Asia because of absent or ineffective institutions. There is also a lack of capacity to carry out comprehensive basin assessments, meaning no proper basin planning takes place with respect to different water usages and timeframes.

Even though the principles of Integrated Water Resources Management (IWRM) are generally known, they are not widely implemented.

In order for these institutions to effectively fulfil their mandates, assistance is provided to develop long-term basin plans and these then serve as the basis for introducing IWRM principles.



Training on databases and Geographic Information System (GIS)

Measures

Relevant basin and irrigation water institutions are being supported with a variety of technical and institutional measures.

Technical support will be provided to improve the institutions' land use databases, especially regarding irrigation, soil, water and vegetation. For example, the programme helps develop a prototype database structure and systematise existing digital and cartographic information, as well as set up workstations for ArcGIS software and database management. These measures will promote sound basin analyses and proper basin planning. In particular, this means different scenarios on water resource formation and use within river or irrigation systems can be tested.

Partners:

Local and regional water management organisations, Land Tenure Development Centre, Scientific Information Centre of the Interstate Commission on Water Coordination, and the International Water Management Institute

Project term: Oct. 2009 – Dec. 2011

Budget: 400,000 Euro

However, in a region facing increasing variability in water availability, integrated planning skills are essential for developing appropriate adaptation measures for river basins or irrigation systems. This is particularly true

when confronting the potential impacts of climate change.

Objective

The main objective for this subcomponent of the Transboundary Water Management in Central Asia Programme is to strengthen irrigation and water resource monitoring and management in selected transboundary river basins and irrigation systems in Central Asia. To this end, the programme is supporting the five Central Asian states to set up effective institutions based on IWRM principles such as, for example, basin organisations for joint management of water

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Furthermore, the database will form part of the reporting system for water management organisations and replace the current outdated manual reporting system. It will also serve as a model and methodology for these organisations to systematise their data. Nationally, partner water agencies will handle database roll out and adoption.



Coordination meeting with partner water management organisations

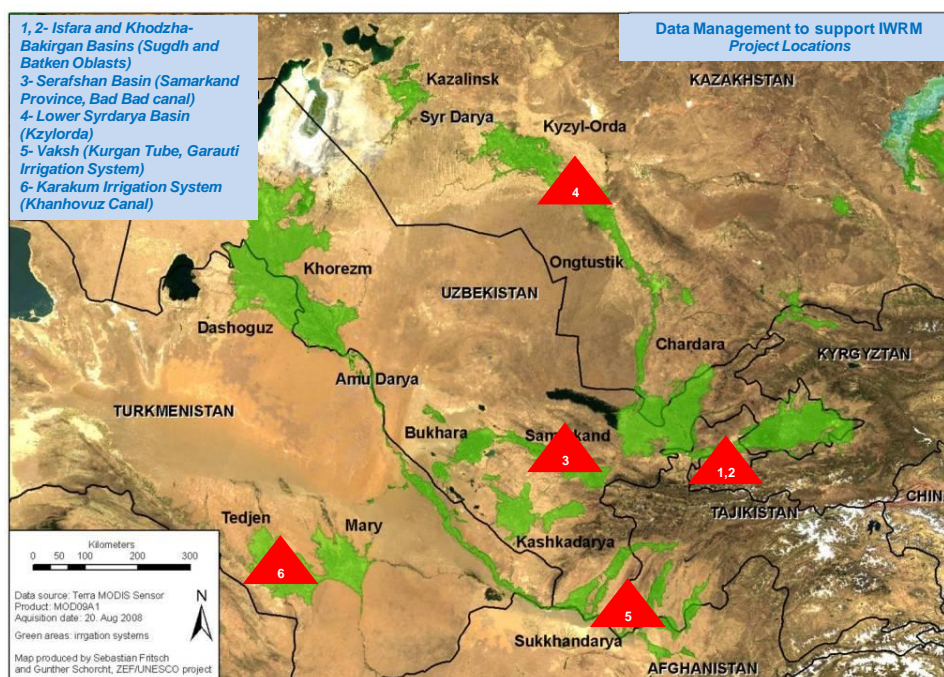
Institutional measures include training local staff in using satellite imagery and remote sensing tools for comprehensive basin analyses and planning, and establishing terms of reference for basin plans.

Intervention areas range in size from small irrigation schemes like Garauti in Tajikistan at 250 square kilometres, up to the Aral-Syrdarya Basin scheme in Kazakhstan covering approximately 80,000 square kilometres.

The approaches required to support the basin and irrigation water institutions depend on the differing natures of the project sites. Approaches include:

- full-scale basin analysis and planning in the Isfara and Khodzha-Bakirgan River basins in Tajikistan and Kyrgyzstan
- limited-scale basin analysis and planning for other locations, such as the Uzbek section of the Serafshan and the Kazakh section of the Aral-Syrdarya sub-basin (here full-scale basin plans could still be developed, depending on how far IWRM principles can be applied)
- activities solely related to developing basin databases and land use maps of irrigated areas.

All approaches include regional coordination meetings with partner water management organisations and off- and on-the-job training on database management and GIS. Contact groups in the partner water management organisations will ensure ownership and sustainability of data management activities.



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