

Transboundary Water Management in the Chu Talas Basins and Regional Cooperation for Water Resources in Central Asia

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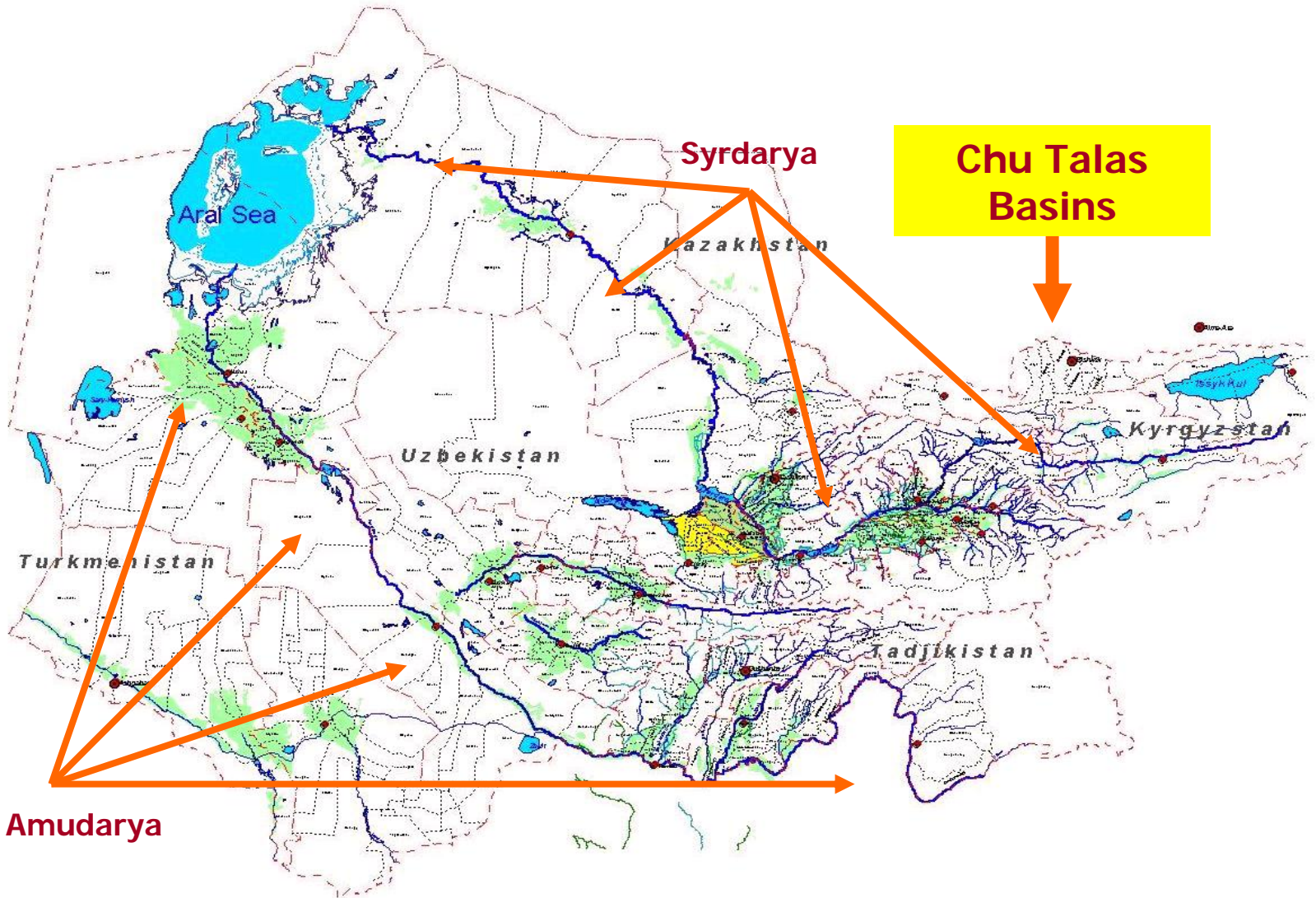
Water Challenges in Central Asia

- Syr Darya and Amu Darya comprise nearly all surface water – limited options for development
- Reduced water flow and desiccation of the Aral Sea
- The uncertainty of climate change on future availability of water resources
- Imperfect institutional framework for regional cooperation on water resources management
- Water allocation for irrigation versus water allocation for power generation
- Energy in winter for upstream countries and irrigation water in summer for downstream countries
- Inefficient water management
- Degraded irrigation and drainage infrastructure
- Deteriorating water quality and soil salinity

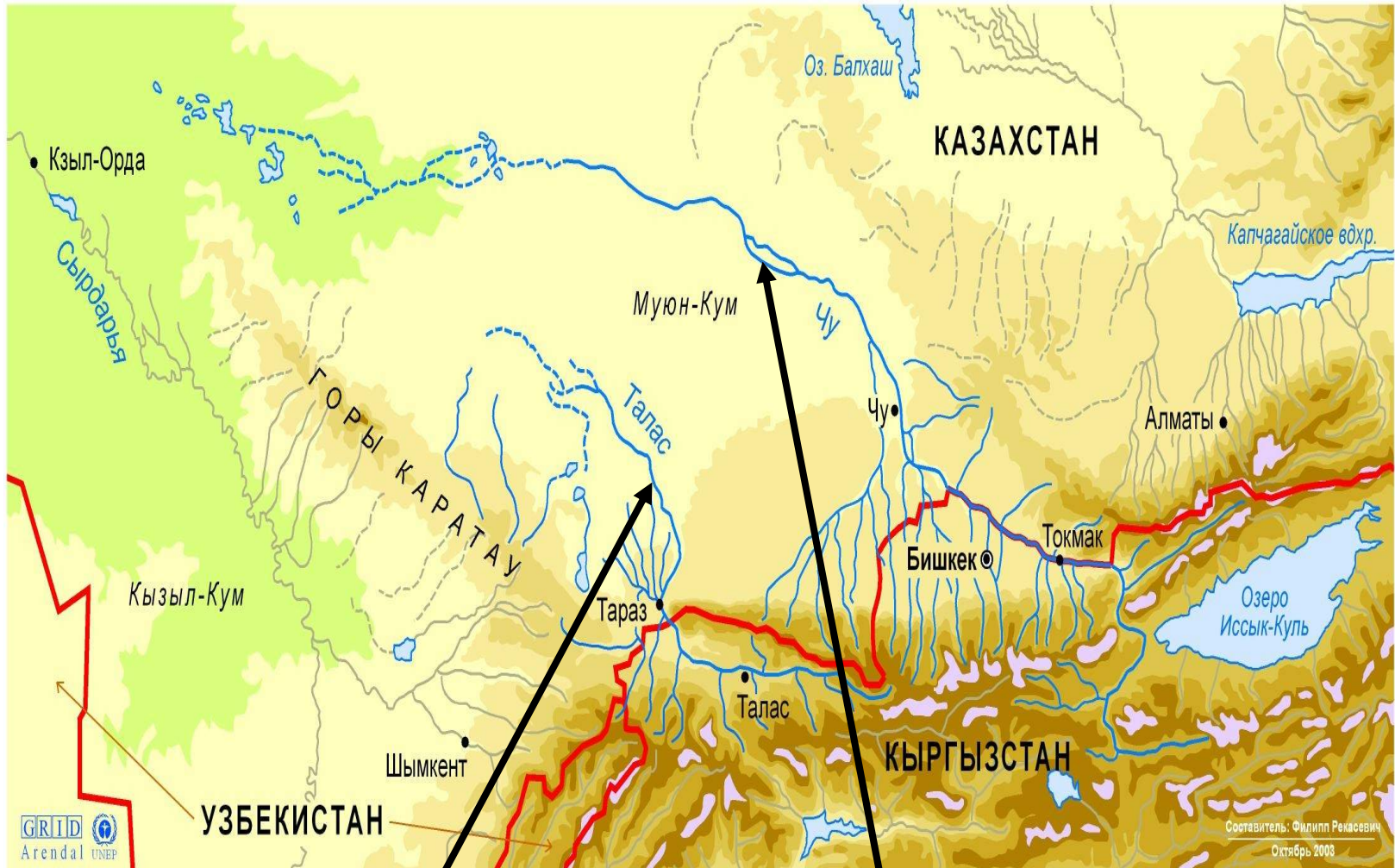
ADB RETA – Improved Management of Shared Water Resources in Central Asia

- **Impact – Sustainable and efficient management of water resources in Central Asia**
- **Outcome – Strengthen the cooperation for the management of water resources in Central Asia**
- **Components**
 - Improving Transboundary Water Management on a Pilot Basis (Chu Talas Basins Experience)
 - Facilitating Regional Water Policy Discussions – continuing work on the Draft Agreement on the Use of Water and Energy Resources in the Syr Darya River Basin
 - Building Regional Water Management Capacity
- **Closed in December 2007**

Aral Sea Basin



Map of the Chu and Talas Basins



TALAS

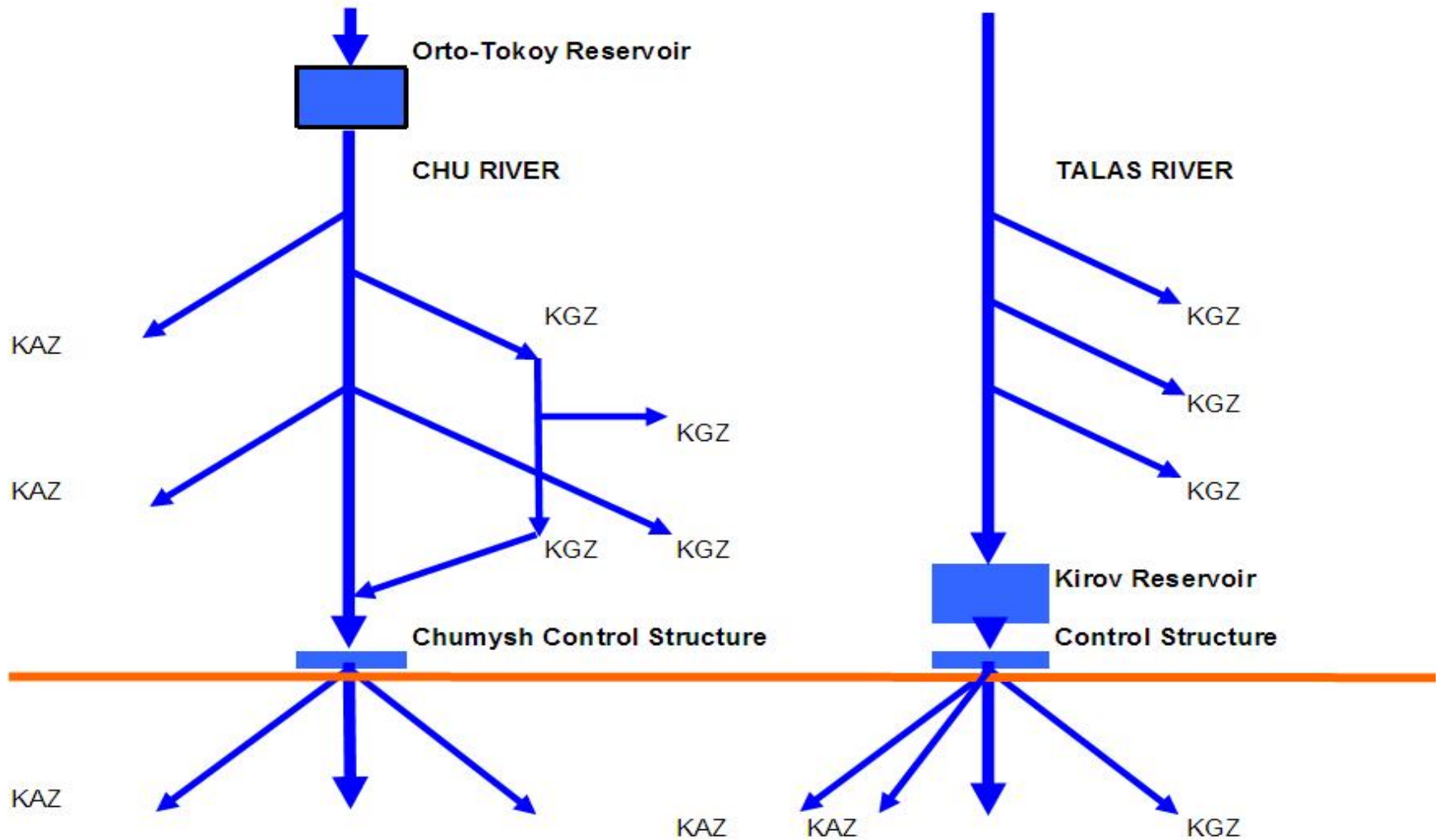
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Basin Data

Chu River:	Total Length	1,186 km
	Total Area	62,500 km²
	One Reservoir	470 mln. m³
	Three Main Canals	284 km
	Interfarm Canals	1,700 km
	Water Intake Facilities	3,900
Talas River:	Total Length	444 km
	Total Area	52,700 km²
	One Reservoir	550 mln. m³
	Interfarm Canals	979 km
	Water Intake Facilities	1,150
	Totals:	Population
Irrigated Area		+700,000 ha

Scheme of the Chu and Talas Basins

KYRGYZSTAN



KAZAKHSTAN

Water Management Challenges in the Chu Talas Basins

- Weak knowledge base for water management
- Lack of coordination on irrigation distribution
- Inefficient water management
- Degraded facilities and inadequate O&M
- Incomplete institutional framework for management and transboundary coordination

Focus Areas of the RETA for Chu Talas Basins

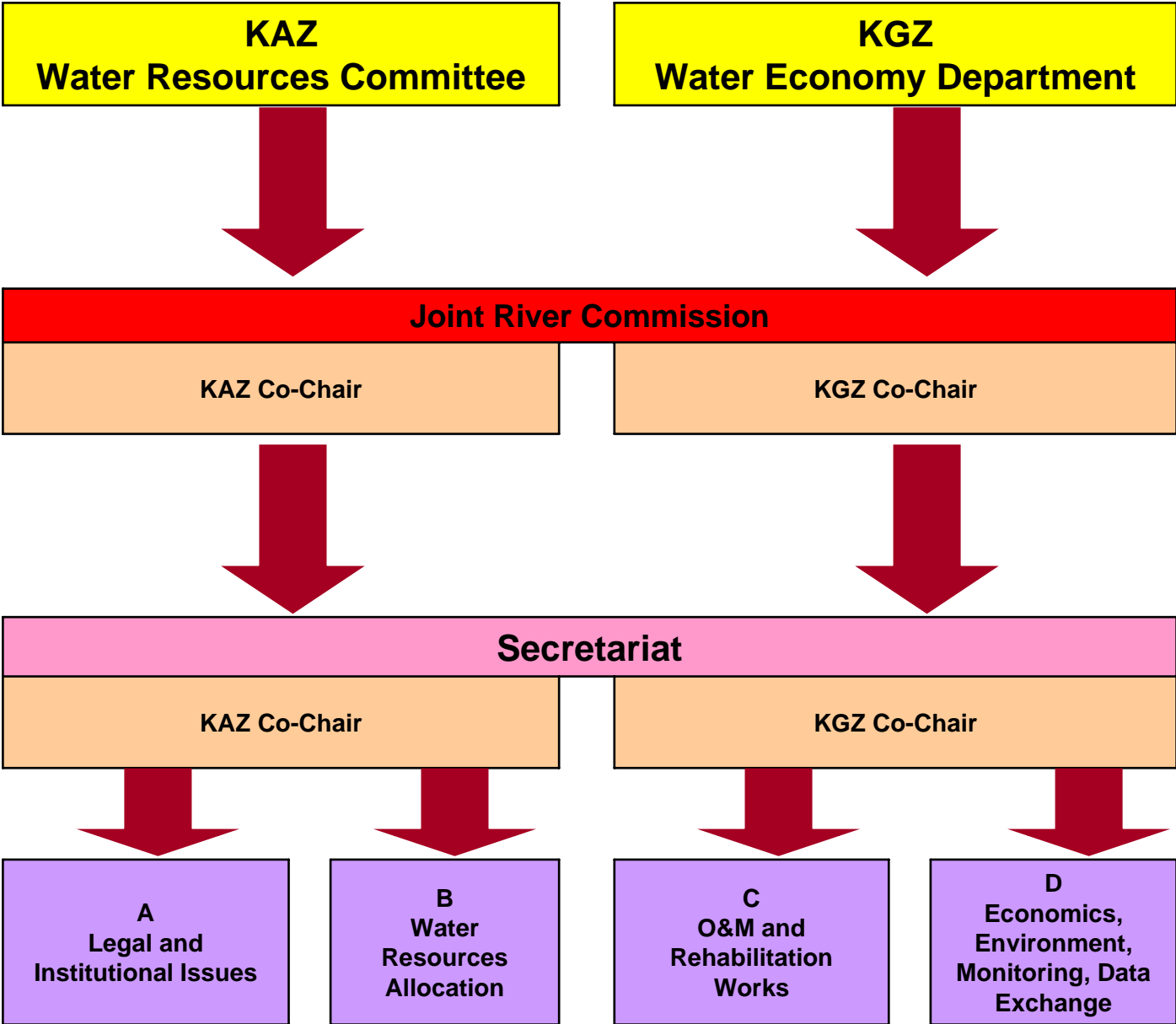
- Developing the legal framework for water rights and water allocation
- Institutional development for system operation and maintenance
- Water assessment and data exchange
- Joint systems operations and improving maintenance practices
- Integrated water resources management (IWRM) planning

Existing Legal Framework for Water Rights and Water Allocation

- Regulation of 1983 on Water Sharing in the Chu Basin
 - 1.6 mln m³ - 50% KAZ/50% KGZ
- Regulation of 1983 on Water Sharing in the Talas Basin
 - 6.6 mln m³ - 42% KAZ/58% KGZ
- KAZ/KGZ Agreement of 2000 on the Use of Interstate Water Facilities in the Chu and Talas Basins
 - 2 Reservoirs, 3 Main Canals, 1 Main Control Structure
- KAZ Water Code 2003 and KGZ Water Code 2005
 - The water resources are the property of the State
 - Everyone has the right to use water in accordance with the provisions of the water code

Institutions for Chu and Talas Basins

- **KAZ Water Resources Committee**
 - Chu Talas Basin Water Management Department
 - Taraz Water Department, 60 WUAs
- **KGZ Water Economy Department**
 - Chu Basin Water Management Department
 - Talas Basin Water Management Department, 115 WUAs
- **Chu Talas Joint River Commission**
 - Secretariat and Technical Working Groups
 - Water assessment, water allocation, system operations and maintenance
- **Interstate Chu Talas Basin Council (Proposed)**
 - IWRM planning, environmental monitoring, water quality control, biodiversity, stakeholder participation, and information dissemination and exchange

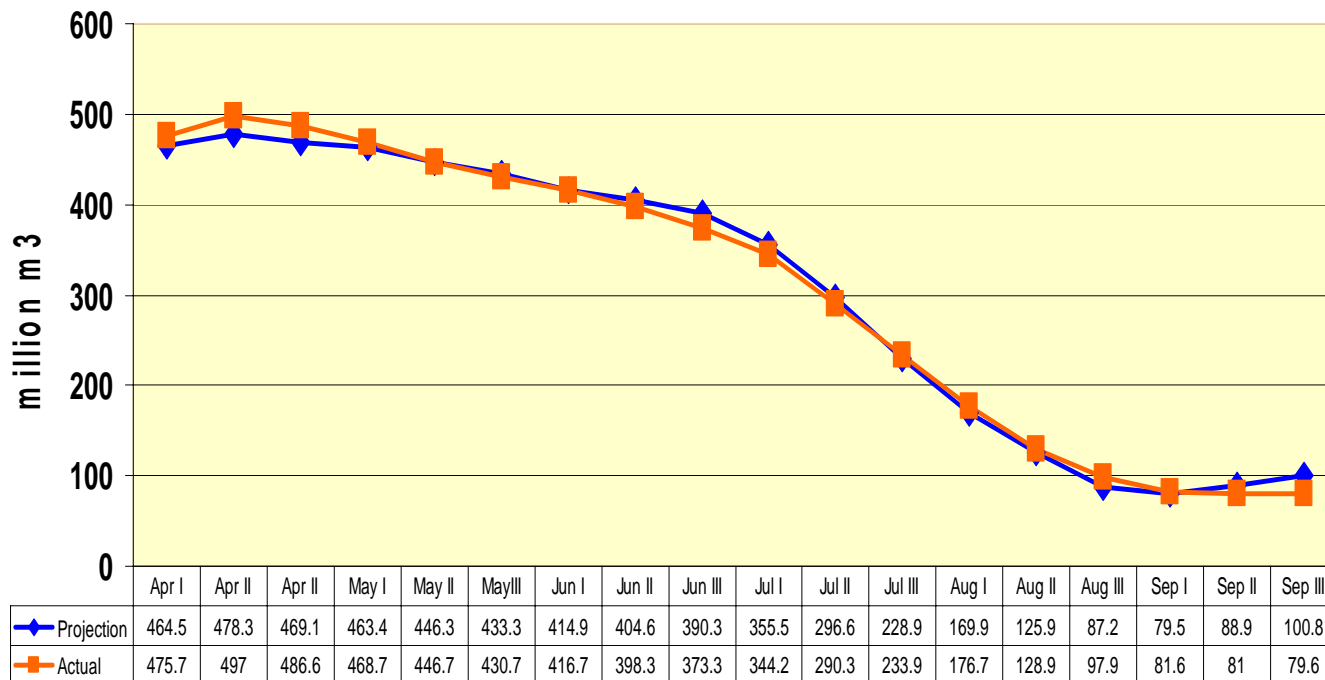


Water Assessment and Data Exchange for Chu Talas Basins

- 10 Monitoring Stations in the Talas Basin
- 5 Monitoring Stations in the Chu Basin
 - All need rehabilitation
- 6 Meteorological Stations in KAZ under rehabilitation
- Numerous water intakes structures that need rehabilitation
- ADB assistance
 - 10 sets of computers installed at all interstate water facilities
 - Computer models for water assessment and allocations
 - Automated Management Information System at Kirov Reservoir
- OSCE, UN ECE, UNESCAP assistance
 - Automated Management Information System at Chumysh Control Structure

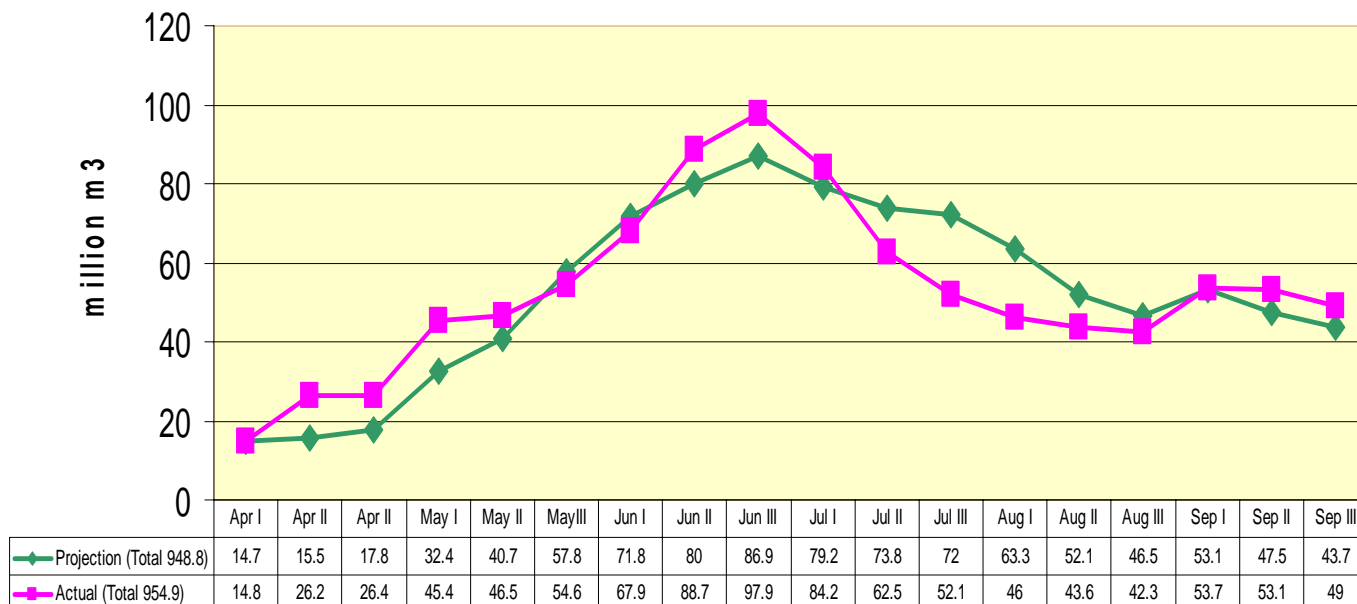
Water Assessment Model for Talas Basin (Deviation 0.1%)

2007 Projected and Actual Water Volume in Kirov Reservoir During Vegetation



Water Assessment Model for Talas Basin (Deviation 0.1-0.6%)

2007 Projected and Actual Water Volumes to be Shared by KAZ and KGZ During Vegetation



Joint Operation and Maintenance

- **Inventory of water facilities in KGZ for joint O&M identified according to 2000 Agreement**
 - New water control structures to be included in the agreement
- **A mechanism for cost-sharing of O&M developed**
 - Improved standards to address previous O&M deficiencies
 - KAZ/KGZ pay O&M cost proportionally to water allocated
 - The Chu Talas Joint Commission identifies the scope of priority works, prepares cost estimates and submits requests for funding
 - KAZ provides cash or contractors to execute works
 - KAZ/KGZ jointly commission the works
- **Agreement is under review for further refinements**

Development of IWRM Plans for Chu Talas Basins

- Awareness of the benefits from IWRM has increased
 - KAZ adopted National IWRM Plan with UNDP support
 - Both KAZ/KGZ requested ADB's assistance in developing IWRM plans for both basins
- Basic legal framework exists
 - KAZ/KGZ Water Codes of 2003 and 2005
 - 2000 Chu and Talas Agreement
- Political will and commitment from both countries to develop IWRM plans is in place

However

- Institutional and technical capacity needs to be further developed to create and implement plans
- Additional support for the development and dissemination of plans is required

ADB RETA – Improved Management of Water Resources in Central Asia

- **Approved September 2008 to be completed in 2010**
- **Impact – Sustainable economic development in the Central Asian Republics and Afghanistan**
- **Outcome - Improved regional cooperation on water resources for the Central Asian Republics and Afghanistan**
- **Components**
 - **Improved knowledge base for water resources management of the Amu Darya**
 - **Strengthened institutional framework for regional cooperation on water resources for the Syr Darya and Amu Darya**
 - **Support to the Chu Talas Joint River Commission**
- **Implemented through a Steering Committee with support from National Working Groups and a Technical Secretariat**
- **Steering Committee to have broad control over the content and pace of the dialogue**
- **Developed in close consultation with RETA participants**
- **Approach to coordinate with other ongoing initiatives**

Improved Knowledge Base for the Amu Darya

- **Hydrometeorological network**
 - Analysis and recommended improvements for the hydromet system
 - Improved data exchange protocols among stakeholders
 - Scope additional technical hydrological, morphological and other water resources studies
- **Benefits from regional cooperation**
 - Review and develop methodology(s) to assess economic, social, environmental and other benefits from regional cooperation on water resources
 - Assess benefits, costs and their distribution from different operational and development strategies of the Amu Darya
 - Scope additional studies to better understand the benefits from regional cooperation on water resources management

Strengthened Institutional Framework for Regional Cooperation on Water Resources

- Analysis of institutional arrangements for water resources management in the Amu Darya Basin with recommendations to improve - including Afghanistan
- Work to develop an interstate agreement for regional cooperation on water resources for the Amu Darya - including Afghanistan
- Continue work on the Draft Agreement on the Use of Water and Energy Resources in the Syr Darya River Basin
- Identify options to institutionalize dialogue for regional cooperation on water resources and to develop a long-term program of work, budget and implementation arrangements for continued dialogue after completion of the RETA

Support to the Chu–Talas Joint Rivers Commission

- Strengthening the agreement of 2000 on the Use of Interstate Water Facilities in the Chu and Talas Basins
- Introduction of additional computerized water assessment and allocation models for the Chu and Talas basins
- Development and dissemination of IWRM plans for each basin

Activities to Support Development of IWRM Plans for Chu Talas Basins

- Establishment of Interstate Chu Talas Basin Council
- Collect baseline data on water quality and quantity
- Inventory and improvement of water infrastructure
- Assessment of water losses
- Rehabilitation of key control structures
- Improved automation of water allocation
- Capacity building of stakeholder institutions
- Public consultation and information dissemination
- Endorsement of IWRM plans by both countries

For detailed information on the Chu Talas Joint
River Commission please visit:

www.talascchu.org

Possible Activities for Regional Cooperation on Water Resources

- Inventory and analysis of previous and ongoing initiatives for regional cooperation on water resources in CAREC countries – many bilateral and multilateral actors and many activities
- Reporting on or coordination of ongoing initiatives for regional cooperation on water resources in CAREC countries
- Development of a clearing house for information on regional cooperation for water resources for CAREC countries
- Reporting on or analysis of water resources management issues of common concern for CAREC countries