

Water information in Central Asia

- A framework for future development

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Why this paper

Reliable information about the environment and in particular water resources is required for the sustainable future of Central Asia. The challenges to ensuring that such information is available and accessible for decision-making, as well as for the broader public, are many:

- the capacity for collecting, managing and quality-controlling such information is generally low and monitoring networks are not sufficiently developed and in some cases are even deteriorating.
- the regular exchange of information within and between States remains difficult due to the lack of a culture of and political will for such exchange, as well as insufficient budgets for maintaining data-generating organizations.
- on the regional level it is difficult or nearly impossible to find information sources which are perceived as politically neutral/impartial.
- communication of data in ways that can be understood by decision makers is underdeveloped.
- at present there is only limited decision-making taking place at the regional level, which would drive the demand for information and policies beyond well-established business-as-usual practices.
- in their turn, the suppliers of information do not actively look for users apart from their established routines, beyond which there is no strong culture of serving other agencies, businesses and the general public.

The authors represent organizations with mandates and visions for information issues in the water and environmental sectors. They have been engaged with Switzerland, SIC ICWC² and many other organizations working in Central Asia trying to address some of these challenges, *inter alia*, by developing the CAREWIB information system and web portal,³ today a well-acknowledged regional information resource. Considerable progress in the water information field has been made since the mid-1990s (starting with the "first edition" of the Aral Sea Basin Programme), and a fair amount of information resources are available and accessible in the region today. Yet, the many efforts have not been able to offer consistent solutions to dealing with the challenges above in their entire complexity.

¹ The views expressed in this chapter are those of the authors and do not necessarily reflect the views of the United Nations Economic Commission for Europe.

² Scientific-Information Center of Interstate Coordination Water Commission of Central Asia

³ Central Asia Regional Water Information Base project www.cawater-info.net.

While it is technically not difficult to define the main needs and concrete steps for developing a regional information system further, financial and political bottlenecks are real and need to be resolved — this is the main precondition for a positive development. Hence, before developing a more detailed plan it is necessary to agree on the broad lines for action and cooperation. The authors have engaged themselves in producing a vision that could be discussed between the main players in the Central Asia water information field. Such a background paper⁴ was prepared for the regional meeting “Managing water information in Central Asia” organized by UNECE with the support of GIZ⁵ and EB IFAS⁶ in Almaty on 7 December 2011.⁷ The meeting, attended by over 60 representatives of Central Asian countries, regional and international organizations and donor agencies, proved a useful platform for exchanging views, perspectives and plans with respect to water information.

Virtually all countries and organizations at the meeting expressed support for the further development of water information and its exchange in the region. Many paid tribute to the achievements of the CAREWIB project and called for the further development of its information system. However, views on specific ways of further developing water information in Central Asia differed, with most organizations retaining their own paradigms and in practice committing only to soft coordination rather than firm cooperation. The table in annex 1 provides a summary of priorities and plans of various organizations derived from the inputs to the meeting, as well as from a study commissioned by UNECE prior to it.⁸

During the Almaty regional workshop in December 2011, the time available for exchanging views and mapping a possible common way forward was extremely limited. The purpose of this reworked version of the issues paper is to take the discussion one step further. Given that consensus has not yet been reached regarding possible truly concerted efforts in the water information field, we see further development as the gradual building of synergies between the main ongoing and planned processes. In doing this we believe that in particular the information system produced by CAREWIB should remain an essential part of the regional infrastructure for water information and decision support, although changes will be needed on the organizational, political, substantive, design and financial levels.⁹

What is proposed

The following is our vision for water and environment information in Central Asia:

- robust supply of water and environmental data in and from the countries.
- well-organized management, exchange and communication of comparable information within the countries and the region.
- systematic communication of integrated strategic-level water and environmental information and its use for policymaking and policy dialogue across Central Asia.

⁴ Nikolai Denisov and Bo Libert. Stronger supply, clever demand: vision for water and environmental information in Central Asia. Issues paper (http://www.unece.org/fileadmin/DAM/env/water/cadialogue/docs/Inform_meeting/vision_for_water_information_in_central_asia_final112_Eng.pdf).

⁵ Deutsche Gesellschaft für Internationale Zusammenarbeit

⁶ Executive Board of the International Fund for the Saving of the Aral Sea, Kazakhstan

⁷ Cf. workshop press release <http://www.unece.org/index.php?id=27511> and materials of the workshop (please see annex 2 for details).

⁸ Juerg Kraehenbuehl. Comments on Regional Water Information Systems, unpublished paper for UNECE. November 2011

⁹ The SDC-funded transitional phase of CAREWIB in 2012 offers a good opportunity to prepare for the necessary changes and start introducing them.

In order to achieve these objectives, it is proposed to coordinate the efforts of Central Asian countries, regional and international organizations and donors in building capacities for:

- (a) regularly communicating strategic information in a user-friendly regionally synthesized format to decision makers and the public;
- (b) integrating, managing and disseminating comparable water information and data on the regional level;
- (c) improving the collection and sharing of water-related data within and among individual countries.

Whereas some of the specific proposals below may seem simple, we believe that at this stage solutions focusing on institutions may be more effective than the elaboration of complex IT setups obscuring the real issues at stake. Regarding the contents, it is suggested that the focus of the discussion and further development be on water and water-related ecosystems, yet with due consideration for and the gradual integration of other traditional issues such as energy, land resources etc.

To move towards the proposed vision, we see several major preconditions:

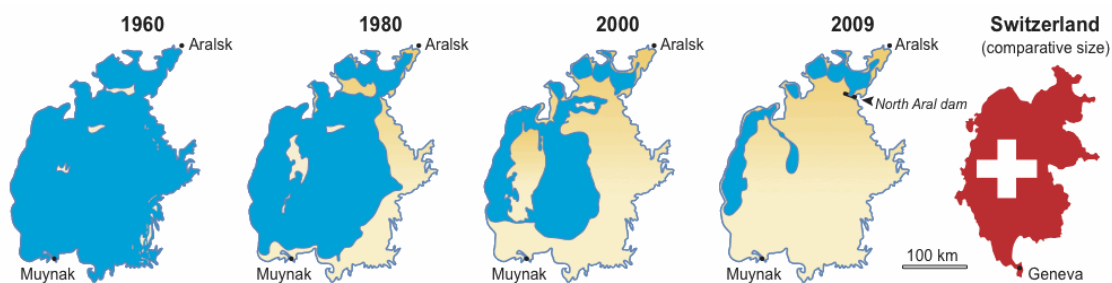
- that countries, their various agencies and regional organizations subscribe to the vision of improving the common information space, and that political and institutional issues with regard to the accessibility and exchange of information can be resolved.
- that information should be managed as close as possible to its source (i.e., has national and, where relevant, regional ownership) and up-to-date aggregated quality-controlled data should be freely available and easily accessible to various users.
- that cooperation is improved among the existing or unfolding initiatives in Central Asia which touch upon the water information field. New projects planned in the sector should take into account their possible contribution to the improved management and use of water information, and seek integration of their activities and outputs with the entire regional network.

A. Communicating strategic issues to policy-makers and the public

To design an information and decision-support system which meets the needs of users, the latter need to be defined, understood and at times educated. Then information supply can be built by “reverse-engineering” the information chain. Regional-scale political and common users, where they exist, need simplified, aggregated and easy-to-understand information rather than raw data, hence the making and communication of such information is the key. At the same time political sensitivities in Central Asia make regional analysis “mission very difficult” and communication a challenging and highly sensitive task.

There are strong arguments for the building of a regional facility and “pipeline” for communicating aggregated strategic information to keep under constant review regional issues and trends. Such a facility will need to rely on a political consensus and the support of the regional Governments, so that the outputs are accepted and to ensure that a stable, solid and trusted supply of raw information material is available for analysis and communication. To strengthen the element of impartiality, information will also need to be drawn from outside the region, e.g., remotely sensed data will be needed to supplement or verify information coming from the countries.

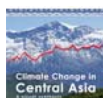
Box 1
Visual communication



The communication of complex information about Central Asia’s water issues to a broad audience (which certainly includes policymakers) requires simple and visual formats. Some examples can be found in various publications, including those prepared by the organizations represented by the authors and listed below.



Central Asia: Environment and development graphics. UNEP/GRID-Arendal, UNDP and SIC ICWC, 2002. Published as a calendar, the collection focuses on the Aral Sea region viewed under several key headings including food production, nutrition, land use, economy, development, health, poverty, energy and biodiversity.



Climate Change in Central Asia. Zoï environment network and SAEFL, 2009. The booklet provides a synthesis of what climate change may mean for Central Asia. It builds upon the series of official national communications on climate change by the Central Asian States under the United Nations Framework Convention on Climate Change.



Environment and Security in the Amu Darya River Basin. UNEP and ENVSEC, 2011. The aim of this report is to identify the environmental stress points in the Amu Darya basin which have, or may have, security repercussions for the States and population of the region. The report then suggests solutions to the challenges identified during the assessment.



Executive Summary of the Second Assessment of Transboundary Rivers, Lakes and Groundwaters. UNECE, 2011. This is a communication product complementing and based upon the full body of the UNECE assessment of more than 140 transboundary rivers, 25 lakes and about 200 transboundary groundwater systems in the pan-European region.



Desertification. Zoï environment network and UNCCD, 2011. A basic information kit that tells the story of desertification, land degradation and drought at the global scale, together with a comprehensive set of graphics on trends and issues over recent decades.



Biodiversity in Central Asia. Zoï environment network and SAEFL, 2012. There is much to look forward to when it comes to preserving biodiversity both globally and in Central Asia as the 2011-2020 United Nations Decade on Biodiversity unfolds.

In practice we propose to create a partnership between UNRCCA¹⁰, EC IFAS and SIC ICWC, where the already well-discussed and forthcoming information bulletin of UNRCCA can be made a vehicle for regularly delivering attractive and understandable information to regional users.¹¹ A pipeline for simple, understandable yet credible communicative and visual information products can then be built around it. On the political level, the process will strongly benefit from the direct negotiations about the bulletin organized by UNRCCA with the Central Asian Governments and Afghanistan. With the full engagement of IFAS the work would be a central contribution to Aral Sea Basin Programme 3. The role of SIC ICWC as the only existing regional information facility (see section B below) will be to help integrate and manage data flows, and to support Central Asian countries and the region's political organizations in the analysis, modelling and visualization of issues and trends. In its turn, the Centre will need to accept United Nations and IFAS political leadership in the production and communication of regional strategic information.

B. Regional integration and management of information

Information needs to be stored and managed somewhere: the region needs a way to channel and transform national data into comparable flows which can be used for analysis, forecasting and decision support on the regional level. Also the notion of "decision-support systems" is becoming increasingly popular in the region, although opinions differ about what they are and to what extent Central Asia is ready for their introduction.¹² But at any rate there will remain a need in regional capacities to collect, integrate and communicate water data from the countries and water basin organizations on the regional level and *vice versa*. In technical terms this will require capacities for database integration, online access and communication, including through a GIS platform. It will also require analytical capabilities to process and integrate underlying data and forecasts.

But besides its comparability and technical quality, the information provided should also be and be seen as unbiased. This is particularly sensitive in today's Central Asia, where the stakes in the water domain are ever increasing and countries and organizations often view each other with suspicion.¹³

The need for an institution in which to deposit and manage regional water information is clear; the question is whether to use and further develop the existing CAREWIB framework or to create a new institution from scratch. This report proposes to further support SIC ICWC as the host and analytical hub for regional water information and decision-support, while taking very seriously the criticism expressed by important stakeholders. An attempt to define some key steps to be taken can be found in box 2 below.

¹⁰ The United Nations Regional Centre for Preventive Diplomacy for Central Asia.

¹¹ Yet the currently proposed vision and structure of the bulletin may still be too comprehensive and all-inclusive, and could benefit from another round of pragmatic user-oriented reflections of what information indeed needs to be regularly offered to the regional audience, and how to ensure its supply in a continuous and cost-efficient way. The first issue of the bulletin, prepared in cooperation with EC IFAS and FFEM, is expected in March 2012.

¹² While e.g. SDC and the World Bank encourage a high-technology approach to decision support (the World Bank in particular in the energy and water domain on the country level), a certain scepticism about Central Asia's absorption capacity for it has been expressed by regional organizations (donor round-table, Almaty, 7 December 2011). It should also be noted that the understanding of what a decision-support system is greatly differs among donors and organizations: from near-real information for operational water management to seasonal and long-term models and forecasts and scenarios.

¹³ The (perceived) lack of impartiality has been one of the key points of criticism of CAREWIB as a regional project; overcoming it at least partially is possible by strengthening regional political oversight of the information system including fully integrating EC IFAS into its governance structure.

The regional database should have a stable and adequate budget, linked to clearly defined responsibilities for managing data and conditions of access to them that are acceptable to the major stakeholders. In principle, open access to data should be the condition, although legacies may need to be addressed, as will be the restrictions imposed by steering bodies, such as IFAS or ICWC, and data suppliers. Overall this will require good will and a strong political mandate, and agreement between Central Asian countries for water information management on the regional scale.¹⁴ In view of the growing commercialization of hydrometeorological data, countries may need to decide and agree on a high level that their Hydrometeorological Services should consistently make selected, key data freely available for the public and within the region.¹⁵

Connections will need to be made with other regional data holders, providers and initiatives, in particular the Aral Sea Basin Programme 3,¹⁶ the World Bank's work on decision-support systems in the water-energy domain, GIZ and SDC's further work in the water sector,¹⁷ etc. (see annex 1). Information flows from the countries will further need to be strengthened through agreements with the countries and data providers and increased political support. Failing that, temporary solutions may need to be maintained for a period of time, such as a strengthened structure and financing of the CAREWIB system of national correspondents and country nodes of the information system.

The growing realities of Afghanistan's plans and steps towards usage of water resources for hydropower and irrigation in the Amu Darya basin underscores the importance of keeping Central Asian States informed about the ongoing and upcoming developments in Afghanistan's water sector through bringing the country into regional information exchange, while also providing Afghanistan with access to water information from Central Asia.

¹⁴ A regional agreement for information exchange has for some time been under development within ICWC and EC IFAS.

¹⁵ Indeed already today Hydrometeorological services provide 10-day to monthly averaged water data and forecasts.

¹⁶ In particular ASBP-3 projects 1.1.2 and 4.2.2.

¹⁷ SDC's water sector note for Central Asia expected to be available shortly can be a framework for further discussing the involvement of Switzerland in the field of water information and decision support.

Box 2

Refurbishing the CAREWIB information system

Feedback from within Central Asia, including discussions at the Almaty meeting in December 2011, and the recent critical external evaluation for SDC, all point in the direction that improvements need to be made to the CAREWIB information system and its CAWaterinfo portal. Not agreeing with all the criticisms, and seeing CAREWIB as one of the few real achievements in the water information sector, we nonetheless see several ways in which changes and improvements can and should be made, as summarized below.

Organizational changes: Central Asia is an immense region, but its professional communities are small. Thus, allegiances built up over many years are hard to dissolve, and CAREWIB may benefit from a change of project leadership. Remaining at SIC ICWC, the project needs to absorb new blood, with young professionals given strong responsibilities for strategy, relations and system management. The regional platform established at SIC ICWC should be broadened with one or two partner institutions in other countries that would share the responsibility for the regional system. This will improve relations with other players, the CAREWIB image and delivery.

Political changes: It is no longer sufficient to govern CAREWIB through ICWC, the political steering of the system needs to be strengthened through the full involvement in its steering mechanism of other political stakeholders including EC IFAS (far beyond its currently limited role in implementation), as well as funding agencies. Relations with Tajikistan need to be openly addressed.

Substantive changes: The content of the system needs to be improved and enriched with near-real-time data and forecasts for decision-making. Full use should be made of geo-information technologies. The known data quality and data documentation issues need to be addressed. National nodes should be strengthened and further developed, starting with the most advanced ones (e.g., Kyrgyzstan and Tajikistan, based on the Isfara basin information system). As much data as possible should be kept open and easily accessible.

Design changes: The organization of the information on the CAREWIB portal and the interface of the system should be improved and made more attractive and user-friendly. Furthermore SIC ICWC may consider rebranding the information system given that CAREWIB will no longer be a Swiss-funded project in the end of 2012, and to reflect the change of funding, paradigm and project organization.

Financial issues: With Switzerland's support phasing out in 2012, the system will need to ensure financial support and stability in the future. Business plans beyond 2012 will have to rely on other sources, including new ones (Switzerland may still wish to participate in supporting the core budget within a collective effort). Additional funds may also come through CAREWIB's enhanced role in regional analysis and communication (see section A above). Partnerships with private foundations and fund-raising among information users are to be explored too insofar as they do not jeopardize the system's image and accessibility.

The SDC-funded transitional phase offers a good opportunity to prepare for the changes and to start implementing them in 2012.

C. Securing country data

The challenge on the country level is to ensure that (a) data are collected; (b) they are of sufficient quality; and (c) they are accessible/shared/exchanged between and among the countries. All Central Asian countries have maintained monitoring networks; however, their conditions and performance vary.¹⁸ The gradual introduction of the EU Shared Environmental Information System (SEIS) approach will hopefully push national information in the direction of SEIS principles already adopted in the EU, and increasingly so in its neighbourhood (see the box 3).

The anticipated focus on water during the initial phase of SEIS implementation in Central Asia will undoubtedly help streamline information flows and eventually equip countries with modern and compatible tools for data delivery and exchange. The efforts of the World Bank to strengthen hydrometeorological networks in Kyrgyzstan and Tajikistan¹⁹ will also increase data availability and hopefully their delivery to users (although it remains to be seen what institutional and financial mechanisms for accessing the data will be promoted and introduced by Hydrometeorological Services). Important efforts in the water information direction are also those by GIZ in selected small basins,²⁰ and France through on-demand capacity-building for meta-information and geographic information in Central Asia.

During the Almaty meeting in December 2011 several donors, including Switzerland and the World Bank, expressed interest in working with water-environmental information on the country level. Indeed, depending on available resources and donor priorities, more comprehensive support to water and environmental information should be offered to countries with the strongest institutional and infrastructural needs (e.g., Kyrgyzstan, Tajikistan). At the same time it is crucial that such actions are linked not only to national, but also to regional and basin-level needs (see section B above), as well as to a certain framework of principles (e.g., those of SEIS) which make the efforts somehow coherent and their outcomes compatible and complementary. In particular, the in-principle direct accessibility of national data for the public and other users should be among the conditions for international support.²¹ If such a framework and a coordination mechanism could be put in place, that would already be a strong move in the right direction in building a Central Asian water information system.

¹⁸ Given small national budgets for monitoring, it would also be beneficial for everyone to reduce duplication of efforts: this however goes deep into the history, culture and indeed economy of the institutions involved. It is for instance common that 3-5 separate monitoring networks collect, analyse and store water quality data. Water flow measurements are often done by both hydrometeorological services and water management authorities, at different places and times – their objectives are different but identification of synergies from cooperation still seems to be possible.

¹⁹ USD 27.7 million for the first phase of the project: Daryl Fields. Accessible and transparent data for energy-water analysis: lessons from the international community. Almaty, 7 December 2011

²⁰ The Kyrgyz <http://river-basins.kg/wmdb> and the Tajik <http://www.isfara-wmdb.tj> parts of the Isfara basin; Zerafshan irrigation system in Uzbekistan <http://www.waterdata.uz>

²¹ Altogether access to data vs. financial (and legal) implications of their regular collection and management will likely be the most difficult issue to deal with on the country level.

Box 3

Shared Environmental Information System

As EU Environment Commissioner Stavros Dimas stated at the launch of the Communication on SEIS in January 2008, "Timely, relevant and reliable information on the environment is absolutely necessary for decision makers to respond to the environmental problems of our time. But this is not enough. Our citizens are also entitled to know if the quality of air and water in their neighbourhood is good enough or if floods, droughts or pollution is risking their property and livelihood. This is the reason we must improve further the way we collect, analyse and communicate information on our environment."

SEIS is based on a set of principles which define the way environmental information should be treated; namely, it should be:

1. managed as close as possible to its source;
2. collected once, and shared with others for many purposes;
3. readily available to easily fulfil reporting obligations;
4. easily accessible to all users;
5. accessible to enable comparisons at the appropriate geographical scale and citizen participation;
6. fully available to the general public and at the national level in the relevant national language(s);
7. supported through common software standards.

Initially conceived in the EU for its member States, SEIS-compatible information systems are now being gradually developed in the EU Eastern and Southern Neighbourhoods, and will be soon introduced in Central Asia. Information online: <http://enpi-seis.ew.eea.europa.eu>.

Next steps

We propose a coordinated effort of the interested parties to initiate the following steps:

1. Strengthen strategic water communication in Central Asia by supporting UNRCCA and IFAS in their communication efforts and making use of SIC ICWC information, analytical and modelling potential under the United Nations-IFAS political umbrella.
2. Sustain, reform and further develop an impartial CAREWIB system as a regional host of water-related data and information, a platform for the exchange and analysis of such information and a decision-support system with extended capacities for modelling and near-real-time data exchange. This needs to be closely coordinated with other regional initiatives to develop decision-support capacities for water management in Central Asia.
3. Encourage country-focused support to national water information networks, linking it at the same time to common principles (cf. SEIS), regional needs, and a coordination framework to ensure the consistency and compatibility of results.
4. Support the efforts of IFAS, other water policy institutions and donor organizations (i.e., the World Bank) in Central Asia in improving the legal and institutional set-up for water information management.

Concretely implementing these steps will require additional thinking, coordination and financial resources. We are committed to contribute to that, and UNECE offers to continue contributing to this process in close coordination with IFAS and the interested parties. In this capacity, UNECE is ready to facilitate, in cooperation with interested organizations, an in-depth discussion of the proposed steps, possible arrangements and funding (see box 4) for their implementation.²²

Box 4

Cost estimates

Continuing the discussions in Almaty in December 2011, we believe that a proper cost estimate for implementing the various components of the proposal needs a feasibility study of its own. However some initial estimates can be repeated.

The costs of the regional communication programme and pipeline could be on the order of EUR 300,000–EUR 500,000 a year including coordination, analysis, production, publication, meetings and public relations. We suggest that these resources are secured for the initial period of two to three years, after which UNRCCA and the partners should be able to demonstrate results, develop a longer-term funding base and gradually transfer the responsibility for the work to regional institutions.

The running costs of the regional information and data facility will be about EUR 300,000–EUR 600,000 a year, including the maintenance of the network of national correspondents and country nodes, and its international oversight and coordination. This estimate is based on the assumption that the existing institutions will be used. If a new institutional structure is to be set up sustainably, the costs can be on the order of one magnitude higher. The integration of Afghanistan into the system may also require additional dedicated resources.

The costs of external support to developing and improving national water information networks and infrastructure may be relatively high, and such support will only be able to be entirely phased out once all the Central Asian economies sufficiently develop in the next 20–30 years. The specific costs and types of action will depend on needs and situations, which vary greatly between countries, and must be evaluated on a case-by-case basis.

Success will demand financially stable support for a decade at least. The transition to the countries' own public funding and other sources of funds will greatly depend on the general economic and political development of Central Asia.

²² Such discussion can be e.g. organized during a World Bank-UNECE-SDC meeting on water information and modeling issues tentatively planned to take place in 2012.

ANNEX 1: Overview of selected ongoing and planned activities potentially related to water information in Central Asia

Organizations	Coverage	Key themes and activities	Specific observations and synergies
EC IFAS (Almaty), Aral Sea Basin Prog-3	Regional (Aral Sea Basin)	Creation of the united information system and database of the Aral Basin	Fund-raising for corresponding ASBP-3 projects is on-going. Mainly administrative (and political) functions and related website content. Strong political potential but need to develop analytical/technical capacities to serve as an information hub. Synergies with ASBP-3 information projects.
SIC ICWC (Tashkent)	Regional	CAREWIB: 1) water data depository 2) operational water data and analytics mainly for Basin Water Organizations 3) tools, good practices, etc. 4) modelling instruments, GIS	Regionally recognized key information source on water use and good practice. Central team in Tashkent and national correspondents in countries. Not accepted by TJK and seriously challenged by recent SDC evaluation. Need to modernize the system need to be modernized and made more relevant to decision support.
SIC ICSD (Ashgabat)	Regional	http://www.ecoportal.kz/ mainly environmental data (not regularly updated)	Potential partner for environmental data management.
Water/river basin organizations	National and regional	Key users of water information and providers of information on this subject	Source of basin-scale data (e.g., for SIC ICWC)
Regional Centre of Hydrology (RCH)	Regional	No operational capacity for data collection and service	
Regional Drought Centre (Tashkent)	Regional	No operational capacity for data collection and service	
Regional Centre for Glaciology (Almaty)	Regional	No operational capacity for data collection and service	
Regional Ecological Centre for Central Asia (CAREC)	Regional	Various activities including support to SEIS and water quality management in Central Asia	CAREC's involvement needed for coordination with SEIS and water quality-related activities
United Nations Regional Centre for Preventive Diplomacy (UNRCCA)	Regional	Early warning system (information bulletins) for transboundary water disputes	Plans edition of the first water information bulletin in March 2012. Development of strategic communication can be built on the political role of UNRCCA.
UNDP-EU	KGZ, TJK (national) KAZ (Ili-Balkhash)	Promoting IWRM strategies implementation and fostering transboundary water cooperation	
UNDP	KAZ	National IWRM and Water Efficiency Plan	Project completed, continuation under development.
UNDP	UZB	Zaravshan basin plan	
UNDP	KGZ, TJK	Risk monitoring (food security, energy access)	
UNDP	Regional	Climate risks management	
UNECE	Regional	Water quality	Potential source of regional water quality data.
UNECE	KGZ-KAZ	Climate change adaptation: Chu-Talas basin	
UNECE	Regional	TJK-AFG water hydrology and environment cooperation	Possible entry point for info exchange with AFG.
UNECE	National-regional	National Policy Dialogues on IWRM	Support on national levels could be developed on the basis of National Policy Dialogues.
UNESCO	Regional	Groundwater assessment	
ENVSEC-UNEP	Regional	Amu Darya basin environment and	Cooperation through follow-up on the regional

Organizations	Coverage	Key themes and activities	Specific observations and synergies
		security assessment	level possible.
IWMI (Tashkent)	Regional	Research and pilot projects in efficient water and land use	Relevant activities and observations on the farm and WUA level can contribute to regional activities.
World Bank	TJK	PPCR (Pilot Programme for Climate Resilience)	
World Bank	Mainly TJK and KGZ	Regional Hydromet Modernization Programme	Major effort in the field, strong potential for country-level synergies.
World Bank	TJK, UZB	Energy-water analytics (as part of "Water and Energy" in Central Asia programme)	Major effort in the field, strong potential for country-level synergies.
World Bank	TJK	Cross Border Impacts of Vahksh River Basin Development (Rogun EIA)	
World Bank	TJK, KGZ	Action Plan for Improving Weather and Climate Service Delivery in High-Risk Low Income Countries	
World Bank - SECO	Local: Osh, Bishkek, Khudjand	Improvement of urban water supply in TJK, KGZ	
ADB	National	Improvement of water and irrigation infrastructure	
EU	Regional	SEIS, EURECA	Potential for synergies, e.g. on country level.
USAID	Regional	Energy Security Information System	Potential for synergies.
USAID	Regional	Glacial melt and water security	
USAID	AFG	Numerous water projects and information support	Possibility to expand/link to Central Asia.
French GEF/ International Office of Water	Regional	Capacity-building in data administration for assessing transboundary water resources	Potential for synergies, e.g. on country level and identification of data sources.
SDC	Regional	Hydromet support programme and RCH creation	Project completed. Some (historical) data generated by the project can be used in the system/publicly.
SDC	Regional/national	Ferghana Valley IWRM, water productivity at farm level, other regional (e.g., CAREWIB) and national projects	Cooperation in the framework of the Swiss water strategy for Central Asia.
SDC and DFID	Regional	Rural water supply	
GEF-GIZ-CACILM	Regional		Well established regional and national coordination mechanisms. Limited (and presently not available) data on land resources.
GIZ and river basin commissions	UZB, KGZ, TJK, KAZ	Transboundary River Basin Plans and Data Management IWRM Khoja-Bakirgan, Isfara etc.	Potential for synergies on the (sub-)basin and technical (IT, GIS, remote sensing) levels.
GIZ and GFZ-CAIG	Mainly KGZ + regional	CAWA project: scientific support for transboundary water management	Potential for synergies/regional information exchange.
Ministries of water	National	Key users of water information and providers of information on this subject	National partners and key users
National Hydrometeorological Services	National	Key providers of water and climate information (does not include data on canals).	National partners, information on key transboundary rivers — especially the Panj, Zeravshan and Murgab — is inadequate. Data quality issues. Water inventories are not conducted. Need to agree on data-sharing mechanisms, access and costs.
Ministries of environment	National	Important users of water information	National partners and key users.
Statistical agencies	National	Providers of synthesized annual water information	Important national partners.

ANNEX 2: Summary of the workshop “Managing water information in Central Asia”, 7 December 2011, Almaty, Kazakhstan

A workshop on managing water information in Central Asia was held by UNECE in the framework of the UNECE Programme “Regional Dialogue and Cooperation on Water Resources Management in Central Asia”, which is supported by the Government of Germany through GIZ. Organizational support for the meeting was provided by the Executive Board of the International Fund for Saving the Aral Sea. The meeting was organized in collaboration with the French project on transboundary basin data management (FFEM project).

UNECE has initiated an analysis of water information on the regional level in Central Asia with the objective of supporting regional institutions and representatives of the five Central Asian countries in their efforts to improve data management and exchange, and to identify opportunities for coordination between various projects and initiatives. The analysis is a contribution to the implementation of the information-related activities of the Aral Sea Basin Programme 3.

The Workshop brought together governmental representatives from hydrometeorological and water authorities of the five Central Asian countries, as well as non-governmental and international organizations active in water and water monitoring to discuss and share information about:

- the ongoing and planned water-related information initiatives in Central Asia.
- the principles for further development of water information management on the regional and the bilateral levels.
- the opportunities for coordination between different organizations and projects.

Workshop documents available through the UNECE website* include a press release (reprinted below), the agenda, the list of participants and the following presentations:

- Managing water information in Central Asia. Bo Libert, UNECE
- Capacity-building in data administration for assessing transboundary water resources in the EECCA. Paul Haener, International Office for Water, France
- Supporting transboundary cooperation and river basin plans through data management for IWRM in Central Asia. Iskandar Abdullaev, GIZ
- Central Asian countries initiative on land management (CACILM). Reinhard Bodemeyer, Regional Natural Resources Programme, GIZ
- Shared Environmental Information System (SEIS): Europe's new approach to environmental information. Nickolai Denisov and Viktor Novikov, Zoï environmental network
- Accessible and transparent data for energy-water analysis: lessons from the international community. Daryl Fields, Energy Unit Europe and Central Asia, World Bank
- Regional energy security information system. Oleg Ryaskov, Regional Energy Security, Efficiency and Trade Program (RESET), USAID
- Regional information activities of the Regional Center for Hydrology. Svetlana Shivareva, Regional Center for Hydrology under EC IFAS
- Central Asia regional water information base (CAREWIB). Iskander Beglov, SIC ICWC
- Water user associations information needs. Jusipbek Kazbekov, IWMI
- Stronger supply, clever demand: vision for water and environmental information in Central Asia. Nickolai Denisov, Zoï environmental network and Bo Libert, UNECE

* <http://www.unece.org/environmental-policy/treaties/water/envwatermeetings/water/other-events/2011/envwaterdialogueinform-meeting/workshop-managing-water-information-in-central-asia.html>.

UNECE workshop to improve quality and access to information on transboundary water resources in Central Asia

Press release published on 08 December 2011, Almaty / Geneva

At the “Managing water information in Central Asia” workshop, held on 7 December in Almaty, Kazakhstan, organized by the United Nations Economic Commission for Europe (UNECE), more than 50 representatives of Central Asian countries, international organizations and donors debated steps to be taken to improve quality and access to information on transboundary water resources in the region. Based on the discussion and presentations during the workshop a proposal for improving management and exchange of water information will be presented by UNECE in the beginning of 2012.

While there are currently efforts under way to develop information exchange in the framework of several projects and institutions (e.g., the Central Asia Regional Water Information Base Project, <http://www.cawater-info.net>), strengthening the availability of reliable information would be a key contribution to water management and transboundary water cooperation in Central Asia. However, for various reasons exchange of information within and between States remains difficult. Important bottlenecks include a low capacity for collecting, managing and quality-controlling the information, as well as insufficiently developed or even deteriorating monitoring networks.

Participants in the workshop discussed ways to improve cooperation between different actors as well as how to raise the political willingness to share information. The need to develop coordinated efforts among Central Asian countries, regional and international organizations and donors to strengthen the national data-regional information axis was stressed. In that connection, a number of concrete actions were outlined to build capacity at all levels, in particular:

- Capacities for regularly communicating water and related environmental information in a synthesized format to regional and national decision makers and the public.
- Regional capacities for the integration and management of comparable national information.
- National capacities for the improved collection and sharing of related data.

The workshop was organized by UNECE in the framework of the UNECE-German Agency for International Cooperation Project “Regional Dialogue and Cooperation on Water Resources Management”.

Note for editors:

The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) of 1992 aims to strengthen national measures and transboundary cooperation for the protection and ecologically sound management of transboundary surface waters and groundwaters. Joint monitoring and information exchange is an important aspect of the Water Convention. Thirty-seven States and the European Union are Parties to the Water Convention. In Central Asia, Kazakhstan and Uzbekistan are Parties to this instrument.

The German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)) is an international cooperation enterprise for sustainable development with worldwide operations, which supports the German Government in achieving its development policy objectives.

The Berlin Water Process was launched at the first “Water Unites” Conference (Berlin, 1 April 2008). The Process is an important part of the water and environment pillar of the European Union’s Central Asia Strategy. The Transboundary Water Management in Central Asia Programme is implemented by GIZ under the Berlin Water Process to optimize cooperation in the Central Asian water sector and improve the lives of people in the region. The UNECE-GIZ project is part of this Programme.