UNRCCA

Bilateral and Multilateral Cooperation on Trans-boundary Water Resources in Central Asia: the Way Forward Following the Sixth World Water Forum

Seminar Report

30 July 2012

Bilateral and Multilateral Cooperation on Trans-boundary Water Resources in Central Asia

Disclaimer:

This report has been prepared by an independent consultant for the United Nations Regional Centre for Preventive Diplomacy for Central Asia (UNRCCA), based on presentations and discussions at the *Bilateral and Multilateral Cooperation on Trans-boundary Water Resources in Central Asia: the Way Forward Following the Sixth World Water Forum* seminar held in Kyrgyzstan on 25-26 June 2012. As such, it does not necessarily reflect the official position or the views of the UNRCCA or the United Nations system as a whole. While UNRCCA seeks to ensure that information contained in the report is accurate, no liability or responsibility is accepted for further use of this information.

Acknowledgements:

UNRCCA gratefully acknowledges the funding provided by the US Government for the organisation of this seminar and for the preparation of this report. This publication has been produced in the framework of the *Central Asia and Afghanistan Regional Cooperation on Trans-boundary Water Sharing* project.

Bilateral and Multilateral Cooperation on Trans-boundary Water Resources in Central Asia

Contents

List of abbreviations

CAREC	Regional Environmental Centre for Central Asia
EC IFAS	Executive Committee of the International Fund for the Aral Sea
EU	European Union
EU TACIS	European Union Technical Assistance to the Commonwealth of Independent States
FAO	(United Nations) Food and Agriculture Organisation
GIZ	Gesellschaft für Internationale Zusammenarbeit (Society for International Cooperation, Germany)
IFAS	International Fund for the Aral Sea
IMF	International Monetary Fund
INBO	International Network of Basin Organisations
IOWater	International Organisation for Water
IWAC	International Water Assessment Centre
IWRM	Integrated Water Resources Management
OECD	Organisation for Economic Cooperation and Development
OSCE	Organisation for Security and Cooperation in Europe
SADC	Southern African Development Community
SIC ICWC	Scientific-Information Centre of the Interstate Commission for Water Coordination
UN	United Nations
UNAMA	United Nations Assistance Mission in Afghanistan
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Cultural and Scientific Organisation
UNRCCA	United Nations Regional Centre for Preventative Diplomacy in Central Asia
US	United States
USA	United States of America
USAID	United States Agency for International Development
WHO	(United Nations) World Health Organisation

Preface

The United Nations Regional Centre for Preventative Diplomacy in Central Asia (UNRCCA) held a seminar on transboundary water cooperation on 25-26 June 2012 for representatives of Central Asian states and international organisations. The seminar, held at Issyk Kul Lake in the Kyrgyz Republic with financial support from the US Government, was entitled *Bilateral and Multilateral Cooperation on Trans-boundary Water Resources in Central Asia*. This report is a summary of the proceedings

The two-day seminar commenced with a review of the outcomes of the 6th World Water Forum held in Marseille from the perspectives of UNRCCA and the national delegations. This was followed by sharing of experience among participants of the wide range of bilateral and multilateral cooperation activities already taking place in the region. In the afternoon, international experts presented information about the latest developments internationally on trans-boundary water agreements and dispute resolution. The first day ended with small group discussions on areas in which cooperation could potentially be strengthened, based on the information provided during proceedings.

The second day was dedicated to information sharing processes in the region. Following overviews of various organisations' activities, participants focused on the pilot bulletin produced by the Executive Committee of the International Fund for the Aral Sea (EC IFAS) in early 2012 following a UNRCCA meeting in September[1] and discussed what could be done to ensure that bulletins can serve as an increasingly useful tool for preventative diplomacy.

The Issyk Kul seminar was attended by national delegations from the five Central Asia states, including representatives of a range of Ministries and Agencies. All the countries took active part in the discussions. In addition, representatives of UNAMA, UNDP, UNECE, UNESCAP, UNESCO, the World Bank, EC IFAS, SIC ICWC, the International Water Assessment Centre, CAREC, USAID, GIZ, and the International Organisation for Water were also involved in the event. A full list of attendees is appended as Annex 1.

[1] For the report on the Almaty seminar, see http://www.ec-ifas.org/engine/download.php?id=54, and for the prototype bulletin see http://www.ec-ifas.org/engine/download.php?id=53.

Outcomes of the Sixth World Water Forum

UNRCCA opened the seminar with a short presentation on the World Water Forum held in Marseille in March. The World Water Forum is a key event in which all stakeholders seek to address the water-related challenges that the world is facing, and to bring water high onto all political agendas. It has been held every three years since 1997, and gathers a wide range of stakeholders around a common framework of goals and concrete targets to tackle today's local, regional and global issues.

The World Water Forum is a high level event. A total of 15 Heads of State, of Governments and European Commissioners; and 103 Ministers, Vice-Ministers and Secretaries of State took part in this year's Forum. A hundred and seventy three countries were represented and 173 national delegations and international organisations took part in the Ministerial Declaration. More than 100 commitments for action were agreed as part of the event.[2]

The Ministerial Declaration of the Forum contains sections on three interrelated clusters of water-related areas.[3] The first of these, entitled Well-Being, stressed the necessity to ensure accelerated access to safe drinking water and sanitation, expand sanitation and fight water-related disease. The second cluster addresses the relationship between water and economic development, referring to the need to support a green economy, and ensure that the linkages between water, food security and energy are recognised in policy making. The third section, on environmental issues, highlights the fact that water has to be considered in programmes pertaining to climate change, biodiversity and desertification, such as those arising from the Rio Conventions. This section also states an intention to develop and strengthen national and transboundary disaster prevention and response strategies, and to promote solutions to urban wastewater and pollution. Finally, the Declaration highlights the conditions of success for all of these intentions, including good governance, financing, an enabling environment for water, and cooperation.

The section of Paragraph 24 of the Declaration about the need for cooperation reads as follows:

> *"…we are committed to enhance cooperation across and beyond water, taking into account the interests of all riparian States concerned, to foster peace and stability. We appreciate cooperative efforts in the field of transboundary waters. We intend to further promote and encourage coordinated, equitable, reasonable and optimal water utilization in transboundary basins, with a view to deepening mutual trust among riparian countries and achieve sound cooperation. Several of the principles of the relevant international Conventions on water can be useful in this regard."*[4]

Several events at the Forum were particularly relevant for the purposes of the Issyk Kul water seminar. On 13 March a High-level Roundtable on Transboundary Waters was hosted by Tajikistan, Zimbabwe and the United States, concentrating on the key challenges, potential shortcomings, and limitations in the management of shared waters. The existing response

[2] http://www.worldwaterforum6.org/en/news/single/article/a-recognised-success-for-the-6th-world-water-forum-which-gathered-more-than-35000-participants-in/
[3] Sixth World Water Forum Ministerial Declaration, available online at http://www.worldwaterforum6.org/en/news/single/article/the-ministerial-declaration-of-the-6th-world-water-forum/
[4] Ibid.

mechanisms, including the global architecture and regional frameworks, were also considered at the roundtable.[5]

Second, a side event covering the specific water concerns of some of the countries in the region was held on 15 March. At the event it was noted that as well as learning from other parts of the world, Central Asia can also share the successes it has had in addressing water problems and of promoting continuous improvement of political, technical, economic and administrative mechanisms to successfully overcome high-water and dry years by progressively increasing the capacity of organisations, skilled professionals and water users.[6]

Finally, UNESCO and the International Network of Basin Organisations (INBO) jointly coordinated nine official sessions on World Water Forum Priority 1.5 "Contribute to cooperation and peace". The outcome document of this series of sessions stated that water resource management should be conducted at the scale of local, national and transboundary basins of rivers, lakes and aquifers. The management should be based on integrated information systems and decision-making should involve concerned parties, including governments and local authorities, representatives of different categories of users and associations for environmental protection or public interest, as well as basin committees. Management plans or master plans should define the medium and long-term objectives to be achieved, and be accompanied by programmes of measures and multi-year priority investments.[7]

Kyrgyzstan[8] participated actively in the World Water Forum, and was signed the Ministerial Declaration. Its delegation reported that two million people in the country still do not have access to reliable water supplies, but take their water from open irrigation ditches. This problem requires coordinated planning, reporting and investment: about $230 million is required for water and sanitation. Water is also needed for the environment and to ensure safe food supplies, as well as for socio-economic development. As electricity is key for water and environmental management, multilateral cooperation is required to harmonise water and energy, in order to increase agricultural production. According to Kyrgyzstan, joint research by the World Bank, FAO and the IMF has shown that the main reason for food shortages is low agricultural productivity. A new integrated management system is needed to facilitate cooperation between countries. The World Water Forum called for increased investment in water. Costs need to be met, and new financial mechanisms put in place, including private payments. Decision making should be based on water availability and requires the active cooperation of all stakeholders. Modern information systems and new strategies are needed to promote information exchange.

Kazakhstan[9] sent a large delegation to the World Water Forum, and was actively engaged in the preparatory process. The representative of Kazakhstan drew attention to the documents agreed by the UN General Assembly on the achievement of 20 biodiversity protection and

[5] http://www.worldwaterforum6.org/en/library/detail/?tx_amswwfbd_pi2[uid]=591
[6] For the background document to this session, see ICWC. *6th world water forum: Input of Central Asia to the world water progress: Central Asian Specific Priorities, Targets And Solutions*, available online at www.cawater-info.net/6wwf/pdf/ca-specific-priorities-targets-solutions_e.pdf
[7] For the synthesis presentation on these sessions, see INBO, *PPT Conclusions,* available online at http://www.inbo-news.org/IMG/pdf/PPT_CONCLUSIONS_PFA_1_5_DONZIER_INBO_WWF6_Marseille_16_03_2012.pdf
[8] From presentation made by the delegation of the Kyrgyz Republic on 25 June 2012
[9] From presentation made by the delegation of the Republic of Kazakhstan on 25 June 2012

natural habitat goals globally by the 2020s;[10] not one of these goals has been met. Humanity has so far proved unable to recognise that water is finite. Water is crucial for peace and stability, and because of the transboundary nature of water in Central Asia cooperation is key. Kazakhstan stated its support for intensification of efforts locally and nationally and called on partners to think globally and act locally. The country supported the Ministerial Declaration, and is ready to cooperate with its neighbours to solve problems through negotiations to find mutually acceptable solutions.

For ***Tajikistan***[11], the World Water Forum was an important platform for discussion. The country also took part in preparatory events in Almaty and Shymkent, but highlighted the fact that not all the region's countries agreed the regional priorities stated in the 15 March side event. Tajikistan wanted water and energy to be included as priorities, as hydro energy is important for sustainable development. This proposal was not supported by others. Tajikistan spoke of the importance of guaranteeing water for future generations. Cooperation is essential to manage risks. Innovations need to be introduced to guarantee food security. Integrated water resource management is essential to reflect all the uses of water, mitigate the effects of climate change and ensure sustainable water supply for potable needs. After 10 years of promoting goals, it is time to move to solutions to ensure wellbeing, through finding agreement and integrating economically. Visible outcomes are needed for the region's countries, as the time has come to find solutions to the problems. The Rio+20 event, which was attended by leaders from most countries, promoted green technology, irrigation and energy.[12] All the ten priorities adopted by the World Water Forum and in Rio are realistic and implementable, such as the development of forecasts on water. States need to decide on indicators and provide information. All parties agree that increased regional cooperation is needed, and a common integrated water resource management system should be developed.

Turkmenistan[13] is actively participating in efforts to promote rational use of water, on the basis of principles of international respect. It can provide good examples of cooperation with neighbouring states on regional issues based on bilateral agreements and mutual benefits. There should be a focus on cooperation for environmental protection.

Uzbekistan[14] hosted an international conference on joint actions towards water security in May 2011 as part of the preparatory process for the World Water Forum. Uzbekistan is fully aware of the importance of irrigation and good planning for water, and since 1991 has successfully modernised and improved its irrigation and water distribution systems, and diversified agricultural production. Rational and equitable use of water resources is vital, as poor regulation of major transboundary rivers in the second half of the twentieth century put the region on the brink of ecological disaster, as can be witnessed by the tragedy of the Aral Sea. More than 50 million people in six countries of the Aral Sea basin depend on well-planned approaches and solutions to water resources, particularly across borders. Uzbekistan supports the World Water Forum's statement that access to drinking water is a fundamental human right and that the water crisis is much more dangerous than energy and finance crises. Unsustainable water management could lead to destruction of water resources, with catastrophic consequences for the environment, economies, societies and food security. The

[10] Aichi biodiversity targets, available online at http://www.cbd.int/sp/targets/
[11] From presentation made by the delegation of the Republic of Tajikistan on 25 June 2012
[12] For more on the Rio+20 event, see the http://www.earthsummit2012.org/ portal
[13] From presentation made by the delegation of the Turkmenistan on 25 June 2012
[14] From presentation made by the delegation of the Republic of Uzbekistan on 25 June 2012

Ministerial Declaration notes that food security is impossible without water resources, which are a key factor for agriculture, rural development and food production. Therefore mechanisms for effective regional cooperation are vital to ensure use of transboundary water on the basis of universally recognised international norms and rules to ensure equality, mutual benefit and fairness for all. Uzbekistan is ready to strengthen cooperation in the framework of IFAS and to ensure efficient functioning of the Executive Committee of IFAS in Tashkent during its presidency over the next three years. The country believes that water should be used primarily for drinking and sanitary needs, secondly to ensure food security and environmental needs, and only after that for industry and energy.

Bilateral cooperation activities in Central Asia

There are several bilateral cooperation activities already underway in the region concerning transboundary water management. This section provides a brief review of some of these activities.

Tajikistan and Kyrgyzstan[15]

Tajikistan and Kyrgyzstan have learned several lessons from the drafting process of their water agreements. Their long experience of cooperation on water issues has been successful for the most part, though there were some more problematic periods. The populations of the transboundary Isfara and Khodzha-Bakirgan river basins have increased significantly over the last 40 years, and thus there have been sharp increases in the water requirements of both countries. As a result of meetings and dialogue, the parties agreed that both sides would benefit from an effective agreement on the proper use of water resources, particularly during the vegetative season.

Currently an active multisectoral intergovernmental commission is tasked with making important decisions: a meeting of this commission was held a week before the Issyk Kul seminar. In addition, in 2009, water resource agencies from the two countries created a bilateral interagency working group on transboundary water issues to help coordinate activities, with the support of GIZ. This working group confirmed the need for a special agreement on cooperation over international rivers. At a meeting in Khojand in 2011, the first draft agreement was considered by international specialists and reviewed by national experts. Joint reviews of the draft agreement will continue in June and July, and it is hoped that the agreement will be signed by the end of the year.

The draft agreement envisages a permanent joint water commission between the sides, to include basin river committees and basin councils, which will engage water users. The Secretariat will be made up of two national offices, and a joint commission to engage in integrated water resource management. In the future a joint mechanism will oversee common plans for water use.

Both parties agree on the importance of the draft agreement. The support of experts in developing the draft document has been crucial. The most acute transboundary water management problems currently relate to the lack of facilities in border areas: this will be solved after the agreement is put in place. Negotiation of an agreement was delayed between the end of the first phase of GIZ support in 2011, and the second phase beginning in 2012.

Kyrgyzstan and Kazakhstan[16]

In 1996-2000, international cooperation began between Kyrgyzstan and Kazakhstan on joint management of water facilities in the Chu and Talas river basins. The safety of the river basins and facilities built on them is vital for the 2.8 million people living in the river basins (1.875 million in Kyrgyzstan and 910,000 in Kazakhstan). In 2000, an intergovernmental agreement on the use of interstate water facilities on the Chu and Talas Rivers was signed. This agreement was registered at the United Nations in October 2002. In 2006, an Interstate Commission for Management of the Chu-Talas was established with a permanent Secretariat.

[15] From presentation made by the delegation of the Republic of Tajikistan on 25 June 2012
[16] From presentation made by the delegation of the Kyrgyz Republic on 25 June 2012

The Commission reports to Kazakhstan's Ministry of Agriculture and Kyrgyzstan's Department of Water Resources and Amelioration. The co-chairs are nominated by the two parties, and the Secretariat also has heads from the two states. Four expert working groups report to the Commission. These are responsible for legal and institutional issues; distribution of water resources; hydro-engineering; and economics, environment, monitoring and exchange of information.

Development of the Chu-Talas Commission has been supported by several international organisations over the years, including EU TACIS, UNECE, UNESCAP, the OSCE, the Swiss Agency for Development and Cooperation, and the OECD. The fifteen years of cooperation have been recognised as good practice by the international community and have already guided cooperation in other interstate river basins, such as Isfara and Khodzha-Bakirgan as mentioned in the previous section.

Theoretical models have been developed and are successfully being used to guide the distribution of water resources in the Talas and Chu river basins. In addition, an environmental audit has been carried out of the river basins to provide recommendations on how to improve the region's environment. The agreement governing the Commission has been amended to provide for funding of the Secretariat from the parties' national budgets. The system for co-financing repair and reconstruction has been improved, and standardised methods have been developed for measuring water flow across the border. In addition, a preliminary assessment has been made of the relationship between surface water and ground water in the Chu river basin.

Basin councils have been created on both sides of the border. Made up of Commission members and government representatives, they have been exemplary in raising awareness, examining joint problems, and increasing the transparency of decision making.

With the support of UNECE and the OECD, in the framework of the EU Water Initiative, a National Dialogue on Integrated Water Resources Management (IWRM) is underway in Kyrgyzstan. Its objective is to support the implementation of IWRM principles at international, national and local levels in accordance with the principles of the UNECE Water Convention, the WHO / UNECE Protocol on Water and Health, the EU Water Framework Directive and other UNECE and European Union tools. As part of the project, the Chu Basin Council will develop a Basin Plan as envisaged in the Protocol on Water and Health.

The implementation process has revealed that in addition to governing operational questions on the facilities, it is necessary for the agreement to mandate an integrated approach to water management in the river basins. A new agreement should be adopted to cover environmental protection issues, and to regulate monitoring of water flow, quantity and quality in the rivers. The new agreement is currently in draft form. In addition, a new interstate basin council should be created to ensure that decisions are made on water resources in the interests of all water users and the ecosystem, and to promote transparency and the engagement of society in decision making.

Further, new basin strategies need to be developed to facilitate adaptation to climate change. These should include modernisation of water quality and quantity monitoring; introduction of water-saving technology; construction of more storage capacity; introduction of drought-resistant crops improving yield; and developing and introducing basin models for management of water resources mainstreaming the ecosystem and the interests of water users.

Kazakhstan and China[17]

There are a total of 24 rivers in the four transboundary river basins between Kazakhstan and China. During the years of Kazakhstan's independence, the two countries have been working closely together to improve cooperation over water resources. In 1993-1994 negotiations were held over the construction of the Dostyk hydroelectric scheme on the Khorgos River. In 1998-2001 five rounds of expert consultations were held to prepare a draft transboundary water agreement following a proposal by Kazakhstan. On 12 September 2001, the two governments signed an Agreement on cooperation over the use and protection of transboundary water.

Between 2002 and 2011, nine sessions of a Joint Commission on Use and Protection of Transboundary Rivers were held, along with eight sessions of Joint Commission Working Groups, and seven sessions to prepare the draft documentation on the Dostyk hydroelectric scheme. The Joint Commission has negotiated several agreements, including:

- An Agreement on the Allocation and Use of River Khorgos water;
- An Agreement between the relevant local authorities in Kazakhstan and China on River Sumba and River Kayshibulak;
- An Agreement on emergency notification of parties about natural disasters on rivers between the Ministry of Agriculture of Kazakhstan and the Ministry of Water Resources of China.
- An Agreement between Kazakhstan's Ministry of Environmental Protection and China's Ministry of Water Resources on mutual exchange of hydrological and hydrochemical information from border gauging stations on the major transboundary rivers;
- An Agreement between Kazakhstan's Ministry of Agriculture and China's Ministry of Water Resources on the development of cooperation over research on transboundary rivers;
- The 2010 Agreement between the Governments of Kazakhstan and China on cooperation over the construction of the joint Dostyk hydroelectric scheme on the Khorgos River. The dam is being constructed by China under the auspices of the Commission. Construction began on 15 April 2011 and it should be completed in December 2012, after which it will be jointly managed by the two countries;
- An Agreement between the two Governments on protecting water quality in transboundary rivers; and
- An Agreement between the two Governments on cooperation in the field of environmental protection.

In addition, the two countries are working together to prepare an agreement on transboundary river water allocation between Kazakhstan and China, which should be ready in 2014.

Uzbekistan and Turkmenistan[18]

Since Soviet times, Uzbekistan and Turkmenistan have been cooperating on water allocation from the Amu Darya. Turkmenistan is particularly dependent on the river, which provides 90 per cent of its water supply. A bilateral Agreement on land and water use was signed between the countries on 15 January 1996, which included the establishment of an Intergovernmental

[17] From presentation made by the delegation of the Republic of Kazakhstan on 25 June 2012
[18] From presentations made by the delegations of the Republic of Uzbekistan and Turkmenistan on 25 June 2012

Water Planning Commission, and the allocation of equal shares of water downstream of the Kirki water post.

In 2007, another agreement was signed between the Ministries of Water Resources of the two countries defining the principles for limits on water intake. Since then, technical committees have met on a monthly basis to establish limits for the following month. The Commission includes representatives from water basin commissions and heads of hydrological facilities. At these meetings, protocols are signed giving times, water volumes, and water gauge levels for posts down to the Aral Sea.

The monthly agreements on limits come into effect 24 hours after signing. Following this, no directives or orders can be given by either side which violate the agreement. Unilateral decisions on construction of hydrological facilities are not permitted: all such facilities are planned together. The two sides have worked together to construct a water runoff system to prevent flooding. also In addition, they agree to prevent the discharge of polluted water, and are engaged in land improvement.

Since 1 June 2007, joint observation has been carried out on the left and right banks of major hydrological facilities. The parties are expected to respond immediately to any complaints by the other side, and so far there has been no need for arbitration in the relationship. The system has worked smoothly in both high and low water years, including periods of major shortages. By avoiding putting any type of economic pressure on the other on water issues, the two sides promote efficient water use.

Multilateral cooperation activities in Central Asia

The role of IFAS[19]

IFAS' Aral Sea Basin Programme 3 has been agreed on by all countries in the region. IFAS was mandated to design the Programme at the Summit of Central Asian Presidents in April 2009. Specific projects require support from the donor community.Tthe 2009 Summit also called for reforms in IFAS; these are currently being implemented with the support of UNECE and GIZ. All partners are welcome to participate in the process

Support from international organisations[20]

Several presentations were made by international organisations welcoming efforts to improve cooperation over transboundary water in Central Asia. **UNECE** referred to the importance of integrated water resource management for sustainable development and its ongoing support for both bilateral cooperation and IFAS. After analysing the strengths and weaknesses in the current system, UNECE sees the potential for a regional agreement. This would only be possible with integrated water resource management that engages water basin users.

The **UNESCAP** representative suggested that institutional capacity is key to successful and enduring cooperation. International river basin institutions can effectively manage major changes in a river basin through a number of instruments, including treaties, cooperative arrangements, creation and distribution of technical data, stakeholder involvement in management plans, equitable allocations, and the distribution of reasonable costs and benefits. Tools such as databases combining hydrological, geographic, socioeconomic, and political data relating to transboundary water can be a valuable asset for river basin institutions to enable greater cooperation, training, and capacity building among basin riparians. The representative then proceeded to present a case study of how such institutional capacity has been developed in the Mekong River Basin.

UNDP's representative introduced a proposal developed by UNDP and UNESCO for GEF funding to allow the Syr Darya River Basin countries to fully utilise their groundwater resources. The proposal should be submitted for funding in September 2012 and discussions are ongoing with regional governments. Greater interstate cooperation would counterbalance the current challenges in the use of transboundary surface and ground water resources, and the variability caused by climatic conditions and climate change, in turn improving overall stability and facilitating intensified cooperation in the Syr Darya basin.

UNESCO has been actively involved in transboundary water affairs in the region since 2007. In 2011, it organised a subregional seminar on transboundary aquifers in which participants agreed on the need for increased cooperation on groundwater and aquifers. The organisation has supported the development of hydrological maps of Central Asia, and facilitated the May 2012 seminar on the issue. The same month, UNESCO and Kazakhstan signed an agreement to establish a regional glaciological centre based in Kazakhstan's Institute of Geography. The region is dependent on snow and ice for its water supply, and the centre will be engaged in forecasting snow and ice cover and melt, as well as the impact of climate change, and will make recommendations for the region.

[19] From presentation made by EC-IFAS on 25 June 2012. For more information on IFAS, see http://www.ec-ifas.org/

[20] From presentation made by international organisations on 25 June 2012

GIZ confirmed its support for the development of the framework agreement between Tajikistan and Kyrgyzstan on transboundary river cooperation, and is currently on standby to reengage in the process. It is looking forward to rendering continuous assistance with the support of the European Union and Germany. GIZ appreciates the fact that river basin water planning between Tajikistan and Kyrgyzstan has seen active grassroots participation, and calls for close coordination between all donors and implementing agencies engaging and planning to engage with the process. The next coordination meeting will be held in Bishkek on 20 July 2012.

The **SIC ICWC** recalled good examples of multilateral cooperation over the past 20 years of Aral Sea water commissions. More than 80 per cent of Central Asia's population lives in the Aral Sea basin, and immediately after the fall of the Soviet Union it was agreed that coordinated efforts were required to jointly manage water resources. On 18 February 1992 an agreement was made on joint management of water and establishment of a Coordinating Commission. Reorganisation followed in 1999 with the Agreement on the status of the International Fund for Saving the Aral Sea (IFAS) and its organisations. Sessions have been held every quarter since April 1999 to define common water policies, promote rational use of water, increase water availability, set limits on uptake, and ensure allocation based on actual water availability. SIC ICWC is also involved in monitoring the Aral Sea.

Finally the **Regional Environmental Centre for Central Asia (CAREC)** has recently started a project to promote broad participation on small watersheds in Central Asia. The project is supported by USAID and will continue until 2015. It aims to introduce Integrated Water Resources Management (IWRM) principles at three small transboundary watersheds: the Isfara basin (Kyrgyzstan, Tajikistan and Uzbekistan); the Ugam basin (Kazakhstan and Uzbekistan); and the Aspara basin (Kyrgyzstan and Kazakhstan). The project will engage local communities in water management and help to improve institutional capacity and strengthen existing water management bodies, thus supporting the development of a new generation of water managers and technicians to promote basin principles and related water sector reforms.

New issues in global transboundary water management[21]

Overview

The afternoon session began with a joint presentation by two international experts that reviewed developing international practice on transboundary water management. Participants addressed the response to changing needs, dispute resolution and the negotiation of new arrangements.

There are several drivers of change in transboundary water management. These include economic factors, such as changes in agricultural production, access to clean water, energy prices and investment. Change can also be caused by environmental factors such as ecosystem services and climate change. The third cluster of factors has to do with political dynamics: the creation of new states – such as those of Central Asia in 1991 and South Sudan, which became independent in 2011 –necessitates a rethinking of transboundary water arrangements; and likewise political transitions and peace can change the dynamics. An example of this effect could be the development of northern Afghanistan, which may lead to greater use of the water of the Amu Darya basin. More broadly population growth, increasing demand for water, diversification of demand and development pressure all lead to changing needs for water. All of these factors lead to a need for changes in transboundary water arrangements – whether or not a treaty is in place.

Areas of cooperation in transboundary water agreements

The areas of cooperation enshrined in multilateral water agreements vary substantially. The 1992 Central Asia Agreement referred to equal rights to use of the region's water resources (Article 1); compliance with regional agreements (Article 2); prevention of harm (Article 3); joint efforts to solve environmental problems (Article 4); information exchange (Article 5); and joint decisions on industrial use of water resources (Article 6). It stated that the SIC ICWC will resolve disputes (Article 13).

Article 1 of the 1995 Mekong Agreement states that the Agreement governs cooperation across the areas of irrigation, hydropower, navigation, flood control, fisheries, timber floating, recreation and tourism. The subject of the 2007 Franco-Swiss Genevese Aquifer Convention is groundwater, while Article 3 of the 2003 SADC Water Protocol covers cooperation in advance of all projects that may affect shared watercourses. Article 3 of the 1994 Danube Convention requires harmonisation of domestic and international measures to promote sustainable development and environmental protection

The 2010 Nile Framework Agreement calls for cooperation on the basis of sovereign equality, territorial integrity, mutual benefit, and good faith (Article 3(1)). The Agreement's model principles also include sustainable development (Article 3(2)); subsidiarity (Article 3(3)); equitable and reasonable utilisation (Article 3(4)); prevention of significant harm (Article 3(5)); protection of the sovereign rights of states to use water in their territories (Article 3(6)); protection and conservation (Article 3(7)); notification (Article 3(8)); recognition of the community of interest (Article 3(9)); exchange of data (Article 3(10)); undertaking environmental impact assessment (Article 3(11)); peaceful resolution of disputes (Article 3(12)); recognition of water as a finite resource (Article 3(13)); recognition that water has social and economic value (Article 3(14)); and water security (Article 3(15)).

[21] From presentation made by international experts on 25 June 2012

Article 4 of the Nile Framework Agreement sets out the factors that should be taken into account when making decisions about management of the river water. These factors include: (1) geographic, hydrographic, hydrologic, climactic, ecological and other factors; (2) the social and economic needs of the basin states; (3) the population dependent on water resources in each basin state; (4) the effects of use of water in one basin state on another basin state; (5) existing and potential uses of water resources; (6) conservation, protection, development, and economy of use of water resources and cost of measures taken to that effect; (7) availability of alternatives of comparable value to a particular planned or existing use; (8) the contribution of each basin state to the waters of the river; and (9) the extent and proportion of drainage area in the territory of each state.

Negotiation of New Arrangements

There are several preconditions for negotiating new arrangements. First, all parties involved should benefit from the new arrangements. These benefits could include prevention of the impact of non-action. All parties must gain overall benefits from the new arrangements. The arrangements need to go beyond the general principles already established in customary international law, such as reasonable and equitable use, prevention of significant harm and cooperation. In deciding whether to go ahead with negotiating new arrangements, the parties need to factor in the transaction costs of a long negotiation process. The approach needs to cover the whole river basin and to be adaptable, and finally it needs to be supported by an effective dispute resolution mechanism.

There are several advantages to having a binding dispute resolution system incorporated into a treaty. First, it encourages the parties to consider substantive issues if there will be significant consequences from non-compliance. Second, it provides an incentive for the parties to negotiate solutions, in order to void third party intervention. Third, it improves confidence in the treaty, as violations of international law are embarrassing and could lead to added pressure on the violating party.

Case study: Columbia River Treaty renegotiation

The 1964 Agreement on Flood Control and Coordinated Power Production between the United States and Canada saw the USA purchasing Canadian storage for flood control for 60 years. The flow of water in the river is coordinated to produce more power in the United States, and Canada is entitled to 50 per cent of the extra power produced. Under the terms of the 1964 Treaty, the flood control provisions change in 2024, which is also the earliest date either party can terminate the Treaty. Instead of “assured flood control”, Canada will be obliged to provide “called upon flood control”. Canada has a more minimalist view of what this means than the United States.

There are other issues that have emerged since 1964 that were not included in the Treaty including environmental concerns and fisheries. For these reasons, the two parties have decided to review the Treaty. Both countries’ review teams are aiming to develop compatible recommendations about what should be done with the Treaty across the areas of flood control, power production, and the ecosystem. There are three possible scenarios for the Treaty: it could be terminated, it could continue as is, or it could be adapted.

The review process is still at a preliminary stage: the two sides are coming up with ideas that may lead to solutions as a starting point for discussion, rather than concrete proposals. Both sides need to understand the other’s interests, and to be aware that more than one solution could satisfy these interests. Negotiations have not yet started, but potential solutions found could feed into recommendations that could result in negotiation.

The two sides' views of flood control after 2024 can be characterised as follows. The United States has interests in avoiding unnecessary costs, accepting reasonable risk, and making predictable payments. Canada has interests in realising the benefits from the infrastructure it has available, creating and sharing downstream benefit, and receiving value for flood risk management services. Both sides want to see flood control within the Treaty, and want value to be created and shared. There is still disagreement on flood control after 2024 and any new arrangements will be subject to continuation of the Treaty.

In deciding how to proceed, both sides will have to consider the values important for their decision making. For the United States these include risk to life and property; avoided costs of infrastructure maintenance and development; the impact of effective use of storage space without coordination with Canada; and the costs of relying on Canadian assistance. Meanwhile Canada has to take into account foregone revenue and impacts on other values; reduced flexibility; and infrastructure maintenance. These considerations are the benefits and costs that could be shared.

What lessons can be learned for Central Asia from this process? Firstly, the lack of a Framework Treaty is a challenge in this context. With or without continuation of the Columbia River Treaty, cooperation between countries is crucial. Real cooperation is based on arrangements that are mutually beneficial. Finally, it is advantageous not to negotiate too soon, but to explore the issues without prejudice, and engage in interest-based negotiation.

Case study: Pakistan – India dispute resolution system

A binding dispute resolution system is an essential part of predicting and implementing change. It is useful for agreements to include provisions that, if faced with disputes, parties have the option to go to a tribunal. At the tribunal, the parties would be required to produce evidence, and witnesses could be examined and cross-examined. The tribunal would then produce a decision, with its reasoning clearly explained, and this decision would be honoured by the parties.

The Indus River Treaty provides a good example of how a binding dispute resolution system is called upon in practice. The Treaty was brokered between India and Pakistan in 1960 by the World Bank, at a time when the two countries were at war. It provided that India would have unrestricted use of the eastern rivers of the Indus basin, while Pakistan could freely use the western rivers. Both sides have the right to build facilities (such as dams) on the rivers, as long as they do not impact on the run of the river.

In 2008, Pakistan decided to build a hydropower plant on the western rivers. The same year, India also decided to create a power plant on a western river. The Indian plan involved three components: building a dam on the Indus, a tunnel to divert water to the power plant site, and the power plant itself. Thus it would have a materially adverse impact downstream in Pakistan. Therefore Pakistan decided to invoke the dispute resolution mechanism for the first time, filing a claim in May 2010.

The Commission set up to arbitrate the dispute was made up of two experts nominated by each state (though they were not allowed to be nationals of those states), and three others (the Chair, an engineer and a legal expert) who should have been agreed by the two sides. As the two sides were unable to agree to the three additional names, these were nominated by third parties: the Secretary-General of the United Nations (for selection of the Chair), the Rector of Imperial College London (for selection of the Engineer Member), and the Lord Chief Justice of England (for selection of the Legal Member).

The Tribunal held its first session in January 2011. It acknowledged the commitment demonstrated by both sides to resolve the dispute in accordance with the Treaty. In March 2011, Pakistan sent a letter to India requesting information on the project. In June, the Tribunal visited the dam site. As India was going ahead with the project as the Tribunal was still debating the issues, Pakistan filed for provisional relief in June 2011, in order to prevent any construction work changing the run of the river and making the Tribunal findings redundant. Following this, the Tribunal requested technical information from India in August 2011, and rendered a decision on the provisional relief claim in September 2011. This decision stated that work on the tunnel and the power plant could continue, as they would not change the run of the river and would in any case not be completed until after the final decision was made, but the dam building had to be stopped until the Tribunal's final decision.

The decision on the merits of the case is expected to be made in late 2012. In July, India will file its case for building the hydropower system being legal, and in August a hearing is planned on the merits. The case is significant as it has proved that a dispute resolution system enshrined in a 60 year old Treaty is still respected by both parties, despite the fact that their relations are often problematic. Both parties have said they will abide by the Tribunal's decision. The expert proposed that such a binding dispute resolution system could work in Central Asia as well.

Proposed areas for strengthening cooperation in Central Asia

Following the presentations on the World Water Forum, current bilateral and multilateral cooperation in the region, and the new developments internationally on transboundary water management, participants divided into four break-out groups to discuss the areas of transboundary water management in which they would like to see enhanced cooperation in Central Asia. The groups came up with a wide range of suggestions, which are summarised below.

IFAS and its Executive Committee were seen as a unique platform for facilitating cooperation in the region, as they are recognised by all the countries of the region and provide hope and support. It is hoped that there will be more cooperation through this platform, and more chances for it to integrate new activities. It was also suggested that the cooperation activities currently being undertaken at sub-basin level outlined above could serve as good models for expansion.

For the moment, not enough regional analysis is being carried out on water management to provide prognoses and link in to capacity building for individual countries. A seminar to be hosted by the World Bank in Almaty in early July should help in this regard.

Participants spoke of the relevance of a *dispute resolution mechanism* for the region that could be based on similar mechanisms in place in other areas. One group reported that such a system is absolutely necessary, and suggested that a functioning dispute resolution mechanism should form part of a new General Treaty for the region. Guidance would be needed on how to proceed with this.

There is a reported need for *scientific and technical cooperation on water quality* and *unified standards in the region for water quality*. Water quality monitoring is currently difficult, as there is a lack of common standards. It was felt that a Central Asian Agreement is necessary but that this would be very difficult to achieve in practice. Bilateral agreements could be the way forward. Another alternative would be to look again at old agreements and treaties. However most of these date from Soviet times and therefore may not be the best basis for cooperation, as understanding of water quality has progressed since then.

One proposal for cooperation on water quality monitoring and sampling was to concentrate on *joint sampling* activities. This could potentially be carried out in partnership with IWAC. It was suggested that bilateral or trilateral sampling of transboundary water quality could be feasible, whereas participation of more states would make joint sampling impossible.

Since Soviet times, a high proportion of water purification equipment has passed the end of its intended working life. According to one participant, some countries have replaced this equipment while other countries, particularly those upstream, have been unable to do so. This is having a serious impact on the amount of unprocessed water being discharged downstream: water is simply not clean enough. It was proposed that multilateral cooperation could be enhanced to advocate donor funding for new water purification equipment in upstream countries.

A proposal was made for developing *harmonised minimum sanitary norms* for the amount of water needed per person for the region, in order to ensure that everyone has enough water. Drinking water supply is an issue everywhere, even in the upstream countries. This is an area

where water and health issues overlap, along with water quality. There could meanwhile be flexible tariffs imposed for additional uses, such as swimming pools and fountains.

Participants reported on the need for increased cooperation on monitoring and using *groundwater*. This should initially focus on enhanced research into and discussion about the issues involved.

Another area in which expanded cooperation was felt necessary is *dam safety*. UNECE has been supporting partnership in this area since 2004. As of today, two phases of work on the issue have been completed. A draft agreement on dam safety has been developed, but it requires further analysis by experts before adoption. There is also a need for greater information exchange on dam safety issues.

Participants reiterated the need for improved *information exchange* in the region on water quantity, quality and use. This is discussed further in the information sharing section below.

Information sharing processes in Central Asia

Easy access to information on the status and evolution of water resources and uses is one of the keys to a successful water policy. Water resource managers need reliable, up-to-date and relevant information on issues such as regulations, planning, risk management and public information. The needs are different depending on the actors and the levels they are acting at

The second day of the seminar was dedicated to information sharing processes in the region. It began with a presentation by EC IFAS on the information portal Water Unites[22] which it has set up to raise awareness of water issues and transboundary water resources management in Central Asia.

The EC IFAS Executive Director then stressed that water resources in the region require an appropriate mechanism to ensure use for the benefit of all, as reflected in the Declaration made by the region's Presidents in 2009. The memorandum that has been signed between EC IFAS and UNRCCA to ensure sustainable development and regional security in Central Asia, including the development of a mutually acceptable regional mechanism on integrated water resources management, is intended to facilitate cooperation in this respect. The UNRCCA seminar on *Early Warning on Potential Trans-boundary Water Problem Situations in Central Asia* held in Almaty in September 2011 launched this process, and the political support provided by UNRCCA has been complemented by technical support from the French-based International Organisation for Water (IOWater) and UNDP in information management.

Since November 2010, IOWater has been implementing a French Global Environment Fund (FFEM) project administered by IWAC (the International Water Assessment Centre) to build capacity for data administration for assessing transboundary water resources in Eastern Europe, the Caucasus and Central Asia.[23] Data management for transboundary water was recognised as vital at the Marseille World Water Forum, and the Handbook on Transboundary Water Management published by the International Network of Basin Organisations and partners contains a whole chapter on the issues.

Most of the necessary data is produced at national level by a range of organisations, but it is sometimes difficult to identify and access. The information is usually fragmented, incomplete and not standardised; the ways it is produced are not clear; and a lack of metadata makes it difficult to trace. This is compounded by the fact that data is not always digitised. Monitoring is not regular either over time or between locations. There is no access to data and information adapted for particular needs. Therefore, efforts need to be made to rationalise the information and make it readable and easily accessible.

The FFEM project has been developed in the framework of assessment reports on transboundary watercourses produced by UNECE. It focuses on the Aral Sea basin, as well as the Dniester River Basin. The project began with developing an understanding of the legislative and institutional context of data management and creating an online database of actors. This was followed by a data source analysis, which included creation of an inventory of existing data and information and an online data source catalogue tool. Next diagrams

[22] http://www.waterunites-ca.org/
[23] This section is based on a presentation by IOWater on 26 June. For the project website, see http://www.aquacoope.org/ffem-eecca/index.php?lang=en

were created that illustrate the main regular data flows between institutions on topics of interest. The final stage is a survey and analysis of partners' needs in terms of access to data produced by other organisations; external online services related to data management; tools and equipment for data processing; and training to reinforce capacity in water data management and administration.

The data collected in these phases is available at the FFEM-EECCA project website.[24] More than 200 data sources related to the Aral Sea basin are recorded in the catalogue. The site can also be used to present information collated in the bulletin. The analytical phase is intended to *raise awareness* of the importance of improving data administration among the main water management stakeholders; *develop concrete tools* for strengthening data administration; and *encourage exchange of experience and knowledge* regarding data administration. The project team is ready to continue supporting the production of bulletins. They are also willing to assist regional countries in meeting their needs for water data administration. The project team is currently providing support to the Kazakhstan information centre to analyse water data, and to Tajikistan to assist development of a national information system on water issues.

EC IFAS Regional Hydrology Centre

A presentation was made on the EC IFAS Regional Hydrology Centre and its role in information sharing. The Centre coordinates regional cooperation activities and is based in Kazakhstan's hydro-meteorological service building in Almaty. It is tasked with providing solutions to EC IFAS on the Aral Sea basin; improving hydrological forecasting and data exchange between national hydro-meteorological centres and strengthening regional cooperation; facilitating establishment of a hydro-meteorological monitoring network on the ground; and expanding cooperation with international organizations, donor countries and other funding sources.

The Centre worked with the World Bank and national hydro-meteorological services to develop a project to modernise hydro-meteorological services. The main aim of the project is to improve the accuracy and timeliness of hydro-meteorological services in Central Asia, with particular attention to Kyrgyzstan and Tajikistan. The project began in September 2011 and will conclude in August 2016. The modernisation programme seeks to restore infrastructure and human capacity in order to reduce disaster risk, facilitate climate change adaptation, and support economic development in the agriculture, water, energy and transport fields. The project is assisting the hydro-meteorological services of Kyrgyzstan and Tajikistan to improve their capacity to monitor and forecast environmental changes, build human capacity, and develop new business practices to ensure sustainable service provision. In addition, the project will promote regional cooperation in hydrometeorology, including through the exchange of relevant information.

The first component of the project, strengthening regional cooperation and information exchange, is intended to provide all project participants with the capacity to use, provide, exchange and archive standard meteorological data, as well as comparable levels of skill in obtaining and compiling information and providing hydro-meteorological services. The other two components are intended to build the capacity of hydro-meteorological services in Kyrgyzstan and Tajikistan respectively and to ensure that they have the infrastructure in place and capability to provide services on a sustainable basis in surveillance, weather forecasting, water resources and climate, corresponding to their countries' economic and social needs.

[24] http://www.aquacoope.org/ffem-eecca/index.php?lang=en

The long term intention of the project is to provide more varied high-quality informational products in user-friendly and client-oriented formats; improve the exchange of data and information at regional level, particularly about dangerous phenomena, and strengthen cooperation between the hydro-meteorological services of Central Asia's countries.

Development of the prototype bulletin on transboundary water[25]

At the international seminar hosted by UNRCCA in Almaty in September 2011, participating delegations from the six countries of the Aral Sea basin agreed in principle to provide information for an early warning system. A tentative list of 44 indicators in nine thematic areas was discussed.[26] It was agreed to produce a prototype bulletin to test the feasibility of the project. The prototype bulletin was developed under the general coordination of EC IFAS with information support from the relevant ministries and hydro meteorological services in Central Asian countries, political support from UNRCCA, and technical support from IOWater and UNDP.

The prototype bulletin concentrated on the Syr Darya river basin and had the objective of early warning of potential crisis situations related to transboundary water resources management in Central Asia. It was planned to issue a bulletin quarterly (January, April, August, and October) to cover different thematic topics, in order to warn of and prevent potential transboundary problems relating to water resources management in Central Asia.[27] The prototype bulletin covers hydrological data concerning the Syr Darya River, including river flow, reservoir volumes and prognoses of river flow. A list of 15 monitoring points was agreed upon (see the map below), along with significant years that can be used for comparison purposes.

[25] From presentation by IOWater, 26 June 2012
[26] For more on this seminar, see the seminar report at http://www.ec-ifas.org/engine/download.php?id=54
[27] See the prototype bulletin, at http://www.ec-ifas.org/engine/download.php?id=53

The data collection process was coordinated by EC IFAS and involved the sending of official request letters. The national hydrometeorological services of Kyrgyzstan, Kazakhstan and Uzbekistan provided the data requested. The bulletin was disseminated to the relevant sections of Central Asian and Afghan Ministries, along with national hydrometeorological services, the component bodies of EC IFAS, UNRCCA, UNDP and other stakeholders. The government bodies provided positive feedback on the prototype.

It was decided at the Almaty seminar that future bulletins would cover topics such as hydrology, climate, irrigation, agriculture and food security, hydroelectric power, environment, institutional development, diplomacy and others, as outlined in the seminar report. It was planned to include information regarding the Amu Darya River and some meteorological data in the second bulletin. After a proposal on technical content and requests for concerned data were sent to all Central Asian national hydrometeorological services, ministry structures, and relevant data producers, a list of monitoring hydro meteorological points was agreed upon (see map below).

At this point, the production of the second bulletin ran into several difficulties. The producers faced the problem that the indicators proposed from the Almaty seminar had not been agreed beyond the names, and that more specific indicators were needed for the collection process. It would also be important to specify what is wanted to be shown by each indicator; what are the areas and units to be covered; what data needs to be collected where and how often; and who should be collecting the data. Meanwhile, it is still not clear who should coordinate the collection and analysis of data for the new bulletin, how the information produced will derive its legitimacy, and how the data producers will cooperate to produce it. This means that many of the data producers were unable to provide the information needed.

At the Issyk Kul seminar, it was noted that a progressive approach is needed: it would be unrealistic to expect to collect all the indicators immediately. It is important to have a clear statement of the objective of the bulletin and to specify which indicators should be presented in the bulletin. The procedures for data collection and processing should be clarified and agreed upon with data producers (who provides what, how is it processed and who is it disseminated to). Finally, clarity is needed regarding who is responsible for steering the process of bulletin production and defining the priorities for its development: it may be worth dividing duties between different organisations. For example, the Regional Centre for Hydrology could be responsible for providing information on the hydrometeorological part.

A representative of the ICWC Scientific Information Centre proposed a structure for data collection and flow for the bulletins. National providers would transmit the data electronically to a Control Centre at EC IFAS. If data was not provided, this could be requested again by monitors at Ministries of Foreign Affairs or UNRCCA. The data provided would then be analysed by a Centre for Information Analysis and Monitoring, made up of Central Asian experts, with the data providers contacted again for clarification if data is missing or inaccurate. The Centre for Information Analysis and Monitoring would input the

data into theoretical models to discover if the situation was optimal and if not further simulations would take place to find solutions. An Expert Centre of decision makers from ICWC and relevant Ministries would review the findings of these simulations in order to find consensus on a solution proposed. The finalised information aggregated by the Centre for Information Analysis and Monitoring and the Expert Centre would then be formatted into a bulletin, to be made available to stakeholders both electronically and in hard copy.

Results of discussions on information sharing

The first day's group discussions confirmed the belief that information sharing is one of the key forms of cooperation needed in the area of transboundary water resources in Central Asia. The intergovernmental commission established after the end of the Soviet Union does ensure some information exchange, but even it does not have comprehensive information. There is an intergovernmental agreement that obliges countries to release some information to each other, but in many cases this cannot be made public as, for example, Kyrgyz law states that any information released to the public should be paid for.

Meanwhile there are also issues with *data availability* within the countries of the region. Data which is not being collected clearly cannot be shared. An inventory of sources is currently being developed, in which all actors in the region are invited to present what data they have, what sources they use and so on. While the inventory will not provide direct access to the information itself, it would at least indicate where and what data is available.

In addition, the fact that there is a lack of a *common reference set* for data in the region is a reason for concern. For example, there is no standardised codification of information regarding rivers and dams. Different methodologies lead to difficulty in standardising data. The inventory of data sources that is being created should lead to more clarity about differences between sources in this respect. There is a need for a regional agreement on common lists of parameters for water quality, dam classification and so on, enabling information to be used for various purposes and facilitate the development of integrated water resource management. The reference set from Soviet times has been altered by individual countries over time, mainly in terms of gradations. In order to create a common system, the countries would have to agree whether to go back to the Soviet system, or to use the international standards that have been agreed in the meantime.

One group recommended that a *common information platform* should be created for the region. A lot of information and data is available, but it is technically difficult to share it. For example, many participants regretted that they knew little about cooperation over water between Kazakhstan and China.

Data collection for the information bulletins

The discussions held on the second day focussed on improving the process of gathering data for the information bulletins. There was repeated feedback that the bulletins could potentially be a very useful source of information about various issues, and that preparation of them should continue under the auspices of IFAS, with political support from UNRCCA. It was proposed that information sharing by the data holders should be closely monitored..

One of the groups recommended to increase the timeliness of the bulletins by processing should data as quickly and efficiently as possible. This could be supported by the use of methods such as video conferences and working meetings. Someone proposed that in addition to a quarterly bulletin, a joint web portal should be created in order for the new information to be entered and observed in real time. The SIC ICWC representative pointed out that their portal[28] already provides significant amounts of data, and, if parties agree, its role could be enhanced.

[28] CAwater website. Address http://www.cawater-info.net/index_e.htm

A key concern raised was that some government organisations refuse to provide information stressing that they are not authorised to do so. One group proposed that a first step to address this concern could be a memorandum signed by Ministers or Deputy Ministers of Foreign Affairs, which would act as a framework agreement on data sharing. It was felt, that UNRCCA, with its political mandate, could follow up on if it sees fit. Participants did not agree on the role of Ministries of Foreign Affairs (MFAs), as some believed that specialised agencies dealing with water issues and statistics are the correct points of contact for countries, while others felt interstate relations should be conducted through MFAs. It was agreed that specialized bodies/agencies in each country responsible for data inclusion in the bulletin should be identified in the near future.

The function of the bulletins was queried. If they were to be published once every three months, they would no longer be early warning bulletins, particularly for purposes such as flood prevention. Perhaps they could be renamed and used to create a shared vision. Meanwhile, it was pointed out that, in terms of conflict potential, the key season for information about water is spring when irrigation water is particularly vital. There is a need for prognoses on water supply to reach farmers in a timely fashion.

It was reported that the World Bank will host a meeting in Almaty in the first week of July to discuss the information already publicly available in near-real time. Many indicators, for example humidity, can be used to create warnings of floods, droughts and so on. The September seminar report refers to a number of exercises already underway by regional and international organisations to collect information about a variety of topics relevant for transboundary water management in Central Asia.

It was proposed that a network of different centres could provide information for the bulletins, with thematic bulletins being issued to complement a consolidated bulletin. One group suggested that the information collected and analysed for the current bulletin, in one of the nine proposed areas of information from the September seminar, would be a duplication of data collected by SIC ICWC that are available to EC IFAS and member states. This high-quality information could be made available for use in the bulletin providing the ICWC agreed on this at its next meeting. Meanwhile, the other eight thematic areas discussed at the September Almaty meeting should be considered and finalised at national level, with the support of donors and regional organisations.

There were mixed views on whether final versions of bulletins should be approved by Governments before being released, particularly if they contain analysis. One government delegation also proposed that the bulletins should focus on water quantity and quality reporting at border posts, as information about the situation within countries may be considered confidential. Countries already produce their own annual national bulletins for internal purposes.

Appendix 1: List of participants

Representatives of Central Asian States	
Kyrgyzstan	Mr. Chyngysbek Uzakbaev, Deputy Director, Department of Water Recourses and Melioration, Ministry of Agriculture and Melioration
	Mr. Chyngyz Eshimbekov, Deputy Director, Department for International Economic Cooperation, Ministry of Foreign Affairs
	Ms. Asel Raimkulova, Senior Specialist, Department of State Ecological Expertise, State Agency for Nature Protection and Forestry
	Mr. Kalkaman Batyrbekov, Leading Specialist, Unit of external relations and project implementation, Ministry of Energy and Industry
	Ms. Aida Atabekova, Expert, Jogorku Kenesh (Parliament)
	Mr. Ababakir Koilubaev, Expert, Unit for Agro-Industrial Development, Office of Prime Minister
	Mr. Kanat Imanaliev, Second Secretary, Department for International Economic Cooperation, Ministry of Foreign Affairs
Kazakhstan	Mr. Musslim Zhiyenbayev, Senior expert, Water Resource Committee, Ministry of Agriculture
	Mr. Darkhan Nursadykov, First Secretary, SCO unit, Department of Asian Cooperation, Ministry of Foreign Affairs
	Ms. Jamal Nurbayeva, Specialist, SCO unit, Department of Asian Cooperation, Ministry of Foreign Affairs
	Ms. Nauatkul Abylkhanova, Expert, Committee of Environmental Regulation, Ministry of Environmental Protection
	Ms. Dana Orazkeldykyzy, Expert, Department of International Environmental Agreements, Ministry of Environmental Protection
Tajikistan	Mr. Anvar Zoirov, Deputy Minister of Melioration and Water Resources
	Mr. Toliboy Yunusov, Deputy Head, Department of Information and Analysis, Ministry of Foreign Affairs
	Mr Nurmakhmad Kholnazarov, Head of Electric Energy Unit, Ministry of Energy
	Mr. Alikhon Karimov, Director, Scientific Research Centre on protection of water resources, State Committee on Nature Protection
Uzbekistan	Mr. Bahodir Rasulev, Chief, Main Department for land-water resource protection, State Committee for Nature Protection
	Mr. Vokhidjon Akhmadjonov, Deputy Chief, Department for balance of water resources and water saving technologies development, Ministry of Agriculture and Water Economy
	Mr. Shukhrat Talipov, Chief specialist, State Inspectorate on Control and Supervision of the technical condition and safety of the largest and most important water economy objects under the Cabinet of Ministers
	Mr. Sherzod Asadov, Second Secretary of Department for CIS, CSTO and SCO, Ministry of Foreign Affairs
Turkmenistan	Mr. Baygeldy Baydjanov, Head of exploitation Department, Ministry of Water Industry
Embassies and International and Regional Organizations	

US Embassy in Astana	Mr. Bruce Hudspeth, Regional Environmental Officer
US Embassy in Tashkent	Mr. Bakhtiyor Mukhamadiev, Environmental and Scientific Affairs Specialist
IFAS	Mr. Saghit Ibatullin, Chairman of the IFAS Executive Committee
	Mr. Alfred Diebold, Technical Director of the IFAS Executive Committee
	Ms. Svetlana Shivaryova - Executive Director of the Regional Center for Hydrology under the IFAS Executive Committee
	Ms. Madina Mussayeva, Coordinator of regional bulletin related activities / Consultant FFEM-EECCA project
SIC ICWC	Mr. Denis Sorokin, Manager for ICWC Information System, SIC ICWC
EurAsEC	Mr. Avasbek Alymkulov, Head of the Department of Energy Policies and Environmental Issues
World Bank	Ms. Daryl Fields, Senior Water Resources Specialist
USAID/CAR	Ms. Gulzada Azhetova, Project Management Specialist, Economic Development Office
IOWATER	Mr. Paul Haener, Head of the Water Information System / FFEM/EECCA project
CAREC	Ms. Guljamal Jumamuratova, Program Specialist, Water Initiative Support Program
GIZ	Mr. Alexandr Nikolayenko, Regional Advisor, Trans-boundary Water Management Programme in Central Asia
	Ms. Maria Koenig, Coordinator for Kyrgyzstan, Transboundary Water Management Programme in Central Asia
International Water Assessment Center, IWAC	Mr. Boris Minarik, Director
UN agencies	
UNDP	Mr. Alexander Avanessov, UN Resident Coordinator and UNDP Resident Representative to the Kyrgyz Republic
	Ms. Natalia Alexeeva, Water Programme Coordinator for Central Asia
UN DPI	Mr. Vlastimil Samek, UN DPI Representative in Kazakhstan
UNESCO	Mr. Sergey Lazarev, Director of Cluster Office in Almaty and Representative to Kazakhstan, Kyrgyzstan and Tajikistan
UNAMA	Mr. Mark Pont, Special Advisor Regional Affairs/Senior Political Affairs Officer
	Ms. Savitri Singh, Senior Regional Trade and Economic Advisor
UNECE	Mr. Marton Krasznai, Regional Adviser Economic Cooperation and Integration Division
UNESCAP	Mr. Nikolai Pomoshnikov, Head of Sub-regional Office of ESCAP for North & Central Asia
	Ms. Irina Kolykhalova, Administrative Assistant ESCAP Subregional Office for North and Central Asia
UNRCCA	
UNRCCA	Ambassador Miroslav Jenča, Special Representative of the UN Secretary General, Head of the Regional Centre

	Mr. Fedor Klimtchouk, Deputy Head of the Regional Centre/Senior Political Officer
	Mr. Alex Grzybowski, UNRCCA Consultant
	Mr. Matthew Naumann, UNRCCA Consultant
	Mr. Lauren Mandell, UNRCCA Consultant
	Ms. Bakhit Abdildina**,** UNRCCA Representative in Kazakhstan
	Mr. Nodir Khudayberganov, UNRCCA Representative in Uzbekistan
	Mr. Jomart Ormonbekov, UNRCCA Representative in the Kyrgyz Republic
	Ms. Maria Urpi, Political Associate in Bishkek/UNV
	Ms. Guncha Muhiyeva, Project Assistant

Appendix 2: Agenda

Day 1, June 25, 2012	
09:00-09:20	**Opening session. Welcome address by:** *- Representative of the Government of the Kyrgyz Republic,* *- Ambassador Miroslav Jenča, Special Representative of the UN Secretary-General and Head of UNRCCA,* *- Mr. Saghit Ibatullin, Chairman of the Executive Committee of IFAS*
09:20-09:30	**Brief presentation of the agenda of the meeting** *- Mr. Fedor Klimchuk, Deputy Head of UNRCCA*
09:30-10:30	**6th World Water Forum – Key results and their implementation in the context of Central Asia** • *Representative of UNRCCA (Introduction)* • *Representative of the Delegation of the Kyrgyz Republic* • *Representative of the Delegation of the Republic of Kazakhstan* • *Representative of the Delegation of the Republic of Tajikistan* • *Representative of the Delegation of Turkmenistan* • *Representative of the Delegation of the Republic of Uzbekistan*
10:30-10:50	Coffee-break
10:50-12:30	**Recent developments in Bilateral and Multilateral Cooperation in the Region. Panel discussion** • **Tajikistan and Kyrgyzstan – lessons learned from the preparation of the Framework Agreement** (*Representatives of the Delegations of the Kyrgyz Republic and Republic of Tajikistan)* • **Kyrgyzstan and Kazakhstan – Update on cooperation within the framework of the joint commission on Chuy and Talas Rivers** *(Representatives of the Delegations of the Republic of Kazakhstan and Kyrgyz Republic)* • **Bilateral and Multilateral developments in water cooperation** (*Representatives of the Islamic Republic of Afghanistan, Turkmenistan and Republic of Uzbekistan)* • **EC IFAS activities to establish a regional mechanism on the comprehensive use of water resources in light of the decisions of the Summit of the Organization** *(Representative of the EC IFAS)*

	• **International community's efforts to support cooperation on trans-boundary water issues** *(Representatives of UNECE, UNDP and other international and regional organizations)*
12:30-14:00	Lunch
14:00-15:30	**Priorities and alternatives of Bilateral and Multilateral cooperation on trans-boundary water resources – way forward in the regional context** - *Break out group discussion*
15:30-15:50	Coffee-break
15:50-17:00	**Presentation of discussion results** - *Group representatives*
17:00-17:30	**Best Practices– intensification of cooperation in response to emerging issues and changing priorities (International experience on on-going negotiations in this field)** - *Alex Grzybowski , Consultant to UNRCCA* - *Lauren Mandell, Consultant to UNRCCA*
17:30-17:45	Adjourn
18:30	Reception

Day 2, June 26, 2012	
9:00-09:10	**Brief presentation of the agenda of the day** *- Mr. Fedor Klimchuk, Deputy Head of UNRCCA*
9:10-10:30	**Review of data sharing on transboundary water resources in the region: best practices and implementation in the regional context** *- Mr. Saghit Ibatullin, Chairman of the Executive Committee of IFAS (introduction),* *- Mr. Paul Haener, FFEM-EECCA project* *- Ms. Svetlana Shivareva, IFAS Regional Center for Hydrology*
10:30-10:50	Coffee-break
10:50-12:30	**Presentation of a prototype bulletin – problems and solutions. Questions and discussion**

	- EC IFAS *- Mr. Paul Haener, FFEM-EECCA project* *- Mr. Matthew Naumann (UNRCCA Consultant)* *- UNRCCA* *- UNDP*
12.30-14:00	Lunch
14:00-15:30	**Break out groups to discuss the way forward with data sharing and the issuance of regular regional bulletins** *Working in groups*
15.30-15:50	Coffee-break
15:50-16:30	**Plenary session to wrap up discussions and present summary outcomes** *Group reports*
16:30-16:45	**Closing remarks** *- EC IFAS* *- UNRCCA*