

Global Water
Partnership
Central Asia and Caucasus

**NETWORK
FOR WATER SECURITY**

www.gwpforum.org

CACENA - CAUCASUS AND CENTRAL ASIA

The region can geographically be subdivided into two sub-regions: The Southern Caucasus (three countries – Azerbaijan, Armenia and Georgia), and Central Asia (five countries – Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan). There is a big differentiation in renewable water resources availability among the countries within each sub-region. The biggest part of the territory is located in the arid and semi-arid climate, and irrigated agriculture accounts for about 85-90 % of total water use. The most common challenging issues for the Caucasian sub-region are the low access to proper drinking water supply and sanitation, water ecosystems degradation, floods and, in some zones - water scarcity. For Central Asia they are increasing water deficit and water ecosystems degradation. Transboundary issues are common for all CACENA countries.



The principal efforts undertaken by national water authorities mostly addressing to implementation of the integrated water resources management (IWRM) principles towards MDGs achievement in all eight countries. These include public participation in decision making, promoting political will to cooperation among sectors and countries, initiating dialogues among all stakeholders and support to practical actions at local levels. Due to active role of the Regional Water Partnership in CACENA a close cooperation has been established between water specialists in the region, joint activities have been implemented, as a result of which good relationship has been established between the countries. During the regional meetings within the framework of GWP CACENA, exchange of information and management experience takes place between the principal stakeholders. The GWP CACENA provides favorable conditions for integrating not only into the GWP network activities, but also for involving local partners into activities supported by other international organizations and donors – with the general goal to create water security over the region.

Network in Action

Today GWP CACENA is a well established regional actor, who helps the region to solve difficult inter-state water resources issues as well as the countries to develop an Integrated Water Resources Management approach in policies and practices. The concept of providing a neutral platform for dialogues has grown in significance since GWP CACENA was established in 2002.

GWP CACENA is not a legal entity. It is a network that unites the country water partnerships (CWP), which in their turn unite the Partners in the countries. GWP CACENA is an integral part of the global network of GWP, however it is not a sub-division of the Global Water Partnership Organization (GWPO).

The mission of GWP CACENA is “to support CACENA countries in the sustainable management of their water resources”. The guiding principles stem from the Dublin and Rio statements, the Millennium Assembly and the World Summit on Sustainable Development, and adapted over time to reflect the international understanding of “equitable and efficient management and sustainable use of water”.

The main objective of the GWP CACENA is to promote the principles of integrated water resources management and to that end:

- To determine the vital requirements of the region and countries, and to support the Partners by linking the requirements with available resources;
- To support the efforts aimed at introduction of the integrated water resources management at the regional, national, local and basin level;
- To develop the tools of information and experience sharing.

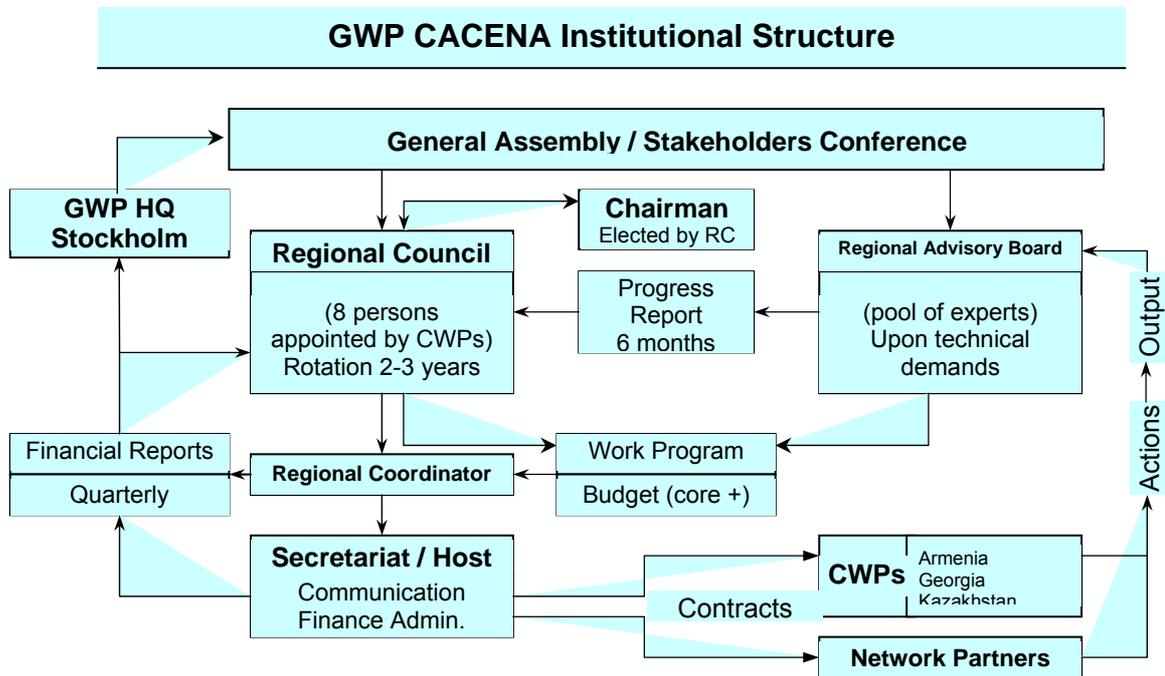


GWP CACENA Partners in Armenia, 2004



Lake Sevan in Armenia, 2004

Regional Council is the main driving force for the GWP CACENA and it was established on 7th December 2006 instead of Regional Technical Advisory Committee (RTAC). The Regional Council includes one representative from each of eight countries.



President of Tajikistan Imomali Rakhmon visiting showcase of GWP CACENA during International Conference in Dushanbe, 2005

GWP CACENA Strategy 2009-2013

Within coming few years the regional water resources will have to be higher ranked on the policy agendas in order to meet combined challenges of social-economic development needs and climate change threats. From this view point the main focus on the Network is set on helping countries *to sustain cooperation* around water bringing the key sectors together with regional and international actors in order *to raise political will for cooperation* via public awareness, increased capacity building activities by improved knowledge management and communication.

According to the Regional Strategy adopted for 2009-2013, during 2009 - the first year of the new cycle - the GWP CACENA network will develop an agreement on subsequent strategic actions for strengthening of country water partnerships in the region in order to reinforce the results in hand (from the past five years) in promoting the concept of IWRM towards sustainable development of all eight countries and to sustain their cooperation capacities (keeping in mind specifics of the two sub-regions – Central Asia and Southern Caucasus).

During the second stage of the new cycle – the years 2010-2011 – the GWP CACENA network will focus on promotion of its neutral platform (in cooperation with other active actors – e.g. EC IFAS, EU, UNECE, Finland, APWF, ADB, SDC, et al.) for dialogues among countries / stakeholders on the most challenging issues (transboundary cooperation, climate change adaptation, drinking water supply and sanitation and further promotion of the IWRM concept) – with the principal goal: to help countries to achieve sustainable cooperation processes.

During the third, final stage of the new cycle – the years 2012-2013 – the GWP CACENA network based on the established sustainable cooperation platform will be focusing on a more substantive programme of activities – to help countries with implementation of their agreed measures, which will appear at the stage as outcomes of the above-mentioned dialogues. Thus, the work programme for this stage should be specified in 2011.

In general the annual Work Plan of GWP CACENA includes four dimensions of activities in accordance with the GWP Strategy 2009-2013:

Strategic Goal #1: Support countries to put into practice better water resource management for water security

Strategic Goal #2: Promote water resources management to address adaptation to climate change and other critical challenges

Strategic Goal #3: Position GWP as the thought leader and pre-eminent advocate of water resources management through the creation of a global communications culture

Strategic Goal #4: Reinforce the network for effective performance



Coordinators of the Inter-Regional Workshop (CACENA and CEE) in Varna, Bulgaria, 2007



GWP CACENA Partners in Bulgaria, 2007



GWP CACENA Partners in Scotland to attend International Water Law Seminar, 2005

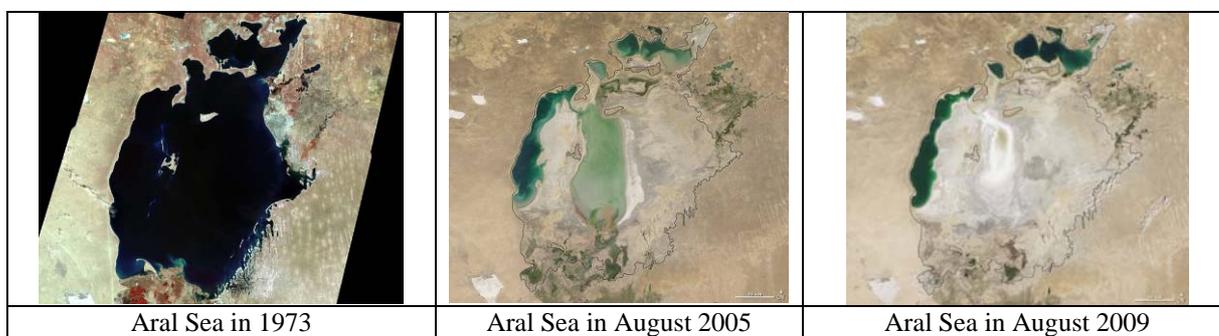


Vadim and Patricia in traditional dress, Dundee, 2005

Regional Concept of the IWRM as a Tool for Water Security

Water resources management is the art of delivering required amount of water to a necessary place in needed moment of time. The history of this art in CACENA countries accounts millenniums, but the most intensively water resources started to be used in XX century, especially after 1960. That was caused by fast growth of the population, intensive industry development and, mainly, irrigated agriculture.

Unfortunately, until 2000 in CACENA countries, priority for water development has been given to the covering basic needs of human beings and satisfaction of economic development, but not for ecosystems' needs. As one of the most known result of that we can observe the disaster of the Aral Sea and its coastal zone. Today's the Aral Sea – these are two separate lakes with total volume of water about 9 % of the Sea, which was in 1960. The mineralization of water in the western part is above 150 g/l, and in the northern part is about 20-35 g/l. There have been heavy losses of biodiversity occurred: more than eighty common species have disappeared from the aquatic fauna and flora.



Also there is uncertainty about the possible impact of global climate change on water resources in the region. Over the last thirty-five years, the average temperature has increased by 1 °C and the size of glaciers for example in the Pamiro-Alay system has been reduced by 30 percent. Different scenarios predict a greater water deficit by the year 2030 as result of evaporation increase and a decrease of water resources in Central Asia between 6 and 20 km³ annually (5–15 percent of total renewable water resources).

The following definition of Water Security could be proposed:

“Water security is a completed set of conditions, processes and actions needed to provide water balance that ensure absence of risks/threats for nature and human society within the entire hydrological basin”.

Water policy within the context of water security should provide system of measures (legal, institutional, engineering and others) aiming to keep balance between biosphere and anthropogenic interventions, and other external factors impacted to water cycle in the basin. There are three keys to sustainable development – as a way to water security and harmony: 1) the social equity, 2) economic growth, 3) environmental and ecological sustainability. The practical instrument for these - is proper implementation of integrated water resources management (IWRM).

The IWRM could be seen not only as a good theory, but as a real practical instrument. Proper implementation depends on clear understanding of the concept. For that GWP CACENA

recommends de-fragmented vision on IWRM, which includes water resources management (WRM) process (including managerial tools) plus governance system.

Water resources management process involves a number of key interrelated components (see table below).

Components and Indicators of Water Resources Management Process

WRM Components		Tasks	Indicators
Available water resources	G O V E R N A N C E	Monitoring Development Protection	Amount, quality, regime, renewability, variability
Infrastructure		O&M	Costs / efficiency / cost recovery
Water requirement		Evaluation Demand management	Level/amount/quality/time/location
Water balance and allocation		Participation Plan (schedule) Regulations	Norm for flow rate Equitability & rationality criterion (rights / share / quota / limit)
Water delivery		Secured water supply	Sufficiency of water supply, uniformity, sustainability, minimum unproductive losses
Water use and productivity		Output and water saving	Productivity (more crop per drop)
Water use effects (MDGs)		Sustainable development	Sustainable use index
Management assets		Maintaining waterworks in operable conditions	Operability indicators
Water quality & ecological flows management		Meeting the environmental requirements	Quality indicators and ecological flow rates
Monitoring & Evaluation		Day-to-day services	Availability of on-line information from all key points of water delivery and distribution
Long-term planning		Adaptation to long-term changes	Water requirements over the planned period are met

First of all, there should be available water resources (surface, underground, etc.) and engineering infrastructure for water abstraction, storage and delivery to water consumers and users. Management process envisages the obligatory water requirements assessment, procedures for water allocation based on permanent balancing of water resources and demands, after that - water delivery service and, finally, managing the process of water use and consumption. Water quality control and meeting environmental requirements can be also added to above process. In addition, management process has to include forecast of long-term changes of key factors and water balance components, as well as to specify a mechanism for adaptation of the water use system to all possible changes.

Naturally, outcomes and efficiency of water management process should be regularly monitored and evaluated. Monitoring, assessment, protection and development of available water resources are key objectives of the first component. A key indicator to demonstrate the progress in achieving established objectives is a renewability of water resources in regard to their reserves or level in a source, water quality, and variability of these parameters over time.

One of key objectives related to engineering infrastructure (reservoirs, irrigation and drainage canals, hydraulic structures, water supply network etc.) is proper operation and maintenance (O&M), including maintaining necessary operational regimes and design parameters of structures; their repairing, up-grading, and, if it is necessary – reconstruction or rehabilitation. At present, a

quality of O&M is defined by such indicators as costs (financial and material), cost recovery, efficiency and operational life of infrastructure.

Next component of water management process (water requirements) is aimed at assessing the needs of all stakeholders in water resources and managing these requirements are based on available water resources. Major indicators of this component are a record-keeping of all points for water delivery, required amount and time of delivery (some water users may be interested in maintaining necessary water level or water quality in their systems).

After specifying available water resources and water requirements, the next component – water allocation – has to be implemented. In other words, this is the process of drawing up a balance taking into consideration available water resources and water demands. Here, major objectives are maximum possible involving all stakeholders in the process of negotiations (coordinating water allocation) and development of acceptable for all procedures (rules) for water allocation. The proposed indicator for this component is criteria of equity and rationality for establishing quotas or limits of water use (in case of water deficit).

A next component of the water management process is water delivery from a source to water users (water supply). Proposed indicators for evaluating a quality of these services are uniformity and sustainability of water supply under minimum non-productive water losses.

Finally, the last key component is water use, including irrevocable water consumption. Here, the major objective is to produce maximum output by using water or its optimal utilization. The proposed indicator is specific water productivity i.e. an amount of water consumed per unit output – product. Producing output and using water, we should be guided by the principles of sustainable development (providing opportunities for future generations to use water in the same extent as today); and the proposed indicator can be a sustainable use index, exceeding of which is inadmissible.

Water Governance

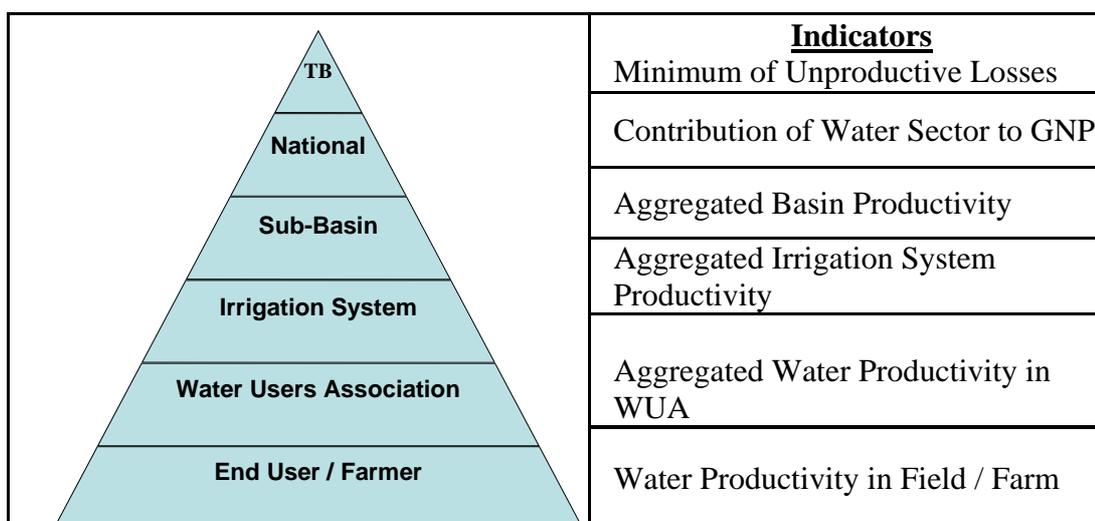
Within the IWRM system the all above mentioned water management process components should be managed by proper governance framework. The main goal of governance framework is to provide equal democratic opportunities for all stakeholders involved into water resources management process.

The main components of the governance framework are the following:

- political commitment;
- institutional arrangements;
- legislative framework;
- financing and incentives;
- public participation;
- capacity development.

The governance framework is not static in time – it should be permanently adapted to changes: natural, political, social, economic, technological. In the large extent it can be referred to management rules that are the most vulnerable parts of the modern management system, and require paying the most attention of all specialists from the water sector because each basin, each sub-basin, and each water management or irrigation system, as each man, has its own features. This is not predetermined only by specific landscape, configuration and lithology of a watershed, but also by conditions of water withdrawal and distribution (surface water sources or groundwater; regulated or unregulated flow), parameters of water distribution system; the

combination of hierarchical water management levels, composition of operational works and conditions at different levels of the water management hierarchy.



Principal Indicators for Different Levels of Water Governance Hierarchy

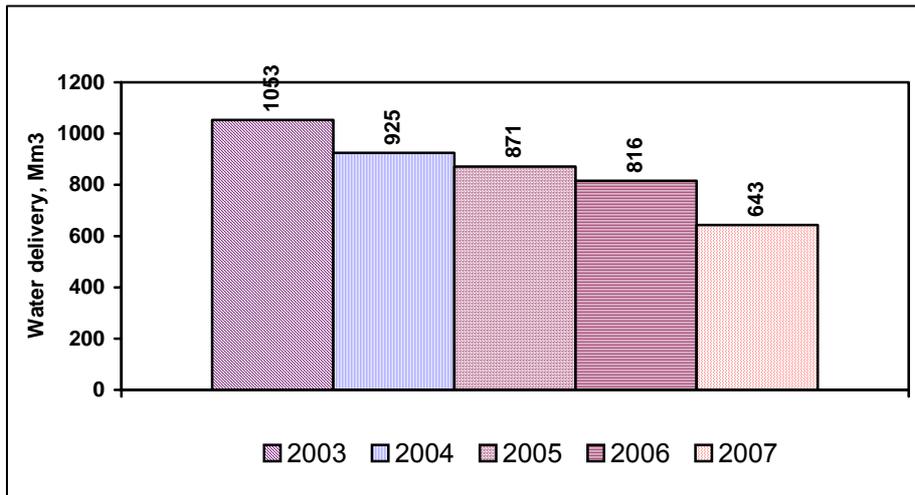
To put IWRM into practice it is necessary to develop specific mechanisms providing the joint interested motives for water users and water management organizations in increasing the water productivity, and at the same time to assist them in achieving this goal. These mechanisms should take into account specific factors causing unproductive water losses, instability in water supply, and unevenness of water distribution. As a whole, the ranking of causes of water productivity reduction that arise within the irrigation system promotes the development of practical measures for achieving the basic criterion of IWRM – provision of “potential productivity” of the water by all water users or, at least, approaching to it. The most part of approaches to improve the water productivity are based on the engineering measures and IWRM tools in combination with organizational, legal, and financial measures. To implement these measures in the first place it is necessary to combine efforts of all participants of the multistage water supply process within water management organizations and water users. Such joint efforts are needed to use agreed procedures and methods for stabilizing water supply, providing equitable water distribution, and establishing the proper public control by water users themselves. At the same time, the technical and financial assistance of the State and local governments is necessary.

Finally, it is important to gain a general understanding of the importance of the co-ordination at all levels of water management hierarchy, and of the input of each participant into integrating water resources management. From the other side, the governance framework should provide horizontal integration among sectors. There should be created platform for effective participation in decision-making process of different sectors (government, NGOs, science, private sector, professional organizations) and sub-sectors (agriculture, hydropower, nature, water supply and sanitation and etc.).

The main criteria for evaluation success of this integrity are: inclusiveness (voice), equity (opportunities), transparency, effectiveness, accountability, coherency, responsiveness, comprehensiveness, ethical considerations. The Governments should define those frames, within that water management agencies should operate for the interests of all economic sectors and water users. The management system should provide conditions for achieving (or approaching to) the maximum water productivity by all water users (in irrigated farming, industry, and domestic water supply, etc.) and for successful surviving. It means that for producing unit of production the minimum water volume should be used that is close to

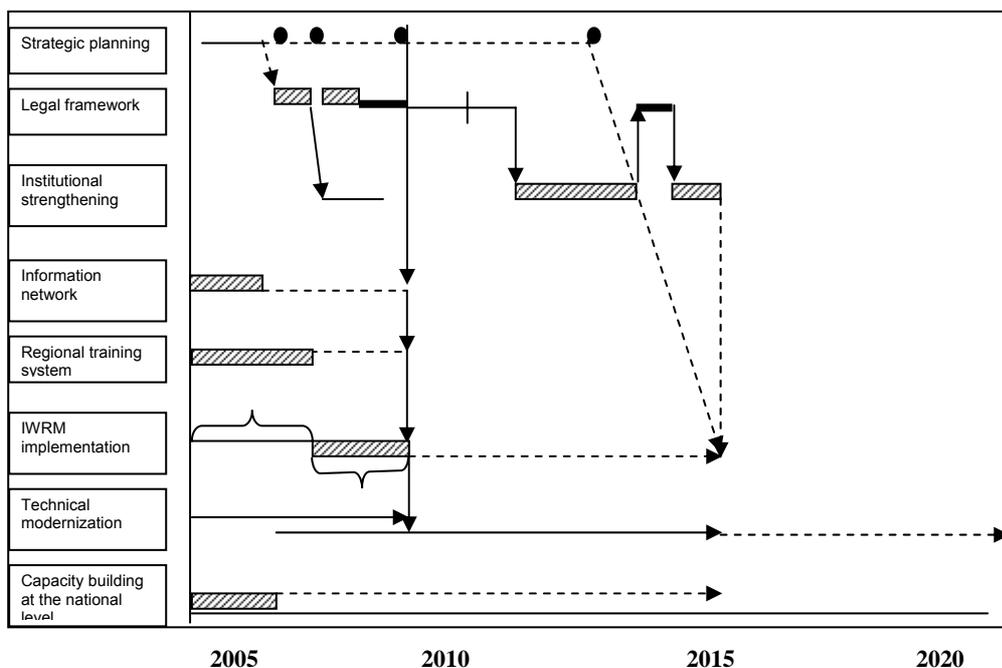
biological or technologically needed water consumption under minimum water losses over all the technological cycle including water intake, water conveyance, water supply, and water use (so-called potential water productivity). Such approach needs in the clear-cut co-ordination of all technological processes as well as the observance of other technological requirements (non-related with water resources).

The principal goal of governance and management processes for recent stage of water development in Central Asia is to achieve significant reduction of water withdrawal from river, and in the same time to improve indicators of water use efficiency and water productivity. As it follows from the figure, we have achieved this goal in some pilot areas.



South Fergana Canal: Water Withdrawal from River during Vegetation Period

A movement towards IWRM principles (rather than towards new programs of technical rehabilitation since it was before) is based on the following regional “Road Map”:



Road Map to support IWRM implementation in CACENA countries

Mandatory preparation by each country the National IWRM and Water Efficiency Plans in co-ordination with Strategic Planning provisions. Under financial support of the Norway International Development Agency through the GWP and UNDP, Kazakhstan commences such activity, and by the end 2008 it was a good example for other countries in the region. The principal goal of preparing the National IWRM Plan is to develop the efficient framework for putting IWRM into practice and to specify objectives, tasks, phases and scope of works, impacts, and mitigation measures combating destabilizing factors.

The sub-regional component for Central Asia has been developed by UNEP Collaborating Centre for Water and Environment (UCC-Water) and UNEP in close consultation with GWP CACENA (and coordinated with UNDP and UNECE) during 2008. The programme involved the IWRM National Councils established under the "IWRM Fergana Valley" Project, which supported by Swiss Development Cooperation. The outputs achieved:

- Sub-regional report was published on progress on IWRM 2005 Target and IWRM Planning in all CACENA countries
- Completed national road maps/work plans for implementation of the IWRM target (for three countries: Kyrgyz Republic, Tajikistan and Uzbekistan).
- Needs assessment for support to implementation of IWRM reforms as identified in road maps and work plans.
- Capacity built on IWRM planning for key water managers and decision makers

Wide public participation in water management should be supported at all hierarchic levels. To this end, it is necessary to ensure the legal registration of the Public Water Bodies and WUAs, to develop the financial mechanisms for their involvement, and to provide training and wide popularization of IWRM principles and achievements with water users' participation.

Establishing the network of training centers and managing the coordinated training process over the region.

Legal and financial justification of IWRM and establishing its legislative basis, improving water charging mechanisms, legal and financial coordination of efficient water use aspects at all hierarchic levels; specifying the role of the Government in the case of WUAs, etc.; establishing water-saving funds; elaborating the environmental water requirements and ensuring nature priority under water allocation procedures.

Technical measures:

- a. Introduction of water record keeping;
- b. Participation of hydro-meteorological services in IWRM;
- c. Establishing the extension service for improving the water productivity;
- d. Computerization of managing the irrigation systems; and
- e. Water-saving interventions.

At the same time, the mechanism of interstate consultations to coordinate water sharing, a regime of water use at transboundary rivers, and further economic development keeping in mind the regional interests was established.

How GWP CACENA Can Help with Water Resources Related Conflicts

Water in Central Asia and Caucasus is an object of competing interests and thus a potential source of conflicts. Two categories of water related disputes could be observed in the region:

- Large: domestic (inter-sectoral) and international / transboundary
- Small: domestic and transboundary

Conflict is the expression of differences without a process to manage them. Conflict resolution mechanisms are:

- Tools to ensure information flow
- Secure fair treatment
- Create sustainable processes

GWP could not be considered as third party from outside the Central Asia and Southern Caucasus, because GWP CACENA is a network of local institutions which are involved into water disputes in different scale, and they know properly what and how are needed for sustainable processes, which are key to stability over time.

During 2009 the GWP CACENA network developed an agreement on subsequent strategic actions for strengthening of country water partnerships in the region in order to reinforce the results in hand (from the past five years) in promoting the concept of IWRM towards sustainable development of all eight countries and **to sustain their cooperation capacities for implementation of the above mentioned three elements of dispute resolutions** (keeping in mind specifics of the two sub-regions – Central Asia and Southern Caucasus).

Strategic partners for that are: National Governments/Water Authorities; EC IFAS; the most active NGOs.

GWP CACENA initiated support to policy dialogues in all eight countries to help to articulate the linkages among water-using authorities and interests such as agriculture, land-use planning, energy, industry, environment and health in order to ensure water is contributing to national development objectives **(to overcome large and small disputes)**.

In parallel track to support transboundary policy dialogues to help countries establish sustainable cooperation at the regional (sub-regional) level **(to overcome large disputes)**.

There were suggested proper incentives for further cooperation in the region with the most active actors and international agencies to overcome water disputes. The inter-regional cooperation with other GWP regions in this direction also is critical.



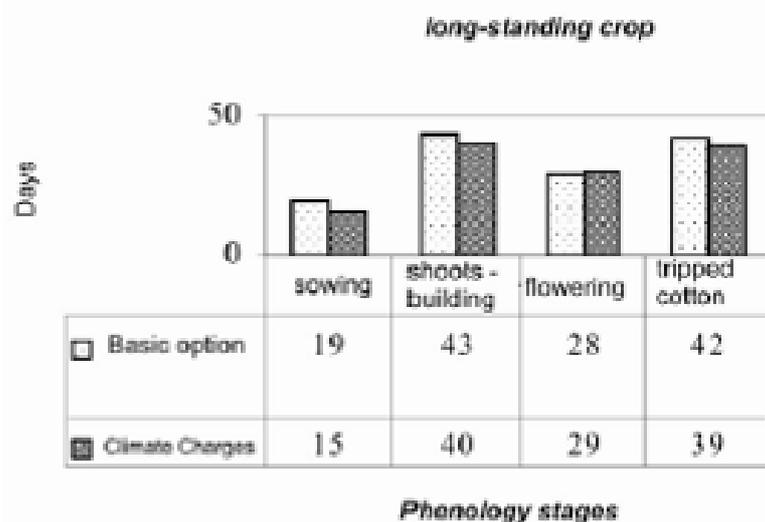
**On the way to Issyk Kul Lake
in Kyrgyzstan, 2007**



**The participants of the ToolBox seminar
in Issyk Kul Lake, 2007**

IN TIME OF CLIMATE CHANGE

More than 60 percent of population in CACENA countries lives in rural areas that created great dependence of populations and wellbeing on climate changes and water availability. Climate change makes agrarians to revise farming practices. With growing temperature, humidity, and changing river flows, we should have the longer potential growing season that would allow production of 2-3 yields a year, provided that irrigation water is available.



In Figure: Observed change in growing season

Climate change and increased air temperatures would cause rise in crop water use by 5-8%; however, unit water use will decrease due to increase in crop yields. Methods such as subsoil irrigation, drip irrigation and sprinkling are well-known among the most effective water conservation methods. However, in each specific case, the advisability of application of capital-intensive methods and

irrigation improvement facilities should be decided on the basis of through feasibility estimations. And the more positive effect of irrigation water productivity improvement will be observed in annual dimension in case of double cropping. Soybean and green gram were recommended as second crop. Soybean yields increased when seeds were inoculated with the appropriate bacterium. This crop generated a great deal of interest among the local population as it could be an important source of protein and has the potential to generate significant income as an oil crop. Cultivation of all the legumes showed an increase in nitrogen and organic matter content in the soil and thus improved soil fertility over the long term.



Formation of azotobacter nodules on green gram roots

Forest plantations as a way to combating desertification

One of the most catastrophic effects of climate change is the shrinkage of the Aral Sea. Major environmental consequence of this shrinkage is an intensive development of desertification processes in Prearalie, Aral Sea Coast Zone. The desertification processes are mainly of anthropogenic nature against the background of global climate aridization. Saxaul, a salt resistant plant, plantations of 10 years old are capable to restrain dust and salt transportation

and create conditions for soil-formation process. Besides the anti-erosion effect, the large schemes of tree vegetation cause self-overgrowing processes in the desert. The scale of such processes is approximately equal to the area of artificial forest plantations. This way, a quite significant contribution is made to transformation of CO₂ into O₂.



“Stabilization of the dried Aral Sea bed”, supported by GTZ

Measures recommended in national strategies on adaptation to climate change and hydrology

- Changing cropping patterns, with inclusion of crops capable to absorb intensively the carbonic dioxide from the atmosphere;
- Exploring additional available sources of irrigation in arid zones. Developing agro-management of effective irrigation water use in irrigated agriculture systems;
- developing a model of probable drought pattern and types, and ways to combat them and their consequences;
- economic development focused on water-free and low water-consuming technologies;
- increasing the share of groundwater use;
- transferring a portion of river runoff inside and outside regions.

In order to mitigate the negative consequences of water resources vulnerability impact on economic sectors, the following actions are needed:

- reconstructing irrigation and water supply systems so that to minimize water losses;
- replacing hydrophilous crops in irrigated lands by less water-loving crops;
- applying advanced technologies in irrigated agriculture;
- applying low water-consuming technologies and water recycling systems in existing industries and communal services;
- using wastewater;

Measures for the improvement of decision-making efficiency:

- development of the interstate regulation of water relations, taking into account expected water changes;
- improvement of advance time and reliability of hydrological forecasts;
- development of models and scientifically grounded recommendations allowing correct and quick assessment of situation in water sector;
- preparation of required services for immediate fulfillment of potential decisions;
- development of multiple water resources use plans, with consideration of climate change and adaptation;
- for detailed assessment of adaptation measures, it is necessary to develop a simulation system, which would allow playing different situations and selecting more appropriate options of water management.

REGIONAL REVIEW WATER SUPPLY AND SANITATION IN THE COUNTRIES OF CENTRAL ASIA AND SOUTHERN CAUCASUS - 2009

This review has been developed within the framework of activities of the Global Water Partnership of the Central Asian Region (Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan and Tajikistan) and the Southern Caucasus (Azerbaijan, Armenia and Georgia) in accordance with the Goal 1 of the Regional Strategy for the period of 2009-2013: **Promote water as a key part of sustainable national development.**

Despite of the fact that by the formation volume of the surface water resources (on average 5057 m³/person in the Central Asia; and 5980 m³/person in the Southern Caucasus) the region cannot be considered as a water-shortage region, the water resources distribution is territory-wise unequal and is prone to considerable seasonal fluctuations. At the same time, the problems to provide quality potable water and sustainable sanitation are of extreme relevance and importance. All countries of the region agreed to use IWRM mechanisms, to ensure a balanced social and economic development taking into account the needs of all sectors.

All countries of the region face common problems and unaddressed tasks in the sphere of water supply and sanitation, namely:

- High rate degradation of the water supply systems and sewage treatment plants;
- High water loss rate;
- Insufficient level of accessibility of the potable water, especially in the rural settlements, incl. high rates of interruptions in the water supply;
- Low tariffs for potable water and low collection rate of the water fees, not covering the cost of operation and maintenance of the water supply and sanitation systems;
- Inadequate equipment of consumers with water-meters (basically, in the households) that have a negative impact on the actual metering of supplied and consumed water, as well as on the water fee collection rate;
- Inadequate governance of the water supply and sanitation systems, low qualification level of the specialists, especially in the remote areas and territorial subdivisions;
- Considerable difficulties with provision of potable water of the required quality;
- Low technical equipment level of the WSS sector;
- Incomplete legal and regulatory framework;
- Low awareness level and poor culture of the water use, undeveloped information database;
- Use of water for irrigation for household purposes in urban areas.

Virtually in all countries of the region the sanitation and sewage water treatment systems are in extremely poor state. Lack of adequate operation and repair, as well as the constantly insufficient and sometimes lack of funding for their maintenance have brought to the crisis of the sanitation systems.

Analysis of submitted data by experts on water resources and the needs of respective sectors shows that the regional countries, on average, are provided with water resources. However, the worn-out state of the systems, the low operation level and the lack of clearly defined economic mechanisms, as well as inefficient management do not allow ensuring the people with sustainable water supply and sanitation.

States of the region have developed their national policies in the sphere of water supply and sanitation after declaration of their independence. However, considering the current economic conditions and the recently adopted mechanisms of IWRM, they should be reassessed and re-elaborated. The regional states have adopted the basic laws regulating the water supply and sanitation sector; however they cannot function fully due to the subordinate documents to ensure their required application under today's circumstances. Some countries of the region

intend to mainstream their legal and regulatory framework in accordance with the European Union standards.

In several countries the functions of the WSS sector's regulation are distributed among various ministries and state institutions that have different priority objectives, which do not contribute to necessary coordinated functioning, operation and overall and equal development of the WSS sector. Therefore, institutional structures in the majority of the states need reassessment and reforming depending on current national policies and strategies.

Not all countries of the region have abandoned the command governance system, resulting in management of the WSS systems by state institutions or local governments without involvement of stakeholders and the public.

In some countries the state has delegated the functions of management, operation and maintenance of the systems to the private sector at the same time keeping the main assets of the WSS sector. Whether such practice is efficient or not will become clear with time.

All states of the region to a certain extent have a developed legal basis for enabling participation of the public in the process of decision-making on environmental issues. The countries have also ratified various international Conventions that require public awareness raising and participation of public in decision-making processes. Very often under the term of "public involvement" is being understood as nothing more than the right of public to be informed. Actual participation of public in decision-making is put aside as second priority. The reasons of such approach are as follows:

- Incomprehension of the importance of public involvement into the decision-making processes from the side of the government officials and their unwillingness to involve the public,
- Low level of comprehension by the public.

It is necessary to reform the perception and behavior of both state officials and public. In this matter the network of the Global Water Partnership might play a significant role.

Almost in all of the countries the state provides subsidies to the water supplying entities, and allocates funds to cover operation and maintenance costs. The WSS sector is financed, basically, out of its own budget and at the expense of the investment projects as well. In many of the countries the tariffs for potable water, and drainage and treatment of sewage are established by the state institutions. Normally, those tariffs are deliberately lowered in order to alleviate the load on household budgets and to prevent possible social tensions. Application of such mechanisms and given the very low consumed water metering rate, makes it hard to achieve a high collection rate of the water fees and to stabilize the financial situation of the WSS enterprises. Subsidies provided by the State budget, normally, are not sufficient. As a result of this, the WSS enterprises are not profitable and unattractive for private sector. Consequently they are not fully performing their basic functions.

All countries have signed the UN Millennium Development Goals, and they implement certain activities in order to fulfill them. However, no country may firmly assure their achievement by 2015. For achievement of the MDGs the countries need considerable foreign investments.

At the same time, the regional states do not possess efficient tools for monitoring and assessment of the actual impact of investments allocated to address the water-related issues. In this regard it is impossible to identify the extent of progress towards achievement of the MDGs.

All countries have recognized IWRM as an efficient mechanism for addressing the tasks on the water resources management, including the issues pertaining to the water supply and sanitation sector. Since 2002 Global Water Partnership promotes and supports introduction of IWRM in

the states of the Central Asia and the Southern Caucasus. At national level the Country Water Partnerships need to work closely with state institutions, and other international organizations.

For the purpose of integration of the water supply and sanitation sector into IWRM the following measures should be arranged and implemented in the region (as a minimum):

- Elaboration of strategies for small-scale water supply and sanitation systems;
- Development and implementation of WSS pilot projects to introduce advanced, acceptable and affordable technologies on sewage treatment, and modern techniques for monitoring of potable water quality;
- Conduction of workshops and trainings for the specialists working in the WSS sector;
- Assistance to involve the private sector in the WSS development.



GWP CACENA delegation in Helsinki, 2008

Knowledge Networking

GWP CACENA is promoting activities of Scientific-Information Center of ICWC, which serves as IWRM Knowledge Hub within the Asia-Pacific Water Forum. The main topics of Knowledge dissemination are river basin management, non-conflict water allocation, organization of water management and conservation on transboundary waterways, environmental disaster management, irrigated agriculture, including irrigation and drainage. Moreover, to pursue the regional collaboration for effective water use, GWP CACENA jointly with SIC ICWC focuses on examining and managing issues such as:

- Improve efficiency and sustainability of water resources management in CACENA region through promotion and application of IWRM principles.
- Extend information coverage of available web-portal and information system
- Become a bridge in knowledge dissemination, linking the international water society and the Russian-speaking audience.
- Develop a regional decision support tool, i.e. integrate the Central Asian Water Information Base (CAREWIB) into decision-making processes of national, regional and international bodies.
- Strengthen water management organizations in CACENA region through sustainable capacity building network.

Cooperation with Finland

The most of GWP CACENA activities and achievements in the region supported by the Ministry for Foreign Affairs of Finland (MFA) during last six years (2004-2010). The Finnish side provides support under the new policy document called "Wider Europe Initiative" (WEI) on Finland's development cooperation outlining five thematic areas that defined its scope. Water is part of the 4th Theme: *Energy and environment; conservation and efficient use of energy, energy safety, promoting the sustainable use of renewable energy sources and other renewable natural resources, sustainable use of mineral resources and environment protection, especially the prevention of cross-border threats to the environment.*

The WEI aims at development assistance to the former Soviet Union countries, today Commonwealth of Independent States (CIS), with EU and Russia as key actors. Finland takes a pro-active role with this initiative. As a first step of cooperation in 2009, Finland co-sponsored the CACENA side event at 5th World Water Forum in Istanbul. In this way Finland together with GWP facilitated strengthening of the regional cooperation between all eight CACENA countries.

At the 5th World Water Forum in Istanbul a delegation representing 18 water professionals from eight CACENA countries participated. This was made possible thanks to financial support from MFA of Finland and organizational support from Government of Turkey. The half-day **CACENA side event** on 18th March with its four themes; Climate Change, Transboundary Cooperation, Water Governance and Capacity building was a success in terms of excellent organization and active involvement of all organizers (GWP CACENA, the two Central Asian regional organizations EC IFAS and ICWC together with MFA of Finland, and Turkey), high participation (130 persons), a structured agenda with one key lecture per theme, a high-level panel, comments and discussion.

Deputy Head of Finland Delegation, Matti Kääriäinen, presented *The Role of Water in Development, a brief on the new policy document called "Wider Europe Initiative"* on Finland's development cooperation for Central Asia and Caucasus.

GWP Senior Adviser Khalid Mohtadullah, who was one of the side event moderators, helped to widen the perspective. In particular in his closing speech he gave examples from other GWP regions of **Shared Benefits** as a basis for transboundary cooperation. Mr. Mohtadullah also pointed to the need for increased capacity building and training in more practical ways to strengthen IWRM by enhancing skills in the development of management instruments for raised institutional performance in the region.

The Executive Secretary of the, Ania Grobicki, in her welcome speech reconfirmed GWP's commitment to continue to play an important role in the CACENA region by promoting water as a key part of sustainable, national development.

The principal outcomes of the CACENA side event were as follows:

Climate Change EC IFAS presented a recently completed regional report on Climate Change in Central Asia, which shows the real picture of the challenging issues that the region will face in coming decades. Tajik Minister of Land & Water will look at less water consuming crops. This initiative was supported by other water leaders from CACENA countries. Agreement of immediate need for improved water efficiency among key actors Actions to be taken for improved water quality.

Transboundary Cooperation Water leaders from the region confirmed their commitment for cooperation where they regard GWP CACENA as a neutral platform for transboundary dialogues. ADB is happy with recent progress and will support further efforts towards new agreements.

Water Governance IWRM is a baseline for on-going reforms in water sector over the region. Uzbek delegates called to build cooperation on the UN Convention 1997 on shared waters principles. In response, Tajik delegates proposed Central Asian Convention on Water.

Capacity Building The need for a joint regional capacity development umbrella was stressed in order to coordinate all actors involved (local, regional, international donors, agencies, etc.). Build on achievements from the Swiss financed IWRM project in Fergana Valley (led by ICWC and IWMI) with involvement GWP CACENA, UNDP and CapNet Universities of Helsinki and Montana ready to cooperate for growing new generation of water leaders.

	
<p>Session Moderators Viktor Dukhovny and Vadim Sokolov</p>	<p>Opening by Ania Grobicki, GWP Executive Secretary</p>
	
<p>High Level Panellists</p>	<p>Finnish Ambassador Matti Kääriäinen</p>

During the side event two new books on IWRM practical experience from CACENA were presented to the world water society:

The first one was presented by Prof. Victor Dukhovny: *IWRM – From Theory to Real Practice: The Experience of Central Asia*, published by SIC ICWC/IWMI and SDC, available online at: http://www.cawater-info.net/library/eng/gwp/dukhovny_sokolov_e.pdf

The second book presented by Muhammad Mizanur Rahman: *Central Asian Waters: Social, Economic, Environmental and Governance Puzzle*, published with support from Helsinki University of Technology and available online at: www.water.tkk.fi/global/publications

Second phase of cooperation

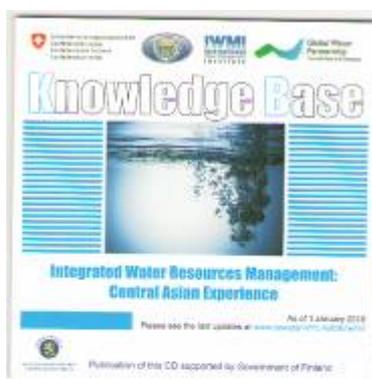
As it was agreed, the Wider Europe Initiative is a framework programme for Finland's development cooperation with countries in Eastern Europe, South Caucasus and Central Asia in order to promote stability and well-being extensively both in our partner countries and in the whole region. The framework programme is based on the Government Programme, which emphasises crisis prevention, support for peace processes and cooperation in environmental issues. One important substance element of the Wider Europe Initiative will be cooperation in environmental protection, particularly cooperation on water issues. This is justified by the policies and priority settings as formulated by a majority, if not all, countries in question, synergies and value added that can be sought in multilateral cooperation frameworks and, not least by the experience and earlier involvement by Finland in water cooperation in Central Asia and South Caucasus.

The second phase of the Finnish contribution was agreed with aim to support start the new GWP CACENA strategy in 2009 with focus on transboundary cooperation, where the Caucasus sub-region lacks regional institutions, IWRM support to national plans, capacity building and regional cooperation and coordination with other actors in the region.

Actual Achievements

Capacity building is one of the basic elements of the Finnish support with the aim to facilitate the process of national IWRM planning in all regional countries. Consequently during second half of 2009 about 500 persons from eight countries who are involved in the process of the IWRM planning and implementation including not only water managers, but also water users and other stakeholders have improved their capacity to support the incorporation of IWRM principles into respective work programmes.

With financial support from Finland:



- There was translated and published a Russian version of “A Handbook for Integrated Water Resources Management in Basins”, GWP-INBO, 2009.
- There were produced two CDs (500 copies each): a) Collection of all publications by the GWP CACENA 2002-2009 in Russian; b) “IWRM Experience in Central Asia” – the most full collection of publications and reports from all five countries during last 15 years – in Russian and English.
- CWP Azerbaijan published Student’s handbook “Integrated Water Resources Management” for Baku University.
- In Turkmenistan there was published Training module on IWRM for the mid level specialists in national language.
- CWP Armenia published GWP TEC papers 4 and 7 in Armenian and special Booklet “A Waterproof Case” in Armenian and Russian for primary schoolchildren.
- CWP Kyrgyzstan published Booklet for children “What is Happen with Water?”

Next steps

The GWP cooperation with Ministry for Foreign Affairs of Finland has good prospects to continue beyond 2009.

In accordance with GWP CACENA Strategy during the years 2010-2011 – the GWP CACENA network will focus on promotion of its neutral platform in cooperation with Finland, EC IFAS, EU, UNECE, APWF, ADB, SDC for dialogues among countries/stakeholders on the most challenging issues to help countries to achieve sustainable cooperation processes.

During the years 2012-2013 GWP CACENA network based on the established sustainable cooperation platform will be focusing on a more substantive programme of activities.

The Helsinki University of Technology cooperation on the *Global Water Problems* curriculum will help the region to establish a new generation of water professionals.

GWP CACENA Network Governance

In accordance with Agreement between GWPO and the Host Institute (IWMI), Secretariat of the GWP CACENA located in the IWMI office in Tashkent, Uzbekistan. From IWMI staff for Secretariat — Mr. Ilhom Babaev serves as a Communication Officer and Financial Manager.

Address of the GWP CACENA Secretariat:

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Country Water Partnerships



GWP Armenia Water Partnership

The Armenia Water Partnership is officially registered as NGO. The certain steps to put the IWRM principles in practice have been made in Armenia. The first steps were stated in the Water Code and in the related by-laws over the last years. The IWRM principles are adopted in a number of national projects and the programs, which are implemented in Armenia under financial support of the international donors with proper methodological facilitation from GWP CACENA. The Ministry of Nature Protection and the Water Resources Management Agency play a key role in practical application of the IWRM principles. The Armenia Water Partnership IWRM includes 15 accredited partners and promotes public awareness and participation processes acting in close cooperation with the above-mentioned authorities. Also it conducts the capacity development programs on IWRM issues.

Established: September 2005

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GWP Georgia Water Partnership

National Water Partnership of Georgia is the Non Governmental Organization. Its establishment was the result of the four years existence of Georgia in the GWP for Central Asia and Caucasus. At present the organization unified 20 accredited partners from governmental authorities, private and non-governmental organization, science, foundations and other stakeholders. Their involvement will contribute in the practical introduction of the principles IWRM in Georgia. Therefore the financial and institutional support of GWP CACENA the public awareness campaign is organized (e.g. the day for protection of Kura-Araks, The day of protection of the Black Sea) as well as the roundtable for improving the water legislation, institutional development, implementation of Millenniums Goals development etc. It cooperates closely with the international programmes and projects (USAID, UNDP, NATO), addressed to implementation the principles of IWRM. It also participates in the development of the policy paper on management of Water Resources in Georgia. All the actions of the organization are based on the principles and values of GWP.

Established: June 2006

Coordinator: Mr. George Dzamukashvili
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GWP Kazakhstan Water Partnership

The Kazakhstan Water Partnership was created as formal network of 24 institutions (governmental authorities, design, research and academic institutions and NGOs) to facilitate process of the National IWRM and Water Efficiency Plan development (with support from Government of Norway and UNDP) and further its practical implementation. The Kazakhstan Water Partnership is playing the key role in awareness campaign addressed to the main IWRM principles among politicians, water professionals and organizations, and public organizations dealt with water issues. Primary expectations regarding IWRM principles implementation are related to a Water Code adopted by the Decree No 481-II dated July 09, 2003, in which the basic requirements to IWRM are clearly enough stated. Practically, only in the beginning of 2004, the reform of the water sector based on the Water Code of the Republic of Kazakhstan has been started. The National IWRM and Water Efficiency Plan formulated by the end 2005 actually adopted by the Government as the National Program. The principal Kazakhstan Water Partnership activities starting from 2008 are addressing to support Government's efforts for implementation the plan into reality.

Established: May 2004

Coordinator: Prof. Nariman Kipshakbaev
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GWP Kyrgyz Republic Water Partnership

The Kyrgyz Republic Water Partnership was created as formal network of 19 accredited partner institutions to facilitate process of the National IWRM Plan development (with support from UNDP) and further its practical implementation. The principal attention the CWP pays to the following directions:

- It serves as conductor for IWRM principles implementation in the country;
- It facilitates the IWRM understanding not only among decision makers, but for the public in large;
- It assists in resolution of interagency and cross-sector conflicts in the process of the water resource management and utilization.

Established: January 2008

Coordinator: Mr. Abdybay Djailobaev
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GWP Uzbekistan Water Partnership

The Uzbekistan Water Partnership was created as formal network of 29 accredited partners. The Decree of the President of the Republic of Uzbekistan "On Accelerating Reforms in the Agricultural Sector" (2003) provides basic framework for putting IWRM into practice at the national level by means of transition from administrative, command system to hydrographic principles of water management and public involvement into water resources governance. The Regional Water Partnership of Central Asia and Caucasus has a recognized role as principal facilitator for the process of development of water policy and strategy of the IWRM at corresponding levels within the Uzbekistan. The CWP was established as a bridge between

RWP programs and national activities. Recently, the most attention CWP pays to promote political dialogue on IWRM implementation (in the form of inter-sectoral seminars and round tables). This is basis for exchange of experiences among the sectors and provinces (sub-basins), and also for dissemination of advanced knowledge about all aspects of IWRM summarized by GWP (TEC papers, ToolBox, CapNet manuals, CACENA regional papers and reports, etc.).

Established: March 2007

Coordinator: Mr. Mansur Abduraimov
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CWP Tajikistan Water Partnership

The Tajikistan Water Partnership was created as formal network of 28 representatives from 10 already accredited partners and some other national institutions (including Ministry of Land Reclamation and Water Resources – national authority responsible for water resources management in the country). The principal activities of the CWP addressing to the following directions:

- Conduct actions for IWRM principles implementation in the country;
- Facilitation of the IWRM understanding among decision makers and for the public in large.

Established: February 2008

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Two countries still do not created country water partnerships:



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Turkmenistan

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