Interstate **C**ommission for **W**ater **C**oordination of Central Asia	**BULLETIN № 2 (64)**	April 2014

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PROTOCOL OF THE 63RD REGULAR MEETING OF THE INTERSTATE COMMISSION FOR WATER COORDINATION (ICWC) OF THE REPUBLIC OF KAZAKHSTAN, KYRGYZ REPUBLIC, REPUBLIC OF TAJIKISTAN, TURKMENISTAN, AND THE REPUBLIC OF UZBEKISTAN

April 18-19, 2014 Tashkent city

Chairman:

Khamraev Shavkat Rakhimovich	Acting Chairman of the IFAS Executive Committee, Deputy Minister, Head of the Central Water Administration, Ministry of Agriculture and Water Resources of the Republic of Uzbekistan

ICWC members:

Bekniyaz Bolat Kabyken uly	Acting Chairperson of the Committee of Water Resources under the Ministry of Environment and Water Resources of the Republic of Kazakhstan
Isabekov Tilek Asanakunovich	First Deputy Director General, Department for Water Resources and Land Reclamation, the Ministry of Agriculture and Land Reclamation of the Kyrgyz Republic
Rakhimov, Sulton Nurmakhmadovich	First Deputy Minister of Energy and Water Resources of the Republic of Tajikistan
Atadzhanov, Allamurat Charievich	Deputy Minister of Water Resources of Turkmenistan

ICWC Executive bodies:

Dukhovniy Viktor Abramovich	Director, SIC ICWC
Kholkhuzhaev Odil Akhmedovich	Head of BWO Syrdarya

Kdyrniyazov, Burkitbay Tadzhiniyazovich	Head of BWO Amudarya
Babadjanova Malika Pulatovna	Head of ICWC Secretariat

Invitees:

Ryabtsev Anatoliy Dmitrievich	Advisor to the Chairman of the Committee for Water Resources, MEWR of the Republic of Kazakhstan, Chairman of the Board of Managers of Kazgiprovodkhoz Institute
Nursadykov Darkhan Kuanyshovich	Advisor, Department of Asia-wide cooperation, MFA Republic of Kazakhstan
Aydarov Nauryz Gubaidullayevich	Counselor of the Embassy of the Republic of Kazakhstan in the Republic of Uzbekistan
Imasheva Gul'mira Saginbaykyzy	Head of the Division for Regulation of Water Use and Protection, Committee for Water Resources, MEWR of the Republic of Kazakhstan
Karlykhanov Adilkhan Karlykhanovich	Head of the Aral-Syrdarya BWI, Committee for Water Resources, Ministry of Environment and Water Resources of the Republic of Kazakhstan
Mamataliev Nurgazy Patiydinovich	Director, Kyrgyz branch of SIC ICWC
Sulaimanov Akylbek Tashtanbekovich	Head of Water Monitoring and Protection Division, Department for Water Resources and Land Reclamation, Ministry of Agriculture and Land Reclamation of the Kyrgyz Republic
Devyatkulov Ruslan Zhakshylykovich	Head of Choo BWRA
Khasanov Khomidjon Usmonovich	Director, Land Reclamation and Irrigation Agency at the Government of Tajikistan
Kholmatov Daler Abdukhalokovich	Principal specialist, Water and Energy Policy Division, Ministry of Energy and Water Resources of the Republic of Tajikistan

Paschyev Yanov Durdyevich	Head of Operations Department, Operations Administration, Ministry of Water Resources of Turkmenistan
Kuchkarov Sharifzhon Zikrillaevich	Head of Water Resources and Advanced Water Saving Technologies Administration, MAWR of the Republic of Uzbekistan
Ziganshina Dinara Ravilievna	Deputy Director, SIC ICWC
Makhramov Makhmum Yakhshibaevich	Deputy Head of BWO Amudarya

Agenda of the 63rd ICWC meeting

Tashkent city, 18-19 April 2014

1. The results of the non-growing season 2013–2014 and approval of water withdrawal limits and reservoir cascade operation modes for the next growing season 2014 within the Amudarya and Syrdarya basins.

2. Discussion of the refined versions of the Concept for Developing Information Exchange and Relationship Mechanisms among its Participants in Central Asia and the Agreement on the Establishment and Functioning of National, Basin and Regional Databases on Integrated Water Use and Protection in the Aral Sea Basin, as well as the Temporary Rules for Usage of the Regional Information System on Water and Land Resources in the Aral Sea Basin.

3. Discussion of the refined versions of Implementation Plan on strengthening ICWC activities in key directions and Strategy for Water Sector Professional Development System Improvement in Central Asian countries.

4. The agenda and venue of the next 64th ICWC meeting.

Additional items

1. Preparation to the 7th World Water Forum

2. Personnel affairs

Decision on the first item:

1. Take into account the report of BWO Amudarya and BWO Syrdarya about the results of the non-growing season 2013-2014 and the water delivery to the riparian states of the Amudarya and Syrdarya basins.

2. Approve the anticipated schedule of operation of reservoir cascade and the limits of water withdrawals of the riparian countries in the Amudarya river basin for the growing season 2014 (Annex 1).

3. Take note of the anticipated regime of Naryn-Syrdarya reservoir cascade for the period from 01.04.2014 to 30.09.2014 (Annex 2).

4. Take appropriate measures in order to ensure water delivery to canals taking water from the Syrdarya river, according to the water withdrawal limits, including to BFC and NFC for the Republic of Tajikistan, and maintain the water level in the Farkhad reservoir and provide water for the Dostyk canal in Kazakhstan part, with necessary water releases from the Toktogul and Kairakkum reservoirs. BWO Syrdarya should agree upon water releases with the OAO "Electrical Stations" of the Kyrgyz Republic. Herewith, the operation regime of the Kairakkum reservoir will be regulated every ten days, depending on inflow at Akdjar gauging station.

Decision on the second item:

1. Take note of the working group's activity on refinement of the following documents:

- Draft Concept for Developing Information Exchange and Relationship Mechanisms among its Participants in Central Asia;
- Draft Agreement on the Establishment and Functioning of National, Basin and Regional Databases on Integrated Water Use and Protection in the Aral Sea Basin (version 11, March 2006);
- Temporary Rules for Usage of the Regional Information System on Water and Land Resources in the Aral Sea Basin.

2. The refined draft Concept for Developing an Information Network on Water and Related Issues in Central Asia is endorsed, taking into account the comments and suggestions by the Tajik party.

3. The ICWC members shall introduce a draft Agreement between the Government of the Republic of Kazakhstan, the Government of the Kyrgyz Republic, the Government of the Republic of Tajikistan, the Government of Turkmenistan, and the Government of the Republic of Uzbekistan "On Information and Analytical Support for Comprehensive Water Resources Management, Use and Protection in the Aral Sea Basin and on Interstate Information Exchange" for consideration of relevant ministries and departments in their respective countries and report on the results of

consultation process at the next ICWC meeting.

4. The ICWC members shall take measures to raise financial resources for further development of national information systems.

Decision on the third item:

1. Take note of the working group's activity on refinement of the following documents:

- Draft Implementation Plan on strengthening ICWC activities in key directions;
- Draft Strategy for Water Sector Professional Development System Improvement in Central Asian countries.

2. The draft Implementation Plan on strengthening ICWC activities in key directions is endorsed, taking into account the comments by the Tajik party, and is recommended for realization.

3. The ICWC members shall take measures to raise financial resources for realization of the Plan.

4. The draft Strategy for Building Capacity on Integrated Water Resources Management in the Central Asian countries (as a project proposal) is agreed and the budget for Phase I is approved.

5. Authorize SIC ICWC to submit the project proposal "Strategy for Building Capacity on Integrated Water Resources Management in the Central Asian countries" on Phase I for donors' consideration.

Decision on the fourth item:

1. Hold the next 64th ICWC meeting in the Dushanbe city in the Republic of Uzbekistan during the first ten-day of July 2014.

2. Adopt an agenda of the next 64th ICWC meeting.

Agenda of the next 64th ICWC meeting

1. Fulfillment of water withdrawal limits and operation regimes of the reservoir cascades in the Amudarya and Syrdarya basins over the growing season 2014.

2. Discussion of proposals and comments received from national ministries and departments on the draft Agreement between the Government of the Republic of Kazakhstan, the Government of the Kyrgyz Republic, the Government of the Republic of Tajikistan, the Government of Turkmenistan, and the Government of the Republic of Uzbekistan "On Information and Analytical Support for Comprehensive Water

Resources Management, Use and Protection in the Aral Sea Basin and on Interstate Information Exchange".

3. Agenda and venue of the next 65th ICWC meeting.

Decision on the first additional item:

1. Recommend ICWC members to take active part in the preparatory process to the 7th World Water Forum (WWF).

2. Apply to GWP CACENA and other development partners for support in actions to be undertaken under preparatory process to WWF7.

3. Take note of information from the Tajik party about their readiness to organize a regional conference under preparatory process to WWF7 in the Dushanbe city in the first ten-day period in July 2014 combined with the 64th ICWC meeting.

4. ICWC members should submit their ideas about this event to ICWC Secretariat during one week.

Decision on the second additional item:

1. Relieve Kdyrniyazov Burkitbay Tajiniyazovich of his post of the head of BWO Amudarya as he will be transferring to another appointment.

2. Appoint the deputy head of BWO Amudarya Makhramov Makhmud Yakhshibaevich as the acting head of BWO Amudarya.

3. Relieve Gapharov Bakhrom Abdulaphizovich of his post of the head of ICWC Secretariat as he will be transferring to another appointment.

4. Appoint the before acting head of ICWC Secretariat Babadjanova Malika Pulatovna as the head of ICWC Secretariat.

Signatures:

Republic of Kazakhstan	**B.K.Bekniyaz**
Kyrgyz Republic	**T.A.Isabekov**
Republic of Tajikistan	**S.N.Rakhimov**
Turkmenistan	**A.Ch.Atadjanov**
Republic of Uzbekistan	**Sh.R.Khamraev**

Annex 1
to the Protocol of 63rd ICWC meeting

Limits of water withdrawals from the Amudarya River and water delivery to the Aral Sea and river deltas during the growing season 2014

River basin, state	Limits of water withdrawals, Mm^3	
	Total annual (01.10.13 to 01.10.14)	of which growing season (01.04.14 to 01.10.14)
		100%
Total from the Amudarya	55070	39615
of which:		
Republic of Tajikistan	9500	6895
From the Amudarya river to the Atamuray gauging station	44000	31520
Turkmenistan	22000	15500
Republic of Uzbekistan	22000	16020
in addition:		
Surkhandarya province of Uzbekistan	1570	1200
- water delivery to Prearalie, including irrigation water and collector-drainage water supply	4200	2100
- sanitary and ecological water releases to irrigation systems:	800	0
Including Dashkhovuz province	150	0
Khorezm province	150	0
Republic of Karakalpakstan	500	0

Note:
1. The limits of water withdrawals imply delivery of water for irrigation, industrial, household and other needs. If water availability in the basin changes, the limits of water withdrawals will be modified accordingly.

Annex 2
to the Protocol of 63rd ICWC meeting

Anticipated operation schedule of the Naryn-Syrdarya reservoir cascade for 1 April 2014 to 30 September 2014

(limits - reduction by 10%)

		April	May	June	July	August	September	Total Mm^3
Toktogul reservoir								
Inflow to reservoir	m3/s	270,20	558,50	855,80	765,70	540,50	279,30	
	Mm3	700,36	1495,89	2218,23	2050,85	1447,68	723,95	8636,95
Volume: beginning of period	Mm3	9009,00	8832,77	9650,22	11263,84	12666,31	13447,01	
end of period	Mm3	8832,77	9650,22	11263,84	12666,31	13447,01	13518,03	
Releases from reservoir	m3/s	337,00	252,00	232,00	238,00	243,00	245,00	
	Mm3	873,50	674,96	601,34	637,46	650,85	635,04	4073,16
Kairakkum reservoir								
Inflow to reservoir	m3/s	555,41	411,23	300,00	300,00	282,26	250,00	
	Mm3	1439,62	1101,43	777,60	803,52	756,00	648,00	5526,17
Volume: beginning of period	Mm3	**3478,00**	**3418,00**	**3418,19**	**2764,26**	**2010,33**	**1511,23**	
end of period	Mm3	**3418,00**	**3418,19**	**2764,26**	**2010,33**	**1511,23**	**1436,41**	
Releases from reservoir	m3/s	584,65	383,56	500,00	500,00	412,90	250,00	
	Mm3	1515,41	1027,33	1296,00	1339,20	1105,92	648,00	6931,87
Chardara reservoir								
Inflow to reservoir	m3/s	537,14	287,50	155,89	154,70	146,28	218,73	
	Mm3	1392,26	770,05	404,06	414,36	391,78	566,94	3939,45
Volume: beginning of period	Mm3	**4127,00**	**4184,38**	**3655,41**	**2652,01**	**1620,03**	**1047,59**	
end of period	Mm3	**4184,38**	**3655,41**	**2652,01**	**1620,03**	**1047,59**	**1116,87**	
Releases from reservoir	m3/s	480,00	350,00	380,00	370,00	250,00	150,00	
	Mm3	1244,16	937,44	984,96	991,01	669,60	388,80	5215,97
Water release to Kzylkum canal	m3/s	20,00	100,00	110,00	110,00	90,00	25,00	
	Mm3	51,84	267,84	285,12	294,62	241,06	64,80	1205,28
Discharge into Arnasay	m3/s	0,00	0,00	0,00	0,00	0,00	0,00	
depression	Mm3	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Delivery to the Aral Sea	m3/s	121,43	126,04	122,77	123,10	125,29	101,77	
	Mm3	314,76	337,59	318,21	329,71	335,59	263,78	1899,63
Charvak reservoir								
Inflow to reservoir	m3/s	248,33	413,84	498,33	363,81	204,10	120,67	
(sum of 4 rivers)	Mm3	528,60	1108,50	1291,82	975,16	547,23	313,15	4764,46
Volume: beginning of period	Mm3	**640,80**	**901,91**	**1543,97**	**1968,68**	**1868,19**	**1611,40**	
end of period	Mm3	**901,91**	**1543,97**	**1968,68**	**1868,19**	**1611,40**	**1437,34**	

		April	May	June	July	August	September	Total Mm^3
Releases from reservoir	m3/s	135,00	173,55	333,33	400,00	298,39	186,67	
(Discharge from Gazalkent HEPS)	Mm3	266,98	464,83	864,00	1071,36	799,20	483,84	3950,21
Andizhan reservoir								
Inflow to reservoir	m3/s	150,00	235,30	263,20	156,30	75,10	54,10	
	Mm3	388,80	630,23	682,21	418,63	201,15	140,23	2461,25
Volume: beginning of period	Mm3	**788,00**	**916,67**	**1197,74**	**1231,02**	**977,32**	**695,35**	
end of period	Mm3	**916,67**	**1197,74**	**1231,02**	**977,32**	**695,35**	**703,34**	
Releases from reservoir	m3/s	100,00	130,00	250,00	250,00	179,35	50,00	
	Mm3	259,20	348,19	648,00	669,60	480,38	129,60	2534,98

Annex 3
to the Protocol of 63rd ICWC meeting

Comments and suggestions by the Tajik party on the draft Concept for Developing an Information Network on Water and Related Issues in Central Asia

1. Replace everywhere in the text of the Concept the phrase 'Information environment on water and related issues in the Central Asian countries' by 'Information environment on water issues in the Central Asian countries'.

2. Delete from the second paragraph of Chapter II "Goals and objectives" the fifth sub-item "increase in business and public activity by ensuring access, on a par with government institutions, to open scientific and technical, socio-economic, socio-political and other kinds of information".

3. Delete the last paragraph "Participation in the information exchange is regulated by agreed rules for usage of the regional information system on water and land resources in the Aral Sea basin (Annex 3), which, among others, provides for division of information and users into categories in order to differentiate access rights" from Chapter V "Participants and users of the information network".

4. Delete all links to the information resource CAWater-Info and relevant information about it in the text of the Concept. Also delete from the first paragraph of Chapter VII "Plan for development of interstate information exchange" the sentence "as well as for the improvement of the CAWater-Info regional portal" and remove completely the third paragraph with the attached Figure 1. From the fourth and fifth paragraphs of Chapter VII delete the sentence "either through the data metabase allocated on the CAWater-Info portal" and the sub-item "The CAWater-Info portal will place information in the section 'water and land resources' (including modeling and analysis), 'The Network of water-management organizations from EECCA countries' and cover activities of the largest international water-related NGOs". The sub-item 3 "Development of the CAWater-Info portal for dissemination of data and analytical information on water-land and environmental issues in Central Asia, including development of new services on the portal for better IS content and analytical tools (see items 1 and 2" should be removed fully.

Annex 4
to the Protocol of 63rd ICWC meeting

Comments and suggestions by the Tajik party
on the Implementation Plan on strengthening ICWC activities in key directions

1. Delete the line “Implementation of automation system along the Syrdarya River under an individual project ‘III phase automation of the Syrdarya River’” from item 3 “Improving quality and accuracy of water accounting” in the column of measures (page 7).

2. Delete sub-item 4.1. Regional information network (page 8) from item 4 “Strengthening the capacity of regional and national institutions through information systems and training”.

Annex 53
to the Protocol of 63rd ICWC meeting

**Budget for Phase I (15 months, 2014-2015)
of the project proposal on the "Strategy for Building Capacity on Integrated Water Resources Management in the Central Asian countries"**

Activities	Costs, US$		
	Total	Per country	Region
1.1. Activity of the Regional Training center (organization, coordination, logistics, etc.)	37 500	-	37 500
1.2. Preparation of new and updating of existing training materials	40 000	20 000	20 000
1.3. Regional workshops	51 500	26 500	25 000
1.4. National workshops (7 workshops x 10,000 USD)	70 000	70 000	-
Total Phase 1	***199 000***		
of which		***116 500***	***82 500***

CONCERNING THE RESULTS OF THE NON-GROWING SEASON 2013–2014 AND APPROVAL OF THE WATER WITHDRAWAL LIMITS AMD RESERVOIR CASCADE OPERATION MODES FOR THE NEXT GROWING SEASON 2014 IN THE AMUDARYA AND SYRDARYA RIVER BASINS[1]

1. Amudarya River Basin

1.1. Results of the Non-Growing Season 2013–2014 in the Amudarya River Basin

The actual water availability at the Atamurat gauging station upstream of Garagumdarya during the non-growing season in the Amudarya river basin came to 73.6% of the quota. Given a quota of 14,455 mln m^3, the actual value came to 10,723 mln m^3. In the past season, the water availability was 109.4%.

The use of the approved water withdrawal quota during the non-growing season under review with a breakdown by Central Asian states is as follows:

- Across the basin, 88.4% of the approved water withdrawal quota was used: while the quota was 15,683.5 mln m^3, the actually used volume came to 13,870.2 mln m^3, in particular:

- Republic of Tajikistan used 74.2% of its water withdrawal quota approved: of the quota of 2,833.5 mln m^3, 2,101.1 mln m^3 was actually used;

- Turkmenistan used 92.3% of its water withdrawal quota approved: of the quota of 6,500 mln m^3, 5,999.7 mln m^3 was actually used;

- Republic of Uzbekistan used 90.9% of its water withdrawal quota approved: of the quota of 6,350 mln m^3, 5,769.4 mln m^3 was actually used.

Downstream of the Atamurat gauging station, which is upstream of Garagumdarya, 91.6% of the approved water withdrawal quota was used; of the quota of 12,480 mln m^3, 11,428.7 mln m^3 was actually used, in particular:

- Republic of Uzbekistan used 90.8% of its water withdrawal quota approved: of the quota of 5,980 mln m^3, 5,429 mln m^3 was actually used;

- Turkmenistan used 92.3% of its water withdrawal quota approved: of the quota of 6,500 mln m^3, 5,999.7 mln m^3 was actually used;

The Priaralie and Aral Sea regions were supplied 938 mln m^3 of water during the non-growing season.

[1] Information on the first item on the agenda of the 63rd ICWC Session.

The use of the approved water withdrawal quota breaking down by river sections is as follows:

1. Upper reach – 76.2%: in particular, Republic of Tajikistan – 74.2%; Republic of Uzbekistan – 92.0%.

2. Middle reach – 94.9%: in particular, Republic of Uzbekistan – 95.8%, Turkmenistan – 94.3%.

3. Lower reach – 84.9%: in particular, Republic of Uzbekistan – 84.9%, Turkmenistan – 84.9%.

During the non-growing season in consideration, 100% of the sanitary and environmental discharge quota was used: at a planned volume of usage of 800 mln m3, the actually used quantity came to 800 mln m^3.

Turkmenistan used 100% of its sanitary and environmental discharge quota: of the quota of 150.0 mln m^3, 150 mln m^3 were actually used. Republic of Uzbekistan also used 100% of its sanitary and environmental discharge quota: of the quota of 650 mln m^3, the actually used volume came to 650 mln m^3.

The actual water volume in the Tuyamuyun reservoir by the beginning of the growing season was 2,668 mln m^3.

It should also be noted that in accordance with the decisions of the adopted "Agreement on sharing water resources between Turkmenistan and the Republic of Uzbekistan in the Amudarya river's lower reaches" 12 meetings of the Water Allocation Commission were held with the involvement of the leaders of "Dashoguzsuvkhozhalyk" Production Association, Lower-Amudarya Basin Irrigation System Administration (Karakalpakstan and Khorezm), BWO "Amudarya", and Tuyamuyun Hydrosystem Operation Office. At those meetings, the Tuyamuyun Hydrosystem operation modes were determined and water withdrawal rates were fixed with a breakdown by water consumers for a given period.

More detailed information is given in Tables 1.1-1.3.

Table 1.1

Analysis of the use of the water withdrawal quota during the non-growing season 2013-2014 in the Amudarya river basin

Name	Water withdrawal quota for 2013-2014, mln m^3	Actually used, mln m^3	%
Upper-Amudarya Administration	3,203.5	2,441.5	76.2
(Upper reach)			
of which:			
Tajikistan	2,833.5	2,101.1	74.2
Uzbekistan	370	340.4	92.0
Water withdrawal from the Amudarya river			
at the Atamurat gauging station (Kerki)	12,480	11,428.7	91.6
of which:			
Turkmenistan	6,500.0	5,999.7	92.3
Uzbekistan	5,980.0	5,429.0	90.8
Middle-Amudarya Administration	8,345	7,919.1	94.9
(Middle reach)			
of which:			
Turkmenistan	5,100	4,811.4	94.3
Uzbekistan	3,245	3,107.7	95.8
Lower reach:	4,135	3,509.6	84.9
of which:			
Turkmenistan	1,400.0	1,188.3	84.9
Uzbekistan	2,735.0	2,321.3	84.9
In addition, regulating (sanitary) releases	800	800	100.0
of which:			
Karakalpakstan (Uzbekistan)	500	500	100.0
Dashoguz province (Turkmenistan)	150	150	100.0
Khorezm province (Uzbekistan)	150	150	100.0
Total for the basin:	15,683.5	13,870.2	88.4
of which:			
Tajikistan	2,833.5	2,101.1	74.2
Turkmenistan	6,500.0	5,999.7	92.3
Uzbekistan	6,350.0	5,769.4	90.9

Table 1.2

Actual hydrologicak situation on the Amudarya river during the non-growing season 2013-2014

Parameters	Unit	October	November	December	January	February	March	Total
		actual						
Water inflow to the Nurek reservoir	m^3/s	409	247	214	178	151	149	3,549
Volume of the Nurek reservoir	mln m^3	10,561	10,351	9,783	9,005	8,070	7,175	6,240
Water release from the Nurek reservoir	m^3/s	487	467	505	527	521	497	7,870
Atamurat gauging station actual	m^3/s	671	531	537	485	589	748	9,338
norm	m^3/s	881	760	870	876	834	823	13,227
%%	%	76.1	69.8	61.7	55.4	70.7	90.9	70.6
Downstream Garagumdarya (actual water content)	m^3/s	1,001	648	544	459	566	862	10,723
norm	m^3/s	1,133	952	896	813	796	952	14,555
%	%	88.4	68.0	60.7	56.4	71.0	90.5	73.7
Cumulative actual	mln m^3	2,682	4,361	5,818	7,046	8,415	10,723	10,723
norm	mln m^3	3,034	5,503	7,902	10,080	12,006	14,555	14,555
%	%	88.4	79.3	73.6	69.9	70.1	73.7	73.7
Surkhandarya province	m^3/s	26	22	15	24	15	26	340
Water withdrawal upstream of the Atamurat gauging station	m^3/s	383	315	282	298	331	436	5,365
Water inflow to the Kelif gauging station	m^3/s	1,053	845	819	783	921	1,184	14,703
Water withdrawal at Kelif-Birata	m^3/s	560	441	386	459	520	654	7,919
Return water at Kelif-Birata	m^3/s	61	52	53	69	81	78	1,028
Water losses at Kelif-Birata	m^3/s	112	3	13	-34	58	203	934
Water inflow to the Birata gauging station, actual	m^3/s	442	452	472	427	424	406	6,877
norm	m^3/s	685	665	729	616	492	546	9,815
Cumulative actual	mln m^3	1,183	2,356	3,621	4,766	5,791	6,877	6,877
norm	mln m^3	1,835	3,558	5,511	7,161	8,352	9,815	9,815
%	%	64.5	66.2	65.7	66.6	69.3	70.1	70.1

Parameters	Unit	October	November	December	January	February	March	Total
		actual						
Water losses at Birata-Tuyamuyun	m^3/s	14	16	-6	19	27	22	236
Volume of the Tuyamuyun reservoir at the beginning of the period	mln m^3	2,510	2,717	3,168	3,391	3,993	4,173	
Water inflow to the Tuyamuyun reservoir	m^3/s	428	437	479	409	397	383	6,641
Water release from the Tuyamuyun reservoir	m^3/s	351	263	395	184	323	945	6,483
Volume of the Tuyamuyun reservoir at the end of the period	mln m^3	2,717	3,168	3,391	3,993	4,173	2,668	
Accumulation (+); drawdown (-)	mln m^3	207	451	223	602	179	-1,504	
Water withdrawal from the Tuyamuyun reservoir	m^3/s	118	48	53	31	85	355	1,822
Water withdrawal at Tuyamuyun-Samanbay	m^3/s	124	90	216	42	59	407	2,489
Water losses at Tuyamuyun-Samanbay	m^3/s	55	73	84	51	99	157	1,361
Water releases through Takhiatash	m^3/s	54	52	42	59	79	26	811
Water withdrawal at Kelif-Samanbay	m^3/s	802	579	655	533	665	1,416	12,230

Table 1.3

Information
on water supply to the Aral Sea and Amudarya river delta during the non-growing season 2013-2014, mln m^3

Name	October	November	December	January	February	March	Water supply from 1 October 2013 to 31 March 2014, actual
From the Amudarya river at the Samanbay gauging station	127	96	88	118	123	59	611
Total discharge from the system of the Kyzketken and Suenli canals							0
Collector and drainage network	57	38	45	53	45	89	327
TOTAL	184	134	133	171	168	148	938
Cumulative	184	318	451	622	790	938	

Note: the data on water supply to the Priaralie region are harmonized with the State Hydrometeorological Service of the Republic of Uzbekistan.

1.2. Review and approval of water withdrawal quotas and multi-reservoir system operation mode in the Amudarya river basin during period 2014

During the growing season 2014, water content in the given Atamurat station, upstream of Garagumdarya, taking into account the natural discharge of the Vakh river, is expected to be below the norm, i.e. within 75-85% as data of national hydrometeorological services show. Even beginning of the growing season 2014 confirms the expected water content in the river.

It should be also noted that by the beginning of the growing season, the water volume in the Tuyamuyun reservoir came to 2,668 mln m^3, which is 867 mln m^3 less than in the last year. In the last year, it came to 3,535 mln m^3, while water volume of the Nurek reservoir was 6,240 mln m3, which agree with the long-term average annual values.

For the growing season 2014, the riparian countries are allocated the following water withdrawal limits for ensuring normal water content in the basin:

1. Republic of Tajikistan	6,895 mln m^3
2. Turkmenistan	15,500 mln m^3
3. Republic of Uzbekistan,	17,220 mln m^3
including the Surkhandarya province	1,200 mln m^3

In the Amudarya river basin as a whole, it is formally proposed to set water withdrawal quotas as much as 39,615 mln m^3 for normal conditions.

Taking into account the forecast of water content at the Atamurat station upstream of Garagumdarya for the growing season, as well as accumulated water storage in the reservoirs, it becomes difficult to fully comply with the proposed water withdrawal quotas in order to ensure uniform water distribution among water users at all river sections.

According to forecasts by the Tajik Hydriometeorological Service, water availability in the Vakhsh river is expected to be within the norm. In this context, based on the evolving hydrological situation, we request to extend water accumulation in the Nurek reservoir until 1 September 2014 in order to provide downstream water users with water.

Taking into account the above-mentioned water situation in the Amudarya river basin, we would like to suggest reducing the water withdrawal quotas by 10% for the growing season 2014.

In view of the aforesaid, we are to submit to the ICWC members for their consideration the quotas for water withdrawal and the volume of water supply to the Aral Sea and Amudarya river delta for the growing season 2014 (Table 1.4).

The Tuyamuyun and Nurek reservoir operation modes are presented in Tables 1.5 and 1.6.

Table 1.4

Quotas for water withdrawal and volume of water supply to the Aral Sea and Amudarya river delta for the growing season 2014[2]

River basin, riparian countries	Water withdrawal quotas, mln m^3		
	Total for the year (from 01.10.2013 to 01.10.2014)	including for the growing season (from 01.04.2014 to 01.10.2014)	
		100%	Reduction by 10%
Total withdrawal from the Amudarya river	55,070	39,615	35,654
of which:			
Republic of Tajikistan	9,500	6,895	6,206
from the Amudarya river at the Atamurat gauging station	44,000	31,520	28,368
Turkmenistan	22,000	15,500	13,950
Republic of Uzbekistan	22,000	16,020	14,418
Including:			
Surkhandarya province	1,570	1,200	1,080
In addition:			
- water delivery to Priaralie, taking into account irrigation water releases and collector & drainage waters	4,200	2,100	1,890
- sanitary and ecological water releases to irrigation systems:	800	0	0
including Dashkhovuz province (Turkmenistan)	150	0	0
Khorezm province (Uzbekistan)	150	0	0
Republic of Karakalpakstan (Uzbekistan)	500	0	0

Annex:
1. The water withdrawal quotas provide for water delivery for irrigation, industrial, municipal and other needs. In case of changes in the basin's water availability, the water withdrawal quotas will be adjusted accordingly.

[2] The data in this Table were corrected in the course of the session. The version agreed between the parties is presented in Annex 1 to ICWC Session Minutes 63.

Table 1.5

Expected operation mode of the Tuyamuyun reservoir (for April-September 2014), mln m^3

Tuyamuyun reservoir	Unit	Forecast						Total
		Apr	May	Jun	Jul	Aug	Sept	
Volume: Beginning of the period	mln m^3	2,668	2,401	2,930	3,819	4,104	3,591	2,668
Inflow to the reservoir	m^3/s	497	960	1,526	1,942	1,487	768	
	mln m^3	1,289	2,572	3,956	5,201	3,984	1,992	18,993
Water releases from the reservoir	m^3/s	600	763	1,183	1,836	1,679	910	
	mln m^3	1,556	2,043	3,066	4,916	4,497	2,360	18,438
Volume: End of the period	mln m^3	2,401	2,930	3,819	4,104	3,591	3,223	3,223
Accumulation (+), drawdown (-)	mln m^3	-267	529	889	285	-513	-368	555

Table 1.6

Expected operation mode of the Nurek reservoir (for the period of April-September 2014), mln m^3

Nurek reservoir	Unit	Forecast						Total
		Apr	May	Jun	Jul	Aug	Sept	
Volume: Beginning of the period	mln m^3	6,240	6,083	6,787	7,997	9,332	10,507	6,240
Inflow to the reservoir	m^3/s	407	813	1,487	1,648	1,403	650	
	mln m^3	1,056	2,177	3,853	4,415	3,758	1,685	16,945
Water releases from the reservoir	m^3/s	468	550	1,020	1,150	965	650	
	mln m^3	1,213	1,473	2,644	3,079	2,583	1,685	12,677
Volume: End of the period	mln m^3	6,083	6,787	7,997	9,332	10,507	10,507	10,507
Accumulation (+), drawdown (-)	mln m^3	-157	704	1,210	1,336	1,175	0	4,267

2. Syrdarya river basin

2.1. Results of the non-growing season 2013–2014 in the Syrdarya River Basin

The Naryn-Syrdarya reservoir cascade (NSRC) and the quotas of water withdrawal from the Syrdarya river during the non-growing season 2013-2014 were considered at the 62nd ICWC Session in the Almaty city on 18 December 2013. At that, the forecasts of hydrometeorological services were taken into consideration, according to which the Syrdarya river basin water content were expected to be about 97% of the norm.

In fact, 5039 mln m^3 of water or 100% of the norm flowed to the upstream reservoirs. The Toktogul reservoir received 2892 mln m^3 (106% of the quota) of water; Charvak reservoir – 1347 mln m^3 (97%); and Andijan reservoir – 800 mln m^3 (87%) (Table 2.1).

The norm of lateral inflow was 10,935 mln m^3. According to the forecast, the lateral inflow was expected to come to 97% of the norm, or 10,638 mln m^3. In fact, the lateral inflow was higher than the predicted by 597 mln m^3 and came to 11,235 mln m^3 (103% of the norm).

The norm of total inflow across the basin up to the Shardara reservoir was 15,974 mln m^3. The lateral inflow was predicted to be 15,540 mln m^3 (97% of the norm). The actual total inflow of 16,274 mln m^3 was more than the predicted by 784 mln m^3.

According to the NSRC operation schedule, which was approved at the ICWC Session, 8.5 bln m^3 of water was planned to be released from the Toktogul reservoir. In fact, 9,788 mln m^3 of water was released, which is 1,224 mln m^3 more than the planned.

Releases from the Andijan reservoir, according to its operation schedule, were to be 655 mln m^3. Actually, 582 mln m^3 was released, or 73 mln m^3 less than the planned.

Table 2.1

Parameter	Volume, mln m^3 (from 01.10.2013 to 01.04.2014)			actual/ forecast (%)	actual/ norm (%)
	norm	forecast	actual		
Inflows to upstream reservoirs					
Toktogul	2,721	2,831	2,892	102	106
Andijan	923	780	800	103	87
Charvak (total of 4 rivers)	1,395	1,291	1,347	104	97
Total:	5,039	4,902	5,039	103	100
Lateral inflows					
Toktogul – Uchkurgan	398	398	(est.) 398	100	100
Uchkurgan, Uchtepe-Kayrakkum	4,235	4,352	4,479	103	106
Andijan – Uchtepe	2,468	2,315	2,359	102	96
Kayrakkum – Shardara	2,959	2,631	3,041	116	103
Gazalkent – Chinaz (w/o Ugam)	875	942	958	102	109
Total:	10,935	10,638	11,235	106	103
Grand total:	**15,972**	**15,540**	**16,274**	**105**	**102**

Releases from the Charvak reservoir, according to its operation schedule, were to be 2,004 mln m^3. In fact, 2,135 mln m^3 was released, or 131 mln m^3 more than the planned.

Releases from the Kayrakkum reservoir, according to its operation schedule, were to be 10,560 mln m^3. In fact, 12,370 mln m^3 was released, or 1,810 mln m^3 more than the planned because of increased inflow in comparison with the scheduled one.

Releases from the Shardara reservoir, according to its operation schedule, were to be 8,184 mln m^3. In fact, 9,480 mln m^3 was released, or 1,296 mln m^3 more than the planned also because of increased inflow.

In general, it was planned to release 29,967 mln m^3 of water according to the schedule. While actually 34,355 mln m^3 was released, that is 4,388 mln m^3 more than planned (Table 2.2).

Table 2.2

Reservoir	Water releases, mln m^3 (from 01.10.2013 to 01.04.2014)		Actual/ scheduled (%)
	According to the approved NSRC operation schedule	Actual	
Toktogul	8,564	9,788	114
Andijan	655	582	89
Charvak (discharge from Gazalkent HPP)	2,004	2,135	107
Kayrakkum	10,560	12,370	117
Shardara	8,184	9,480	116
Total:	**29,967**	**34,355**	**115**

Water was supplied for leaching of lands and irrigation of winter grain crops based on water users' requests and according to quotas. Moreover, water was additionally supplied for cleaning of main canals from silting. The volume of water used for cleaning of canals can be classified as transit, since the water was not delivered to the fields and was discharged back to the river. In total, the transit volume came to 1,788 mln m^3.

Tables 2.3 and 2.4 provide data on water supply to the water consumer states during the non-growing season.

Water supply to Kazakhstan through the Dostyk canal was 443 mln m^3 under the water quota of 400 mln m^3, i.e. 43 mln m^3 more.

To Kyrgyzstan's canals, 34 mln m^3 of water was delivered, while the water quota was 37 mln m^3, i.e. 3 mln m^3 less;

Water supply to Tajikistan came to 23 mln m^3 under the water quota of 179 mln m^3, i.e. 156 mln m^3 less;

Uzbekistan received 2,630 mln m^3 under the water quota of 2,484 mln m^3, i.e. 146 mln m^3 more.

All the states received water in full as requested. Kazakhstan and Uzbekistan slightly exceeded their quotas.

According to the approved schedule, inflow to the Shardara reservoir was planned to be 12,360 mln m^3. In fact, the inflow during the non-growing season came to 12,713 mln m^3.

In February, a risk of overfilling of the Shardara reservoir occurred because of high inflow to it, and coastal areas and buildings in the vicinity of the Chinaz city were subjected to submergence. To take joint actions in such circumstances, Kazakhstan and Uzbekistan established a working committee with the involvement of

representatives of the parties and BWO "Syrdarya". Having investigated the situation by visiting the Kayrakkum reservoir, the areas about the Chinaz city, and Dustlik canal from 10 to 13 February, the committee recommended measures to be taken. So that to prevent worsening of the flooding situation, Uzbekistan's canals were additionally supplied with 500 mln m^3 of water with its following distribution through irrigation networks in the Golodnaya Steppe.

Table 2.3

Reach, water consumer state	Water withdrawal, mln m^3 (from 01.10.2013 to 01.04.2014)	
	Water quota	**Actual**
Toktogul – Uchkurgan hydroscheme, including:	**1,329**	**1,351**
Kyrgyzstan	30	31
Tajikistan	47	14
Uzbekistan	1,252	1,306
Uchkurgan – Kayrakkum hydroscheme, including:	**221**	**203**
Kyrgyzstan	7	3
Tajikistan	43	4
Uzbekistan	171	196
Kayrakkum hydroscheme – Shardara reservoir, including:	**1,550**	**1,576**
Kazakhstan	400	443
Tajikistan	89	5
Uzbekistan	1,061	1,128

Table 2.4

Reach, water consumer state	Water withdrawal, mln m^3 (from 01.10.2013 to 01.04.2014)	
	Water quota	**Actual**
Kazakhstan (Dostyk canal)	400	443
Kazakhstan	37	34
Tajikistan	179	23
Uzbekistan	2,484	2,630

Data on distribution of water resources downstream of the Shardara reservoir, according to the Committee for Water Resources of the Ministry of Environment of the Republic of Kazakhstan, are given in Table 2.5.

Table 2.5

Name	2013			2014			Total for the period
	X	XI	XII	I	II	III	
	mln m^3						
Gauging station downstream the Shardara reservoir	1,272	2,278	3,677	1,836	2,100	2,549	13,712
Inflow to the Koksaray reservoir	0	378	0	433	1,210	1,011	3,032
Release from the Koksaray reservoir	0	0	0	0	0	0	0
Intake to canals	0	0	0	462	367	508	1,337
Inflow to the Aral Sea (Karateren gauging station)	354	607	1,393	590	525	789	4,256

1,906 mln m^3 of water was expected to inflow to the Aral Sea and Priaralie. Actually, the inflow came to 4,256 mln m^3. The Arnasay system received 122 mln m^3 of water.

According to the approved Naryn-Syrdarya reservoir cascade operation schedule, 11,588 mln m^3 of water was planned to be in its reservoirs by 1 April.

As a result, by the beginning of the growing season of 1 April water volume in the reservoirs came to 10,388 mln m^3, i.e. is 1.2 bln m^3 less (Table 2.6).

The upstream reservoirs accumulated water as follows:

Toktogul: 9.9 bln m^3

Andijan: 0.788 bln m^3

Charvak: 0.591 bln m^3.

Table 2.6

Reservoir	Reservoir volume, mln m^3			
	by 01.10.2013	**scheduled by 01.04.2014**	**actual by 01.04.2014**	**actual by 01.04.2013**
Toktogul	15,916	10,169	9,009	11,246
Andijan	565	701	788	874
Charvak	1,507	718	591	708
Total:	**17,988**	**11,588**	**10,388**	**12,828**
Kayrakkum	1,509	3,418	3,478	3,325
Shardara	999	5,219	4,127	3,954
Total:	**20,496**	**20,225**	**17,993**	**20,107**

The actual operation mode of the Naryn-Syrdarya reservoir cascade divided into months of the non-growing season is shown in Table 2.7.

In should be noted in conclusion that all water consumers of the Syrdarya river basin were provided with water in full in accordance with their requests.

By the beginning of the growing season, water was accumulated in the Kayrakkum and Shardara instream reservoirs as much as possible.

Under wet conditions in the second half of the non-growing season, owing to operational interactions between the Parties, they managed to prevent negative flood situation in the middle and lower reaches of the Syrdarya River.

Table 2.7

Naryn-Syrdarya reservoir cascade operation schedule from 1 October 2013 to 31 March 2014

		October, actual	November, actual	December, actual	January, actual	February, actual	March, actual	Total, mln m3
Toktogul reservoir								
Inflow to reservoir	m3/s	250.45	200.07	175.74	157.97	149.97	166.42	
	mln m3	670.81	518.57	470.71	423.10	362.80	445.73	2,891.72
Volume: beginning of the period	mln m3	1,5916.00	15,741.00	14,777.00	13,419.00	11,862.00	10,297.00	
end of the period	mln m3	1,5741.00	14,777.00	13,419.00	11,862.00	10,297.00	9,009.00	
Release from reservoir	m3/s	313.39	572.00	681.19	739.61	793.18	650.39	
	mln m3	839.38	1,482.62	1,824.51	1,980.98	1,918.86	1,742.00	9,788.35
Kayrakkum reservoir								
Inflow to reservoir	m3/s	435.61	817.13	962.61	1011.94	1138.57	885.00	
	mln m3	1166.74	2118.01	2578.26	2710.37	2754.43	2370.38	13698.21
Volume: beginning of the period	mln m3	1509.00	2285.00	2731.80	3089.80	3457.60	3516.50	
end of the period	mln m3	2285.00	2731.80	3089.80	3457.60	3516.50	3478.00	
Release from reservoir	m3/s	152.98	617.23	866.55	881.93	1297.86	947.26	
	mln m3	409.74	1599.87	2320.97	2362.17	3139.78	2537.14	12369.66
Chardara reservoir								
Inflow to reservoir	m3/s	182.28	467.24	893.84	773.66	1437.86	1145.95	
	mln m3	488.23	1211.09	2394.06	2072.18	3478.46	3069.31	12713.32
Volume: beginning of the period	mln m3	999.00	1055.00	1569.00	2518.00	3013.00	4135.00	
end of the period	mln m3	1055.00	1569.00	2518.00	3013.00	4135.00	4127.00	
Release from reservoir	m3/s	169.35	319.50	600.00	687.26	878.57	980.16	
	mln m3	453.60	828.14	1607.04	1840.75	2125.44	2625.27	9480.24
Release to the Kyzylkum canal	m3/s	5.00	3.50	4.46	5.00	56.79	57.74	
	mln m3	13.39	9.07	11.95	13.39	137.38	154.66	339.84
Discharge into the Arnasay depression	m3/s	0.00	0.00	0.00	0.00	5.36	40.65	
	mln m3	0.00	0.00	0.00	0.00	12.96	108.86	121.82
Delivery to the Aral Sea	m3/s	63.48	116.33	220.10	220.32	219.57	291.13	
	mln m3	170.04	301.54	589.51	590.11	531.19	779.76	2962.14
Charvak reservoir								
Inflow to reservoir (total of four	m3/s	101.91	85.69	80.58	72.41	68.53	103.25	
	mln	272.94	222.12	215.82	193.95	165.79	276.55	1347.17

		October, actual	November, actual	December, actual	January, actual	February, actual	March, actual	Total, mln m3
rivers)	m3							
Volume: beginning of the period	mln m3	1507.00	1318.00	1214.00	1024.00	831.00	621.00	
end of the period	mln m3	1318.00	1214.00	1024.00	831.00	621.00	591.00	
Release from reservoir (release from the Gazalkent HPP)	m3/s	158.90	113.20	137.94	136.93	143.25	124.55	
	mln m3	425.61	293.41	369.45	366.76	346.55	333.59	2135.37
Andijan reservoir								
Inflow to reservoir	m3/s	43.68	43.33	62.97	54.94	51.86	48.29	
	mln m3	116.99	112.32	168.65	147.14	125.46	129.34	799.90
Volume: beginning of the period	mln m3	564.50	458.20	454.02	603.25	735.50	847.99	
end of the period	mln m3	458.20	454.02	603.25	735.50	847.99	788.00	
Release from reservoir	m3/s	83.39	50.17	6.61	5.00	5.00	69.26	
	mln m3	223.34	130.03	17.71	13.39	12.10	185.50	582.08

2.2. About the Naryn-Syrdarya reservoir cascade operation mode and water withdrawal quotas for the growing season 2014 in the Syrdarya river basin

The forecast of the Hydrometeorolgical Service for the growing season and updated forecasts for April and II quarter of 2014 were received on 7 April 2014.

According to the Hydrometeorolgical Service, during the growing season the water content in the basins of the Naryn river and Fergana Valley rivers is expected to be 80-90% of the norm. The water content in the Chirchik river basin is expected to come to 75-85% of the norm; in the basins of the Karadarya river, northern Fergana Valley rivers and Akhangaran river, 70-80% of the norm (Table 2.8).

Table 2.8

The forecast of inflow in the Syrdarya river basin for the growing season 2014

Parameters predicted by the Hydrometeorolgical Service for the growing season 2014	Volume, mln m3				% of the norm		
	norm	range of forecast values		Hydrometeorolgical Service forecast	range of forecast values		Hydrometeorolgical Service forecast
		min	max		min	max	
Predicted inflow to upstream reservoirs:							
Toktogul reservoir	9,588	7,622	9,652	8,637	80	101	90
Andijan reservoir	3,095	2,226	2,696	2,461	72	87	80
Charvak reservoir (Ugam river)	5,825	4,439	5,089	4,764	76	87	82
Total:	**18,508**	**14,287**	**17,437**	**15,862**	**77**	**94**	**86**
Predicted lateral inflow:							
Toktogul – Uchkurgan	1,184	920	1,200	1,060	78	101	90
Uchkurgan, Uchtepe – Kayrakkum	3,526	2,883	3,513	3,198	82	100	91
Andijan – Uchtepe	2,660	1,832	2,462	2,147	69	93	81
Kayrakkum – Shardara	3,337	2,501	3,131	2,816	75	94	84
Gazalkent – Chinaz g/s – Chirchik	943	580	900	740	62	95	79
Total:	**11,650**	**8,716**	**11,206**	**9,961**	**75**	**96**	**86**
GRAND TOTAL:	**30,158**	**23,003**	**28,643**	**25,823**	**76**	**95**	**86**

With water content in the Naryn basin of up to 90% of the norm, according to the forecast, the inflow to the Toktogul reservoir is expected to come to 8637 mln m^3. The inflow to the Andijan reservoir is predicted to be 2461 mln m^3 (80% of the norm); to the Charvak reservoir – 4764 mln m^3 (82% of the quota).

The total inflow to upstream resrevoirs of the Naryn-Syrdarya reservoir cascade during the growing season is predicted to come to 15,862 mln m^3, or 86% of the quota.

The total lateral inflow is expected to come to 9,961 mln m^3, or 86% of the norm.

In general, the water content in the Syrdarya river basin is predicted to come to 25,823 mln m^3, or 86% of the norm.

As a comparison, last year the water content during the growing season was in fact 25,631 mln m^3 (85% of the norm).

Water reserves in the reservoirs at the beginning of the growing season, without taking into account the dead-storage capacity, are 10,530 mln m^3 (Table 2.9). Last year, these reserves came to 12,594 mln m^3, i.e. were 2,064 mln m^3 more.

Table 2.9

Water reserves in the reservoirs without taking into account the dead-storage capacity, mln m3

Name	Actual volume as of 01.04.2014, mln m^3	Dead-storage capacity, mln m^3	Water reserves, mln m^3	
			as of 01.04.2014	as of 01.04.2013
Toktogul	9,009	5,500	3,509	5,746
Andijan	788	150	638	724
Charvak	641	426	215	282
Kayrakkum	3,478	917	2,561	2,408
Shardara	4,127	520	3,607	3,434
Total	18,043	7,513	10,530	12,594

As of 1 April 2014, the water reserve in the Toktogul reservoir, without taking into account the dead-storage capacity, were 3,509 mln m^3, which was less than at the beginning of the growing season of the last year of 2013 by 2,237 mln m^3.

The Andijan reservoir has 638 mln m^3 of water, which is less than in the last year by 86 mln m^3.

The Charvak reservoir accumulated 215 mln m^3, i.e. 67 mln m^3less than in the last year.

The Kayrakkum reservoir water reserve comes to 2,561 mln m^3, which is larger by 153 mln m^3than in the last year.

The Shardara reservoir accumulated 3,607 mln m^3, i.e. 173 mln m^3 more than in the last year.

Taking into consideration the existing water reserves in the reservoirs and judging from the expected water content at the level of the last year, we would like to present for your consideration the water consumer states' quotas for water withdrawal for the growing season 2014 with limited (reduced) water consumption by 10%, similar to those as for the growing season 2013 (Table 2.10).

Table 2.10

Water withdrawal quotas for the Syrdarya river basin countries, mln m^3

Water consumer state	Water consumption w/o reduced quota (100%)	Water consumption with the quota reduced by 10%
Kazakhstan (Dostyk canal)	780	702
Kyrgyzstan	246	222
Tajikistan	1,905	1,715
Uzbekistan	8,800	7,920
Total:	**11,731**	**10,560**
Inflow to the Shardara reservoir	3,282	3,689
Water delivery to the Aral Sea and Priaralie	1,900	1,900

Inflow to the Shardara reservoir will come to 3,689 mln m^3.

The Aral Sea and Priaralie are expected to receive 1,900 mln m^3 of water.

The appropriate Naryn-Syrdarya reservoir cascade operation mode for the growing season 2014 is presented in Table 2.11.

The recommended reservoir cascade operation mode (with the quota cut by 10%) allows for the releases from the Toktogul reservoir not more than its own needs and is based on the principle that at present the Kayrakkum reservoir is operating in the water transit mode and will keep the full capacity until the end of May.

If from the Toktogul reservoir water is released in the amount that would satisfy only the Kyrgyz Republic's own demands for electric energy, water deficit will take place in the section from the Kayrakkum reservoir to the Shardara reservoir.

At that, the resources of the Kayrakkum reservoir will not be enough: in June and July available water supply to the lands of Golodnaya Steppe and Maktaaral district of the South-Kazakhstan province may come to 80% of the demand.

To raise water availability, it is necessary to additionally increase the inflow to the Kayrakkum reservoir by 80-100 m^3/s in June and by 100-130 m^3/s in July.

Hence, to cover water demands during the growing season, stakeholders will have to consider the issues related to the increase of the inflow to the Kayrakkum reservoir taking into consideration the existing water situation.

Table 2.11

Schedule-forecast[3]
of the Naryn-Syrdarya reservoir cascade
from 1 April 2014 to 30 September 2014
(quota cut by 10%)

		April	May	June	July	August	September	Total, mln m3
Toktogul reservoir								
Inflow to reservoir	m3/s	270.20	558.50	855.80	765.70	540.50	279.30	
	mln m3	700.36	1,495.89	2,218.23	2,050.85	1,447.68	723.95	8,636.95
Volume: beginning of the period	mln m3	9,009.00	8,876.83	9,726.42	1,1371.15	1,2701.29	1,3490.01	
end of the period	mln m3	8,876.83	9,726.42	1,1371.15	1,2701.29	1,3490.01	1,3651.75	
Releases from reservoir	m3/s	320.00	240.00	220.00	265.00	240.00	210.00	
	mln m3	829.44	642.82	570.24	709.78	642.83	544.32	3,939.43
Kayrakkum reservoir								
Inflow to reservoir	m3/s	538.41	399.23	267.83	200.25	178.50	291.49	
	mln m3	1,395.56	1,069.29	694.22	536.34	478.09	755.55	4,929.05
Volume: beginning of the period	mln m3	3,478.00	3,418.00	3,418.00	2,810.29	1,923.10	1,207.44	
end of the period	mln m3	3,418.00	3,418.00	2,810.29	1,923.10	1,207.44	1,309.30	
Releases from reservoir	m3/s	567.65	371.63	450.00	450.00	390.00	223.33	
	mln m3	1,471.35	995.37	1,166.40	1,205.28	1,044.58	578.88	6,461.86
Chardara reservoir								
Inflow to reservoir	m3/s	520.14	245.57	155.89	154.70	137.00	192.06	
	mln m3	1,348.19	657.74	404.06	414.36	366.94	497.82	3,689.11
Volume: beginning of the period	mln m3	4,127.00	4,140.31	3,499.03	2,495.63	1,463.66	866.37	
end of the period	mln m3	4,140.31	3,499.03	2,495.63	1,463.66	866.37	866.52	
Releases from reservoir	m3/s	480.00	350.00	380.00	370.00	250.00	150.00	
	mln m3	1,244.16	937.44	984.96	991.01	669.60	388.80	5,215.97
Releases to the Kyzylkum canal	m3/s	20.00	100.00	110.00	110.00	90.00	25.00	
	mln m3	51.84	267.84	285.12	294.62	241.06	64.80	1,205.28
Discharge into the Arnasay depression	m3/s	0.00	0.00	0.00	0.00	0.00	0.00	
	mln m3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delivery to the Aral Sea	m3/s	121.43	126.04	122.77	123.10	125.29	101.77	
	mln m3	314.76	337.59	318.21	329.71	335.59	263.78	1,899.63

[3] In the course of the Session, this data was updated. The version agreed upon by the parties is presented in Annex 2 to Minutes 63 of the ICWC Session.

		April	May	June	July	August	September	Total, mln m3
Charvak reservoir								
Inflow to reservoir (total of four rivers)	m3/s	248.33	413.84	498.33	363.81	204.10	120.67	
	mln m3	528.60	1,108.50	1,291.82	975.16	547.23	313.15	4,764.46
Volume: beginning of the period	mln m3	640.80	901.91	1,543.97	1,968.68	1,868.19	1,611.40	
end of the period	mln m3	901.91	1,543.97	1,968.68	1,868.19	1,611.40	1,437.34	
Releases from reservoir (releases from the Gazalkent HPP)	m3/s	135.00	173.55	333.33	400.00	298.39	186.67	
	mln m3	266.98	464.83	864.00	1071.36	799.20	483.84	3,950.21
Andijan reservoir								
Inflow to reservoir	m3/s	150.00	235.30	263.20	156.30	75.10	54.10	
	mln m3	388.80	630.23	682.21	418.63	201.15	140.23	2,461.25
Volume: beginning of the period	mln m3	788.00	916.67	1,197.74	1,412.46	1,158.76	888.46	
end of the period	mln m3	916.67	1,197.74	1,412.46	1,158.76	888.46	896.44	
Releases from reservoir	m3/s	100.00	130.00	180.00	250.00	175.00	50.00	
	mln m3	259.20	348.19	466.56	669.60	468.72	129.60	2,341.87

ANALYSIS OF WATER-MANAGEMENT SITUATION IN THE SYRDARYA AND AMUDARYA RIVER BASINS OVER THE GROWING SEASON 2013

1 Syrdarya River Basin

The actual inflow to upstream reservoirs in the Syrdarya basin (Toktogul, Andizhan, and Charvak reservoir, excluding the Ugam River) was 16.187 km^3 or 101.6% of the forecast during the growing season. The upstream reservoirs diverted generally 5.14 km^3 of flow from the Naryn, Karadarya, and Chirchik rivers, that is 0.49 km^3 less than planned. The actual water releases from the reservoirs were 11.05 km^3 or 7.3% less than planned volume.

The total lateral inflow along the Naryn and Syrdarya rivers (reaches up to Shardara reservoir) calculated by balance method (using BWO Syrdarya data) was 8.55 km^3.

By the end of the growing season, 17.99 km^3 of water or 97.9% were accumulated in upstream reservoirs, including 15.92 km^3 in Toktogul reservoir, 1.51 km^3 in Charvak reservoir, and 0.56 km^3 in Andizhan reservoir.

The total water withdrawal from the Naryn and Syrdarya rivers in the reaches up to Shardara reservoir was 10.15 km^3, of which: 0.225 km^3 for Kyrgyz Republic; 1.449 km^3 for the Republic of Tajikistan; 7.935 km^3 for the Republic of Uzbekistan; and 0.541 km^3 for the Republic of Kazakhstan (through the Dustlik canal).

0.32 km^3 (3,5%) less water was taken out against the schedule of BWO Syrdarya during the growing season 2013. Water was distributed unevenly among the states and river reaches (see Table 1.1).

In general, water supply was satisfactory for Kyrgyzstan since all other countries experienced sharp shortage in some months, especially at the beginning of the growing season. This shortage was particularly acute in the river's midstream in Kairakum-Shardara section, where water availability of Uzbekistan decreased lower than 80-70% and virtually kept at this level until August (see Table 1.2). Water shortage was less acute in the Toktogul-Kairakum section; however, in some ten-day period it reached 77-79% in Uzbekistan and 70-84% in Tajikistan. Kazakhstan provided itself with water mainly through water accumulation in winter in the Shardara reservoir and the unaccounted by BWO pumped water delivery from the reservoir.

Obligations for water delivery to Kairakkum reservoir were 114% satisfied and the inflow amounted to 5.14 km^3 compared to 4.51 km^3 of planned inflow in BWO schedule. Nevertheless, the operation regime of Kairakkum reservoir caused 183 Mm^3 of undersupply in Tajikistan itself in April-May without any apparent reason from the side of BWO. At the same time, undersupply in the midstream was partially

compensated by more intensive water diversion in small rivers. Tajikistan withdrew 90 Mm^3 or 127% of the mean annual amount (2008-2013) from the Isfara River in 2013. In the same period, Uzbekistan diverted from the Isfara River only 13.7 Mm^3 or 70% of the mean annual amount (2008-2013) and 30% against the maximum amount in 2010.

Water availability in the Syrdarya midstream depends on releases of water from the Kairakkum reservoir, which even in average years may reduce delivery to the canals located in the midstream area in case of operation under energy generation regime. During the growing season 2013, the minimum water availability against limits of the year 2013 was observed in Tajikistan up to 11.6% in the second ten days of April, in Kazakhstan up to 51.6% in July, and in Uzbekistan up to 68%. The total water releases from the Kairakkum reservoir were 6.32 km^3, including 5.96 km^3 of water discharged into the river.

Water releases from the Kairakkum reservoir were 0.22 km^3 higher than planned by BWO Syrdarya. The ten-day analysis of water releases from the Kairakkum reservoir is shown in Table 1.8. It is notable that the targets of water releases from the reservoir were overachieved, mainly through higher releases in August and during the first ten-day period in September when water demand decreased. Using those excessive volumes in May and July could increase water availability for Tajikistan and Uzbekistan in these months.

Inflow to the Shardara reservoir was 3.54 km^3 or 15.3% lower than scheduled by BWO Syrdarya. Balance calculations identified flow losses in the amount of 0.02 km^3 in the Toktogul-Shardara section, given the lateral inflow of 8.55 km^3.

Water releases from the Shardara reservoir were 5.54 km^3, including 4.8 km^3 of water discharged into the river; water did not reached the Arnasay reservoir.

Water was not discharged into Arnasay from the Shardara reservoir during the growing season 2013. Significant discharge into Arnasay (from 100 Mm^3 and higher) was observed before more often in April, sometimes in May, June, and July, except for 2002, when water was discharged all over the growing season under higher inflows to Shardara reservoir exceeding 6-7 km^3. Inflow to the reservoir was only 3.5 km^3 during the growing season 2013 (Table 1.6 and Figure 1.1). A downward tendency is observed regarding growing season water releases into Arnasay over the period of 1993-2012. Whereas in 1993-2003 discharge into Arnasay reached 12-16% of inflow to Shardara, in the last decade it did not exceed 1-3%.

The channel balance of the Syrdarya River downstream (including accumulation and drawdown of the Koksarai reservoir) is shown in Table 1.7. The Table gives data on water use (water withdrawal) and losses of the river water. The water losses are derived from imbalance of balance calculations, and therefore may include collector-drainage water (with negative sign) discharged into the river and unaccounted water withdrawals.

It follows from the balance that the total water withdrawal from the Shardara reservoir and the Syrdarya River amount to 5117 Mm^3 in the lower reaches during the growing season, while water losses are 2653 Mm^3 (or 55% water releases from Shardara). The total flow uses (water diversions plus losses) are estimated at

7770 Mm^3 in the lower reaches. Moreover, the amount of Syrdarya river water from Shardara (including discharge from Koksaray and along the Arys River) to Karateren gauging station decreased from 8275 to 1243 Mm^3 during the growing season because of diversions and losses.

SIC ICWC estimated that during the growing season the average flow losses in the Syrdarya lower reaches were 1.9 km^3 for dry year (90% probability) and 2.4 km^3 for normal year over 1990-2000. The estimation was made on the basis of imbalance in channel water balance and included losses through evaporation, transpiration, outflow and inflow of groundwater, and losses through overflow in the floodplain. Losses for the year of 90% probability agree with an estimation of the Sredazgiprovodkhlopok Institute and with D.Ratkovich's data.

Thus, for the lower reaches the estimated losses during the growing season 2013 exceed 1.4 times the previous assessments for a dry year.

According to Aralo-Syrdarya Basin Water Administration's data, the Koksaray reservoir did not accumulate water during the growing season 2013, and earlier accumulated flow in the amount of 2960 Mm^3 was evacuated (April-July).

The analysis of reservoirs' water balance (Table 1.5) indicated to unaccounted inflow to Toktogul and Charvak reservoirs in the amount of 0.01 and 0.01 km^3, respectively. Losses found for Andizhan, Kairakkum, and Shardara reservoirs amounted to 1.83 km^3 in total.

According to Kazgidromet's data (at Karateren gauging station), water delivery to the Aral Sea and Prearalie amounted to 1.474 km^3 during the growing season.

The ten-day analysis of water releases from the Kairakkum and Toktogul reservoirs and of water availability per republic is shown in Tables 1.8 and 1.9 and Figures 1.2 and 1.3.

Table 1.1

Water availability in the Syrdarya River basin countries for the growing season 2013

Water user	Water volume, km^3		Water availability, %		Deficit (-), surplus (+) km^3	
	limit/ schedule*	actual	season	min value for ten-day period**	season	total of ten-day period***
1. Total water diversion	10.47	10.15	97.0	72.26	-0.32	-1.13
2. By countries:						
Kyrgyz Republic	0.207	0.225	108.8	80.33	0.02	0.00
Republic of Uzbekistan	7.921	7.935	100.2	72.49	0.01	-0.79
Republic of Tajikistan	1.717	1.449	84.4	37.27	-0.27	-0.33
Republic of Kazakhstan	0.624	0.541	86.7	51.57	-0.08	-0.14
3. By river reaches						
3.1 Toktogul reservoir-Uchkurgan hydroscheme	3.53	3.69	104.5	74.59	0.16	-0.20
In particular:						
Kyrgyz Republic	0.128	0.167	130.0	103.97	0.04	0.00
Republic of Tajikistan	0.213	0.073	34.2	11.11	-0.14	-0.12
Republic of Uzbekistan	3.193	3.453	108.1	75.68	0.26	-0.16
3.2 Uchkurgan hydroscheme – Kayrakkum hydroscheme	0.98	1.11	113.6	76.87	0.13	-0.03
In particular:						
Kyrgyz Republic	0.079	0.058	74.2	51.37	-0.02	-0.02
Republic of Tajikistan	0.406	0.519	127.8	89.63	0.11	0.00
Republic of Uzbekistan	0.490	0.530	108.1	69.99	0.04	-0.04
3.3 Kayrakkum hydroscheme – Shardara reservoir	5.96	5.35	89.8	67.62	-0.61	-1.15
of which:						
Republic of Kazakhstan	0.624	0.541	86.7	51.57	-0.08	-0.14
Republic of Tajikistan	1.098	0.857	78.1	11.59	-0.24	-0.29
Republic of Uzbekistan	4.237	3.951	93.2	68.54	-0.29	-0.79
4. In addition:						
Inflow to the Shardara reservoir	4.18	3.54	84.7	42.2	-0.64	-0.85
Discharge to Arnasay	0.00	0.00	0.00	0.00	0.00	0.00
Water supply to the Aral Sea and Priaralie	2.42	1.47	60.9			

*) Limits for the growing season 2013
**) Minimum value recorded for the ten-day period
***) Total water deficit recorded for ten-day periods

Table 1.2

Water availability of countries for May-July 2013

River reach	State	May			June			July		
		I	II	III	I	II	III	I	II	III
Toktogul-Kayrakum	Kyrgyz Republic	129	112	125	112	96	101	94	97	97
	Tajikistan	86	97	92	84	86	88	70	86	104
	Uzbekistan	127	121	106	110	100	88	79	77	88
Kayrakum Chardara	Kazakhstan		**66**	113	111	89	74	98	**52**	**52**
	Tajikistan	38	71	**69**	75	74	79	81	76	90
	Uzbekistan	81	72	81	72	**69**	78	79	**69**	75

Table 1.3

Water diversion from BFC for the republics

Source	Indica-tors	Unit	April	May	June	July	August	Sept.	For the growing season
BFC	Limit	mln m^3	291.34	364.13	391.64	515.14	406.64	235.68	2204.57
	Actual	mln m^3	368.24	385.93	374.16	413.90	430.43	294.85	2267.51
	WA	%	126	106	96	80	106	125	103
BFC+ feeding canal in Uzbekistan	Limit	mln m^3	269.67	334.45	361.12	481.61	376.17	213.61	2036.63
	Actual	mln m^3	360.74	376.46	358.63	400.32	412.24	293.28	2201.66
	WA	%	134	113	99	83	110	137	108
BFC+ feeding canal Tajikistan	Limit	mln m^3	21.00	28.15	27.99	28.93	28.07	21.00	155.13
	Actual	mln m^3	6.95	8.14	13.11	9.21	14.65	0.65	52.69
	WA	%	33	29	47	32	52	3	34
BFC+ feeding canal Kyrgyz Republic	Limit	mln m^3	0.67	1.53	2.53	4.60	2.40	1.08	12.82
	Actual	mln m^3	0.56	1.34	2.44	4.37	3.55	0.92	13.18
	WA	%	83	88	96	95	148	86	103

Table 1.4

Syrdarya River channel water balance for the growing season 2013

Item	Water volume, km3		Deviation (actual-planned)
	predicted/ planned	actual	
1 Inflow to the Toktogul reservoir	7.92	8.83	0.90
2 Lateral inflow at the river reach Toktogul reservoir-Shardara reservoir (+)	2.17	8.55	6.38
of which:			
Release into the Karadarya river	1.60	1.64	0.04
Release into the Chirchik river	0.56	0.45	-0.11
Lateral inflow from CDF and small rivers		6.45	6.45
3 Flow regulation in the reservoirs: inflow (+) or diversion (-)	-3.44	-3.71	-0.27
of which:			
Toktogul reservoir	-4.87	-4.66	0.21
Kayrakkum reservoir	1.43	0.95	-0.48
4 Regulated flow (1+2+3)	6.65	13.67	7.02
5 Water diversion at the reach Toktogul-Shardara (-)	-10.47	-10.15	0.32
6 Water losses (-) or unrecorded inflow to the channel (+) at the reach Toктogul-Shardara	8.00	0.02	-7.97
Including % of the regulated flow	120.25	0.18	-120.07
7 Inflow to the Shardara reservoir	4.18	3.54	-0.64
8 Flow regulation in the Shardara reservoir: inflow (+) or diversion (-)	2.03	2.00	-0.04
9 Water release from the Shardara reservoir into the river	5.01	4.80	-0.21
10 Diversion to the Kzylkum canal (-)	-1.21	-0.74	0.47
11 Discharge to Arnasay (-)	0.00	0.00	0.00
12 Water supply to the Aral Sea and Priaralie	2.42	1.47	-0.95

Table 1.5

Water balance of the Syrdarya River basin reservoirs for the growing season of 2013

Item	Water volume, km3		Deviation (actual-planned)
	Predicted/ planned	Actual	
1. Toktogul reservoir			
1.1 Inflow to the reservoir	7.92	8.83	0.90
1.2 Water volume in the reservoir:			
- at the beginning of the season (April 1, 2013)	11.27	11.25	-0.02
- at the end of the season (October 1, 2013)	16.08	15.92	-0.16
1.3 Release from the reservoir	3.06	4.17	1.11
1.4 Unconsidered water inflow (+) or losses (-)	-0.05	0.01	0.07
% of the inflow to the reservoir	-0.69	0.12	0.81
1.5 Flow regulation: inflow (+) or diversion (-)	-4.87	-4.66	0.21
2. Andizhan reservoir			
2.1 Inflow to the reservoir	2.85	2.46	-0.39
2.2 Water volume in the reservoir:			
- at the beginning of the season (April 1, 2013)	0.87	0.87	0.01
- at the end of the season (October 1, 2013)	0.90	0.56	-0.34
2.3 Release from the reservoir	2.80	2.77	-0.04
2.4 Unconsidered water inflow (+) or losses (-)	-0.01	-0.01	0.00
% of the inflow to the reservoir	-0.38	-0.28	0.10
2.5 Flow regulation: inflow (+) or diversion (-)	-0.05	0.30	0.35
3. Charvak reservoir			
3.1 Inflow to the reservoir	5.15	4.90	-0.25
3.2 Water volume in the reservoir:			
- at the beginning of the season (April 1, 2013)	0.69	0.71	0.02
- at the end of the season (October 1, 2013)	1.38	1.51	0.12
3.3 Release from the reservoir	4.44	4.11	-0.33
3.4 Unconsidered water inflow (+) or losses (-)	-0.02	0.01	0.03
% of the inflow to the reservoir	-0.34	0.29	0.63
3.5 Flow regulation: nflow (+) or diversion (-)	-0.71	-0.78	-0.07
4. Kayrakkum reservoir			
4.1 Inflow to the reservoir	4.51	5.14	0.64
4.2 Lateral inflow	0.25	0.23	-0.02
4.3 Water volume in the reservoir:			
- at the beginning of the season (April 1, 2013)	3.42	3.33	-0.09
- at the end of the season (October 1, 2013)	1.54	1.51	-0.03
4.4 Release from the reservoir	6.19	6.32	0.14
Of which:			
- release to the river	5.75	5.96	0.22
- water diversion from the reservoir	0.44	0.36	-0.08
4.5 Unconsidered water inflow (+) or losses (-)	-0.45	-0.86	-0.41
% of the inflow to the reservoir	-10.01	-16.78	-6.77
4.6 Flow regulation: inflow (+) or diversion (-)	1.43	0.95	-0.48
5. Shardara reservoir			

Item	Water volume, km3		Deviation (actual-planned)
	Predicted/ planned	Actual	
5.1 Inflow to the reservoir	4.18	3.54	-0.64
5.2 Lateral inflow	-	-	-
5.3 Water volume in the reservoir:			
- at the beginning of the season (April 1, 2013)	3.93	3.95	0.02
- at the end of the season (October 1, 2013)	1.37	1.00	-0.37
5.4 Release from the reservoir	6.22	5.54	-0.67
Of which:			
- discharge to Arnasay	0.00	0.00	0.00
- releasein to the river	5.01	4.80	-0.21
- water diversion from the reservoir	1.21	0.74	-0.47
5.5 Unconsidered water inflow (+) or losses (-)	-0.53	-0.96	-0.43
% of the inflow to the reservoir	-12.63	-26.98	-14.34
5.6 Flow regulation by the reservoirs: inflow (+) or diversion (-)	2.03	2.00	-0.04
TOTAL flow regulation by reservoirs: inflow (+) or diversion (-)	-2.17	-2.19	-0.02
TOTAL losses (-), unconsidered inflow (+)	-1.06	-1.80	-0.74

Table 1.6

Dynamics of inflows to the Shardara reservoir and releases into the Arnasay for the growing season 1993-2013, mln m^3

Year	Indicator	Apr.	May	Jun.	Jul.	Aug.	Sept.	Growing season	% of inflow
1993	Inflow to Shardara	1823	3241	3064	1043	645	870	**10686**	
	Release into Arnasay	242	0	1018	0	0	0	**1260**	12
1994	Inflow to Shardara	3185	2945	1993	1163	623	874	**10782**	
	Release into Arnasay	980	156	0	0	0	0	**1136**	11
1998	Inflow to Shardara	2042	2888	3482	1377	683	605	**11077**	
	Release into Arnasay	178	0	850	0	0	0	**1028**	9
2002	Inflow to Shardara	2685	2598	1981	1227	495	582	**9569**	
	Release into Arnasay	651	200	60	24	297	17	**1249**	13
2003	Inflow to Shardara	4464	2327	2187	1009	481	882	**11351**	
	Release into Arnasay	1464	388	0	0	0	0	**1852**	16
2004	Inflow to Shardara	2290	1305	827	580	533	1038	**6574**	
	Release into Arnasay	472	0	0	0	0	0	**472**	7
2007	Inflow to Shardara	3165	1603	1131	535	358	499	**7291**	
	Release into Arnasay	244	0	0	0	0	0	**244**	3
2010	Inflow to Shardara	2710	3013	2854	1103	656	1251	**11587**	
	Release into Arnasay			67	61			**129**	1
2013	Inflow to Shardara	1359	626	511	316	323	409	**3543**	
	Release into Arnasay	0	0	0	0	0	0	**0**	

Fig. 1.1 Relations of water release to the Arnasay and water inflow to the Shardara reservoir (as per th data from the BWO "Syrdarya" for 1993-2012)

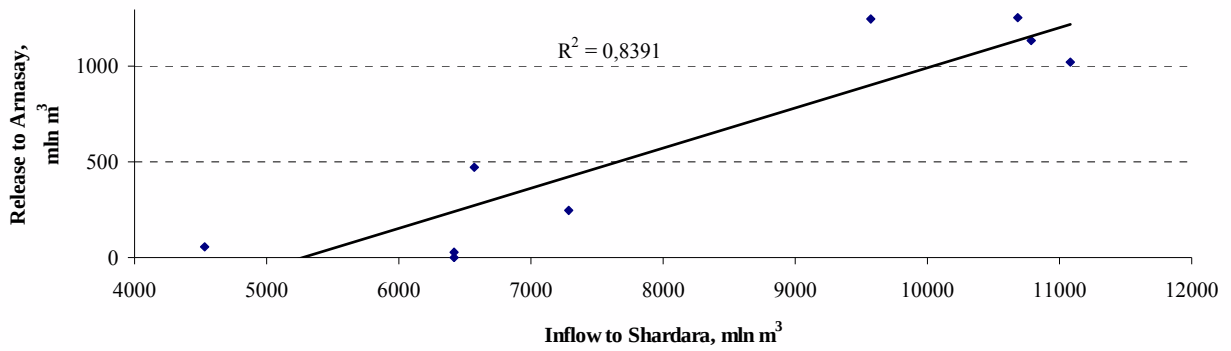


Table 1.7

Water balance within the Syrdarya River downstream for the growing season 2013 (mln m^3)

Item	Apr.	May	Jun.	Jul.	Aug.	Sept.	Growing season
Release from Shardara (BWO "Syrdarya" data)	1102	721	491	1228	959	303	4804
Diversion into Kyzylkum canal	89	88	130	280	132	19	738
Syrdarya River flow: gauging station downstream of Shardara (BWA "Aral-Syrdarya" data)	1136	782	521	1210	1112	328	5089
Imbalance – release from Shardara – gauging station (g/s) downstream of Shardara: (+) losses, (-) unconsidered inflow	-34	-61	-30	18	-153	-25	-285
Diversion to Koksaray	0	0	0	0	0	0	0
Release from Koksaray	183	1048	1168	561	0	0	2960
Release into the Arys River	130	49	22	13	3	9	226
Losses within the reach downstream of Shardara - Koktyube g/s	0	272	156	124	0	0	552
Syrdarya River flow: Koktyube g/s	1449	1607	1555	1660	1115	337	7723
Diversion within the reach of Koktyube g/s – Tasbuget g/s	217	858	884	892	455	37	3343
Diversion within the reach of Tasbuget g/s – Kazaly g/s	80	237	226	230	118	145	1036
Losses within the reach of Koktyube g/s – Kazalinsk g/s	511	269	338	514	469	0	2101
Syrdarya River flow: Karateran g/s	641	243	107	24	73	155	1243

Item	Apr.	May	Jun.	Jul.	Aug.	Sept.	Growing season
TOTAL FOR LOWER REACHES:							
Diversion	386	1183	1240	1402	704	201	5117
Losses	511	541	494	638	469	0	2653

Table 1.8

Ten-day analysis of releases from the Kayrakkum reservoir and water availability within the reach of Kayrakkum-Chardara

Republic	Indica-tors	April			May			June			July			August			September			*For the growing season, mln m³*
		I	***II***	***III***	***I***	***II***	***III***	***I***	***II***	***III***	***I***	***II***	***III***	***I***	***II***	***III***	***I***	***II***	***III***	
Release from the Kayrakkum reservoir	Plan, m^3/s	450	450	450	350	350	350	380	380	380	400	400	400	350	350	350	250	250	250	5745.6
	Actual, m^3/s	467	401	352	351	266	319	364	377	433	438	388	449	512	518	380	340	239	193	5962.44
	Actual/ Plan,%	104	89	78	100	76	91	96	99	114	110	97	112	146	148	109	136	96	77	104
UZ	Limit, m^3/s	217	226	240	242	245	266	356	402	402	405	405	405	333	261	189	107	71	49	4237
	Actual, m^3/s	155	238	200	195	176	215	257	275	315	320	280	304	326	335	269	248	207	180	3951
	W/A,%	*71*	*105*	*83*	*81*	*72*	*81*	*72*	*69*	*78*	*79*	*69*	*75*	*98*	*128*	*142*	*233*	*291*	*370*	*93*
TJ	Limit, m^3/s	9	54	73	74	74	80	83	86	86	86	86	86	86	86	74	54	36	32	1098
	Actual, m^3/s	4	6	9	28	53	55	62	64	68	70	65	78	84	77	78	75	59	37	857
	W/A,%	*41*	*12*	*12*	*38*	*71*	*69*	*75*	*74*	*79*	*81*	*76*	*90*	*98*	*89*	*106*	*139*	*164*	*116*	*78*
KZ	Limit, m^3/s	0	0	0	14	18	23	36	45	54	63	81	99	99	90	81	0	0	0	624
	Actual, m^3/s	8	9	5	13	12	25	40	40	40	62	42	52	77	93	60	32	3	0	541
	W/A,%				*93*	*66*	*113*	*111*	*89*	*74*	*98*	*52*	*52*	*78*	*104*	*75*				***87***

Table 1.9

Ten-day analysis of releases from the Toktogul reservoir and water availability (W/A) within the reach of Toktogul-Uchkurgan

Republic	Indicators	April			May			June			July			August			September			*For the growing season, mln m³*
		I	*II*	*III*	*I*	*II*	*III*	*I*	*II*	*III*	*I*	*II*	*III*	*I*	*II*	*III*	*I*	*II*	*III*	
Release from the Toktogul reservoir	Plan, m^3/s	*200*	*200*	*200*	*180*	*180*	*180*	*200*	*200*	*200*	*200*	*200*	*200*	*180*	*180*	*180*	*200*	*200*	*200*	*1519*
	Actual, m^3/s	*386*	*306*	*300*	*262*	*245*	*209*	*202*	*222*	*197*	*203*	*220*	*322*	*422*	*366*	*219*	*222*	*221*	*225*	*2030*
	Actual/ Plan,%	*193*	*153*	*150*	*146*	*136*	*116*	*101*	*111*	*98*	*101*	*110*	*161*	*234*	*203*	*122*	*111*	*111*	*113*	*134*
UZ	Limit, m^3/s	135	158	178	201	190	190	201	218	242	270	287	283	260	231	193	151	121	119	3193
	Actual, m^3/s	195	230	237	250	234	192	224	221	213	217	217	254	255	257	211	188	165	172	3453
	W/AO, %	*144*	*145*	*133*	*125*	*123*	*101*	*111*	*101*	*88*	*80*	*76*	*90*	*98*	*112*	*109*	*124*	*136*	*144*	*108*
TJ	Limit, m^3/s	10	12	13	14	14	14	15	15	15	15	15	15	15	15	14	12	10	8	213
	Actual, m^3/s	1	3	6	6	2	4	4	6	8	4	3	9	9	9	4	1	1	2	73
	W/A,%	*11*	*26*	*49*	*41*	*15*	*26*	*26*	*40*	*53*	*23*	*20*	*61*	*59*	*60*	*27*	*8*	*13*	*31*	*34*
RG	Limit, m^3/s	3	4	3	5	7	7	9	9	11	12	12	13	10	11	10	8	6	5	128
	Actual, m^3/s	3	6	6	8	9	11	11	10	13	14	14	15	15	14	14	11	9	7	167
	W/A,%	*106*	*155*	*164*	*165*	*133*	*144*	*120*	*104*	*119*	*117*	*117*	*116*	*143*	*131*	*139*	*141*	*144*	*158*	*130*

Fig. 1.2 Indicators of the ten-day analysis of releases from the Kayrakkum reservoir and water availability for the states at the Kayrakkum-Shardara reach over the growing season peak (June-August) of 2013

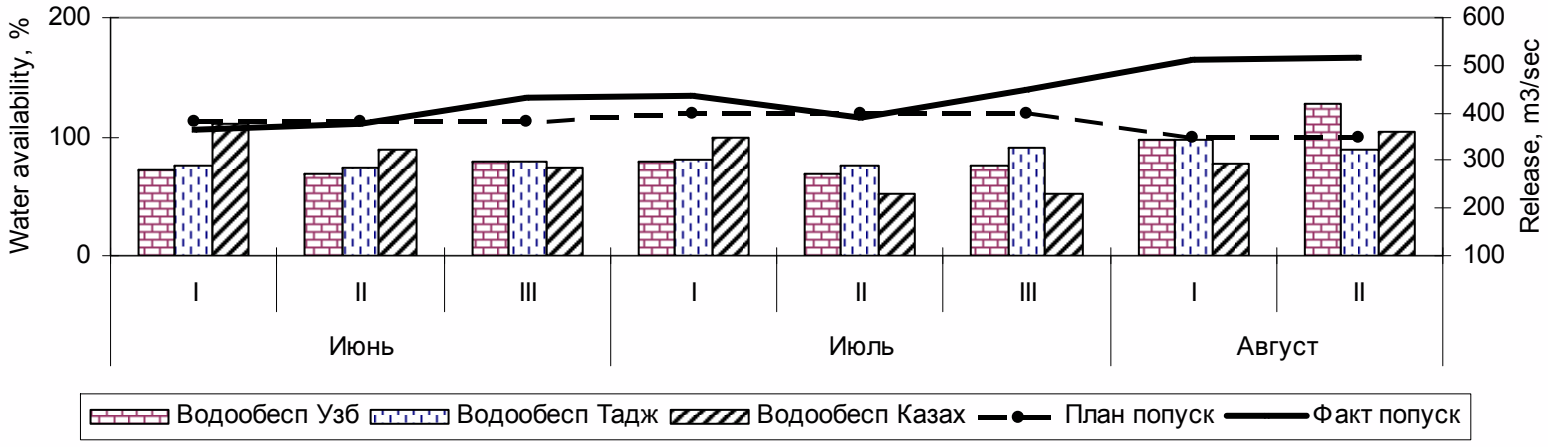


Fig. 1.3 Indicators of the ten-day analysis of releases from the Toktogul reservoir and water availability for the states at the Toktogul-Uchkurgan reach over the growing season peak (June-August) of 2013

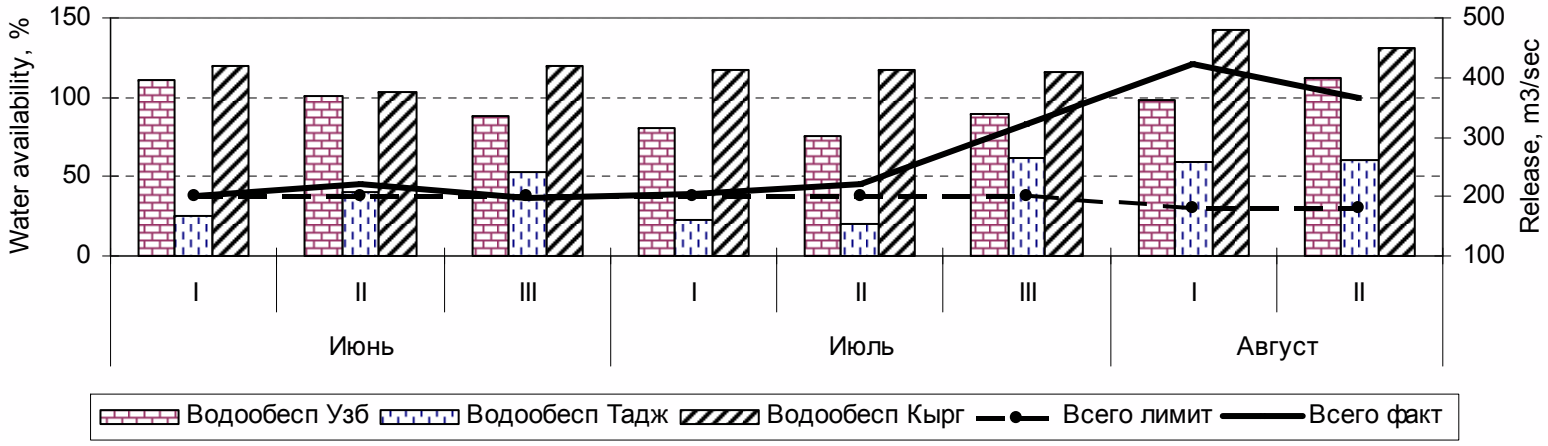
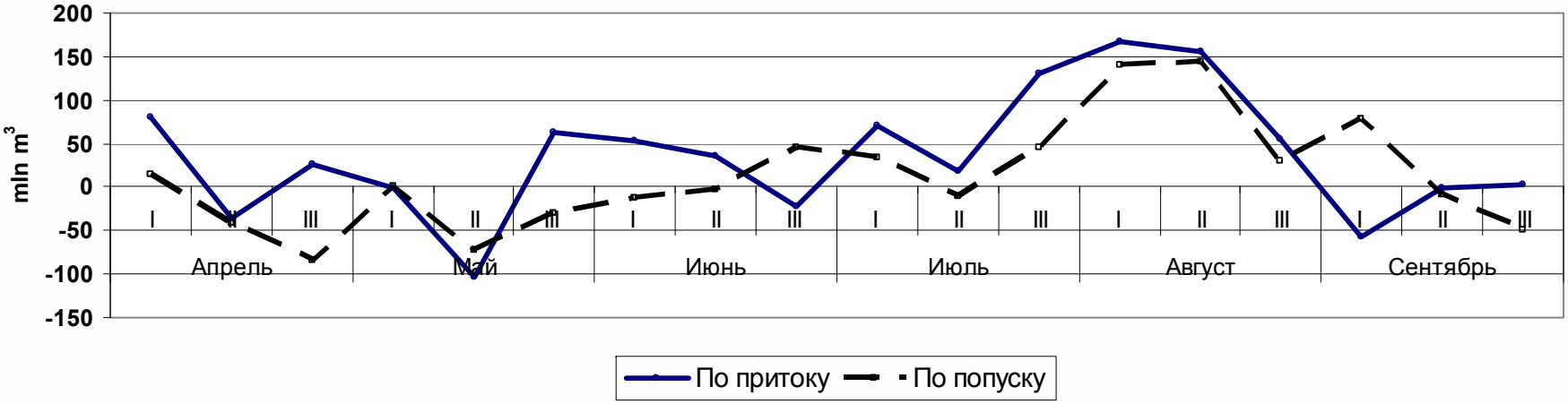


Fig. 1.4 Deviation of the actual inflow and release from the planned (calculated) from the Kayrakkum reservoir, mln m^3



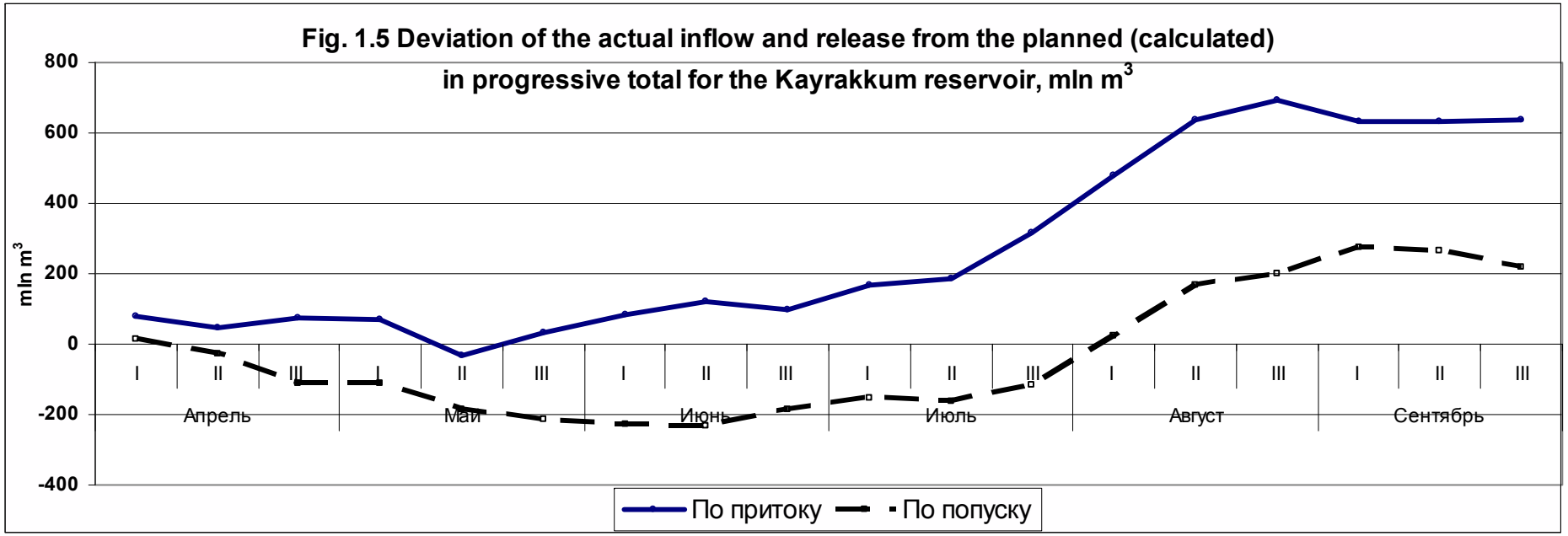


Fig. 1.5 Deviation of the actual inflow and release from the planned (calculated)
in progressive total for the Kayrakkum reservoir, mln m3
800
600
400
200
0
-200
-400
mln m3
I
II
III
Апрель
Май
Июнь
Июль
Август
Сентябрь
По притоку
По попуску

The positive (+) values of deviation of actual inflow from planned (design) one indicate to unaccounted inflow, while the negative (-) values demonstrate unfulfilled obligations regarding inflow to reservoir and/or unaccounted losses (water diversion).

The negative (-) values of deviation of actual water releases from planned (design) ones indicate to non-observance of agreements on water releases (provided that in term of inflow the deviation is positive or negative but to a lesser degree than water releases) (see Figures 2 and 3).

2 Amudarya River Basin

The actual water availability along the Amudarya River in the Atamyrat gauging station (upstream of intake to Garagumdarya) was 38.48 km^3 or 7.92 km^3 less than expected by BWO Amudarya schedule (see Table 2.2). At the same time, inflow to Nurek HPP turned to be lower by 1.59 km^3 than the forecast and, accordingly, water releases from reservoir were 12.62 km^3 or 1.65 km^3 less than planned volume.

Under such water-related situation, the established quotas of water withdrawals into canals in the Amudarya River basin were 84% used; the total water withdrawal was 33.27 km^3, including 27 km^3 downstream of Atamyrat gauging station (starting from intake to Garagumdarya). In general, given the water availability of 84%, all republics received from 80 to 87% of water that is more equitable than in case of the Syrdarya River (Table 2.1).

The Nurek reservoir accumulated up to 10.76 km^3 by the end of season, and the water volume in Tuyamuyun hydroscheme's reservoir reached 2.51 km^3 (Table 2.3). Diversion of the river flow for accumulation in the Nurek reservoir amounted to 4.2 km^3, while feeding to the river flow at expense of Tuyamuyun reservoirs (including diversions from Tuyamuyun hydroscheme) was 1.02 km^3. Thus, the total diversion of river flow was 3.37 km^3.

A very complex water situation was observed along the Amudarya - in May and June water content of the river was 10% lower than the forecast, which already was 10% less than the average annual value. Twenty days in July showed that water content dropped to 20% lower than the forecast. Under such conditions all irrigated lands were undersupplied in terms of water quotas, although the quotas were reduced by 10% based on the forecast.

If one looks at how much water each transboundary state received from the Amudarya, the picture seems quite strange: Tajikistan got 11991 m^3/ha; Turkmenistan - 8577 m^3/ha; and, Uzbekistan - 6271 m^3/ha.

The comparison of actual and planned volumes shows that drawdown of the Nurek reservoir took place in the 1^{st}-2^{nd} ten-day periods of April from 6.365 to 6.15 km^3 (211.2 Mm^3 in total), the latter volume was kept until the second ten-days of May

and then accumulation in the reservoir started - up to 6.87 km^3 by early June, 8.36 km^3 by July, and 9.8 km^3 by the beginning of August. According to the plan, Tajikistan should not evacuate water from the Nurek reservoir during the growing season (in the growing seasons 2010, 2011, and 2012 as well), and on the contrary accumulate water in the reservoir up to 6.4 km^3 (actual 6.15) by the second ten-days in May, to 7.17 km^3 (actual 6.87 km^3) by June, 8.55 km^3 (actual 8.36 km^3) by July, and 9.79 km^3 (actual 9.8 km^3) by the beginning of August.

If one compares the actual water releases from the Nurek reservoir with planned ones, water releases were lower by 245 Mm^3 than those scheduled by BWO in April, by 300 Mm^3 in May, by 70 Mm^3 in June, and by 800 Mm^3 in July!!! Only in the first ten-days of August the actual water releases were higher than planned ones by 92 Mm^3. This situation can be explained partially by generally reduced inflow (as compared to BWO's schedule) to Nurek during the growing season, although the actual water releases towards Nurek were above the schedule in some periods (1st ten-days of April, 3rd ten-days of May, and 1st ten-days of August). The calculations also demonstrate in water releases could be increased in July (at least, up to values scheduled by BWO) by shifting the date of maximum accumulation from early August to mid September.

Water losses, calculated by balance method, along the Amudarya river from the Atamyrat gauging station to inflow point to Tuyamuyun hydroscheme were 6.24 km^3 or 16.22% of the flow in the Atamyrat section. Water losses from the inflow point to Tuyamuyun hydroscheme to the point of water delivery to the Aral Sea and Prearalie were 2.63 km^3 or 16.6% of inflow to Tuyamuyun hydroscheme.

In general, water losses in the Amudarya basin were 8.87 km^3 or 23.1% of river's water content (Atamyrat gauging station), i.e. 0.34 km^3 (3,21%) less than design losses (as planned by BWO Amudarya).

Lateral inflows to the Nurek reservoir were 0.2 km^3, while losses in the Tuyamuyun reservoir were equal to zero and lateral inflow also were zero.

Through flow to Samanbay gauging station plus discharge of collector-drainage water, 0.92 km^3 of water were delivered to Prearalie and the Aral Sea meaning half of the planned delivery.

Table 2.1

Water availability in the Amudarya River Basin countries for the growing season 2013

Water user	Water volume, km3		Water availability, %		Deficit (-), surplus (+) km3	
	Limit/ Plan	Actual	Season	Min ten-day period*	Season	Total for ten-day period**
1. Total water diversion	39.61	33.27	84.01	65.55	-6.33	-6.33
2. By countries:						
Kyrgyz Republic	-	-	-	-	-	-
Republic of Tajikistan	6.89	5.57	80.93	76.26	-1.31	-1.31
Turkmenistan	15.50	13.47	86.93	68.76	-2.03	-2.03
Republic of Uzbekistan	17.22	14.23	82.61	58.06	-2.99	-3.04

Water user	Water volume, km3		Water availability, %		Deficit (-), surplus (+) km3	
	Limit/ Plan	Actual	Season	Min ten-day period*	Season	Total for ten-day period**
3. Downstream of Atamyrat GS***	31.52	27.00	85.67	63.42	-4.52	-4.54
Of which:						
Turkmenistan	15.50	13.47	86.93	68.76	-2.03	-2.03
Republic of Uzbekistan	16.02	13.53	84.45	58.45	-2.49	-2.58
4. By river reaches:						
Upstream	8.09	6.27	77.53	70.93	-1.82	-1.82
Of which:						
Kyrgyz Republic	-	-	-	-	-	-
Republic of Tajikistan	6.89	5.57	80.93	76.26	-1.31	-1.31
Surkhandarya province, Uzbekistan	1.20	0.70	58.04	41.67	-0.50	-0.50
Midstream	16.21	14.72	90.85	76.98	-1.48	-1.51
Of which:						
Turkmenistan	10.47	9.24	88.25	70.57	-1.23	-1.25
Republic of Uzbekistan	5.73	5.48	95.60	88.88	-0.25	-0.33
Downstream	15.31	12.28	80.18	45.35	-3.03	-3.15
Of which:						
Turkmenistan	5.03	4.23	84.18	48.96	-0.80	-0.84
Republic of Uzbekistan	10.29	8.05	78.23	39.35	-2.24	-2.33
5. In addition:						
Emergency and environmental releases to canals within lower reaches	0.00	0.00				
Of which:						
Turkmenistan	0.00	0.00				
Republic of Uzbekistan	0.00	0.00				
Water supply to the Aral Sea and Priaralie****	2.10	0.92	44.0			

***)** Minimum value recorded for the ten-day period
****)** Total water deficit for ten-day periods
*****)** Atamyrat gauging station – located at the Amudarya upstream of the water intake to Garagumdarya
****) Taking into account CDF

Table 2.2

The Amudarya River channel water balance for the growing season 2013

Items	Water volume, km3		Deviation (actual-planned)
	Predicted/ Planned	Actual	
1 Water content in the Amudarya river: unregulated flow at the Atamyrat GS *	46.41	38.48	-7.92
2 Flow regulation in the Nurek reservoir: accumulation (+) or drawdown (-)	-4.14	-4.20	-0.06
3 Water diversion in the midstream (-)	-16.21	-14.72	1.48
4 Midstream return CDF (+)	1.31	1.49	0.17
5 Water losses (-) or unconsidered inflow to the channel	-6.34	-6.24	0.10

Items	Water volume, km3		Deviation (actual-planned)
	Predicted/ Planned	Actual	
(+)			
In % of the flow at the Atamyrat GS	-13.67	-16.22	-2.55
6 Inflow to the TMHS (Bir-Ata GS)	21.04	14.81	-6.23
7 Flow regulation at TMHS: accumulation (+) or drawdown (-)	-0.50	1.02	1.52
8 Losses (-) in the TMHS reservoirs, lateral inflow (+)	0.26	0.00	-0.26
In % of inflow	1.23	0.00	-1.23
9 Releases from TMHS (including water diversion from the reservoir)	20.54	15.83	-4.71
10 Downstream water diversion, including diversion from TMHS (-)	-15.31	-12.28	3.03
11 Downstream return CDF (+)	0.00	0.00	0.00
12 Emergency and environmental water releases to canals (-)	0.00	0.00	0.00
13 Runoff losses (-) or unconsidered inflow to the channel (+)	-3.13	-2.63	0.50
In % of the flow at the Tuyamuyun downstream pool gate	-15.2	-16.6	-1.40
14 Water supply to the Priaralie and Aral Sea	2.10	0.92	-1.18
TOTAL losses:	-9.21	-8.87	0.34
In % of the water content in the river	-19.85	-23.1	-3.21

* Water content is calculated as the total of flow at the Kerki gate, Kerki upstream water diversions (without Tajikistan and Surkhandarya province) and accumulation in the Nurek reservoir

Table 2.3

Water balance of the Amudarya River Basin's reservoirs for the growing season 2013

Items	Water volume, km3		Deviation (actual-planned)
	Predicted/ Planned	Actual	
1. Nurek reservoir			
1.1 Inflow to the reservoir	18.41	16.82	-1.59
1.2 Water volume in the reservoir:			
- at the beginning of the season (April 1, 2013)	6.06	6.37	0.30
- at the end of the season (October 1, 2013)	10.50	10.56	0.06
1.3 Release from the reservoir	14.27	12.62	-1.65
1.4 Lateral inflow (+) or water losses (-)	0.30	0.20	-0.11
In % of the inflow to the reservoir	1.64	1.17	-0.47
1.5 Flow regulation: accumulation (+) or drawdown (-)	-4.14	-4.20	-0.06
2. TMHS reservoirs			
2.1 Inflow to the TMHS	21.04	14.81	-6.23
2.2 Water volume in the reservoirs:			
- at the beginning of the season (April 1, 2013)	3.28	3.54	0.26
- at the end of the season (October 1, 2013)	4.03	2.51	-1.52
2.3 Release from the TMHS	20.54	15.83	-4.71
Of which:			
- release into the river	14.92	11.23	-3.68
- water diversion	5.62	4.60	-1.02
2.4 Lateral inflow (+) or water losses (-)	0.26	0.00	-0.26
In % of the inflow to the reservoir	1.2	0.00	-1.2

Items	Water volume, km3		Deviation (actual-planned)
	Predicted/ Planned	Actual	
2.5 Flow regulation: accumulation (+) or drawdown (-)	-0.50	1.02	1.52
TOTAL flow regulation by the reservoirs: accumulation (+) or drawdown (-)	-4.63	-3.17	1.46
TOTAL losses (-), unconsidered inflow (+)	0.56	0.20	-0.36

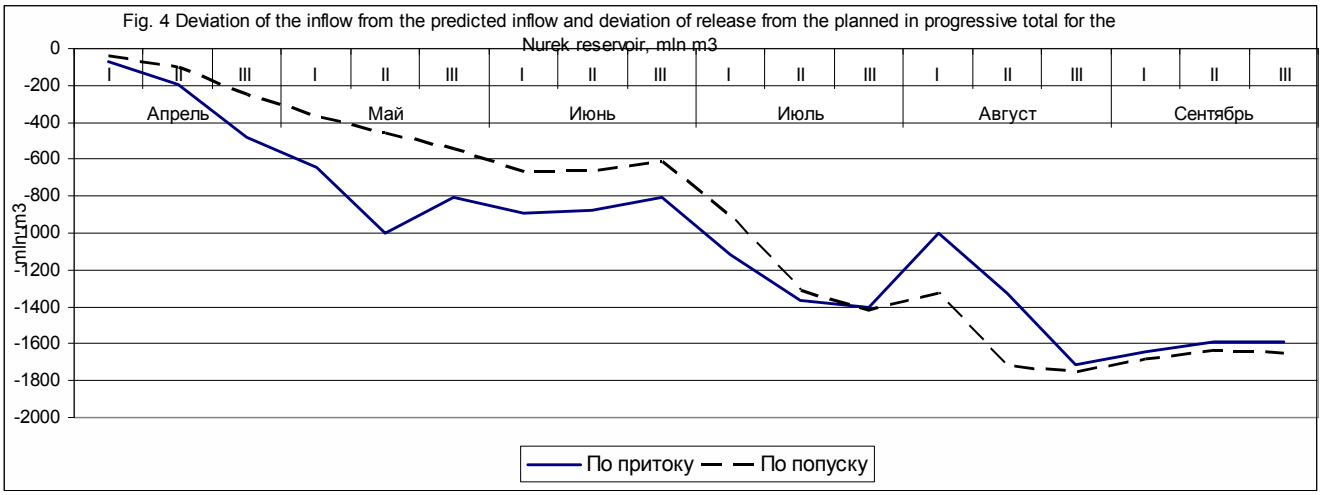


Fig. 4 Deviation of actual inflows from predicted ones and deviation of actual releases from planned ones for the Nurek reservoir on a cumulative total, mln m^3

2ND STAKEHOLDERS CONSULTATION MEETING TOWARDS THE 7TH WORLD WATER FORUM

Gyeongbuk, Republic of Korea, February 27-28, 2014

The 2nd Stakeholders Consultation Meeting will serve to create the Forum's Working Groups, which will jointly develop the content of the Forum throughout its preparatory process. During the two-day meeting, the key concepts of the Thematic, Regional, Political and Science and Technology Processes was presented to members of the Coordination Committees for appropriate processes and discussed by the Consultation Meeting participants, as well as other components such as the Citizens' Forum, exhibition, etc. discussed.

The meeting was preceded by the Meeting of the World Water Council Board – the main Forum organizer. Several key decisions were made at the meeting.

First – in conformity with the decision of the Korean Government, Forum events in April 2015 will be divided in two parts – the Political and Regional Processes with the Ministry Conference and exhibition will be held in Gyeongbuk, and the Thematic and Science Processes along the Citizens' Forum in Deagu. It takes two hours between the two cities by car. Therefore, all stakeholders need to consider this factor when planning their events and logistics.

Second - in conformity with the decision of the WWC Board members, the next 8th World Water Forum will be hold in Brazil in 2018.

Government officials, representatives of interstate organizations, non-government organizations, public and private enterprises, networks and scientists (general number of participants about 700 individuals – 300 foreign from 64 countries and 400 Koreans) active in the water sector participated in the Consultation Meeting.

Four participants from Central Asia took participation in the Consultation Meeting work: Sh.Talipov – EC IFAS, B.Burkhanzhonov – MAWR of Uzbekistan, S.Rakhimov – First Minister Deputy of Energy and Water Resources of Tajikistan, and V.Sokolov – Global Water Partnership Central Asia and Caucasus (GWP CACENA).

REGIONAL PROCESS

On the eve of the Consultation Meeting – February 26, 2014, the open meeting of the Regional Process Coordinators was held. The Regional Process Coordination Committee includes eight persons – four members of the WWC Board and four representatives from Korea. The Regional Process Co-chairs are Dr. T. Jonch-Clausen (Denmark) from the World Water Council and Dr. T. Kim (Korea).

Vadim Sokolov (GWP CACENA) participated in the Regional Process Coordinators Meeting.

By the results of the Coordination Committee Meeting, it was agreed that the Regional Process will be organized based on the Road Map proposed by the Coordination Committee.

Roadmap of the Regional Process

Item	Date
Regional Classification and Organisation	
- Discuss the major directions for the Regional Process–All	Jan - Feb 2014
- Elaborate and deliver regional proposals (incl. Sub-regional and Regional Session Groups)–Regional Coordinators	Feb – Jul 2014
- Approve regional proposals– International Steering Committee	Feb – Jul 2014
- Confirm and support the Preview Sessions in each region– Regional Coordinators	Mar - Jul 2014
Operating the Regional Process Commission	
- Report selected Regional Design Groups to ISC–RPC	Feb 2014
- Report selected Regional Session Groups to ISC–RPC	Dec 2014
Managing the Session Outputs	
- Conduct interim check on current progress of sessions–Regional Coordinators and Regional Committee	Feb – Sep 2014
- Delivery of final reports from each region– Regional Committee	Jan 2015
- Validate final regional reports– Regional Committee and International Steering Committee	Jan- Mar 2015
Linkage with Other Processes	
- Contribute to the political processes– Regional Committee	Mar 2014 – Apr 2015
- Share the current status of each process and cooperate to build the “Action Monitoring System”– Regional Committee	Aug 2014 – Apr 2015

The Regional Process will be organized for seven world regions approved:

- Asia
- America
- Africa
- Europe

Special regions (three) – the Arab League, the Mediterranean, economic water stressed countries.

Regional Process Coordinator per region was named.

The Coordinator of Asia Regional Process, which includes Central Asia sub-region, is Mr. Ravi Narayanan (India), the Asia-Pacific Water Forum Governing Council, functions of the Asia Process Secretariat will be fulfilled by the Japanese Water Forum with support of the Korean Water Forum.

It is agreed that Central Asia will create its Sub-regional Working Group for the Sub-Regional Process (applications for participation in the group were submitted to the Coordination Committee from three representatives of Central Asia – Sh. Talipov from the EC IFAS, S. Rakhimov – MEWR of Tajikistan, and V. Sokolov – GWP CACENA). The Executive Committee of IFAS and GWP CACENA were recognized as co-coordinators of the Central Asia Sub-regional Process by the Regional Committee.

The Central Asia Sub-regional Process will be open for participation in it, besides organizations from the five Central Asia countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) and concerned organizations from the countries of Caucasus (Azerbaijan, Armenia and Georgia) and Mongolia.

It was also recommended during the preparatory process for each region to lean on those priority topics, which proceed from the decisions of the 6th World Water Forum.

It should be noted that in March 2012, in Marseilles during the 6th World Water Forum, at the Central Asia Special Session, the following seven priorities for our sub-region were presented:

1: Guaranteeing water for future generations

2: Risk management and water security

3: International cooperation on transboundary watercourses management to the benefit of all countries in the region

4: Adoption of innovations in agriculture through agrarian reforms in order to achieve food security

5: Integrated water resources management – a tool for balancing multiple uses of water

6: Climate change and conserving environmental capacity

7: Sustainable water supply and sanitation

On February 27, 2014, open group consultations of the sub-regions of the Asia Regional Process were held. Three groups – North-Eastern Asia, China and Central Asia in consultations took participation.

According to the results of consultations, at the plenary session, before closing the meeting, the Chair of the Asia Process Mr. Ravi Narayanan announcев that in general 11 priority themes were stated for Asia region:

THEME 1.1: Enough Safe Water for All

THEME 1.2: Integrated sanitation for all

THEME 1.3: Adapting to Change: Managing Risk and Uncertainty for Resilience and Disaster Preparedness

THEME 1.4: Infrastructure for sustainable water resources management and services

THEME 2.1: Water for Food

THEME 2.3: Water and Cities

THEME 3.1: Green Growth, Water Stewardship and Industry

THEME 4.1: Economics and Financing for innovative investments

THEME 4.2: Effective Governance: Enhanced political decisions, stakeholder participation and technical information

THEME 4.4: Water cultures, justice and equity

THEME 4.5: Enhancing Education and Capacity Building

During their sub-regional sessions, the sub-regions of the Asia Process (six only) – North-Eastern Asia, South-Eastern Asia, South Asia, **Central Asia**, Pacific region, China – can raise discussions on their specific priorities agreed within the framework of future (during 2014) sub-regional consultations with their stakeholders.

During the consultations of the Central Asia sub-region, except for four representatives from the region, Mr. Soo-yang Kim, the Facilitator from the Regional Committee, and Asai Shigenori, the Representative of the Japanese Water Forum participated. On the results of the round table consultations, the following preliminary priorities for Central Asia grounded on the above mentioned seven priorities by the results of the 6th WWF were submitted to Mr. Ravi Narayanan, the Chair of the Asia Process:

THEME 1.3: Adapting to Change: Managing Risk and Uncertainty for Resilience and Disaster Preparedness

THEME 2.1: Water for Food

THEME 3.2: Managing and Restoring Ecosystems for Water Services and Biodiversity

THEME 3.4: SMART implementation of IWRM

THEME 4.2: Effective Governance: Enhanced political decisions, stakeholder participation and technical information

THEME 4.3: Cooperation for reducing conflict and improving transboundary water management

THEME 4.5: Enhancing Education and Capacity Building.

Meanwhile, in the form of the preliminary application given to the Asia Pacific Water Forum Secretariat, it was highlighted that the final list of the priorities for Central Asia will be officially presented in April 2014 after the ICWC meeting and agreeing with key stakeholders.

THEMATIC PROCESS

The Coordination Committee of the Thematic Process includes eight persons – four members of the WWC Board and four representatives from Korea. The Thematic Process Co-chairmen are Mark Smith from the World Water Council (IUCN – International Union for Conservation of Nature) and Dr. Hyoseop Woo, the President of the Korean Institute of Construction Technologies.

The International Governing Committee of the 7th World Water Forum approved 16 key themes, which will be presented for the dialogue during all Forum events and after it – in a form of further actions.

THEME 1.1: Enough safe water for all

Since recognition of the Human Right to Water and Sanitation by the UN in 2010, focus has been placed on implementation measures to make that right a reality on the ground, as measured by quality, quantity, affordability and equity. Moreover, effective access to water means little if the source is not safe to drink.

In the 7th World Water Forum, it is essential to share advanced experiences. The list of tentative issues:

- Comprehensive long-term water resources plan for water security
- Assessment for water quantity and quality in regional and country levels
- Improved storage and conveyance
- Maximize water supply reliability
- Water use efficiency and effectiveness
- Appropriate technologies for safe water supply in a region
- Assessment methodologies for water safety in terms of physcio-chemistry and biology
- Efficient groundwater use ensuring water quantity

● Rainwater harvesting and reuse

● Desalination

● Decision making system for the source of drinking water supply

THEME 1.2: Integrated sanitation for all

Access to basic sanitation, and its implementation remains at the core of public health. It has immediate impacts on water resource quality and is fundamental to reducing poverty. Wastewater treatment must be an integral part of providing sanitation for all.

Tentative issues:

● How to promote appropriate wastewater treatment in urban area in developing countries?

● What is the most affordable way to integrated approach for sanitation?

● How to promote water reuse in urban and water scarce area?

THEME 1.3: Adapting to Change: Managing Risk and Uncertainty for Resilience and Disaster Preparedness

Managing risks and uncertainties of extreme water-related events and climate variability is central to achieve socioeconomic growth and sustainable development. This theme also covers rehabilitation and development after humanitarian crises occurs, including man-made disasters.

Major attention will be paid to early warning of population for coordinated response to water-related disasters.

Tentative issues:

● Adapting Climate Change in an Integrate Water Management Way at Watershed Level (National and Transboundary)

● Scientific support to Climate Change Understanding the problem and Informing Duty Bearers Strategies

● Preparing the COP 21 Paris Meeting 2015: the Path toward a Positive Agenda

● How to input the revision of the Hyogo Framework for Action through the Sendai process 2015?

● Humanitarian response to major crisis: improving effectiveness through supporting national coordination platforms (preparedness and response)

● Conciliating Emergency, Rehabilitation and Development agendas

● Coping and Adaptive Capacities: how to reduce vulnerability to disasters?

THEME 1.4: Infrastructure for sustainable water resources management and services

Recently, the main issue in the field of water resources management is to find the way to deal with the lack of water, food, and energy owing to population growth. In order to cope with this issue, securing water resources for sustainable development, improving the ability of aging facilities, maximizing the efficiency of the operation and management of existing water facilities are to be discussed.

Tentative issues:

● Comprehensive long-term water resources plan for water security

● How to secure water resources for sustainable development

● Improving the performance of aging facilities

● Maximizing the efficiency of water resources operation and management

● The aim to measure and guide regional sustainability performance of hydropower

● Progress in Protocol used to assess hydropower sustainability at the project level

● Resilience issues related:

Water supply infrastructure

Water transfer infrastructure

Water treatment infrastructure

Water distribution infrastructure

Waste water collection and treatment/disposal infrastructure

THEME 2.1: Water for food

Where 70% of the world's water withdrawals are already used for agriculture, an increase in cereal production of 70 - 100% will be required over the next 25-30 years to meet the needs of a growing global population. Achieving the required increase will necessitate improvements along the entire chain, from field to fork.

Tentative issues:

● Develop customized groundwater well

● Develop rubber dam and ground dam

● Agricultural water reuse

● TM/TC (Tele-metering and Tele-control) system for water management

- Precision Agriculture (PA) technologies
- Improve drainage and reduce inundation
- Micro-irrigation for horticulture and landscape
- Efficient irrigation technology for bio-crop production
- Design and assess water demand for agricultural production and rural society
- Optimize water allocation for farmers and irrigation needs
- Modeling future sustainable farming with ecosystem
- Irrigation and rural society in Asia
- Environmental issues in irrigated agriculture
- Sustainable food production through irrigation

1. Degradation of soils in existing farming areas across key food insecure parts of the world caused by overuse and inappropriate farming techniques. Arrest decline in soil fertility. Develop extension services for farmers.

2. Rapid deterioration of ecosystems due to return of polluted water from farming activities or loss of environmental flows. Where feasible, establish catchment-based management systems with substantial involvement of farmers in decision making.

3. Virtual water imports substituting for actual water use in agriculture in water-stressed parts of the world. Economic compensation tools to restore social balance through water use. Consider reductions in agricultural water use (through efficiency gains), but also through structural shifts in economies to establish less agricultural dependence.

4. Developing water use in smallholder farming and strengthening the wider development impacts of more productive rural rainfed systems that are less vulnerable to external shocks, including climate variability.

5. Establish more effective conjunctive use of blue and green water in water-stressed dry lands areas, reduce drought losses.

THEME 2.2: Water for energy

Ensuring water security while managing the world's rapidly growing demand for energy is a major challenge. Better integration of water and energy policies can help to balance these competing demands, in addition to increased efficiency and better supply and demand management and harmonization between sectors.

Tentative issues:

- IT Technology for the effective utilization of Water Energy
- The Combination of Water and Energy preparing for Climate Change
- Technical Development of Hydropower Sustainability

● Protocol Realization for Sustainable Hydropower Assessment and Management

● Expanding the Use of Water Energy Through Reasonable Water Resources Management

● Development and Value of Water As Renewable Energy Resources

● Water Energy Policy and Regionally Applicable Technology

● The Role of Water to moderate Global Energy Inequity

● The Future Prospect of Water Energy Industry

● Alternative Energy Sources

● How to Heighten Energy Efficiency?

● Desalination : the Sustainable Solution and Hope for the Future Generations

● Access to Water Through Affordable Energy Sources for Off-Grid

Communities

● Paving the way for the development of a conceptual framework of energy impacts on water

● The Hydropower Power Sustainability: Assessment Protocol, a Global Framework to Promote Best Practice

● Water in a Changing Oil and Gas World

● Existing and Innovative Solutions for Better Water Management Practices in Biofuel Production

● Getting Policies Right for the Integration of Water and Energy

● Multipurpose water uses of hydropower reservoirs

● Water for energy: climate change impacts

THEME 2.3: Water and cities

The world's population is rapidly urbanizing, increasing demand for sustainable water solutions for cities and significantly increasing risks and vulnerability to water related disasters. Better management of urban water services will reduce poverty in cities, while better protection of water sources will make cities more resilient. Deployment of new technologies, for example water re-use, wastewater treatment technologies and desalination has potential to make future cities more water and energy efficient, as well as cleaner environments. Cities of the future will need integrated urban water management including not only water supply, wastewater and storm water but also the management of solid waste, housing and transportation.

THEME 3.1: Green growth, water stewardship and industry

Water is integral to the environmental and social stability that underpin the global economy and efforts to reduce poverty. Yet, sustainable and equitable management of water is too often overlooked, and its benefits underestimated in economic development decisions. Sustainable growth can be encouraged by bridging the economic, social and environmental dimensions of water, and reinforcing them through new and innovative technologies and infrastructures. Moreover, business, industries, governments, NGOs, communities and others can all become part of solving shared water challenges, for example by joining efforts to reduce industrial water footprints, thus reducing costs and improving efficiency. Just as there are different cultures there will be different green economies within both developing and industrialized countries. Green economies will feature both new and old technologies and tools.

Tentative issues:

● Green infrastructure and balancing natural and built infrastructure in infrastructure portfolios

● Public-private partnerships (PPPs) for green business and green water management

● Standardization of water accounting methods, availability and accessibility of water accounting tools (e.g. maps and databases) and capacity building for water accounting

● Knowledge sharing through case studies at local, national and transboundary levels

● Incentivizing water use efficiency, minimized waste, and green business (e.g. through water accounting, waste charges, standards, water pricing, and water rights trading, as well as sectoral approaches (that may include well-designed and monitored subsidies))

● Regulatory frameworks for sustainable water management

● The role of technology in water accounting and water efficiency

● Integrated water resources management (IWRM)

● Closing the water loop through integrated urban water management (IUWM)

● Payment for ecosystem services (PES)

● Communication, awareness raising, education, participation, empowerment and ownership

THEME 3.2: Managing and Restoring Ecosystems for Water Services and Biodiversity

The water cycle is at the center of our ecological support system for life and offers critical benefits from water storage, filtration and risk reduction. Degrading ecosystems damage the delivery of water services to people. There are vital opportunities to improve both the sustainability of water services and the conservation of biodiversity by restoring watersheds, wetlands or rivers, as well as by using nature in engineering designs. Their implementation could be enhanced by incorporating the socio- economic value of natural systems and ecological flow needs into water resources management. New accounting for natural capital in cost-benefit assessments also has potential to help create explicit criteria for ecosystems health in the design of water investments.

Tentative issues:

- Ecosystem approach to water resource management
- Maintaining environmental flows and the pulse of aquatic ecosystems
- Integrated watershed management enhancing biodiversity
- Application of traditional knowledge for freshwater ecosystem management
- Innovative restoration techniques for degraded ecosystems
- Algal bloom management strategies and techniques
- Eco-friendly engineering solutions for restoration
- Rehabilitate aquatic ecosystems to restore ecosystem functions
- Improving the quality of water resources and freshwater ecosystem health
- Monitoring aquatic ecosystem to identify trends and assessing progress of restoration

THEME 3.3: Ensuring Water Quality from Ridge to Reef

Poor raw water quality has major environmental and economic costs that are felt from upland watersheds to coastal zones. Better management of water quality and of the ecosystems that regulate the quality, quantity and timing of water flows have benefits for both development and ecosystems. How can implementation of these solutions be accelerated and mainstreamed in investments for water resources development and management?

THEME 3.4: SMART implementation of IWRM

Reconciling water uses among competing social and ecological needs is a political as well as technical process. The same water is often claimed by different users, but water is the venue that connects these demands and can encourage new and

productive political – technical dialogues to meet them. When we consider the multiple uses of water, be it for food and energy, industry and environment, or inland navigation and recreation, an integrated management approach is necessary to balance supply and demand. But, how is achieving that balance implemented in practice, while safeguarding the sustainability of surface and groundwater sources? How can we address the backlogs in its implementation?

Tentative issues:

- Modelling and monitoring approaches for water management
- Smart Water Distribution System
- Emerging Water Issues - Current and Future Trends
- Smart Water Loop Design and Management Plan
- Smart Water Grid Standardization
- ICT for Smart Water Management
- Advanced Metering Infrastructure for Water Management
- Integrated management of surface and ground waters
- New institutional, legal and policy paradigms
- Community participation – bottom up planning
- Economic instruments for market based mechanisms for improving water quantity and quality
- Managing environmental assets as part of the IWRM approaches
- Capacity building using ICTs – also for monitoring and warning mechanisms

THEME 4.1: Economics and Financing for innovative investments

Greater recognition is needed of the contribution of investment in water infrastructure and water resources development to creating platforms for growth and for social stability that is essential for increasing the flow of financial capital. Vendible aspects of water investment help foster solid capital markets essential for economic development. Investment in water supply and services saves millions in costs related to poor public health, low productivity and environmental damage in the long run. This message needs to be transmitted to financial decision-makers around the globe to improve financial flows and ensure financial feasibility and viability for improvements. Investment needs, for both hard measures and soft measures, are large. The needs will not be solved by ODA only. Efficient use of existing financial resources for water would significantly help us achieve our water-related goals and ease barriers to access to resources that already exist. Innovative financing mechanisms and private and public partnership are also essential.

THEME 4.2: Effective Governance: Enhanced political decisions, stakeholder participation and technical information

The heart of water governance is the integration of political and technical institutions and dialogs. In order for governance to make a difference to realities on the ground, it must be informed by a robust science, coupled with legitimate political decision-making bodies and effective multi-stakeholder partnerships, at scale. Science and policy must therefore work more closely together for better governance to emerge as technical and financial expertise does not alone make for effective water policy and services management. Early involvement of good representation of critical stakeholders' interests and facilitation of CSO participation will be necessary to improve the decision- making process. This may include operationalizing River Basin Organizations, transparent and inclusive shared visioning processes for river basins with local authorities, industry, NGOs, civil society organizations, government. Better sharing of information systems and knowledge, public access databases and new technologies that facilitate that interface.

Tentative issues:

- Stakeholder engagement for effective water governance
- Governance and performance of water and sanitation services
- Basin governance
- Integrity and Transparency
- Indicators/Principles on water governance to guide decision-makers' action

THEME 4.3: Cooperation for reducing conflict and improving transboundary water management

Water unites far more than it divides. Half of the world's population lives in transboundary river basins. Indeed, water is a potential catalyst for cooperation and peace from local to international levels. The conditions for sound and sustainable cooperation must use numerous means that include new forms of consensus building such as assisted negotiations, mediation and multi stakeholder participatory processes, legal instruments and frameworks at national and international levels, joint management practices and institutions and capacity building. Inter-governmental agreements at the global level, such as the UN Watercourses Convention and the UNECE Water Convention, may have an increasing role in facilitating more effective water cooperation in future, provided that they respond to the development needs of local communities and contribute significantly to more equitable and sustainable outcomes. Water is an important venue for second track diplomacy as it plays important roles in allowing dialogs among conflicting parties

Tentative issues:

● Effect of climate change on transboundary waters and their joint management

● Sustainable (economic) development of upper regions in transboundary basins (trade-off interests between upstream and downstream countries and between key sectors)

● [Scientific/Institutional] review of on-going transboundary cooperation/conflict issues and of the benefits of transboundary water cooperation

● Enlargement of the interested parties' involvement from riparian countries in transboundary basins

● Searching for more opportunities for cooperation in 'other' issues: water quality, ecosystems, fisheries, economic development etc.

● Monitoring and Information Sharing: Achievements, limitations and future directions

● Multi-national "Early Warning System" of chemical pollution or radioactive contamination in transboundary waters

● Linking international aid or foreign investment with transboundary water cooperation

● Comparative analysis of current joint management systems with respect to

geographical/political/economic conditions

● Role of international organizations and peer countries in the conflict resolution and greater cooperation

● The role of global and other legal and institutional frameworks for promoting

transboundary cooperation on the ground

THEME 4.4: Water cultures, justice and equity

Water has brought civilizations livelihood, sustenance and well-being. Water carries the collective memory of humanity. Water has been instrumental in our past development. It is equally the key to our future development as well to maintaining our life support on Earth, our home.Water debates often mirror debates of social ethics. For example, water as a common good, water and human dignity, water as facilitator of well-being, rights and responsibilities to access, water and social justice, wealth generation roles of water. In most major faith traditions, water has been a symbol of reconciliation, healing and regeneration. Water decisions have ethical dimensions. Knowledge embedded in this collective experience of humanity and gathered over generations can therefore provide important lessons for the future. Moreover, it is important to consider how different genders and different age groups each cultivate different relationships with water

Tentative issues:

● Recognize the regional characteristics of water

● Knowledge and experience related to water as a public good

● Capacity building for citizens

● Water and women

THEME 4.5: Enhancing Education and Capacity Building

Education and training is essential to establish effective water resources management appropriate to local and regional needs. Developing and developed countries need enhanced capacity building. Education and training must be more than a one-way flow of rich to the poor. It must also include poor to poor, poor to rich as well. All require a demand/needs-based capacity development programs that enables and empowers civil society, community organizations and stakeholders to fulfill their roles in water governance and management.

Tentative issues:

● Water security for small nations

● Water and strategic defense policies

● Balance between technological driven economic growth and environmental conservation

● Global inequality of quality of life and resources use

● Implication of water security on economic and social stability

● Role of education in securing water resources

● Water conflict mitigation to improve international trust and cooperation

● Global consequences of climate changes, particularly in science and engineering

● Green engineering and appropriate education tool

● Tools and technology for desalination, water reuse, and water reclamation

● Securing both water quality and quantity for water scarce/stress countries

● Technologies for water quality monitoring pertaining to water security

● Water Education for the next generation and teachers

● Training Program for underdeveloped countries on water resources and supply system

● Appropriate technology and education for sanitary water

● International twinning partnership between water operators for better drinking water quality

During the consultations on February 27-28, 2014, the International Forum Committee agreed on the preparatory process coordinators for Thematic Sessions by working groups.

Within the framework of the Thematic Process, a new special program – Creation of Action Monitoring System was also initiated. It should be established under coordination of the Thematic Process and applied after the 7th Forum to assess all follow-up actions and projects – in order to more impartially form programs of further World Water Fora.

Unfortunately, since all the consultations were held concurrently, representatives from Central Asia did not manage to monitor the results of the consultations on two other processes, namely – Political and Science. However, in the near future, the Forum Organizational Committee promised to post all materials on the Forum website: www.worldwaterforum7.org.

V.I.Sokolov

UZBEKISTAN: NATIONAL CONSULTATIONS ON WATER RESOURCES ARE ON THE UNITED NATIONS POST-2015 DEVELOPMENT AGENDA

The National Water Partnership of Uzbekistan held a roundtable with the participation of key stakeholders in the Training Center of the Interstate Commission for Water Coordination (partner of GWP CACENA) in Tashkent on March 12, 2014.

The roundtable participants were welcomed by Mr. Ravshan Mamutov, Deputy Head of the Chief Water Management Department of the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan. In his speech, he noted that Uzbekistan to a considerable degree relies on its neighbors in the matter of required water supply from surface water sources, as only 15% of all the water resources used in the country form in its territory. This fact highlights the risks in ensuring water for future generations in Uzbekistan. Other challenges in assured access to water in Uzbekistan are as follows:

- imperfect water resources management from the institutional point of view and lack of long-range planning
- lack of coordinated legal framework for the water resources management at the international (transboundary) and national levels
- imperfect information support in the water sector
- aging of the water management infrastructure and, consequently, inefficient water use (particularly in the irrigated agriculture accounting for roughly 90% of the total water consumption).

Deputy Director of the Scientific Information Center of the Interstate Commission for Water Coordination (SIC ICWC), Regional Director of GWP CACENA, Mr. V.I. Sokolov informed the roundtable participants that the Uzbekistan Institute of Forecasting and Macroeconomic Research was developing a concept of the Vision "Uzbekistan-2030", the purpose of which is to suggest steps for propelling Uzbekistan to the level of industrially advanced countries and increase in per-capita income by 2030. In the source of this forward-looking work, the following focus areas of the Vision are particularly significant for the water sector:

- formation of institutional background for the development of competitive environment as a key factor for improving the performance of economy and accelerating structural reforms (in the agricultural and water sectors as well)
- energetic and ecological sustainability: guidelines for the transition to resource-efficient growth model
- long-range social sustainability: guidelines for the reformation of the social policy system
- spatial aspects of the building of regions' industrial capacity from the standpoint of provision these regions with water resources.

Prof. V.A. Dukhovny, Director of SIC ICWC, turned to the roundtable participants for voicing their opinions and giving recommendations for the mainstreaming of promising elaborations for efficient development of the Uzbekistan water sector within the scope of the works started under the Vision "Uzbekistan-2030". The guideline for improving sustainable development should be based on a broad program for controlling unproductive water losses at different levels of the water management and use system. The main task is to establish a system of legal liability of all system's stakeholders.

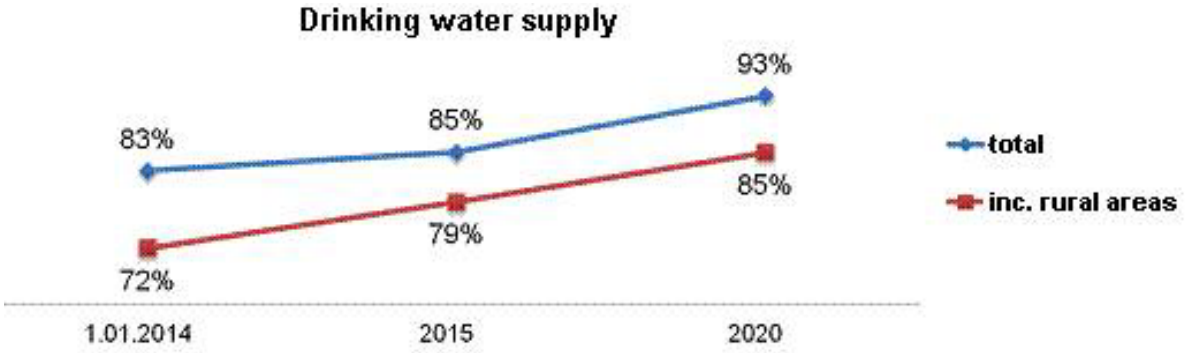
The Deputy Chairman of the Board of the Uzbekistan Ecology Movement Mr. Saidrasul Sanginov noted that serious issues are associated with the Aral Sea and its vicinity problems. "Today, s challenging range of not only environmental, but also social and economic as well as demographic problems with global consequences have arisen in the Priaralie region", – spoke the President of the Republic of Uzbekistan at a United Nations Plenary Meeting (New-York, 20 September 2010).

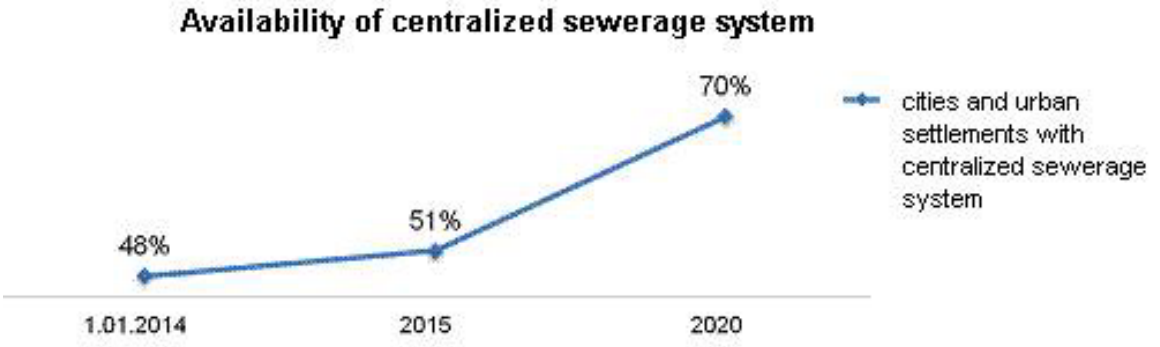
The Government of Uzbekistan believes that the states located ion the basins of transboundary rivers can and must contribute to regional cooperation in the water sector. Such interaction is a key to the development and reaching mutually acceptable agreements on sustainable use of transboundary water resources. Adhering to rules of international law, Uzbekistan is one of the three Central Asian countries being parties to United Nations international conventions that govern transboundary river issues.

The Head of the Department of Regional Water Supply System of the Uzbek Agency "Uzkommunkhizmat" Mr. T. Khaydarov represented the Program for Comprehensive Development and Modernization of Drinking Water Supply and Sewerage Systems in the Republic of Uzbekistan for the period until 2020. The Program includes:

- prediction and review of resources separately for each drinking water source with a view of ensuring reliable and regular water supply
- wide coverage of rural settlements by water supply systems, including residential districts being constructed according to standard plans
- formation and implementation of projects in the field of sanitation, first of all in the cities where water supply systems have already been reconstructed
- completion of the installation of water use metering devices; implementation of automated consumer feedback system
- further improvement of the legal and institutional sector management systems; optimization of the organizational structure of local water supply and sewerage enterprises
- development of the Concept of Comprehensive Development and Modernization of Drinking Water Supply and Sewerage Systems by 2035.

Expected efficiency of the Program implementation is shown in the diagrams below:





Representatives of the Uzbek Hydrometeorological Data Research Institute under State Center of Hydrometeorological Service "Uzgidromet" Mr. B. Tsarev and Ms. N. Karandaeva introduced the following guidelines for the development of hydrometeorological service to the roundtable participants:

- development and improvement of the national hydrometeorological survey system

- hydrometeorological support to branches of economy, population, and armed forces of the Republic of Uzbekistan
- formation and establishment of the national hydrometeorological fund of data, national fund of data on environmental pollution, and state recording of surface waters
- coordination of all the works for the creation and maintaining state water-resources inventory
- carrying out of regular monitoring over pollution of atmospheric air, soil, surface water, and occurrence and development of natural hydrometeorological phenomena
- performance of research works for improving short-range and long-range forecast of weather, water availability, and climate change.

In his report, the Deputy Director of the Republican Association "Uzvodremecology" Mr. A.A. Djalalov highlighted the importance of such areas of focus for Uzbekistan water specialists as public awareness and improving water culture among the population as well as enhancing sharing of knowledge and best practice in the sphere of water resources management.

Representatives of science and education, Prof. Sh.Kh. Rakhimov, Director of the Research Institute of Irrigation and Water Problems under the Tashkent Institute of Irrigation and Melioration, and Prof. A.T. Salokhiddinov, Head of a Chair of the Tashkent Institute of Irrigation and Melioration, mentioned of the significance of training of skilled personnel for the republican water industry and further building of their scientific capacity. The roundtable participants were informed that the Cabinet of Ministers had approved the issue of a new academic and research "Irrigation and Reclamation" which was to become quarterly issued from 2014. To eradicate water illiteracy a special program and new standards are needed for rating specialist skill.

Representatives of non-government organizations and mass media Mr. I.Kh. Domulajonov, Non-Governmental & Non-Profit Organization "For Clean Fergana", Ms. N.V. Shulepina, Chief Editor of the Web Portal SREDA.UZ, T.A. Sultanov, Director of the Regional Environmental Center for Central Asia (CAREC) Office in Uzbekistan. They made a note of such issues as extended access to reliable information and communication means, which are supposed to be addressed within long-range works in the water sector. Information awareness will contribute to more effective of water problems as well as raising education level.

The roundtable participants expressed their gratitude to GWP CACENA for the organization of that event and approved the idea to regularly hold such events in future. Such a platform for consultations is very significant in the Vision "Uzbekistan-2030" development process.

V.I.Sokolov

SECOND WORKING SEMINAR "RIVER BASIN COMMISSIONS AND OTHER JOINT BODIES FOR TRANSBOUNDARY WATER COOPERATION: TECHNICAL ASPECTS"

Second working seminar "River Basin Commissions and Other Joint Bodies for Transboundary Water Cooperation: Technical Aspects" within the framework of the UNECE Water Convention was held in Geneva on 9-10 April 2014. The seminar was devoted to specific fields and technical aspects of the cooperation within the scope of joint bodies, such as cooperation for conservation and restoration of ecosystems, water infrastructure, and financing, and is aimed at achieving the following goals:

- Introducing and discussing the experience of joint bodies in specific technical issues of transboundary water cooperation in the whole world with the view of identifying problems, exchange of best practices, and cross training.
- Showing the value of the joint cooperation in resolution of common problems as well as advantage of transboundary cooperation.
- Discussing how joint bodies' work can go on within the framework of a new plan of Convention actions (2016-2018) and, for this purpose, determining appropriate deficiencies and requirements.
- Enhance the awareness of how the global legal frameworks, of which Convention on Transboundary Water and 1997 United Nations Convention on Watercourses, their compatibility and complementarity, as well as the International Law Commission draft articles on the right of transboundary water-bearing horizons of 2008 are associated with the activities of joint bodies and can facilitate their work.

In the introductory session, Ms. Haide Jekel, Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, Germany, Mr. Marko Kainer, Director, UNECE Environment Division, and Dr. Lea Kauppi, Finnish Institute for Environment (SYKE) took the floor. The report "Lessons learnt in the course of providing support in transboundary cooperation in various regions of the world financed by the Global Environment Fund" was delivered by Ms. Astrid Hillers, GEF Senior Environmental Specialist. Among the key lessons learnt in the course of the implementation of GEF projects she highlighted the necessity of more active promotion of coordinated surface and ground water management, involvement of the private sector and civil society, carrying out of works down through the chain from the producer to users, greater attention to innovations and creation of knowledge chains.

Session 1 was devoted to the problems of environmental protection within the transboundary water cooperation. Reports on the works on Ohrid Lake between Albania and Macedonia, environmental aspects in the agreement for cooperation in conservation and sustainable development of the Dniester river basin between Ukraine

and Moldova, transboundary environmental problems and their solution in the Volta river basin, establishment of cooperation aimed at reducing the River Plate pollution level, and organization of space for nature in the developed river basin, viz. General Plan of Fish Migration and Biotope Atlas for the Rhine river, were presented. In the course of the discussions, they mentioned the importance of nature protection despite the difficulties with due regard for the ecological factors in joint bodies' activities where generally sectors' interests prevail. The participants agreed that in order to give due consideration to the ecosystem when managing transboundary water resources it is necessary to take nationwide measures, develop joint programs, and strengthen the legal framework.

Session 2 examined the cooperation among riparian countries in infrastructure development and use. The experience of the regional program for the Senegal river basin infrastructure development in benefiting from joint use. Mr. Tilek Isabekov, Head of the Kyrgyz part of the Chu-Talass Commission, informed the participants about the transboundary cooperation in the use and maintenance of water management infrastructure in the Chu and Talass river basins. At present, the parties are discussing the possibility to expand the Commission's functions with the view of including as well water quality issues in the scope of joint consideration.

Jabbar Vatanfada told about the experience of cooperation between Iran and Turkmenistan in the field of joint development of the infrastructure in transboundary rivers. Of which, he threw light on the construction and operation stages of the Dustlik dam on the Kharirud river between Iran and Turkmenistan. The speaker also declared the intention to involve Afghanistan in the cooperation process if the latter shows such an interest.

The interesting report "Albufeira Convention: cooperation in infrastructure development and balancing of water demand in the transboundary context" was delivered by a representative of the Ministry of Agriculture, Food, and Environment of Spain. The main objective of the agreement was to ensure secured regime of runoff. The speaker noted that in spite of rising demand for electricity, cutback in hydropower production in future by 2027 with the aim of providing proper runoff regime was predicted.

Session 3 dealt with the financing of transboundary cooperation transboundary cooperation. The speakers, representatives of GIZ and Ministry for the Environment of Germany, made a synopsis of the existing financing mechanisms of joint bodies. There are three financing sources: (1) contributions by member states, which can be made in the form of money transfer to the budget of a joint body or allocations in kind (organization of meetings in its territory, allocation of buildings, assignment of workers, etc.; (2) external contributions (grants, technical assistance, etc.); (3) other sources (taxes, payment for services). The Mekong Commission's budget comes to 20 million US dollars, 90% of which account for the aids of sponsors. Currently the Mekong Commission carried out restructuring works with the view of budget reduction by up to 5-6 million US dollars and transition to self-sufficiency by 2030. The Nile Commission's budget is even bigger, 55.7 million US dollars, and is composed of the budget for every Commission body to function and the budget for the

implementation of technical projects.

Further, the participants were proposed to exchange views within small groups on the sources of financing the activities of joint bodies in their transboundary basins and key drivers for stable financing. Among the major factors, political will, selection of innovative mechanisms of involvement of the private sector, strengthening of economic integration in the region, as well as inclusion of the "regional cooperation" component in all national water projects.

Session 4 considered the problem of coordination of different types of water use. A report on preliminary assessment of the relationship between water, food, energy, and ecosystems in the Alazani/Ganykh basins within the Water Convention was presented by a representative of the Ministry of Environmental Protection and Natural Resources of Georgia. Also, the experience of the Costa Rica and Panama Bilateral Commission for Integrated Management of the Siksaola River Basin and experience of the International Commission for the Protection of the Danube River in the development of Guidelines for the coordination of different types of water use: navigation and environmental protection, sustainable hydropower industry development.

Session 5 was held in the form of a series of roundtables where specific transboundary water cooperation tools and approaches were considered. Among these are the capacity building tools applied within the Nile River Basin Initiative, demonstration of the experience of small basin councils in the cooperation in small transboundary rivers of the Central Asian region (CAREC), work of the Group for Sub-Basin Cooperation between five countries of the Tisa river, beginning of the GEF Project for Global Assessment of Transboundary River Basin Management (TWAP), development of the Chad Lake Water Charter as a means for ensuring sub-regional integration and security, example of integrated water resources management in the Kongo river basin, approaches to the strategy of adaptation to climate change in the Rhine and Mosel-Saar river basins, options for the identification of the sphere of bilateral agreements between Peru and Ecuador.

At Session 6, the issues of rising awareness and establishing contacts with various stakeholders of joint bodies' activities.

At Session 7 dealing with transboundary groundwater management issues, the report "Sub-Tashkent Transboundary Water-Bearing Horizon" was presented by Mr. Timur Mavlyanov, Head of the Department of the State Committee for Geology and Mineral Resources of the Republic of Uzbekistan. Given the drop of artesian water level in the Sub-Tashkent basin by 20-200 m and over, the speaker noted of the need for thorough study of groundwater.

At the final Session, the draft Principles of Efficient Work of Joint Bodies prepared by the Water Convention Secretariat taking into account the experience of joint commissions all over the world. This draft document will be sent to the participants for their comments and recommendations. A revised version will be submitted for consideration and approval by the Working Group for IWRM and then, possibly, to the Meeting of Parties for adoption in November 2015.

JOINT WORKSHOP ON INTEGRATED WATER RESOURCES MANAGEMENT IN CENTRAL ASIA

Workshop on Integrated Water Resources Management in Central Asia was hold in Tashkent on April 18-19, 2014. Organizers of the workshop were Scientific Information Center of ICWC, Executive Committee of IFAS, Regional Centre for Preventive Diplomacy for Central Asia, UNDP and Ministry of Agriculture and Water Resources in the Republic of Uzbekistan.

The workshop was organized as 4 sessions.

The session "Understanding and main principles of IWRM. International practice and tendencies" considered issues regarding international practice and existing IWRM tendencies in the world. Joop de Schutter, UNESCO-IHE representative, familiarized the participants with the development and practical application of IWRM concept in activities of joint bodies for the Nile, Mekong, and Danube, whose work experience can be useful in strengthening existing regional institutes in Central Asia. Representatives from the Global Water Partnership told about available IWRM mechanisms and tools, as well as specific measures carried out by GWP in Central Asia and the Caucasus to move forward the IWRM principles. The audience was also familiarized with the main IWRM principles in international law and issues of IWRM sustainable development.

The session "IWRM at the regional level and support of international organizations in this matter" was devoted to experience of implementing international projects and programs on IWRM in the region in general and in the countries of Central Asia. Particularly, results of the projects implemented with the support of Switzerland, Germany and UNDP were presented. The speakers mentioned that those projects helped to adapt the IWRM principles to local specifics and conditions, and demonstrated that proper implementation of IWRM significantly improves water use efficiency and equitability for all categories of water users.

During the session "IWRM principles implementation in Central Asian countries", representatives from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan familiarized the audience with achievements and challenges of IWRM in their countries. It was noted that since certain experience had been already gained in implementation of IWRM in every CA country, it was important to continuously exchange information on achievements and lessons learnt during the process of reformation.

At the session "IWRM application prospects in Central Asia", SIC ICWC Director Prof. Dukhovny V.A., based on the analysis of IWRM experience in Central Asia, outlined the main steps towards, especially in part of improving management and governance of water supply and demand and capacity building. Of which, he underlined that any implementation of IWRM should be comprehensive and integral, i.e. take into account relationships and interdependence of various water hierarchy levels and associated sectors.

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