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**CENTRAL ASIA REGIONAL WATER INFORMATION BASE
PROJECT 'CAREWIB'**

**Final Report
For Phase 2 (August 2007 – June 2010)**

August 2010

Tashkent - Geneva

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1. Introduction

The “Central Asia Regional Water Information Base (CAREWIB)” Project was developed in support for the ASBP-1 approved by the decision of the Heads of State on 11 January 1994 (Project 2 – “Data base and management information system for water and environment”) and ASBP-2 approved by the IFAS Board on 28 August 2003 (Item 6 – “Reinforcement of material/technical and legal basis in interstate organizations, development of the regional information system designed to manage water resources of the Aral Sea basin”).

The CAREWIB Project is implemented within the framework of the Swiss Regional Medium-Term Program for Central Asia 2002-2006 “Natural Resources and Infrastructure Management” (Swiss Water Policy for Central Asia 2002-2006); - “Management, Security and Conflict Prevention” (raising transparency and public awareness); - and cross-cutting “environmental” issues (relation between water and environment) in accordance with the Aarhus Convention.

The CAREWIB Project is implemented under the decision made at the 37th ICWC meeting (22-24 December 2003, Karshi). The progress of project activities was considered at the 42nd (28-29 April 2005, Almaty), 43rd (2 November 2005, Almaty), 46th (8-10 March 2007, Ashgabat), 48th (11 October 2007, Khodjent) and 49th (19 March 2008, Tashkent) ICWC meetings.

The Project is funded by SDC and implemented by SIC ICWC in Tashkent with the assistance of the UNECE and UNEP/GRID-Arendal Office in Geneva, in close cooperation with five national water management organizations. Phase 1 of the CAREWIB Project started on 1 December 2003 and came to the end on 31 December 2006. It was decided to continue activities between Phases 1 and 2. The bridging period lasted from 1 January to 31 July 2007.

Phase 2 of the project started 1 August 2007. Phase 2 of the CAREWIB Project is aimed at further improvement of information support to water and environmental sectors in Central Asia initiated in Phase 1 of the CAREWIB Project.

The main results of the activities on the portal: the "critical mass" of information accumulated on the portal and structured in the thematic knowledge bases makes it possible to conclude that CAREWIB is the first and exclusive knowledge portal about water resources and ecology in Central Asia, including the increased available information, the increased multimedia capability, an enhanced thematic coverage, and improved access to this information for portal visitors.

The increase in numbers of daily visitors - from 800 in January to 1500 in December 2009 - is an indirect evidence of recognition and active use of the portal.

The main outcome of the second project activity (IS) is national information systems creation is the integration of all five national information systems into the common regional online system, which now cover the whole Central Asia by adding other Central Asian regions beyond the Aral Sea Basin.

2. Key project results achieved during the reporting period

2.1. Enhancement of information scope and coverage of CAREWIB Portal and Information System including strengthening of mechanisms for data collection

2.1.1. Block 1a. Further development of the regional information portal CAWater-Info

The main outcome of this activity is the increase of information volume on the portal, more themes covered and facilitation of visitors' access to information on two main directions of the portal's development. Since 2009 video films were placed on the portal what strengthened the portal's multimedia potential. Emphasizing the strengthening of regional cooperation, the CAREWIB project has supported preparation of a review: "Transboundary cooperation on the international rivers: problems, experience, lessons, prognosis of experts" as the strengthening potential of the knowledge base "International and national water law". This review was translated into Tajik and Kyrgyz languages.

The achievements regarding the aims defined in the project document are given below.

Result 1a.1. On-line information available in the Internet for the following areas:

- water information for countries in the region;
- water and environmental projects;
- official news from governmental sources and international organizations;
- foreign mass media on the region;
- international conferences;
- tenders/calls for project proposals;
- innovative equipment and technologies;
- list of scientific, water management organizations;
- international and local non-governmental organizations;
- electronic library.

Situation at the beginning of 2009: SIC and the partners have a big volume of information on water and land resources use in the Aral Sea basin, which should be processed and made available on the portal.

SIC results:

- Information on matters related to the Aral Sea basin is tracked on a daily basis. Information sources are websites of leading news agencies in CAR, donor organizations, SIC partner organizations, and projects. A part of information is taken from hard-copy publications (newspapers, magazines, brochures, monographs) and received mails. Information comes from national

project coordinators in CARs and from partner organizations, with which agreements have been concluded.

- In the portal section "News" 1154 messages in Russian and 229 in English were placed in 2008.
- In 2009 1167 pieces of news in Russian and 173 in English were placed on the "News" portal.
- In January-August 2010 907 pieces of news in Russian and 111 in English were placed on the "News" portal. About 50% of this information was provided by national teams.
- The electronic library of the portal has been upgraded to improve access to available material (documents have been provided with abstracts, according to which the contents of a publication can be assessed before downloading it).

5 NFP results:

- The material including information from national water management organizations have been translated into national languages of Central Asian countries and have been placed on the CAWater-Info portal.
 - Kazakhstan: news - 39; documents - 181; video material - 1; links - 13.
 - Kyrgyzstan: news - 187; documents - 100; links - 10.
 - Tajikistan: news - 12; documents - 62; links - 22.
 - Turkmenistan: news - 67; documents - 167; video material - 1; links - 17.
 - Uzbekistan: news - 59; documents - 279; video material - 1; links - 8.

Indicators: Increased information flow obtained through the CAREWIB correspondent network. Information in national languages of CARs is placed on the portal. The number of portal visitors has doubled during the year and reached 1500 people per day in December 2009. The planned work was fulfilled up to 100%.

Milestones: the work was made according to plan.

Result 1a.2. Working content management system (CMS) for extending capabilities to provide services for portal visitors.

Situation at the beginning of Phase 2: The portal sites are mainly static web-pages.

SIC results:

- CMS Joomla has been installed for operation of one of the portal websites in five national languages of CARs - Kazakh, Tajik, Turkmen and Uzbek (Fig.1) - www.cawater-info.net/ca/.
- CMS WordPress has been installed for the portal section "Clean water space" (popular and informative articles about water, Fig. 2) - www.cawater-info.net/all_about_water/.
- The "Clean Water Space" website in Russian contains the following sections:
 - «Children's room»
 - Papers
 - Figures and facts
 - Essay
 - Movies

- Photogallery
- A competition "Precious water droplet 2" was organized among children (within Uzbekistan) for the best picture and the story about water to attract additional visitors on the "Clean Water Space" website.
- On the basis of CMS a website for the EECCA water management organizations' network has been opened (Fig. 3) - www.cawater-info.net/russian_water_network/. Participation in the WMO EECCA is voluntary and based on professional unanimity and mutual understanding, and is being organized as an exchange of views, experience, information on various aspects of water management activity and without any fees.

Indicators: Owing to CMS registered users can place information on the portal websites. The planned work was fulfilled to 100%.

Milestones: the work was made according to plan.



Fig. 1 - Entrance of the portal section in the national language (CMS Joomla)



Fig. 2 - Entrance of the portal section "Clean Water Space" (CMS WordPress) - popular and informative articles about water

The God has given water to the World as a sacred gift and ordered to not allow its damage, because He has not made that. In our century of infinite race for benefit, riches, in century of petroleum idol and golden calf only faith in and devotion in clean water, and its miracle power for health, fertility, saving of all beautiful things can personify the God's Will! The website "Clean Water Space" is dedicated to this.



Fig. 3 - General view of the website for the EECCA water management organizations' network (CMS Joomla)

Result 1a.3. Support of the bibliographic database on land and water resources use.

Situation at the beginning of Phase 2: Bibliographic DB with 2400 records in Russian.

SIC results:

- Bibliographic DB contains 4117 records in Russian and 2761 - in English - www.cawater-info.net/biblio/
- The database style and facilities have been upgraded (Fig. 4) - the searching options within DB and export of data to the MS Word are added.

Indicators: The number of bilingual bibliographic records in the DB portal has increased from 2400 (2007) to 4117 (2010) in Russian and from 0 (2006) up to 2761 (2010) in English. The planned work was fulfilled to 100%.

Milestones: the work was made according to plan.

№	Наименование	Автор	Ссылка		
1	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download	
2	Запащенко Е.Н. Засоленность и засоление почв при близком уровне воды.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
3	Саманов А.А. Особенности расчета некоторых физико-химических процессов в водных объектах Казахстана.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
4	Николаев А.Н. К вопросу математического описания обменной сорбции в полиуретанах.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
5	Динияз В.М. Экспериментальное определение коэффициента диффузии солей Ca ²⁺ в почве.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
6	Насири Ю.Н. Расчет карбонатно-сульфатной равновесия в pH-зонахных системах карбонатных почв по водной вытяжке.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
7	Запащенко Е.Н. Динамика карбонатной системы в почвах и тропных водах.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
8	Алиев Ж.У. Особенности почвенного режима и биохимии старороссыных почв Карагандинской агроэколого-растительной системы и методы их оптимальной регуляции.	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
9	Назаров М.Д. Значение ландшафтно-геологических предпосылок о зональном выносе для геологического анализа (на примере юго-западных макросекций ар-Караганды).	Генезис и мелиорация засоленных почв Казахстана.	Алиев Ата	«Наука» КазССР	Download
10	Особенности мелиорации засоленных таежных почв.	Генезис и мелиорация	Алиев Ата	«Наука»	Download

Fig. 4 – Bibliographic Database

Result 1a.4. Placing the database on foreign water management and donor organizations “Water Atlas” and the electronic reference book “Who is Who in Water Management of Central Asia” on the Internet

Situation at the beginning of Phase 2: Unstructured data that should be processed are available.

SIC results:

- Material has been gathered for the database on foreign water management and donor organizations “Water Atlas” and for the electronic reference book “Who is Who in Water Management”
- The databases “Water Atlas” and “Who is Who in Water Management” have been created as the MS Access DB in Russian and in English and were placed on the portal (Fig. 5 and 6).
- The database "Water Atlas" contains information about water management and donor organizations which are classified by three categories: international, regional and national -www.cawater-info.net/atlas/.
- As the EECCA water management organizations’ network is developing, the electronic reference book "Who is Who in Water Management" is being developed by including organizations' personnel in the CIS - www.cawater-info.net/whoiswho/.
- The databases’ style and facilities have been upgraded - the searching options within DB and export of data to the MS Word are added.

5 NFP results:

- Information about personnel of national water management organizations is being collected.

Indicators: The database "Water Atlas" and the electronic reference book "Who is Who in Water Management" have been created as the MS Access DB and placed on the portal. The database "Water Atlas" contains 569 records in Russian and in English. The electronic reference book "Who is Who in Water Management" contains 382 records in Russian and in English. The planned work was fulfilled to 100%.

Milestones: the work was made according to plan.

Организация (RU)	Телефон (RU)	Телефон (EN)	Электр (RU)	Электр (EN)	Веб-сайт (RU)	Адрес (RU)	Страна (RU)
Международная Ассоциация Чистых Водных Организаций	+32 2 234 19 37	+32 2 234 19 11	info@iwco.org	www.iwco.org	6, rue de la Loi Schaumanstraat 5, 1014 60 Brussels	Бельгия	
Сотрудники для Развития Водных и Связанных ресурсов	+44 (0)20 7762 4622	+44 (0)20 7762 4745	info@water.org	www.water-education.org	2nd Floor, 47-48 Dolphin Quay, London SE11 5LD, London England	Англия	
Сеть Европейских Водных Пользователей (ЭВПО)	+31 15 272 95 95	+31 15 272 95 95	info@evpo.org	www.evpo.org, www.evp.nl	Office address: Wolvenhart 7, 2011 ACZaaf Conventstraat address, P.O. Box 3204, 2001 CA Zaandam The Netherlands	Нидерланды	
Центр Водных и Газовых Источников Водных Систем (ВВС)	+44 (0) 1865 200000	+44 (0) 1865 200224	info@wsi.co.uk, wsi@wsi.co.uk	www.wsi.co.uk	1201 Watlington, Watlington Watlington, Oxford, OX10 9JG, Oxfordshire, 2010 899, UK	Англия	
ИИВ	+1 813 884 8096 ext 800 1-800-328-6399		AL7_34407@water.org, info@water.org, info@water.org	www.water-idea.org	333 Promenade des Portugais/avenue O'Connell/Boulevard de l'Église/Church Lane, 100 City Centre, L1R 7T7 (Irish Consulate), 110 Walla Walla WA 99176	США	
Технический Центр Воды	+91 722 229 5275	+91 722 229 5276	water@waterindia.net, info@waterindia.net	www.waterindia.net		Индия	
Ассоциация Инженеров и Профессоров Водных Ресурсов	+91 800 871 952 475		www.aipw@waterindia.net		110 Ganges Avenue, Chennai 7213	Индия	

Fig. 5 – Database on foreign water management and donor organizations “Water Atlas”

№	Страна (У)	Имя (У)	Место работы (У)	Должность (У)	Профессиональная специализация (У)	Портфолио
0	Казахстан	Тадирбай Киптыбай Аманжолдин	Жаппа Абадиев Е ИБП	Начальник ОБП	Инженер	Портфолио
1	Казахстан	Халимбетов Рахымбек Камилович	Департамент водного хозяйства в МСВ и ГПТ КР	Генеральный директор	Инженер-инженер	Портфолио
2	Казахстан	Байкенов Кудайбек Камарович	Дирекция строительства водосельственных объектов Департамента водного хозяйства МСВ и ГПТ КР	Директор	Инженер-инженер	Портфолио
3	Казахстан	Мухомедов Спика Ахметович	Кыргызский НЭП организации	Инженер (капитан)	Программирование	Портфолио
4	Казахстан	Салимбетов Латифа Сапарович	САБЕНКО	Национальный координатор проекта в Кыргызстане	Математик	Портфолио
5	Казахстан	Голованко Татьяна Генриховна	Кыргызский НЭП организации	Инженер-программист	Проектирование	Портфолио
6	Казахстан	Шарипов Александр Владимирович	Дирекция строительства водосельственных объектов Департамента водного хозяйства МСВ и ГПТ КР	Главный инженер	Инженер-инженер	Портфолио
7	Казахстан	Климова Галина Александровна	«Второй проект» инжиниринговая компания при ДИИ МСВ и ГПТ КР	Специалист по мониторингу в области	Агроном - зоотехник	Портфолио
8	Казахстан	Землянская Наталья Сергеевна	Кырг НЭП организации	Зав. Лабораторией	Программирование	Портфолио
9	Казахстан	Жолдыбай Ильямович Дукетович	ДИИ МСВ и ГПТ КР	Нач. отдела член Экспертной комиссии	Инженер-инженер	Портфолио
10	Казахстан	Калимуллин Александр	ИИИИИИИИ	Специалист	Автоматизация систем управления	Портфолио

Fig. 6 – Electronic reference book "Who is Who in Water Management"

Result 1a.5. Establishment of a virtual water community of CAR. Results of discussions, overviews of participants’ feedback and experience at forums of the Portal

The activity has been decided to stop according to the PSC decision of 26 February 2009.

Result 1a.6. Knowledge Base on the Use of Water and Land Resources of the Aral Sea Basin

Situation at the beginning of Phase 2: Initiation of structuring available information on the Use of Water and Land Resources of the Aral Sea Basin.

SIC results:

- The available information has been structured, represented as a hypertext knowledge base on water and land resources use in the Aral Sea basin, and has been placed on the portal - www.cawater-info.net/bk/water_land_resources_use/
 Knowledge Base includes the following sections:
 - physical-geographical characteristics of the region;
 - water resources;
 - water resources use;
 - desertification and monitoring;
 - organizational and legal issues of water resources management and financing.

The knowledge base also includes the results of the past field studies on

irrigation and drainage in the region. Inclusion of those studies proceeds from a need to ensure the intergenerational continuity. Recently, most graduates of higher education institutions have been coming to water-management organizations without knowledge of experience in irrigation and drainage as gained in Central Asia over the past 20-30 years. It is assumed also that earlier research works are unknown to most foreign specialists who try to assist the Central Asian states in solving water and environmental problems in the Aral Sea basin.

- Information generalized on 398 pilot projects that have been implemented in the region earlier has been added into the existing KB on the use of water and land resources of the ASB (Fig. 7).
- A CD version of the database has been prepared for dissemination (see Result 2.4).

Indicators: Thematic scope is extended; information quality, volume and convenience of use are improved. The number of records about pilot projects implemented earlier in the region are increased from 212 (in 2006) to 398 (in 2010). The planned work was fulfilled to 100%.

Milestones: the work is implemented according to the planned term.

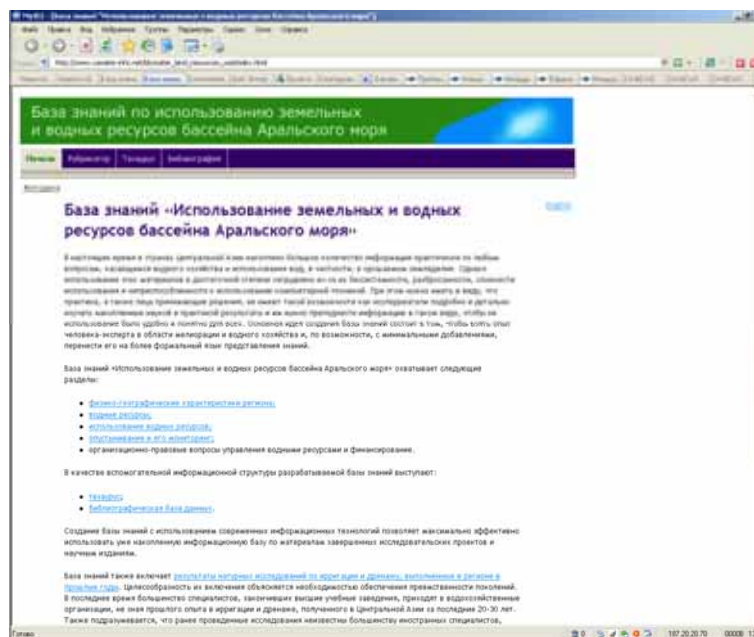


Fig. 7 – Knowledge Base “Water and Land Resources Use in the Aral Sea Basin”

Result 1a.7. Knowledge Base with information from the “IWRM-Fergana” Project to facilitate effective extension services to WUAs and farmers

Situation at the beginning of Phase 2: Results of the "IWRM-Fergana" project are in different formats and poorly structured.

SIC results:

- The KB contains 553 documents: monographs, reports, articles, brochures and other materials from the "IWRM-Fergana" project, WPI-PL project, GWP CACENA, other partners, including GWP ToolBox (Fig. 8) - www.cawater-info.net/bk/iwrm/
- This KB is included in the list of GWP ToolBoxes (along with the KB “Gender and Water in Central Asia”).
- A CD version of the database has been prepared for dissemination (see 2.4)
- The web-site of the project "Water productivity increase - plot level" (WPI-PL) is opened (Fig. 9) - www.cawater-info.net/wpi-pl/
- The web-site of the project "Rural Enterprise Support Project - Phase II - Swiss Governments parallel grant financing for sub-components 2b and 2c" (RESP2) is opened (Fig. 10) - www.cawater-info.net/resp2_swissgrant/

Indicators: Quality and effectiveness of consulting services for farmers, WUAs and water management organizations are improved. The planned work was fulfilled to 100%.

In addition to the planned works the web-sites of the projects WPI-PL and RESP2 are opened.

Milestones: the work is implemented according to the planned term



Fig. 8 – Knowledge Base “Integrated Water Resources Management: Central Asian Experience”



Fig. 9 – The web-site of the project "Water productivity increase - plot level" (WPI-PL)



Fig. 10– The web-site of the "Rural Enterprise Support Project - Phase II - Swiss Governments parallel grant financing for sub-components 2b and 2c" (RESP2)

Result 1a.8. Portal information is available and updated in two languages

Situation at the beginning of Phase 2: Information in Russian is prevailing on the portal.

SIC results:

- The materials translated into English are being increased progressively that promotes involvement of additional English-speaking audience to the portal.

Indicators: Increased percentage of bi-lingual website with a good quality of English content. All databases and knowledge bases – 100%; other sections – from 70 to 100%.

Milestones: the work is implemented according to the planned term

Result 1a.9. Creation of the regional water quality database

Situation at the beginning of Phase 2: There are water quality data available on the portal, but it is not arranged into single section, and therefore can't be used extensively.

SIC, UNECE and GRID-Arendal results:

- Project staff took part in the introductory seminar of the UNECE project "Water Quality in Central Asia" in Bishkek.
- In case of the separate financing under the UNECE project "Water Quality in Central Asia" the format preparation for the database on water quality will be started and further developed (In June 2010 the work hasn't yet been initiated).

Indicators: Water quality information is more available.

Milestones: the work is implemented according to plan.

2.1.1. Block 1b. FURTHER DEVELOPMENT OF THE INFORMATION SYSTEM

Result 1b.1. Developing GIS layers: water management network, assessment of melioration conditions and productivity of lands, water availability in districts, situation in Prearalie, the Aral Sea, etc. Improved access to data and information on the Amudarya River basin

Situation at the beginning of Phase 2: Thematic layers of cartographic information necessary for national focal points (NFP) were determined. The national points in the Aral Sea basin submitted requests to respective departments on gathering cartographic information.

SIC results:

- The GIS-files were developed on the basis of available cartographic information by specialists of SIC ICWC. This material was processed and integrated into the regional information system and made available through Internet;
- The GIS-files are available for users registered in the regional online information system; The following regions are accessible: Uzbekistan (Tashkent, Jizzak, Namangan, Syrdarya, Fergana, Khorezm, Navoiy, Bukhara, Karakalpakstan areas), Tajikistan (Khatlon and Sogd, provinces subordinated to the Republic, Gorno-Badakhshan Autonomous Region), Kyrgyzstan (Osh, Batkent, Djalalabad, Naryn areas), Kazakhstan (South Kazakhstan, Kzylorda areas), Turkmenistan (Akhalskaya, Balkanskaya, Maryiskaya, Lebapskaya, Dashoguzskaya areas).
- The following GIS-layers are available for users registered in the regional online information system:

- Main rivers;
- Main reservoirs and large lakes;
- Main canals;
- Headworks;
- Gauging stations on the rivers and main canals;
- Drainage network (main drains);
- Groundwater deposits;
- HPS;
- TPS;
- Meteorological stations;
- Agglomerations (*areas, towns, cities etc.*)

5 NFP results:

- Gathering the cartographic information on the country's provinces and its transmission to SIC with subsequent integration into national information GIS systems by SIC specialists.
- Adjustment of GIS-information jointly with the SIC specialists.

Indicators: New GIS-layers for: Uzbekistan - 40, Southern Kazakhstan - 2, Tajikistan - 20, Kyrgyzstan – 20, Turkmenistan - 20. The planned work is fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

Result 1b.2. Information needed for modeling and GIS is available within the DB (ecology, climate and energy)

Situation at the beginning of Phase 2: An agreement was reached with UDC “Energy” on providing hydropower information for the regional IS on the whole Aral Sea basin.

SIC results:

- Monthly data for the period from 2000 to 2009 obtained from UDC “Energy” have been entered in the Regional DB “CAREWIB” on:
 - Uzbekistan output: by hydroelectric power stations (HEPS) – Farkhad, Chirchik-Boysu, Andizhan PEPS (Shariakhan HEPS), Namangan, Samarkand, Fergana PEPS (Kudash), Kashkadarya, Charvak + Khodjикent; by thermoelectric power stations (TEPS) – Tashkent GRES-2, Navoi GRES-17, Angren GRES, Tashteploset (Tashkent TEPS), Fergana TEPS, Ferteploset (2a-8a), Takhiatash GRES (1v), Syrdarya GRES, Novoangrenskaya GRES, Muborak TEPS, Talimarjan GRES.
 - Tajikistan output: by HEPS – Nurek, Vakhsh HEPS cascade, Varzob HEPS cascade, Gorno-Badakhshayskaya, Dushanbe-Vakhsh, Kayrakum; by HEPS – Dasahba TEPS, Yavan TEPS, Gorno-Badakhshay DEPS, Dushanbe-Vakhsh TEPS.
 - Kyrgyzstan output: by HEPS – Uch-Kurgan, Toktogul, Alamedin HEPS cascade, Bystrovskaya, Atbashi; by TEPS – Osh TEPS, Osh PEPS, Jalalabad TEPS, Frunze TEPS.
 - South Kazakhstan output: by HEPS – Chardara; by TEPS – Dzhambul GRES, Chimkent TEPS 1, 2, Dzhambul TEPS-4, Kentau TEPS-5, Kyzylorda TEPS-6.

- Turkmenistan output: by HEPS – Mary HEPS; by TEPS – Bezmeinskaya GRES, Chardzhou TEPS, Mary GRES.
- Monthly data on power flows over the period from 2000 to 2009 obtained from UDC “Energy” have been entered in the Regional DB “CAREWIB”:
 - From Uzbekistan to Tajikistan, South Kazakhstan, Turkmenistan and Kyrgyzstan;
 - From Kyrgyzstan to Uzbekistan, South Kazakhstan;
 - From Turkmenistan to Uzbekistan;
 - From Tajikistan to Kyrgyzstan, Uzbekistan;
 - From South Kazakhstan to Kyrgyzstan, Uzbekistan.
- Information for the period from 1980 to 2009 obtained from the project correspondents in the five states has been entered into blocks: “Land”, “Economy”, “Water”, “Drainage” and “Water supply” in “CAREWIB” DB.

5 NFP results:

- Establishing of sustainable bilateral relationships on mutually beneficial information exchange with national departments on ecology, hydrology and energy.

Indicators: Increased volume of DB with information from 1980 till now across sections: "Earth", "Economy", "Water Management", "Municipal Water Supply". The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

Result 1b.3. The improved interface links the database, models and analytical blocks

Situation at the beginning of Phase 2: The program module for data export (tables, diagrams) from the online regional IS into Excel Format is developed.

SIC results:

- Module for integrating new GIS-files into the regional online system.
- Module for searching for lacking data in the online regional information system (this module was developed on the requests of regional correspondents for more easy data input into the online DB).
- Modules for import and export of tabular data into the Excel format from the online regional information system (Fig. 11).

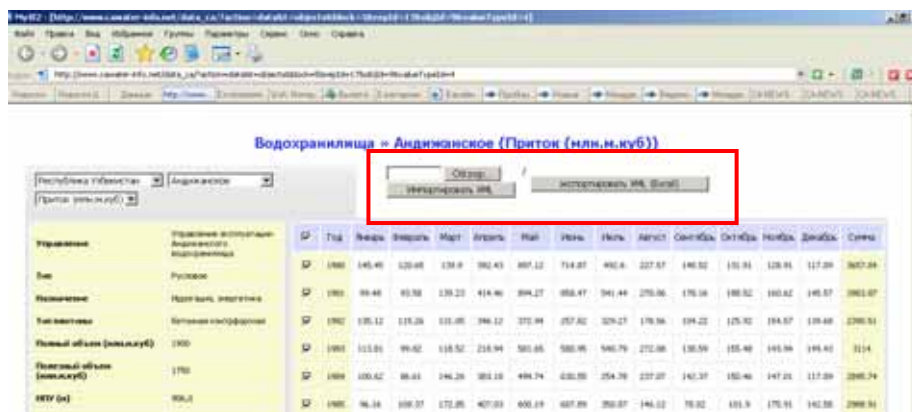


Fig. 11 - Module for import and export of tabular data into the Excel format from the online regional information system

5 NFP results:

- Submitting the proposals on improvement of the online database interface and its use for the working tasks of NFPs.

Indicators: 5 new forms for each of areas have been added to the interface (total: 140).

Milestones: the work is implemented according to plan.

Result 1b.4. The system has been successfully tested by external users and experts

Situation at the beginning of Phase 2: The module for preparation of analytical reports on the basis of the online DB data has been tested by the project experts: selection of years-analogues; prediction of inflow; analysis of actual and planned regimes; analysis of deviations; analysis of water situation

SIC results:

- The module for preparation of analytical reports on the basis of the online DB data has been tested by the project experts: selection of years-analogues; prediction of inflow; analysis of actual and planned regimes; analysis of deviations; analysis of water situation.

5 NFP results:

- Training (together with SIC specialists) on handling analytical modules and their introduction into analytical work of the national water ministry/authority was not conducted.

Indicators: Increased accuracy of the system and number of modeling iterations to eliminate discovered errors.

Milestones: the work is implemented according to the planned term

Result 1b.5. Analytical reports have been submitted to ICWC members

Situation at the beginning of Phase 2: The analytical block for preparing monthly the analytical reports for ICWC members in the regional information system has been developed. The analytical reports allow implementing an integrated assessment of the water situation in the Amudarya and Syrdarya river basins and the river reaches.

SIC, BWO Amudarya and BWO Syrdarya results:

- Analytical tools applicable to water management issues of states were developed (see 1b.6)
- Ten-day preparation of a 'brief' analytical report using data of online DB and a monthly 'complete' analytical report for distribution via e-mails of the ministries of water management has been organized: analysis of actual and planned operation modes for reservoir; analysis of deviations of actual water withdrawal from planned one per water management site; analysis of water situation by indicators of water availability and flow distribution evenness.
- The seasonal analytical reports on operation effectiveness of multipurpose water-resources schemes of the Amudarya and Syrdarya river basins for vegetation and non-vegetation periods are available on the portal from 2008 till now.

Indicators: Analytical reports were prepared monthly. The seasonal analytical reports for vegetation and non-vegetation periods from 2008 till now are available on the website – Total: 4. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 1b.6. Analytical reviews allowing to expose the water resources reserves within the region, each country and sub-basins

Situation at the beginning of Phase 2: ICWC members have approved the dissemination of the full monthly analytical reports to all ICWC members and of the brief ten-day analytical reviews from the project website.

SIC results:

- List of persons interested in the analytical reviews prepared by the SIC have been identified, and the automation procedures for preparation of analytical reports for external information users have been developed.
- The portal section "Water situation in the Amudarya and Syrdarya river basins" is being updated every ten-day period and it contains information since 1991 till now (Fig. 12) - www.cawater-info.net/analysis/
- Data on water delivery to the Aral Sea and deltas of Amudarya and Syrdarya rivers since 1991 till now has been introduced into this portal section.

5 NFP results:

- List of persons (within each country) interested in the analytical reviews issued by the SIC have been identified.

Indicators: Analytical reviews have been prepared and are being updated every ten-day period in the portal section "Analysis of water situation in the Amudarya and

Syrdarya river basins". The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan



Fig. 12 – Analytical section of the portal

Result 1b.7. Major part of the IS is available through the Portal

Situation at the beginning of Phase 2: A number of materials needed to be made available for the general public (data, analytical reports etc.) is agreed on with the ICWC members.

SIC results:

- The regional information system has been placed on the portal; it contains 2 databases (about sectors and subjects) and GIS-block and information since 1980 till now (Fig. 13) - www.cawater-info.net/data_ca/
- The Database on sectors contains blocks: "Earth", "Economy", "Water Management", "Municipal Water Supply".
- The Guide on the water management bodies is placed in the portal.
- Information related to characteristics of water management facilities and series of observations (since 1980 till now) is placed into the database on characteristics of the following water management facilities: reservoirs, rivers, canals, drains, climate stations, general gauging stations and waterworks (Fig. 14).
- Translation of the online DB from Russian into English is completed.

5 NFP results:

- Data of each country is added to the online IS.

GRID-Arendal results:

- The interactive map creation is evaluated and the system's upgrading version is prepared.

Indicators: 98 parameters of the Information System on sections and also the database on characteristics of water management facilities and long-term data (since 1980 to now) for 5 countries in whole and their regions are available through the portal. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Водохранилища » Папанское (Приток (млн.м.куб))

Республика Папанское Обзор Приток (млн.м.куб) Импортировать XML		Год	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь	Сумма	
Управление	Суточное	<input checked="" type="checkbox"/>	1900	0	0	18.29	36.35	90.10	96.94	130.26	101.92	66.58	52.14	37.75	27.24	665.65
Тип	Русловое	<input checked="" type="checkbox"/>	1901	26.45	19.02	19.0	30.90	68.56	67.46	85.4	86.44	50.17	39.18	31.1	27.9	560.46
Назначение	Ирригация и водоснабжение городов/С/х	<input checked="" type="checkbox"/>	1982	20.91	18.86	19	25.46	90.64	103.19	150.34	133.54	64.86	41.19	36.18	27.96	732.13
Тип плотины	Земляная	<input checked="" type="checkbox"/>	1983	23.48	22.04	22.02	34.71	72.84	112.74	85.97	102.72	52.5	33.24	24.14	25.25	622.75
Полный объем (млн.м.куб)	260	<input checked="" type="checkbox"/>	1984	23.18	18.79	17.85	27.14	51.19	80.89	109.05	74.29	49.55	49.31	49.55	25.27	576.06
Полезный объем (млн.м.куб)	240	<input checked="" type="checkbox"/>	1985	18.51	17.44	16.53	26.59	43.83	96.21	116.08	67.2	42.7	37.64	28.73	21.38	532.84
НПУ (м)	1282	<input checked="" type="checkbox"/>	1986	18.12	14.47	17.53	30.11	76.27	161.61	209.62	149.48	71.66	55.07	42.29	43.4	809.63
ГНУ (м)	1225	<input checked="" type="checkbox"/>	1987	34.81	27.89	33.63	64.89	119.39	213.11	202.11	130.94	66.64	49.53	40.12	34.41	1017.47
Средняя глубина при НПУ (м)	7000	<input checked="" type="checkbox"/>	1988	27.34	24.39	25.51	24.66	71.15	117.85	134.67	147.02	52.03	68.3	29.34	26.69	748.95
Средняя ширина при НПУ (м)	1600	<input checked="" type="checkbox"/>	1989	24.08	20.39	21.75	24.91	78.26	143.6	136.32	120.01	66.23	46.29	22.09	20.04	741.97
Максимальная глубина (м)	87	<input checked="" type="checkbox"/>	1990	21.19	22.41	25.67	33.62	79.14	145.54	120.89	107.77	66.31	42.67	31.47	27.53	724.21
Площадь зеркала при НПУ (млн.м)	7,1	<input checked="" type="checkbox"/>	1991	23.33	21.72	24.44	39.33	80.78	130.22	170.47	116.72	66.31	38.99	22.55	22.8	757.66
Максимальная высота плотины (м)	100	<input checked="" type="checkbox"/>	1992	21.61	19.29	23.9	34.31	79.45	151.83	139.49	105.54	64.51	60.49	43.88	36.51	780.91
Длина дамбы по гребню (м)	93	<input checked="" type="checkbox"/>	1993	25.45	21.22	26	33.26	88.49	133.9	141.26	115.85	61.15	37.97	27.01	20.57	732.13
Ширина дамбы по гребню (м)	25	<input checked="" type="checkbox"/>	1994	19.56	22.39	27.06	30.26	78.58	102.45	142.69	100.21	60.13	36.77	37.49	27.0	694.19
Расчетная высота волны (м)	1,2	<input checked="" type="checkbox"/>	1995	21.04	19.25	22.61	29.79	71.31	192.31	145.66	123.24	39.32	43.85	39.61	29.13	777.12
Тип ГЭС	-	<input checked="" type="checkbox"/>	1996	21.76	17.33	22	37.58	57.97	105.96	149.53	109.88	52.81	43.99	29.84	24.79	673.38
Мощность ГЭС (МВт)	-	<input checked="" type="checkbox"/>	1997	21.7	25.3	30.3	33.6	87.1	178.9	204.5	130.4	69.9	40.2	34	28.6	804.5
Проектная продолжительность эксплуатации (лет)	100	<input checked="" type="checkbox"/>	1998	23.8	21.1	25.2	12.7	97.2	124	156.3	128.4	88.8	51.6	36.5	25.7	783.3
Площадь орошаемых земель (тыс.га)	Кыргыстан - 30,1 / Узбекистан - 9,43	<input checked="" type="checkbox"/>	1999	18.6	16.4	20.6	30.7	63.1	86.9	98	102.5	43.2	40.1	40	33.3	593.4
Год ввода в эксплуатацию	1985	<input checked="" type="checkbox"/>	2000	23.5	19.9	24	34.7	87.1	128.3	130.3	105.8	52.6	43.1	37.8	41.8	728.9
Водоток	Река Амбура	<input checked="" type="checkbox"/>	2001	31.6	21.8	23.6	29.6	64.4	155.3	148.5	121.5	78	48.5	33.5	21.4	777.7
Бассейн реки	Сафдарьел	<input checked="" type="checkbox"/>	2002	20.8	18.3	19.6	37.4	92.6	200.8	168.6	108.3	70.7	45.1	35.9	31.57	849.67
Местоположение	Ошская область, Науратский район	<input checked="" type="checkbox"/>	2003	26.7	20.7	24.6	38	80.3	127.8	171.9	132.7	60.4	53.3	54.6	45.3	836.3
		<input checked="" type="checkbox"/>	2004	26.5	18.7	24.3	29.8	71.7	168.9	189.6	135	72.4	52.2	39.9	31.9	860.9
		<input checked="" type="checkbox"/>	2005	28.06	21.4	21.24	34.19	100.72	101.94	118.1	102.6	55.51	50.76	54.7	35.02	722.24
		<input checked="" type="checkbox"/>	2006	26.53	21.7	22.97	30.71	53.56	89.7	117.62	84.6	47.2	36.9	29.3	22.3	583.09
		<input checked="" type="checkbox"/>	2007	22.9	27.4	35	24.7	59.5	77.5	77.9	77	39.4	33.61	28.7	8.33	511.94
		<input checked="" type="checkbox"/>	2008	69.63	83.21	85.82	86.93	67.58	44.73	35.17	37.17	44.18	42.56	43.89	50.26	691.12
		<input checked="" type="checkbox"/>	2009	0	0	0	0	0	0	0	0	0	0	0	0	

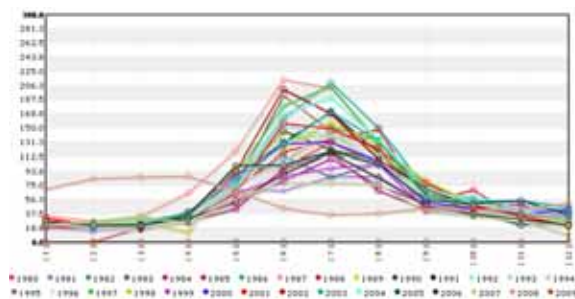


Fig. 13 - Various form of data in the regional information system

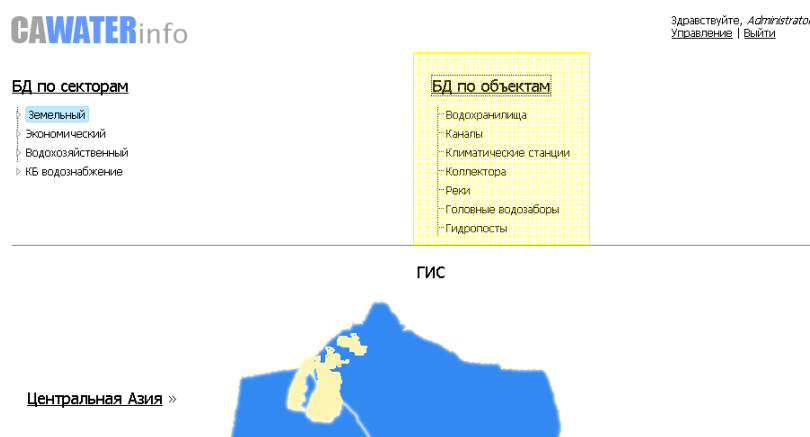


Fig. 14 – DB on facilities

2.2. Production and dissemination of publications and other types of information

Result 2.1. Analytical and popular scientific publications on water, energy, floods, dams, Afghanistan, etc. have been produced and disseminated. IFAS materials, ICWC bulletins, SIC ICWC collected articles with general information, reviews and legal documents have been produced and disseminated

Situation at the beginning of Phase 2: Brochures, monographs and reports are being published and disseminated via e-mail and in hard copies

SIC results:

- Various brochures, monographs and reports have been published and disseminated. The following publications should be high-lighted:
 - V.A. Dukhovny, A.G. Sorokin: Assessment of the impact of the Rogun reservoir on the Amudarya river water regime
 - Adaptation to climate change: problems in the region in view of world experience
 - Water for food, water for life. Integrated assessment of water management in agriculture. Summary (publication of SIC ICWC on the request of IWMI)
 - Integrated remote and ground surveys on the dried bottom of the Aral Sea
 - A. Fainberg: Its Majesty Water
 - Model legislation of CIS countries concerning water
 - 5th World Water Forum: political process (by request of the World Water Council)
 - Second announcement on the 5th World Water Forum (by request of

- the World Water Council)
 - Problems of Aral Sea and Priaralie (collection of scientific papers of SIC ICWC)
 - Integrated Water Resources Management: from theory to practice. Central Asia Case Study.
 - Searching economic ways to solve interstate transboundary conflicts.
 - INBO bulletin No. 16-18 (ordered by INBO)
 - Water Resources of Afghanistan
 - Towards 5th World Water Forum: reports of Central Asian countries
 - Regional Model for Integrated Water Resources Management in Twinbasins "RIVERTWIN"
 - Policies of the national information systems development of countries in the Aral Sea Basin.
 - Afghanistan and regional integration.
 - Summit of Heads of the States - founders of the International Fund for saving the Aral Sea (jointly with the EC IFAS, see Result 3.5).
 - Rysbekov Yu.Kh. Transboundary cooperation on the international rivers: problems, experience, lessons, experts' prognosis.
 - Afghanistan and transboundary water management issues.
 - 5th World Water Forum: Top 25 Highlights
 - Istanbul Ministerial Statement / Istanbul Declaration of Heads of States on Water / Istanbul Water Consensus on water supply
 - Istanbul Water Governance (ordered by WWC)
 - 11 posters and 40 brochure of the "IWRM-Fergana" project.
 - IWRM as a tool for adaptation to climate change: textbook and manual for trainer.
 - Water Governance
 - I. Begimov: "Canal Automation in the Fergana Valley" (project results).
 - Precious drop of water-2. The materials sent to the competition for the best work about caring of the water, water sources and environment
 - K.Sadoff, M.Muller: Water Management, Water Security and Climate Change Adaptation: Early Impacts and Essential Responses
 - Water management and land reclamation at the end of XIX - the first one-third of XX
 - Innovative partnership towards water productivity increase.
 - Organization and methods of the optimal mode of operation, maintenance and management of irrigation systems
 - Some UN General Assembly Resolutions on International Water Law Sphere
 - Kurbanbaev E., Artykov O., Kurbanbaev S. Integrated Water Resources Management in the Amydarya river delta.
 - Integrated solution of land and water resources use problems in the EECCA region (Collection of scientific papers).
 - Problems on environment and water-land resources use in the EECCA region (Collection of scientific papers).
- The following materials were issued:
 - 6 information collections – "Water Resources of Mexico", "Water Management in Israel", "Water Governance in Central Asia", "Transboundary Water Resources: shared use", "Water Resources Management in Central Asia", "Water Management in Portugal and

- transboundary waters”.
- 5 abstract collections.
- 8 ICWC bulletins (in Russian and in English).
- 4 legislation collections - "Interstate agreements on transboundary waters between countries of Eastern Europe, Caucasus and Central Asia (EECCA)", "Normative Legal Documents on Gender Equality, Part 3: National Documents", "UN's selected documents", "National and international Normative Legal Documents on Water Law".
- 7 bulletins "New in Water Management".
- 336 publications in electronic format have been added to the e-library on the portal – SIC and its partners
- 271 publications have been added into the Knowledge Base on water law (Total: 610 documents in the KB).
- Bulletins, brochures and other publications were regularly disseminated at workshops, conferences and so on.

Indicators: 336 publications by SIC ICWC and partners have been placed on the portal. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 2.2. Analytical report on information needs of users to enlarge the portal's regular audience

Situation at the beginning of Phase 2: The mechanism of user need defining is not determined.

SIC results:

- Two analytical reports on site visit statistics for 2008 and 1 generalized report for 2006-2009 were developed (2 publications).
- Measures improving the portal and directed to satisfy the user's needs have been outlined.

Indicators: 2 Analytical reports. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 2.3. IFAS and ICWC press-releases, the “CAWater-Info News” bulletin and advertising booklets of the project have been disseminated

Situation at the beginning of Phase 2: Bulletins, information/abstract/law collections, press-releases, booklets are being published and disseminated in the e-format and in hard copies.

SIC results:

- 366 bulletins "CAWater-Info News", 41 press-releases of ICWC, 12 bulletins of GWANET (in Russian and in English), 4 bulletins of INBO (in Russian) have been disseminated via e-mail.

- The database on e-mail addresses of subscribers contains:
 - 318 Russian-speaking and 166 English-speaking subscribers on "CAWater-Info News" bulletin;
 - 328 Russian-speaking and 88 English-speaking subscribers on ICWC Press-releases;
 - 320 subscribers on the INBO bulletin;
 - 65 subscribers on the GWANET bulletin.

Indicators: 366 bulletins "CAWater-Info News", 41 press-releases of ICWC, 12 bulletins of GWANET (in Russian and in English), 4 bulletins of INBO (in Russian) have been disseminated via e-mail. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

Result 2.4. CDs with digital learning materials are produced and disseminated

Situation at the beginning of Phase 2: CDs with digital learning materials weren't produced.

SIC results:

- CDs with proceedings of the seminar "Socio-economic sustainability and water productivity: food and water security in Central Asia" (Tashkent, 18-20 March 2008).
- CD with CAREWIB training materials (textbooks, manuals) (see 3.1)
- CD with the Knowledge Base "Land and Water Resources Use in the Aral Sea Basin"
- CD with the Knowledge Base "IWRM: Central Asian experience"
- CD with the Knowledge Base "International and national water law"



Fig. 15

Indicators: 5 CDs with digital learning materials. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

Result 2.5. Thematic maps according to specific requests of the ICWC members are produced and delivered in time

Situation at the beginning of Phase 2: Specific requests from ICWC members to

creation of thematic maps were placed under the NFPs control.

SIC results:

- The following maps have been produced:
 - Main rivers (13 provinces of the Republic of Uzbekistan, 2 provinces of the Republic of Tajikistan);
 - Main reservoirs and large lakes (13 provinces of the Republic of Uzbekistan, 2 provinces of the Republic of Tajikistan);
 - Main canals (13 provinces of the Republic of Uzbekistan, 2 provinces of the Republic of Tajikistan);
 - Administrative areas (*districts, towns and other large settlements*) (13 provinces of the Republic of Uzbekistan, 2 provinces of the Republic of Tajikistan).
 - On the basis of new GIS-layers (see 1b.1) maps have been prepared for the following regions: Uzbekistan - 40, South Kazakhstan - 2, Tajikistan - 20, Kyrgyzstan - 20.

5 NFP results:

- Cartographic information is being gathered to be integrated into national information systems.

Indicators: 82 maps. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

2.3. Capacity building of water management organizations and other users and integrating CAREWIB into decision-making processes of national, regional and international bodies as well into the public debate

Result 3.1. NIS developers have been trained: 2 seminars per year have been held in each country, and consultation were provided upon request

Situation at the beginning of Phase 2: The initiative to establish national focal points was agreed with all national water management organizations; the Memorandums of Understanding describing the Parties' activity on the National information systems' development were signed.

SIC results:

- National focal points have been established at the ministries of water resources. Computer equipment has been purchased and delivered.
- Templates of national IS have been created.
- Data on provinces and states as a whole available in the regional IS have been delivered to each NFP.
- Manuals have been prepared and updated:
 - Manual on using the CAREWater-Info portal in daily activity (10th edition, updated).
 - Manual on using the Regional Information System of the Aral Sea Basin's

- countries.
- Methodical Guide of developing the Information System for water management sector at the national level.
- Manual on the Content Management System (CMS) for the National Focal Points (2d edition, updated).
- Manual on using Knowledge Bases of the CAREWater-Info portal in daily activity (6th edition, updated).
 - Manual on use of CAREWIB Database (5th edition, updated)
 - Manual on using the Geographic Information System (GIS) for National Focal Points.
 - Manual on the CAREWater-Info portal information retrieval (2d edition, updated).
- Manual on using the CAREWater-Info portal forum in daily activity.
- Manual on using the web-site of the Russian-speaking water management organizations network.
- Maintenance of equipment transferred to national focal points has been carried out; some modernization has been made;
- Training seminars for NIS developers have been conducted locally (see Result 3.3)

5 NFP results:

- The national focal point was established at every ministry of water management
- Communication with NGOs, NHMS, water management and environmental institutions of the republic in order to receive information for the national DB are established.
- Information is being entered into the national information systems.
- Data for the regional information system according to the Memorandum of Mutual Understanding is regularly being delivered.

Indicators: 25 training seminars (4- in 2007, 9 - in 2008, 8 - in 2009, 4 - in 2010) were held and 25 consultations have been conducted. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

Result 3.2. Information System is being regularly updated by national data collected within the Aral Sea basin.

Situation at the beginning of Phase 2: The ASB's regions are added into the national information systems (DB).

SIC results:

- New sub-blocks were developed and entered into the IS:
 - "Land Reclamation" (drainage network, drainage water discharge, drainage water mineralization; drainage coefficient, length of new drainage and of modernized drainage);
 - "Water Management" (water disposal);
 - "Municipal water supply" (water distribution system, water supply sources).

- The activity related to placing the IS on the portal, can be seen at the Result 16.7

5 NFP results:

- Lists of divisions supplying information to NIS have been agreed with the management of the ministries.
- Historic information is being gathered by divisions and entered in NIS.

Indicators: see Result 1b.7. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 3.3. Training seminars for representatives of national water management organizations and consultations upon request have been conducted. Advanced technologies is applied for the benefit of information support in Central Asia

Situation at the beginning of Phase 2: In 2006-2007 a series of training seminars for representatives of the national water management organizations was held.

SIC results:

- Training seminars have been prepared and held for the personnel of the national focal points with participation of representatives of national water management organizations:
- 25-28 October 2007, Dushanbe, Tajikistan (17 participants)
- 12-15 November 2007, Astana, Kazakhstan (13 participants)
- 5-7 December 2007, Tashkent, Uzbekistan (8 participants)
- 12-15 December 2007, Bishkek, Kyrgyzstan (15 participants)
 - 21-27 February 2008, Ashgabat, Turkmenistan (14 participants)
 - 29-30 April 2008, Bishkek, Kyrgyzstan (27 participants)
 - 13-15 May 2008, Astana, Kazakhstan (13 participants)
 - 12-13 June 2008, Tashkent, Uzbekistan (10 participants)
 - 20-27 August 2008, Ashgabat, Turkmenistan (18 participants)
 - 3-5 November 2008, Bishkek, Kyrgyzstan (17 participants)
 - 12-13 November 2008, Khodjent, Tajikistan (17 participants)
 - 2-3 December 2008, Astana, Kazakhstan (15 participants)
 - 25 December 2008 - Tashkent, Uzbekistan (15 participants)
 - 16-17 April 2009, Shymkent, Kazakhstan (5 participants)
 - 19-25 May 2009, Bishkek, Kyrgyzstan (19 participants)
 - 08-10 June 2009, Astana, Kazakhstan (14 participants)
 - 23-26 June 2009, Tashkent, Uzbekistan, for NFPs of Tajikistan (8 participants)
 - 9-16 September 2009, Ashgabat, Turkmenistan (15 participants)
 - 28 September-1 October 2009, Astana, Kazakhstan (15 participants)
 - 13-14 October 2009, Khodjent, Tajikistan (9 participants)
 - 29-31 October 2009, Bishkek, Kyrgyzstan (22 participants)
 - 22 April 2010, Khodjent, Tajikistan (22 participants)
 - 23-24 April 2010, Khodjent, Tajikistan – for NFP of Kyrgyzstan (14 participants)

- 19-26 May 2010, Ashgabad, Turkmenistan (15 participants)
- 15-17 June 2010, Astana, Kazakhstan (9 participants)
- A regional workshop was held 13-14 February 2008 in Tashkent (22 participants), at which problems related to the establishment of national information systems and the work plan of national focal points for 2008 were discussed.
- A regional workshop was held on 22-23 July, 2008, in Tashkent (15 participants), at which the reports about implemented work in the first half year 2008 were considered; further tasks were discussed; and a training seminar on entering information in the portal section in national languages was held.
- Regional seminar to discuss the Report on 2008 and Work plan for 2009 was held in Tashkent, 26 February (44 participants)
- Regional seminar to discuss the Report on 2009 and Work plan for 2010 was held in Tashkent, 2 March 2010 (40 participants)

Indicators: 24 training seminars and 4 regional seminars were held. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term

Result 3.4. Participation of representatives from NGOs and other stakeholders in regional seminars were organized.

Situation at the beginning of Phase 2: Representatives of NGOs and other stakeholders took part in the seminars organized in 2006-2007.

SIC results:

- Representatives of NGOs and other stakeholders were invited to participate in the training seminars.
- Uzbekistan's NGOs Ecoforum¹ and SIC's personnel participated in seminars organized by both parties and communicated.

Indicators: Stable collaboration with the Ecoforum of NGOs in Uzbekistan was organized. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 3.5. CAREWIB is recognized by IFAS and other important regional and national organizations as an official system for keeping records, data collection and use, data analysis and modeling of water and land resources in the Aral Sea basin

Situation at the beginning of Phase 2: The Portal and the Information System were presented many times at international conferences and workshops with participation of representatives from IFAS, ICWC, EurAsEC, ministries of the states, and other

¹ Ecoforum NGOs of Uzbekistan consists of 30 ecological NGOs.

organizations

SIC, UNECE, GRID-Arendal results:

- The CAREWIB Information System and the CAWater-Info portal were presented at:
 - 5 World Water Forum, Istanbul, Turkey, 16-22 March 2009;
 - Meeting of experts related to the water management and energy sectors of the states- the IFAS founders, Almaty, 1 April 2009;
 - Meeting of experts from the water management and energy sectors before the Summit of the Heads of the States - the IFAS founders, Almaty, 26-28 April 2009;
 - World Water Council's General Assembly, Marseille, France, 14-16 October 2009;
 - Meeting of experts on water management and energy sectors, Almaty, 10-11 November 2009;
 - 5th session of the Meeting of the Parties to the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Geneva, Switzerland, 10-12 November 2009;
 - 60th IEC Meeting & 5th Asian Regional Conference, New Delhi, India, 6-12 December 2009;
 - First Working Group on Strengthening Institutional and Legal Frameworks and Aral Sea Basin Programme - 3, Almaty, Kazakhstan, 10-11 December 2009.
 - Work meeting on the project: "Improved information exchange on water resources in EECCA countries based on the Central Asian Regional Water Information Base "CAREWIB"», Tashkent, 8-9 April 2010 (with participating of representatives from Uzbekistan, Russia and Southern Caucasus countries); a follow-up concept for implementing a similar platform in the Southern Caucasus was developed)
 - Founding conference and seminar on consideration of development of the Network of EECCA water management organizations, Moscow, 31 May 2010 (with participating of water management organizations from Russia, Ukraine, Moldova, Byelorussia, Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan and Azerbaijan)
- Brochure "Summit of the Heads of States – founders of the International Fund for saving the Aral Sea" was prepared and published jointly with EC IFAS.

Indicators: Information System CAREWIB is used as an official information resource by 5 national water management organizations in Central Asia – ICWC founders. The portal is actively used by the NWO EECCA members (see 4.2). The CAREWIB IS is proposed to be included into "Aral Sea Basin Programme 3", which is now being worked out. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

2.4. Ensuring the long-term political and financial support to CAREWIB

Result 4.1. Financial conditions for further sustainable functioning of the CAREWIB are fully or partly set up after the Project is completed.

Situation at the beginning of Phase 2: Business plan has not been developed

SIC, UNECE, GRID-Arendal results:

- "CAREWIB development strategy in the framework of information service development for the water sector in Central Asia" (where the main ways of information service's further development in the region with participation of interested parties were proposed) has been developed in lieu of the business plan.
- The project document for the transition period is prepared on the basis of strategy.

Indicators: The strategy for further development is prepared. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 4.2. Practical cooperation has been established and formalized with key important institutions within their spheres of activities

Situation at the beginning of Phase 2: Bilateral cooperation was established with 13 organizations within the region, with which information is regularly being exchanged; beyond the region: with the World Water Council, International Network of Basin Organizations, Global Water Partnership for Central Asia and Caucasus

SIC, UNECE, GRID-Arendal results:

- Further cooperation with partners according to the concluded agreements (mutual participation in the workshops, seminars, conferences; exchange of publications and others).
- Agreements on cooperation with 56 organizations of EECCA countries – members of NWO EECCA have been concluded, including: 6 – Kazakhstan, 14 – Kyrgyzstan, 4 – Tajikistan, 1 – Turkmenistan, 10 – Uzbekistan, 3 - Belarus, 2 - Azerbaijan, 6 - Russia, 7 - Ukraine, 2 – Moldova, 1 – Georgia.
- Agreement about cooperation has been concluded with the International Office for Water (France). The web-site of IOWater is opened on the portal (Fig. 10).
- The web-site of KnowledgeHub of Water Pacific Water Forum is opened (Fig. 11).
- The web-site of Inter-Islamic Network on Water Resources Development and Management is opened (Fig. 12).
- The project-proposal "Improving exchange with information on water resources in the EECCA countries using CAREWIB-project experience (Phase II)" for 2008-2010 was prepared by SIC jointly with UNECE. Financial support from the Government of Russian Federation was granted.

Indicators: Bilateral cooperation on regular information exchange was established with 56 organizations within the EECCA region. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to the planned term



Fig. 12 - The web-site of Inter-Islamic Network on Water Resources Development and Management

Result 4.3. Advertisers were identified and agreements on placing ads at the Portal were made.

Situation at the beginning of Phase 2: Contracts with advertisers were not made

SIC results:

- Attempts have been undertaken to make agreements with advertising internet-systems but success wasn't reached: Google and Yandex refused agreement "because the portal doesn't correspond to the needed requirements" (it may be that this negative response was because our proposal was not commercial).

Indicators: Income through advertising. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

Result 4.4. Information and data from Afghanistan are being placed at the portal step by step

Situation at the beginning of Phase 2: The portal has a section dedicated to Afghanistan (news block, database on rivers).

SIC, UNECE and GRID-Arendal results:

- News about Afghanistan are placed on the portal
- Materials were translated; 4 publications were issued:
 - "Afghanistan: the return to peaceful life: trends of regional cooperation development and ways (a glance from Central Asia)"

- “Water Resources of Afghanistan”
- "Afghanistan and regional integration"
- “Afghanistan and transboundary water management issues”
- Contact was maintained with potential stakeholders in Afghanistan (UNOMIG / UNDP, national agencies)
- New contacts established and interest in cooperation solicited with officials from Afghanistan's Ministry of Water, the Hydrometeorological Service and the National Environment Protection Agency (meetings in Tashkent, Geneva)
- The range of problems is developed for a feasibility study on integrating Afghanistan's information into CAREWIB (to be initiated after approval of financing in Tashkent for a CAREWIB-facilitated meeting on water cooperation with Afghanistan).

Indicators: Information on Afghanistan including materials of the Government of Afghanistan is available through the portal; 4 publications were issued. The planned work was fulfilled up to 100%.

Milestones: the work is implemented according to plan.

3. Milestones and outputs of the project

The tables 3.1-3.4 show the most important results and milestones for 2007-2010.

Table 3.1
Important results and milestones of the CAREWIB Project in 2007

Item	Place	Date
ENVSEC, regional meeting	Ashgabat	18-20 September
Regional training workshop "Central Asia Regional Water Information Base"	Tashkent	25-26 September
Work meeting between SDC and SIC ICWC	Tashkent	9 October
Consideration of project results at 48 th ICWC meeting	Khodjent	11 October
Training workshop on creation of national information system in the Republic of Tajikistan	Dushanbe	25-28 October
Regional Consultation Meeting for Candidate Water Knowledge Hubs in the Asia-Pacific Region	Singapore	29-31 October
Training workshop on creation of national information system in the Republic of Kazakhstan	Astana	12-15 November
15 th session of the Project Working Group on SPECA Project "Rational and Efficient Use of Water and Energy Resources in Central Asia"	Bishkek	14-15 November
ENVSEC, meeting	Kabul	19-21 November
Training workshop on GIS, Portal and IS	Osh	22-26 November
Training workshop on creation of national information system in the Republic of Uzbekistan	Tashkent	5-7 December
Training workshop on creation of national information system in the Kyrgyz Republic	Bishkek	12-15 December
Meeting of SIC project staff on organizational issues (under the guidance of Prof. V.A. Dukhovny)	Tashkent	monthly

Table 3.2
Important results and milestones of the CAREWIB Project in 2008

Item	Place	Date
Swiss mission for water sector monitoring	Tashkent	6 February
Regional workshop on the project with the participation of all NFPs	Tashkent	13-14 February
Training workshop on formation of a national information system in Turkmenistan	Ashghabat	21-27 February
International Conference "Problems of Aral: Impact on the gene pool of population, flora, fauna and international cooperation for mitigating consequences"	Tashkent	11-12 March
Meeting of the Project Steering Committee	Tashkent	18 March
Discussion on the progress of the project at 49 th ICWC meeting	Tashkent	19 March
Mission of Ms. Teresa Adam	Tashkent	14 April
Joint mission to Turkmenistan under the Environment and Security initiative	Ashghabat	13-18 April
Training workshop on formation of a national information system in the Kyrgyz Republic	Bishkek	29-30 April
Swiss mission for water sector monitoring	Tashkent	12 May
Training workshop on formation of a national information system in the Republic of Kazakhstan	Astana	13-15 May
Joint mission to Uzbekistan under the Environment and Security initiative	Tashkent and regions	19-28 May
Central Asia International Scientific-Practical Conference "Problems of climate change, water resources management, governance and capacity building in Central Asia"	Bishkek	28-29 May
International Conference "Water Resource Systems Management in Extreme Conditions"	Moscow	3-5 June
Training workshop on formation of a national information system in the Republic of Uzbekistan	Tashkent	12-13 June
Regional workshop on the project with participation of all NFPs	Tashkent	22-23 July
Training workshop on establishing the national information system in Turkmenistan	Ashgabad	20-27 August
1 st Central Asian international exhibition and conference dedicated to water and water technology – WaterTech Central Asia 2008	Almaty	16-18 September
Swiss mission on water sector monitoring	Tashkent	20 October
Regional theoretical and practical workshop "Ecological security - critical factor of water resources use"	Tashkent	23-25 October

Item	Place	Date
Training workshop on establishing the national information system in the Republic of Kyrgyzstan	Bishkek	3-5 November
Training workshop on establishing the national information system in the Republic of Tajikistan	Khodjent	12-13 November
International conference "Water consolidation – Strengthening cooperation in the water resources management in Central Asian Region"	Almaty	17-18 November
Training workshop on establishing the national information system in the Republic of Kazakhstan	Astana	2-3 December
Seminar-meeting "Development of the water sector information network in CIS: Information System of Central Asian water sector "CAREWIB" case study"	Moscow	11-12 December
Meeting between SDC and GRID-Arendal office in Geneva (Geneva Environment and Security Centre)	Bern	16 December
Meeting of SIC project staff on organizational issues (under the guidance of Prof. V.A. Dukhovny)	Tashkent	every month

Table 3.3
Important results and milestones of the CAREWIB Project in 2009

Item	Place	Date
Swiss mission for water sector monitoring	Tashkent	17 February
Regional workshop on the project with the participation of all NFPs and meeting of the Supervisory Committee of the project	Tashkent	26 February
5th World Water Forum	Istanbul	16-22 March
UNECE-CAREC Regional seminar "Harmonization of standards and water quality standards in Central Asian countries"	Bishkek	3-4 March
Presentations of the CAREWIB and "IWRM-Fergana" projects during the meeting of journalists and the public at the UNDP office.	Tashkent	22 March
Meeting of experts related to the water management and energy sectors of the states-the IFAS founders	Almaty	1 April
Training workshop on formation of a national information system in the Republic of Kazakhstan	Shymkent	16-17 April

Item	Place	Date
Meeting of experts from the water management and energy sectors before the Summit of the Heads of the States - the IFAS founders	Almaty	26-28 April
Training workshop on formation of a national information system in the Republic of Kyrgyzstan	Bishkek	29-30 May
Training workshop on formation of a national information system in the Republic of Kazakhstan	Astana	13-15 June
Training workshop on formation of a national information system in the Republic of Tajikistan	Tashkent	23-26 June
Training workshop on formation of a national information system in Turkmenistan	Ashgabad	9-16 September
Training workshop on formation of a national information system in the Republic of Kazakhstan	Astana	28 September - 1 October
Training workshop on formation of a national information system in the Republic of Tajikistan	Khodjent	13-14 October
Training workshop on formation of a national information system in the Republic of Kyrgyzstan	Bishkek	29-31 October
Meeting of the Parties of the UNECE Water Convention	Geneva	10-12 November
Workshop on practical and strategic aspects of the CAREWIB project's development.	Geneva	25-27 November
Meeting of SIC project staff on organizational issues (under the guidance of Prof. V.A. Dukhovny)	Tashkent	Monthly

Table 3.4
Important results and milestones of the CAREWIB Project in 2010

Item	Place	Date
Regional workshop on the project attended all National Focal Points and the Project Steering Committee Meeting	Tashkent	2 March
International Forum "The Drop of Water - the Grain of Gold"	Ashgabad	1-4 April
Workshop on the improved information exchange on water resources in EECCA countries based on the Central Asian Regional Water Information Base "CAREWIB"	Tashkent	8-9 April
The training seminar on the creation of the national information system in the Republic of Tajikistan	Khodjent	22 April

Item	Place	Date
The training seminar on the creation of the national information system in the Republic of Kyrgyzstan	Khodjent	23-24 April
The training seminar on the creation of the national information system in Turkmenistan	Ashgabad	19-26 May
The training seminar on the creation of the national information system in the Republic of Kazakhstan	Astana	15-17 June
Organizational meeting of the SIC project staff (under the direction of Prof. Dukhovny V.A.)	Tashkent	monthly

4. Constraints and lessons learned

The main constraints to be taken into consideration in further activities are shown in the following findings:

- Options for improving integration with the activities of EC IFAS will partially depend on its future political position, mandate and location;
- There is uneven interest among countries of the region in the integration of Afghanistan into regional activities; Afghanistan itself remains cautious with respect to water cooperation and information exchange with the north;
- Some of the important national institutions (e.g. hydrometeorological services) remain unconvinced of the project's added value, and the efforts of project implementing agencies alone may not be sufficient to overcome this (donor support and mediation may be required);
- Whereas implementing agencies are doing their best to bring together various donor interests in the region to diversify and consolidate the project's support base, options there remain limited partially due to still insufficient (although improved) coordination among the donors themselves.

5. Outlooks for 2010-2011

Further information exchange in water-environment area in the region will be focused on improvement of the CAWater-Info Portal and CAREWIB Information System on the basis of stakeholders' participation principle (BWOs, EC IFAS + RHC and NHMS; SIC ICSD + environmental agencies, CDC "Energy") and uniform methodical principles and engineering tools.

In connection with above-mentioned further project work will be focused on the the following components:

1) Facilitation of improved cooperation between sectors and institutions with the purpose of fostering the development of a water management decision

support system model and decentralized responsibility for data collection and input

- Creation of a Working Group for evaluation of the project by the main suppliers and customers in the region (EC IFAS, ministries, SIC ICWC, BWOs, and RHC (NHMS) etc.) with the aim to detect deficiencies, problems, gaps in the development of information space and exchange and defining new customers and other information suppliers.
- Elaborating a common mechanism for cooperation on the basis of analysis not only within the project, but with regard to the information exchange as a whole.
- Developing, elaborating and testing analytical instruments of IS, including:
 - multi-playing Aral Sea Basin Management Models (ASB-mm);
 - model of water balance of river sections (selection of river sections, and problem solving on flow distribution, channel inflow calculation, water losses in the river-bed) - *with participation of BWOs*;
 - estimation and forecasting of lateral inflow to Syrdarya and Amudarya - *with participation of BWOs*;
 - estimation and forecast of water content in the rivers of the Syrdarya and Amudarya Basins by the climatic and hydrological hindcasting series - *with participation of RHC, Hydromet services, BWOs*;
 - real-time forecasting of return water and lateral inflow - *with participation of BWOs* ;
 - estimation of water losses in the river channel - *with participation of BWOs*;
 - analysis of the socio-economic aspects related to activity of other sectors connected to water sector.
- Developing computer models and interfaces to solve routine problems of water resources management and estimation in an on-line regime:
 - Model of reservoir's waterworks facility with hydroelectric power station (object selection and problem solving on streamflow regulation by reservoir, evaluation of HES's operating mode, including electricity production, deficit calculation, releases and others) - *with participation of CDC "Energy", BWOs*
 - Model of hydrochemical composition of water for Amudarya river (selection of gauging station, river section, input of data on hydrochemical composition, analysis of hydrochemical balance [in mg-eq], data validity estimation) - *with participation of BWOs*
 - Evaluating performance of the models - analytical instruments including used analytical models and initial data.

2) Rationalizing the information service's institutional structure in Central Asian water and environmental sectors:

- Broadening the Political&Geographical coverage (Afghanistan);Improving the institutional structure for the regional information system (involving EC IFAS, SIC ICSD, BWO, RHC, NHMS, CDC "Energy");
- Increasing the financial support (cooperation with donors and international organizations: Germany, France, USA, World Bank, WMO, WHO, others);
- Cooperation with other data holders (CACILM, UNDP, others);
- Conduct a stakeholder workshop to plan the project and define its role in the ASBP 3 framework, and
- Making, matching and finalizing the Project Document for the next phase on the base of an elaborated cooperation mechanism.

3) Enhance the content and increase access to the Information System, including strengthening of data collection and information retrieval mechanisms at the regional and national levels:

- Broadening the coverage of the regional information system by including more hydrometeorological, environmental etc data by:
 - Filling the regional and national DBs with new information, based on model and GIS requirements;
 - Spatial visualization of databases' regional statistics through GIS-interface;
 - Inclusion of the whole CA into the IS (include national provinces outside the boundaries of the Aral Sea basin) - *with participation of EC IFAS and its branches and national water management organizations of CA, ICSD, CDC "Energy"*;
 - Making and developing a new database on the quality of water resources;
 - Making and developing a database block on the assessment of long-term forecasts and climate change impact on water resources of Central Asia;
 - Creating a Database on ASBM-3 projects.
 - Inclusion of data from Afghanistan within the Aral Sea Basin into the IS (GIS-layers and possibly periodic data).

4) Enhance informational scope and scale of the CAWater-Info Portal including an online platform of modeling tools:

- Extending experience and broadening cooperation in the EECCA regions (within activity related to developing of water management organizations network);
- Maintaining the existing portal, including updating of the knowledge base and database, news posting, etc;
- Developing new sections on the portal, which demonstrate the IS content and its analytical instruments.

5) Produce various informational products including digital publications (collection of materials, printing and transmission to partners, publishing on the web portal) and disseminate them among target user groups and other interested parties:

- Publication of popular thematic, graphic and cartographic information about the most urgent water and ecological problems in the region (including training of regional organizations how to prepare such information);
- Publication of ICWC bulletins, EC IFAS bulletins, other periodicals of SIC ICWC, EC IFAS and other partner-organizations;
- Publication of monographs, booklets, scientific articles etc. of partner-organizations`;
- Digitization and publication of rare and ancient books, of maps etc. related to the Aral Sea Basin problem, which are in the partner-organizations' archival depositories via web-site;
- Publication the existing material and preparing new material on water resources of Central Asia aiming to promote the portal and Information System in the global ISs (WaterWiki etc.);

- Investigating needs of farmers, WUAs, agricultural producers in the information of IS and of the portal and possibilities for its delivery to users (agro-newsletters, satellite images etc.).

6. Monitoring and reporting

Internal monitoring by the Consortium

During the implementation of the project, work meetings were held every month in SIC with the project personnel, at which current issues and tasks were discussed.

External monitoring by SDC

Monitoring of the Project activities is executed by the Regional Water Program Manager (Swiss Cooperation Office in Uzbekistan) under the supervision of SDC country Director for Kyrgyzstan and Uzbekistan (Swiss Cooperation Office in Bishkek). Monitoring includes regular meetings of SDC Coordinator of the Regional Water Program with the responsible representatives of the project. During the reporting period, the project personnel met with water sector monitoring missions.

7. Annexes

Annex 1. List of Abbreviations

Annex 2. List of workshops conducted under project

Annex 3. List of publications under project

Annex 4. List of the CAWater-Info portal links

Annex 5. Statistics of the portal visits

Annex 6. Information System Structure

Annex 7. Patents

Annex 1. List of Abbreviations

ASB	Aral Sea Basin
ASB-mm	Aral Sea Basin Management Model
ASBP	Aral Sea Basin Program
BWO	Basin Water Organization
CAR	Central Asian Republics
DB	Database
EC	Executive Committee
EECCA	Eastern Europe, Caucasus and Central Asia
GRID-Arendal	Global Resource Information Database Centre, Arendal, Norway
GWP CACENA	Global Water Partnership for Caucasus and Central Asia
ICSD	Interstate Commission for Sustainable Development
ICWC	Interstate Commission for Water Coordination in Central Asia
IFAS	International Fund for Saving the Aral Sea
INBO	International Network of Basin Organizations
IS	Information System
KB	Knowledge Base
MAWR	Ministry of Agriculture and Water Resources
NIS	National Information System
NFP	National Focal Point
NGO	Non-governmental organizations
NHMS	National hydro-meteorological services of Central Asian states
SDC	Swiss Agency for Development and Cooperation
SIC	Scientific-Information Center
UNECE	United Nations Economic Commission for Europe
WUA	Water Users Association
WWC	World Water Council

Annex 2. List of workshops conducted under project

2007

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
3.3.	Regional seminar on the project attended all National Focal Points	25-26 September	2	Tashkent UZ	I. Beglov	SIC	Regional seminar	Presentation of CAWater-Info portal, CAREWIB IS; training on development of NIs and use of CAREWIB regional IS in daily work	All project participants	35 (29/6)	7162	102	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Tajikistan	25-28 October	4	Dushanbe Taj	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Tajikistan	17 (15/2)	3114	46	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Kazakhstan	12-15 November	4	Astana KAZ	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kazakhstan	13 (10/3)	3407	66	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Uzbekistan	5-7 December	3	Tashkent UZ	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's	NFP of Uzbekistan	8 (7/1)	81	10	According to the protocol and YPO

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
								staff					
3.3.	The training workshop on development of the national information system in the Republic of Kyrgyzstan	12-15 December	4	Bishkek KYR	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kyrgyzstan	15 (6/9)	2532		According to the protocol and YPO

2008

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
3.3.	Regional seminar on the project attended all National Focal Points	13-14 February	2	Tashkent UZ	I. Beglov	SIC	Regional seminar	Consideration of NIS development problems and NFP's Work plan for 2008	All project executors	22 (17/5)	5171	118	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in Turkmenistan	21-27 February	7	Ashgabad Turkmenistan	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Turkmenistan	14 (12/2)	3790	39	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Kyrgyzstan	29-30 April	2	Bishkek KYR	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's	NFP of Kyrgyzstan	27 (15/12)	4921	91	According to the protocol and YPO

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
								staff					
3.3.	The training workshop on development of the national information system in the Republic of Kazakhstan	13-15 May	3	Astana KAZ	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kazakhstan	13 (9/4)	3832	98	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Uzbekistan	12-13 June	2	Tashkent UZ	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Uzbekistan	10 (9/1)	185	9	According to the protocol and YPO
3.3.	Regional seminar on the project attended all National Focal Points	22-23 July	2	Tashkent UZ	I. Beglov	SIC	Regional seminar	2008 half-year progress report consideration; future tasks discussion; training on information input into the portal section in the national languages	All project executors	15 (11/4)	2725	91	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in Turkmenistan	20-27 August	7	Ashgabad Turkmenistan	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Turkmenistan	18 (16/2)	4247	34	According to the protocol and YPO
3.3.	The training workshop on development	3-5	3	Bishkek	I. Beglov	SIC	Training	Summarizing	NFP of	17	3724	73	According

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
	of the national information system in the Republic of Kyrgyzstan	November		Kyrgyzstan			g	of NFP's activities on the CAREWIB project in Kyrgyzstan; evaluation of NIS's fullness degree; revision of national data delivered to the regional IS.	Kyrgyzstan	(10/7)			to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Tajikistan	12-13 November	2	Khodjent Tajikistan	I. Beglov	SIC	Training	Training on use of the portal, the regional IS, NIS for personnel of SogdDWM and provincial water management organizations, and development of data transmission into NIS	Personnel of SogdDWM and provincial water management organizations	17 (15/2)	1540	45	According to the protocol and YPO
3.3.	The training workshop on development of the national information system in the Republic of Kazakhstan	2-3 December	2	Astana KAZ	I. Beglov	SIC	Training	Summarizing of NFP's activities on the CAREWIB project in Kazakhstan; evaluation of NIS's fullness	NFP of Kazakhstan	15 (10/5)	3735	125	According to the protocol and YPO

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
								degree; revision of national data delivered to the regional IS.					
3.3.	The training workshop on development of the national information system in the Republic of Uzbekistan	25 December	1	Tashkent UZ	I. Beglov	SIC	Training	Summarizing of NFP's activities on the CAREWIB project in Uzbekistan; evaluation of NIS's fullness degree; revision of national data delivered to the regional IS.	NFP of Uzbekistan	15 (13/2)	199	13	According to the protocol and YPO

2009

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
3.3.	Regional workshop on the project attended all National Focal Points	26 February	1	Tashkent UZ	I. Beglov	SIC	Regional workshop	Discussing problems on development of the national information systems and the work plan for national focal points (NFP) in 2009	All project executors	44 (36/8)	7166	163	According to the protocol and YPO 2009
3.3.	The training seminar on the creation of the national information system in the Republic of Kazakhstan	16-17 April	2	Shymkent KZ	A. Kats	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kazakhstan	5 (3/2)	571	57	According to the protocol and YPO 2009
3.3.	The training seminar on the creation of the national information system in the Republic of Kyrgyzstan	13-15 May	3	Bishkek KG	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kyrgyzstan	19 (9/10)	5335	94	According to the protocol and YPO 2009
3.3.	The training seminar on the creation of the national information system in the Republic of Kazakhstan	8-10 June	3	Astana KZ	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's	NFP of Kazakhstan	14 (8/6)	3608	86	According to the protocol and YPO 2009

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
								staff					
3.3.	The training seminar on the creation of the national information system in the Republic of Tajikistan	23-26 June	4	Tashkent UZB	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Tajikistan	8 (7/1)	1771	55	According to the protocol and YPO 2009
3.3	The training seminar on the creation of the national information system in Turkmenistan	9-16 September	8	Ashgabad Turkm	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Turkmenistan	15 (13/2)	4663	39	According to the protocol and YPO 2009
3.3	The training seminar on the creation of the national information system in the Republic of Kazakhstan	28 September-1 October	4	Astana KZ	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kazakhstan	15 (9/6)	3222	54	According to the protocol and YPO 2009
3.3	The training seminar on the creation of the national information system in the Republic of Tajikistan	13-14 October	2	Khodjent Taj	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Tajikistan	9 (6/3)	1158	64	According to the protocol and YPO 2009
3.3	The training seminar on the creation of the national information system in the Republic of Kyrgyzstan	29-31 October	3	Bishkek KG	I. Beglov	SIC	Training	Training on establishment and development of NIs for the NFP's staff	NFP of Kyrgyzstan	22 (11/11)	4614	70	According to the protocol and YPO 2009

2010

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
3.3.	Regional workshop on the project attended all National Focal Points	2 March	1	Tashkent UZB	I. Beglov	SIC	Regional workshop	Discussing problems on development of the national information systems and the work plan for national focal points (NFP) in 2010	All project executors	44 (36/8)	7166	163	According to the protocol and YPO 2010
3.3.	The training seminar on the creation of the national information system in the Republic of Tajikistan	22 April	1	Khodjent Tajikistan	I. Beglov	SIC	Training	Training of NWMOs personnel to use the portal and IS	Personnel of national water management organizations	22 (16/6)	2513	114	According to the protocol and YPO 2010
3.3.	The training seminar on the creation of the national information system in the Republic of Kyrgyzstan	23-24 April	2	Khodjent Tajikistan	I. Beglov	SIC	Training	Summarizing activities	NFP of Kyrgyzstan	14 (11/3)	2785	99	According to the protocol and YPO 2010
3.3.	The training seminar on the creation of the national information system in Turkmenistan	19-26 May	7	Ashgabad Turkmenistan	I. Beglov	SIC	Training	Summarizing activities and training on GIS	NFP of Turkmenistan	15 (10/5)	4186	40	According to the protocol and YPO 2010
3.3.	The training seminar on the creation of the national information system in the Republic of Kazakhstan	15-17 June	3	Astana KAZ	I. Beglov	SIC	Training	Summarizing activities	NFP of Kazakhstan	9 (6/3)	6374	236	According to the protocol and YPO

Activity	Name of Event	Date	No of days	Place, country	Responsible	Institution	Type of event	Purpose	Target Audience	Number of Participants (M/F)	Direct Costs (USD)	Direct Costs/Participant/day (USD)	Follow up activities
													2010

Annex 3. List of publications under project

The SIC's e-publications disseminated through portal and mailing list are included in the list of publications issued by SIC ICWC and partners.

2008

Activity	Name	Date	Publisher
2.1.	V. Dukhovny, A. Sorokin: Assessment of the impact of Rogun reservoir on Amudarya river water regime	January	SIC ICWC
2.1.	Adaptation to climate change: regional problems in view of the world experience (Publication of the project CAREWIB, vol. 9)	January	CAREWIB project
2.1.	Water for Food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture. Resume (published in Russian by SIC ICWC for IWMI)	February	SIC ICWC
2.1.	Comprehensive Remote Sensing and Ground Based Studies of the Dried Aral Sea Bed	March	SIC ICWC
2.3.	SIC ICWC's Information Collection "Water Resources of Mexico"	March	SIC ICWC
2.1.	Her Majesty Water by A.Fainbergh	March	SIC ICWC
4.2.	5th World Water Forum's Song Sheet	April	CAREWIB project
2.1.	Bulletin of the Information-Consulting Center (ICC) on European Commission Framework Programme FP7 in Central Asia, vol. 22 (2008), FP7 "People" Work programme 2008 Marie Curie action	April	CAREWIB project
2.1.	SIC ICWC's Information Collection "Water Management of Israel"	May	SIC ICWC
2.3.	SIC ICWC's Abstracts Review No. 28	May	SIC ICWC
2.3.	ICWC Bulletin No. 48, May 2008	May	SIC ICWC
2.3.	Intergovernmental agreements on transboundary waters concluded by Eastern Europe, Caucasus and Central Asia (EECCA) states (SIC ICWC's Legal Collection, vol. 19)	June	SIC ICWC
2.1.	Model water law of CIS member-states (Publication of CAREWIB project, vol. 10)	June	CAREWIB project
4.2.	5th World Water Forum Political Process (published in Russian by SIC ICWC for World Water Council)	June	SIC ICWC
4.2.	5th World Water Forum: Second Announcement (published in Russian by SIC ICWC for World Water Council)	June	SIC ICWC
2.3.	Newsletters «CAWater-Info News» (in Russian and in English including Mailing List)	January-June	CAREWIB project
2.3.	Press releases of ICWC (in Russian and in English, Mailing List)		SIC ICWC
2.3.	Newsletters of The Network GWANET (in Russian and in English, Mailing List)		SIC ICWC

Activity	Name	Date	Publisher
2.3.	Bulletins of INBO (in Russian, Mailing List)		CAREWIB project
4.2.	Second announcement on the 5 th World Water Forum (by request of the World Water Council)	July	SIC ICWC
2.1.	"New in Water Management", No. 6	July	project CAREWIB
2.1.	Problems of Aral Sea and Priaralie (collection of scientific papers of SIC ICWC)	August	SIC ICWC
2.1.	Integrated Water Resources Management: from theory to practice. Central Asia Case Study.	August	project «IWRM-Fergana»
2.1.	"New in Water Management", No. 7	August	project CAREWIB
4.2.	Bulletin of INBO, No. 16, December 2007 — January 2008	September	SIC ICWC
2.1.	Searching economic ways to solve interstate transboundary conflicts.	September	SIC ICWC
2.1.	Water resources of Afghanistan	October	project CAREWIB
2.1.	Towards 5 th World Water Forum: reports of Central Asian countries	November	project CAREWIB
2.1.	SIC ICWC's Information Collection "Water Management in Central Asia" Ази»	December	SIC ICWC
2.1.	Increasing the WUAs financial stability through using the internal reserves.	December	project «IWRM-Fergana»
2.1.	SIC ICWC's Abstracts Review No. 29	December	SIC ICWC
2.1.	Bulletin of ICWC, No. 50, November 2008	December	SIC ICWC
2.1.	"New in Water Management", No. 8	December	project CAREWIB
2.1.	Regional Model for Integrated Water Resources Management in Twinbasins "RIVERTWIN"	December	SIC ICWC
2.1.	The national information systems development strategies of countries in the Aral Sea Basin.	December	project CAREWIB

2009

Activity	Name	Date	Publisher
2.1.	Analytical Report on statistics of the CAWater-Info portal's websites' visits (2008)	January	CAREWIB Project
2.1.	Strategies of National Information Systems development	January	CAREWIB Project
2.1.	Guidelines for use of the CAREWIB's Databases on-line	February	CAREWIB Project
2.1.	Development of Water Information Network in CIS using as an example and with the involvement of the Information System and Water Portal "CAREWIB" (Progress report for 2008)	February	CAREWIB Project
2.1.	Integration of Stakeholders for Improving Water Governance (leaflet)	March	«IWRM-Fergana» Project
2.1.	Introduction of advanced technologies in WUA "Akbar-Abad" (leaflet)	March	«IWRM-Fergana» Project
2.1.	Social Mobilization (leaflet)	March	«IWRM-Fergana» Project
2.1.	SCADA system in Central Asia (leaflet)	March	«IWRM-Fergana» Project
2.1.	Role and importance of water accounting in Associations of Water Users (leaflet)	March	«IWRM-Fergana» Project
2.1.	Management Information System "Ferghana" (leaflet)	March	«IWRM-Fergana» Project
2.1.	Environmental requirements of the "IWRM-Ferghana" Project (leaflet)	March	«IWRM-Fergana» Project
2.1.	Reclamation matters in Water Users Assosiations (leaflet)	March	«IWRM-Fergana» Project
2.1.	Water Productivity Improvement at the Field Level (leaflet)	March	«IWRM-Fergana» Project
2.1.	Hydrographization (leaflet)	March	«IWRM-Fergana» Project
2.1.	Public participation (leaflet)	March	«IWRM-Fergana» Project
2.1.	"New in Water Management", No. 9	March	CAREWIB Project
2.1.	"New in Water Management", No. 10	April	CAREWIB Project
2.1.	Istanbul Water Guide	April	CAREWIB Project

Activity	Name	Date	Publisher
2.1.	ICWC Bulletin No. 51, April 2009	April	SIC ICWC
2.1.	Regulatory legal acts concerning gender equality. Part 3: National documents (SIC ICWC's Legal Collection, vol. 20)	April	SIC ICWC
2.1.	GWP Strategy 2009—2013	April	GWP CACENA
2.1.	Policy Brief 7 Investing in infrastructure: The value of an IWRM approach	April	GWP CACENA
2.1.	Policy Brief 8 Triggering change in water policies	April	GWP CACENA
2.1.	Integrated Water Resources Management	April	GWP CACENA
2.1.	A. Bahri - Managing the other side of the water cycle: Making wastewater an asset	April	GWP CACENA
2.1.	Guidelines for the Safe Use of Urine and Faeces in Ecological Sanitation Systems	May	GWP CACENA
2.1.	Guidelines on the Use of Urine and Faeces in Crop Production	May	GWP CACENA
2.1.	Urine Diversion: One Step Towards Sustainable Sanitation	May	GWP CACENA
2.1.	A Handbook for Integrated Water Resources Management in Basins	May	GWP CACENA
2.1.	Instruction for builders of water meters in WUA	May	«IWRM-Fergana» Project
2.1.	Demand management: method for correction of base tariffs for water services	May	«IWRM-Fergana» Project
2.1.	Demand management: paid water use	May	«IWRM-Fergana» Project
2.1.	Water governance: kinds and mechanisms of preventing and solving of water conflicts and disputes	May	«IWRM-Fergana» Project
2.1.	Water governance: creation and organization of Canal Water Committee (CWC) activity	May	«IWRM-Fergana» Project
2.1.	Water governance: creation and organization of Union of Canal Water Users (UCWU) activity	May	«IWRM-Fergana» Project
2.1.	Role of public participation in increasing of water management equity and efficiency	May	«IWRM-Fergana» Project
2.1.	Hydrographization theory and practice	May	«IWRM-Fergana» Project
2.1.	Theory and practice of integrated water resources management	May	«IWRM-Fergana» Project
2.1.	Water management: water management methods	May	«IWRM-Fergana» Project

Activity	Name	Date	Publisher
2.1.	Water management: water distribution monitoring and assessment	May	«IWRM-Fergana» Project
2.1.	Water management: water distribution indicators	May	«IWRM-Fergana» Project
2.1.	Water management: business plans drawing up and implementation	May	«IWRM-Fergana» Project
2.1.	Water management: classification	May	«IWRM-Fergana» Project
2.1.	Water management: terms and definitions	May	«IWRM-Fergana» Project
3.5.	Summit of the Founder-States of the International Fund for Saving Aral Sea	June	SIC ICWC, EC IFAS
4.4.	Afghanistan and Regional Integration	June	CAREWIB Project
2.1.	Yu. Rysbekov: Transboundary cooperation on the international rivers: issues, experiences, lessons, and experts' forecasts	June	SIC ICWC
2.1.	News in Water Management, No. 11	July	CAREWIB Project
2.1	Istanbul Ministerial Statement / Istanbul Declaration of Heads of States on Water / Istanbul Water Consensus on water supply (translation and publication on order of the World Water Council)	July	SIC ICWC
2.1	Istanbul Water Governance (translation and publication on order of the World Water Council)	July	SIC ICWC
2.1	5 World Water Forum: Top 25 Highlights (translation and publication on order of the World Water Council)	July	SIC ICWC
2.1	Gender and Water 1 - Introduction to Gender. What does it mean? (publication of SIC ICWC for the Alliance on Gender and Water problems)	August	SIC ICWC
2.1	Gender and Water 2 – Gender, water, sanitation and health (publication of SIC ICWC for the Alliance on Gender and Water problems)	August	SIC ICWC
2.1	Gender and Water 3 - Gender, water and climate phenomena (publication of SIC ICWC for the Alliance on Gender and Water problems)	August	SIC ICWC
2.1	Gender and Water 4 - Gender, water, agriculture and food (publication of SIC ICWC for the Alliance on Gender and Water problems)	August	SIC ICWC
2.1	Water supply and sanitation problems in countries of Central Asia and Southern Caucasus (regional review) - (issued by GWP CACENA)	August	SIC ICWC
2.1	Special UN documents (SIC ICWC legal digest, No. 21)	August	SIC ICWC
2.1	SIC ICWC Information Digest "Transboundary water resources: sharing"	August	SIC ICWC

Activity	Name	Date	Publisher
2.1	ICWC bulletin No. 52, August 2009	September	SIC ICWC
2.1	SIC ICWC Information Digest "Water Resources Management of Central Asia"	September	SIC ICWC
2.1	Abstracts bulletin of SIC ICWC No. 30	September	SIC ICWC
2.1	INBO bulletin No. 17 (translation and publication in Russian on order of INBO)	October	SIC ICWC
2.1	Water at a crossroad: Dialogue & Debate at the 5th World Water Forum (translation and publication on order of the World Water Council)	November	SIC ICWC
2.1	IOW bulletin "International News" No. 16 (translation and publication in Russian on order of IOW)	December	SIC ICWC
2.1	Improving management of drinking water supply and sanitation systems for people: IOW's publications (translation and publication in Russian on order of International Office for Water)	December	SIC ICWC
2.1	Problems and tasks of purposeful and efficient water resources use by farms (Proceedings of the Republican scientific and practical conference dedicated to "The Year of rural development and improvement")	December	SANIIRI
2.1	Soil fertility and ways for its improvement (Manual for farmers)	December	«IWRM-Fergana» Project
2.1	Whole-year use of irrigated lands (Manual for farmers)	December	«IWRM-Fergana» Project
2.1	Measures and recommendations on improvement of irrigation service fees gathering	December	«IWRM-Fergana» Project
2.1	Manual on fixing the tariff of services by water management organizations for water users	December	«IWRM-Fergana» Project
2.1	Water Management on the Irrigation Systems	December	«IWRM-Fergana» Project
2.1	Monitoring, analysis and resolution of conflicts and disputes on irrigation systems	December	«IWRM-Fergana» Project
2.1	Manual on fixing the tariff for services by water users associations	December	«IWRM-Fergana» Project
2.1.	Report on results of statistical analysis of the portal visitings	December	CAREWIB Project
2.3.	Newsletters «CAWater-Info News» (in Russian and in English including Mailing List)	January-December	CAREWIB Project
2.3.	Press releases of ICWC (in Russian and in English, Mailing List)	January-December	SIC ICWC
2.3.	INBO bulletins (in Russian, Mailing List)	January-December	CAREWIB Project

2010

Activity	Name	Date	Publisher
2.1.	Analytical Report on statistics of the CAWater-Info portal's websites' visits (2006-2009)	January	CAREWIB Project
2.1.	Problems related to water-protection zones of pilot canals and how to solve them: institutional aspects (recommendations) (publication of the "IWRM-Fergana" project)	January	«IWRM-Fergana» Project
2.1.	Irrigation and drainage problems within pilot canals and how to solve them (institutional aspects)	January	«IWRM-Fergana» Project
2.1.	SIC ICWC's Information Collection "Water management of Portugal and transboundary water"	January	SIC ICWC
2.1.	IWRM as a Tool for Adaptation to Climate Change: training manual and facilitator's guide	February	GWP CACENA
2.1.	ICWC Bulletin No. 53, March 2010	March	SIC ICWC
2.1.	SIC ICWC's Abstracts Review No. 31	March	SIC ICWC
2.1.	Manual on use the software for Central control station of the Southern Fergana canal	March	«IWRM-Fergana» Project
2.1.	International and national normative legal documents of water law (SIC ICWC's Legal Collection, No. 22)	March	SIC ICWC
2.1.	The concept of IWRM principles expansion to the Akburasay river basin	March	«IWRM-Fergana» Project
2.1.	Governance and water management on Southern Fergana Canal	March	«IWRM-Fergana» Project
2.1.	Governance and water management on Aravan Akbura Canal	March	«IWRM-Fergana» Project
2.1.	Governance and water management on Right-bank Main Canal	March	«IWRM-Fergana» Project
2.1.	Governance and water management on Khodja Bakirgan Canal	March	«IWRM-Fergana» Project
2.1.	Organizing water cycle in the pilot canals	March	«IWRM-Fergana» Project
2.1.	Water saving technologies in the farm enterprises	March	«IWRM-Fergana» Project
2.1.	U.Rasulov: Calibration technique for small gauge stations and water recording in WUAs	March	«IWRM-Fergana» Project
2.1.	Land treatment for preventing and control a salinization of irrigated lands	March	«IWRM-Fergana»

Activity	Name	Date	Publisher
			Project
2.1.	Automation and monitoring system of the Southern Fergana Canal: principle and general manual on operation with automation and monitoring system of the Southern Fergana Canal for officers and dispatchers	March	«IWRM-Fergana» Project
2.1.	Water Governance	March	«IWRM-Fergana» Project
2.1.	I. Begimov: Canal Automation in Fergana valley	April	CAFV project
2.1.	K.Sadoff, M.Muller: Water Management, Water Security and Climate Change Adaptation: Early Impacts and Essential Responses (GWP TEC Background Paper No. 14, published in Russian by GWP CACENA)	April	GWP CACENA
2.1.	Resolution of controversies and conflicts in WUAs	April	«IWRM-Fergana» Project
2.1.	What is WUA?	April	«IWRM-Fergana» Project
2.1.	Development of the water sector information network in CIS: Information System of Central Asian water sector “CAREWIB” case study (Report for 2009)	April	CAREWIB Project
2.1.	Precious drop of water-2. The materials sent to the competition for the best work about caring of the water, water sources and environment	April	CAREWIB Project
2.1.	“Irrigation water allocation between farmers within the WCA (Water Consumers Association) - User Manual”	May	«IWRM-Fergana» Project
2.1.	Selected UN General Assembly resolutions on International Water Law	May	CAREWIB Project
2.1.	Water management and land reclamation: early XX - late XIX	May	CAREWIB Project
2.1.	Mirzaev N. Integrated Water Resources Management (institutional aspects)	June	«IWRM-Fergana» Project
2.1.	Innovative partnership on the way to water productivity improvement	June	WPI-PL
2.1.	Organization and procedures for optimum operation, maintenance, and management of irrigation systems	June	CAREWIB Project
2.1.	Kurbanbaev E., Artykov O., Kurbanbaev S. Integrated Water Resources Management in the Amudarya delta	June	GWP CACENA
2.1.	New in Water Management, vol 12	July	CAREWIB Project
2.1.	New in Water Management, vol. 13	July	CAREWIB Project
2.1.	Integrated solution of water and land resources use problems in the EECCA region (collection of scientific papers)	July	CAREWIB Project

Activity	Name	Date	Publisher
2.1.	Problems on ecology and land-water resources use in the EECCA region (collection of scientific papers)	July	CAREWIB Project
2.1.	G. Stulina. Recommendations on zoning of irrigating modulus and crops' irrigation schedule	July	«IWRM-Fergana» Project
2.1.	INBO Network Newsletter (in Russian), No. 18 (translation and publication in Russian on order of the International Basin Organizations)	July	SIC ICWC
2.3.	“CAWater-Info News” bulletins (in Russian and English, including mailing)	January- July	CAREWIB Project
2.3.	ICWC Press-releases (in Russian and English, including mailing)	January- July	SIC ICWC
2.3.	INBO bulletins (in Russian, mailing)	January- July	CAREWIB Project

Annex 4. List of the CAWater-Info portal links²

URL	Website/webpage
www.yale.edu/emcwa/Amu-Darya/amudarya_watershed2.htm	EMCWA/Amu-Darya
waterwiki.net/index.php/CAREWIB	CAREWIB - WaterWiki
http://waterwiki.net/index.php/Enhancing_regional_exchange_of_water_resource_information_(CAREWIB_phase_II)	Enhancing regional exchange of water resource information (CAREWIB phase II) - WaterWiki
http://waterwiki.net/index.php/CA_Water_Info	CAWater-Info - WaterWiki
www.brookings.edu/opinions/2008/0812_central_asia_linn.aspx	The Compound Water-Energy-Food Crisis Risks in Central Asia - Brookings Institution
www.carec.kz/english/index.html	CAREC
www.ecolex.org/ecolex/ledge/view/RecordDetails;jsessionid=4072F98904507CEE706650C46A617508?id=LEX-FAOC081586&index=documents	FAO EcoLex: Legislation
www.apwf-knowledgehubs.net/h9_iwrm_in_central_asia.php	APWF-Knowledge Hubs
http://enrin.grida.no	GRID-Arendal: Central & Eastern Europe, Caucasus, and Central Asia Environmental Information Programme
www.swisscoop.kg/index.php?navID=22498	SDC in Central Asia - Water Information Base
www.unece.org/env/water/links/link.htm	United Nations Economic Commission for Europe Official Web Site
www.nyulawglobal.org/globalex/Turkmenistan1.htm	GlobaLex - UPDATE: A Research Guide to the Turkmenistan Legal System
www.gateway.uz/index.php?subtopic=0&lng=1&topic=4	Uzbekistan Development Gateway
www.envsec.org/pub/ENVSEC%202004%20Progress%20report.doc	ENVSEC
www.untj.org/?c=7&id=155	UN Tajikistan Information Platform
http://iea.uoregon.edu/page.php?query=one_indicator	International Environmental Agreements (IEA) Database Project
http://old.cagateway.org/index.php?lng=1&topic=6&subtopic=22	CA Gateway
www.aralsjon.nu/en/links.html	Swedish Aral Sea Society
www.uzngo.info	Civil Society in Uzbekistan
ecologysite.net	Catalogue of sites on ecology
www.g-o.de/dossier-detail-333-3.html	scinexx Zum Weiterlesen: Links und Literatur
www.caresd.net/water/	The integrated water resources management - basis for prevention of conflicts in the region: e-Forum
http://worldenergy.ru/doc_33.html	"World Energy" Magazine
www.waterinfo.ru/links.php	FSUE Centre of the Russian register of hydraulic engineering structures and of the state water cadastre
www.talaschu.org/links.php	Commission of the Republics of Kazakhstan and Kyrgyzstan on use of water management structures of interstate usage on the Chu and Talas rivers
www.evrases.com/ru/main/linklistpage/1/	EurAsES: links
www.gwpcacena.net/en/links.htm	GWP CACENA
www.aboutus.org/CaWater-Info.net	CaWater-Info.net - AboutUs Wiki Page
http://imt.udman.ru/ep/index.php?page=links	Students' Ecoportal
www.camp.tj/Links.html	CAMP Kuhiston

² Only some most important portal links

URL	Website/webpage
www.analitika.org	Analitika.org
www.acck.narod.ru/law_rus.html	Association of the Crisis Centres of Kyrgyzstan
www.neww.org/en/news/news/1,4315,1.html	News - UNDP Courses on Gender in Uzbekistan
www.unescap.org/oes/SPECA/about/documents/English/ESCAP_activities_SPECA.pdf	ESCAP Activities in the SPECA Region
www.iwmi.cgiar.org/Publications/IWMI_Research_Reports/PDF/pub105/RR105.pdf	IWMI Publications
www.gender-az.org/index.shtml?id_doc=5837	Azerbaijan Gender Information Center
www.gwptoolbox.org/index.php?option=com_content&view=article&id=5:organizations&catid=1:structure&Itemid=49	GWP ToolBox
www.watermonitoringalliance.net/index.php?id=308	Water Monitoring Alliance
http://centralasia.iwmi.org/news.html	IWMI-Central Asia
http://unic.un.org/imu/recentActivities/category/Tashkent.aspx	UN Information Centres - Tashkent
http://sreda.uz/index.php?do=static&page=partners	Sreda.Uz
www.tajikwater.net	TajikWater.net (water resources information for Tajikistan)
http://unece.org/env/water/centralasia.htm	UNECE
http://turkmen-water.ru	International Forum "The Drop of Water - the Grain of Gold" 2010

Annex 5. Statistics on the portal visits

General statistics on the CAWater-Info domain visits

2007

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Aug 2007	6695	9257	26415	95705	956.77 MB
Sep 2007	7649	10178	26220	103232	1.09 GB
Oct 2007	10998	14686	45727	156212	2.27 GB
Nov 2007	11907	15684	35811	151545	1.48 GB
Dec 2007	11096	14840	43128	147190	2.20 GB
Total	48345	64645	177301	653884	7.99 GB

2008

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2008	10216	13386	35019	137796	1.80 GB
Feb 2008	9843	13100	33345	133530	1.88 GB
Mar 2008	10482	13535	36655	142272	2.36 GB
Apr 2008	11850	15982	47650	161779	2.41 GB
May 2008	11097	15017	51277	166517	2.89 GB
Jun 2008	10349	13902	45629	149512	2.46 GB
Jul 2008	8119	11545	49622	155356	2.64 GB
Aug 2008	6894	10722	42281	134645	2.00 GB
Sep 2008	9953	14805	54944	186948	2.33 GB
Oct 2008	13988	19582	62996	228252	2.80 GB
Nov 2008	15488	21645	81814	260925	3.93 GB
Dec 2008	16921	24173	84213	274236	3.67 GB
Total	135200	187394	625445	2131768	31.18 GB

2009

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2009	15486	21784	87931	269350	3.97 GB
Feb 2009	16813	23698	91140	306028	4.23 GB
Mar 2009	19585	27150	110551	363953	5.26 GB
Apr 2009	18639	26176	88184	349885	4.89 GB
May 2009	18330	25663	90777	321940	4.87 GB
Jun 2009	14812	21746	116029	307393	5.87 GB
Jul 2009	13412	20505	107573	298676	5.80 GB
Aug 2009	6894	10722	42281	134645	2.00 GB
Sep 2009	17527	24829	125725	327864	7.38 GB
Oct 2009	23417	32757	102226	388285	7.12 GB
Nov 2009	21056	30266	118780	385069	9.23 GB
Dec 2009	20924	30561	114601	408665	14.28 GB
Total	206895	295857	1195798	3861753	74.90 GB

2010

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2010	19860	27554	95126	374935	13.23 GB
Feb 2010	20773	28099	78727	416160	12.01 GB
Mar 2010	20773	28099	78727	416160	12.01 GB
Apr 2010	20773	28099	78727	416160	12.01 GB
May 2010	22214	30756	77892	419504	13.53 GB
Jun 2010	17487	24012	63673	321552	11.17 GB
Jul 2010	12644	18428	79873	283360	11.12 GB
Total	134524	185047	552745	2647831	86.77 GB

General statistics on the ICWC-Aral domain visits

2007

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Aug 2007	1460	1805	4264	21177	164.48 MB
Sep 2007	1883	2329	5008	26328	220.72 MB
Oct 2007	2400	3014	5711	32738	228.35 MB
Nov 2007	2427	3016	5794	34003	224.75 MB
Dec 2007	2230	2727	5659	27258	206.85 MB
Total	10400	12891	26436	141504	1.05 GB

2008

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2009	2000	2517	6167	31171	218.08 MB
Feb 2009	2085	2485	5676	30866	209.27 MB
Mar 2009	2203	2719	6460	35561	276.03 MB
Apr 2009	2371	2982	6171	34707	258.32 MB
May 2009	2495	3168	6503	36316	291.41 MB
Jun 2009	2423	3010	6572	32090	242.34 MB
Jul 2009	2044	2885	9660	35363	267.91 MB
Aug 2009	1669	2334	6013	28095	220.87 MB
Sep 2009	2346	3217	6570	36675	260.46 MB
Oct 2009	2886	3841	8033	45391	302.38 MB
Nov 2009	3345	4592	8337	51812	330.64 MB
Dec 2009	3172	4560	10824	46565	454.53 MB
Total	29039	38310	86986	444612	3.25 GB

2009

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2009	2986	4439	8885	43239	347.78 MB
Feb 2009	3168	4483	8574	45016	334.18 MB
Mar 2009	3674	4836	8270	48190	389.07 MB

Apr 2009	3474	4521	9063	49882	428.06 MB
May 2009	3301	4308	8602	44941	414.61 MB
Jun 2009	2766	3893	8247	38978	369.53 MB
Jul 2009	2473	3799	8950	38418	323.89 MB
Aug 2009	2474	3764	9648	37856	455.80 MB
Sep 2009	2758	3823	10153	38099	404.88 MB
Oct 2009	3776	5221	11922	54584	497.08 MB
Nov 2009	3854	5547	11435	52525	504.67 MB
Dec 2009	3779	5131	10756	50043	573.99 MB
Total	38483	53765	114505	541771	4.93 GB

2010

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2010	3881	5270	10295	56856	581.95 MB
Feb 2010	4090	5125	11201	59013	589.94 MB
Mar 2010	4192	5374	12289	60166	600.33 MB
Apr 2010	3467	4682	11614	53273	475.98 MB
May 2010	3211	4369	12819	48036	481.63 MB
Jun 2010	2466	3328	9459	34946	389.79 MB
Jul 2010	2159	3347	11673	35780	466.15 MB
Total	23684	31750	79951	350561	3.53 GB



Geography of cawater-info.net domain visits

Point size: ● = 1,000+ ● = 100 - 999 ● = 10 - 99 ● = 1 - 9 visits



Geography of icwc-aral.uz domain visits

Point size: ● = 1,000+ ● = 100 - 999 ● = 10 - 99 ● = 1 - 9 visits

Annex 6. Information System Structure

DB by sectors

- Land sector
 - Land areas (th. ha)
 - Areas of saline lands (th. ha)
 - Distribution of areas by crops (th. ha)
 - Gross crop harvesting (th. t)
 - Crop yields (t/ha)
 - Distribution of collector and drainage flow (m3/sec)
 - Collector and drainage water discharge (m3/sec)
 - Drainage flow salinity (g/l)
 - Drainage module (l/sec/ha)
 - Length of newly established drainage (km)
 - Length of drainage with reconstruction completed (km)
 - Technical characteristics (km, unit)
- Economic sector
 - Demographic indicators
 - Population (th. people)
 - Birth rate, death rate, migration (per mille)
 - Population employment (th. people)
 - Living standard
 - Population income, outlay (mln \$)
 - Average monthly wages, pension (\$)
 - Housing and transport
 - Available housing (m2)
 - Transportations (th. people, th. t)
 - Education and culture
 - Education (th. people, unit)
 - Number of museums, libraries (unit)
 - Health (th. people, unit)
 - Consumer goods production structure (%)
 - Agriculture
 - Gross agricultural production, including crop and animal production (bln \$)
 - Population of livestock, cows, sheep and goats (th. heads)
 - Production of meat, milk, eggs (th. t, mln unit)
 - Water sector (mln \$, th. people)
 - GDP and its structure
 - GDP (mln \$)
 - Industry, construction, agriculture, forestry, transport and communication (%)
- Water resource sector
 - Water withdrawal from sources
 - Total water withdrawal (Mm3)
 - - Domestic
 - actual (Mm3)
 - - Industrial
 - actual (Mm3)

- including for heat power plants
 - actual (Mm3)
 - - Agricultural
 - actual (Mm3)
 - including for irrigation
 - actual (Mm3)
 - Other (Mm3)
 - Water disposal
 - Total release of collector flows (Mm3)
 - - Domestic
 - actual (Mm3)
 - % of purification under availability of purification installation
 - - Industrial
 - actual (Mm3)
 - % of purification under availability of purification installation
 - including from heat power plants
 - actual (Mm3)
 - % of purification under availability of purification installation
 - - Agricultural
 - actual (Mm3)
 - % of purification under availability of purification installation
 - including irrigation
 - actual (Mm3)
 - Other (Mm3)
- Domestic water supply sector
 - Water distribution system
 - Urban water treatment plants
 - planned water supply (Mm3)
 - actual water supply (Mm3)
 - system performance (%)
 - District water treatment plants
 - planned water supply (Mm3)
 - actual water supply (Mm3)
 - system performance (%)
 - Other water treatment plants
 - planned water supply (Mm3)
 - actual water supply (Mm3)
 - system performance (%)
 - Water supply sources
 - Surface water
 - planned water supply from rivers (Mm3)
 - actual water supply from rivers (Mm3)
 - planned water supply from canals (Mm3)
 - actual water supply from canals (Mm3)
 - planned water supply from reservoirs (Mm3)
 - actual water supply from reservoirs (Mm3)

- Groundwater
 - planned water supply (Mm3)
 - actual water supply (Mm3)

DB by objects

- Reservoirs
- Canals
- Climate stations
- Drains
- Rivers
- Head Intakes
- Gauging stationa
- TPS
- HES

Annex 7. Patents



REPUBLIC OF UZBEKISTAN

STATE PATENT OFFICE

FORMAL SOFTWARE REGISTRATION CERTIFICATE

No. DGU 00130

According to the Law on Legal Software and Database Protection as adopted in the Republic of Uzbekistan on 6 May 1994, the State Patent Office issues the present Certificate for the following software

The Aral Sea Basin Regional Information System Software Package

Rightholder(s): *Scientific-Information Center of the Interstate Commission for Water Coordination in Central Asia, UZ*

upon application No. DGU 2007 0096 date of application: 14.06.2007

Author(s): *Dukhovny Victor Abramovich, Sorokin Denis Anatoliyevich, Beglov Iskander Ferdinandovich, Kats Anatoly Vladimirovich, Shakhov Victor Yurievich, UZ*

Registered in the public software inventory
The Tashkent city, Republic of Uzbekistan, 03.07.2007

ЎЗБЕКИСТОН РЕСПУБЛИКАСИ



ДАВЛАТ ПАТЕНТ ИДОРАСИ

МАЪЛУМОТЛАР БАЗАСИНИНГ РАСМИЙ РЎЙХАТДАН
ЎТКАЗИЛГАНЛИГИ ТЎҒРИСИДАГИ

ГУВОҲНОМА

№ ВГУ 00130

Ушбу гувоҳнома Давлат патент идораси томонидан Ўзбекистон Республикасининг 1994 йил 6 майда қабул қилинган «Электрон ҳисоблаш машиналари учун яратилган дастурлар ва маълумотлар базаларининг ҳуқуқий ҳимояси тўғрисида»ги Қонунига асосан


Орақ денгизи ҳавласи давлатларининг сув ҳўжалиги сектори маълумотлар базаси номи маълумотлар базасига берилди.

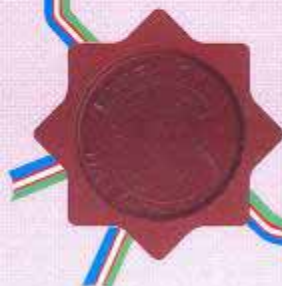
14.06.2007 йилда келиб тушган № ВГУ 2007 0013 талабнома бўйича

Ҳуқуқ эгаси(лари): *Марказий Осиё Давлатлараро сув ҳўжалигини мувофиқлаштириши комиссиясининг илмий-ахборот маркази, UZ*

Муаллиф(лар): *Духовный Виктор Абрамович, Сорокин Денис Анатольевич, Беллов Исхандер Фердинандович, Кац Анатолий Владимирович, Шахов Виктор Юрьевич, Дегтярева Анастасия Сергеевна, Романова Татьяна Владимировна, Жерельева Светлана Георгиевна, UZ*

Ўзбекистон Республикаси маълумотлар базалари давлат реестрида 05.07.2007 йилда Тошкент шаҳрида рўйхатдан ўтказилган.

 Директор
А.А. Азимов



REPUBLIC OF UZBEKISTAN

STATE PATENT OFFICE

FORMAL DATABASE REGISTRATION CERTIFICATE

No. BGU 00130

According to the Law on Legal Software and Database Protection as adopted in the Republic of Uzbekistan on 6 May 1994, the State Patent Office issues the present Certificate for the following database

The Aral Sea Basin Water Database

Rightholder(s): *Scientific-Information Center of the Interstate Commission for Water Coordination in Central Asia, UZ*

upon application No. BGU 2007 0013 date of application: 14.06.2007

Author(s): *Dukhovny Victor Abramovich, Sorokin Denis Anatoliyevich, Beglov Iskander Ferdinandovich, Kats Anatoly Vladimirovich, Shakhov Victor Yurievich, Degtyareyva Anastasiya Sergeevna, Romanova Tatyana Vladimirovna, Zherelieva Svetlana Georgiyevna, UZ*

Registered in the public database inventory
The Tashkent city, Republic of Uzbekistan, 03.07.2007