Interstate Coordination Water Commission of Central Asia

BULLETIN No. 18

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Content

INFORMATION ABOUT THE WORLD BANK VICE PRESIDENT MR. YOHANESS LYNN'S VISIT TO THE INTERNATIONAL FUND FOR THE ARAL SEA SAVING EXECUTIVE COMMITTEE (EC IFAS)

On September 19, 1998 the World Bank Vice President J. Lynn visited EC IFAS and met with its leader ship. EC IFAS Chairman R.A. Giniyatullin informed Mr. Lynn about EC activity in whole and concretely on preparation of GEF Project's fulfilment. Mr. Lynn congratulated Mr. R.A. Giniyatullin in relation with the GEF Project approval and its coming into the power since Septembers 7, 1998. Mr. Lynn was satisfied with fulfiled work and said that all countries' governments support of the GEF programs fulfilment assures that GEF program will play role of initiator and organizer of water resources and environment management radical improvement. Mr. R.A. Giniyatullin answered Mr. Lynn's questions. The meeting attendees: The World Bank Mission in Uzbekistan Deputy Chief Mr. Werner Roider, expert A. Krutov, EC IFAS Technical Director U. Buranov, GEF Agency Technical Director V. Dukhovny.

PROCEEDING № 20
Of the Interstate Coordination Water Comission' s meeting (ICWC) of the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tadjikistan, Turkmenistan, and Republic of Uzbekistan.

August 21-22 1998 . Cholpon-Ata

***Attendees ICWC* Members:**

A. Ryabtsev.	The First Deputy Chairman of the State Commitee of the Water Resources of the Republic of Kazakhstan.
A. Kostyuk	The First Deputy General Director of the Water Department of the Ministry of Agriculture and Water Management of the Kyrgyz Republic.
M. Nazriyev	The First Deputy Minister of Reclmation and Water Management of the Republic of Tajikistan.
T. Altiyev.	Deputy minister of Agriculture and Water Management of the Turkmenistan.
A. Jalalov	The First Deputy Minister of Agriculture and water management of the Republic of Uzbekistan.

***ICWC* Organizations**

I. I. Kalandarov	BWO «Amudarya» Head
O. Lysenko	BWO «Amudarya» Water Resources Department Head.
M. Khamidov	BWO «Syrdarya» Head.
Y. Tolstunov	BWO «Syrdarya» Deputy Head
P. Umarov	SIC ICWC Deputy Director.
G. Negmatov	ICWC Secretariat Head.

Invited:

R. Apasov	Office of the Government of Kyrgyz Republic
U. Buranov	EC FAS Technic Director
A. Kamaletdinov	Head of the Science and Technical Department of Minvodkhoz of Tajikistan
K. Bejishekeyev	Deputy General Director of the Water Department of the Ministry of Agriculture and Water Management of the Kyrgyz Republic.
l. Kiyashkina	SIC ICWC Kyrgyz Branch Director.
D. Goshayev	Head of the Operation Department of the Ministry of Agriculture and Water Management of Turkmenistan.
B. Yusupov	Head of the Department of the Water Resources Balance of the Ministry of Agriculture and Water Management of the Republic of Uzbekistan.
U. Ruziyev.	SIC ICWC, expert.

Chairman: A. Kostyuk - the first Deputy General Director of the Water Department of the Ministry of Agriculture and Water Management of the Kyrgyz Republic

Agenda

1. About the growing period irrigation of the current year and additional measures on its successful completion.
2. About technical state of interstate water structures, objects and necessary measures in relation with flood discharges.
3. Consideration of the project "Agreements between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan and the Republic of Uzbekistan about information exchange for carrying out database of the Water Resources Complex Use and Protection in the Aral Sea Basin. (DB WRCUP ASB)
4. Consideration of the Draft Agreement between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan and the Republic of Uzbekistan «about principles of share participation in compensation on exploitation and technical maintenance of in water structures», offered by Kyrgyz Republic.

(it is introduced in addition according the decision of Governments Heads Council.)

5. About water reservoirs Naryn-Syrdarya cascade operation regime on the non-growing period of 1998-1999

(it is introduced in addition by BWO «Syrdarya»)

6. About the next 21th ICWC meeting's agenda.

After the meeting participants' presentations have been heard and opinions exchange have been executed, ICWC members decided:

ON THE FIRST QUESTION

1. To approve actions BWO «Amydarya» and BWO «Syrdarya» measures on the realization of water intake limits and providing water reservoirs cascade operation adopted regime on Amydarya and Syrdarya during the passed growing period of 1998.
2. To notice that timely fulfilment of mutual obligations by Uzbekistan and Tajikistan on the water storage in Kairakum water reservoir allowed to supply regularly with water Uzbekistan and Kazakhstan irrigated lands located downstrem.
3. To approve water reservoirs cascade operation regimes on Amydarya and Syrdarya on the final period of the growing season of 1998.
4. ICWC members should constantly control realization of intergovernmental agreements on the hydro power station (HPS) Naryn-Syrdarya cascade, promote mutual deliveries and payments for electric power, gas and coal between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, and the Republic of Uzbekistan corresponding to the pointed agreements; to support BWO «Syrdarya» in water reservoirs cascade management.
5. To recommend ICWC states - members to take appropriate organizational measures on the water resources efficient use and to carry out lands leaching during autumn-winter period of 1998, using high humidity of the present year.

ON THE SECOND QUESTION

1. To notice that as the result of increased and durable flood discharges many hydrotechnical structures demand immediate repair-reconstruction works. BWO «Amydarya» and BWO «Syrdarya» should provide entire workability of interstate systems and structures by February 1999.

2. After the current growing period completion BWO «Amydarya» and BWO «Syrdarya», attracting design, scientific research organizations' experts, should inspect thoroughly hydro structures and define necessary volume of the reconstruction works. ICWC members to support BWO's in order to find financial means for fulfillment of the reconstruction works and structures repair.

3. On behalf of ICWC to apply to EC IFAS and Governments of republics concerned in order to direct republics share fees partially for hydro- structures reconstruction..

4. ICWC Water Organizations should give an efficient assistance to BWO s in order to fulfill indicated works.

ON THE THIRD QUESTION

1. To take into the consideration SIC ICWC information on the draft of the Agreement "About information exchange...". ICWC members should coordinate draft Agreement with ministries concerned according to internal procedures and submit it to ICWC consideration..

ON PROCEEDING:

ON FOURTH QUESTION

1. To take into consideration SIC ICWC information on the draft Agreement between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan and the Republic of Uzbekistan «About principles of the share participation on compensation of operation and maintenance of interstate water structures,» offered by the Kyrgyz Republic.

Water management bodies of the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan and the Republic of Uzbekistan should consider draft Agreement proposed and submit their comments to ECIFAS by September 1, 1998.

ON THE FIFTH QUESTION

1. To bring in the offered by BWO «Syrdarya» Naryn-Syrdarya cascade operation regime on the non-growing period of 1998-1999 for discussion and coordination on the working meeting of representatives of Syrdarya river basin states' fuel-power and water-related branches.

ON THE SIXTH QUESTION

1. The Next ICWC meeting should be held in October 1998 in the Republic of Tajikistan.

The next ICWC 21-st meeting's Agenda

1. Results of the growing period of 1998
(responsible: BWO «Amudarya» and BWO «Syrdarya»).
2. Consideration and discussion of water reservoirs' cascade operation regime and water-intake limites for Amudarya and Syrdarya rivers' basins on the non-growing period of 1998-1999 y.
(responsible: BWO «Amudarya» and BWO «Syrdarya»).
3. Information about progress in European Union ВУФМАС program "Estimation of the water consumption, irrigated lands productivity and possibility of land use of the improvement»
4. Information about the water management specialists vocantional training in Central Àsian states.
(responsible SÍC ICWC)
5. About the next 22-nd ICWC meeting's agenda.

For the Republic of Kazakhstan	A. RYABTSEV
For the Kyrgyz Republic	A. KOSTYUK
For the Republic of Tajikistan	M. NAZRIYEV
For the Turkmenistan	T. ALTIYEV
For the Republic of Uzbekistan	A. JALALOV

ABOUT THE GROWING PERIOD IRRIGATION OF 1998 AND ADDITIONAL MEASURES ON ITS SUCCESSFUL COMPLETION (BWO AMUDARYA»)[1]

On May 15, 1998 at the ICWC meeting in Shymkent corrected water intake limits and water reservoirs cascade regime on the growing period in the Amudarya river basin were approved and also it was charged to take additional measures on its successful conducting; in this direction BWO «Amydarya» together with ICWC state-members did fulfill certain work in order to achieve positive results on the present growing period's successful conducting.

Late Spring, high precipitation obviously effected in a whole water management and agricultural situation in the basin. Unfavourable weather conditions did not allow to the majority of the basin water consumers to use intake limits on the non-growing period, so all over the Republic of Tajikistan saving are 129,3 mln cu. m, over Turkmenistan 254,6 mln cu. m and over the Republic of the Uzbekistan - 544,3 mln cu. M, including the lower reaches: over the Republic of Karakalpakstan -234,3 mln cu. m, over Khoresm - 310 mln cu.m. In this relation decision was taken jontly with ICWC members to permit each state to use under necessity within the non-growing period limits saved during the non-growing period. However, they promised to keep themselves within the fixed limits on the water year.

Actual water supply by the gauging station Kerky upstream Karakum canal for the current period was 139 % of norm (33,0 cu. km). Especially high water supply was in April - 153 %, in May - 160 %, in June river flow reduced and was 120 % of norm, then in July flow increased and was 137 % of norm. Such high water supply was a result of high precipitation and high temperatures in the region, which caused intensive forming and increasing inflow of the water resources into basin. So after «dry period» cycle the river channel was absolutely not formed and silted and flood discharges passing in the middle and lower reaches of Amudarya river became complicated. Hence BWO «Amudarya» and ICWC members took preventive measures on preparation of the river channel for water passing. However during flood each state was subjected to damage. Water organizations had also financial losses, because of extra and repairs works fulfilled.

Certainly, all above mentioned factors have brought definite changes in actual activity within the current growing period, as well as in water intakes regime and in Amydarya water reservoirs cascade operation regimes. For instance, in order to unload river channel during time of the water situation stabilization and eliminate flood threat decision was made excessive water release over irrigation systems of the Republic of Uzbekistan and Turkmenistan in the lower reaches of river, which were fixed as one-time emergency releases. Totally BWOs emergency releases were equal to 1457 mln cu m, including: over the the Republic of Karakalpakstan - 556,8 mln cu m, over Khorezm veloyat - 565,7 mln cu m, over Dashkhovuz veloyat - 334,5 mln cu m. At 01.08.98 the water volume of Tuyamuyun water reservoir was equal to 6198 mln cu m, last year on this date it was 2123 mln cu m.

[1] Information about the first question ICWC meeting s agenda.

The total release from the reservoir was equal to 29,9 cu km, including into the river 27,2 cu km; besides, releases through Takhiatash dam were equal to 13,2 cu km of water. In Nurek water reservoir water storage is ahead of fixed schedule. The same situation can be seen in relation with water storage in on-system water reservoirs of river basin, so on August 1 1998 3947 mln cu m were stored, last year on this date it was 2841,6 mln cu m.

For four months of the current vegetation period under the fixed limit 26155,2 mln cu m, 24566,6 mln cu m was actually used or limit was used on 93,9 % including.

1. The republic of Uzbekistan used limit on 100,5 %, under limit 11215,4 mln cu m actually 11276,1 mln cu m was used.
2. Turkmenistan used the fixed limit on 94,1 %, under limit 10858,5 mln cu m actually usage to 10222,5 mln cu m.
3. The republic of Tajikistan used the fixed limit on 75,2 %, under limit 4081,3 mln cu m, fact was 3068 mln cu m.

Over the river plots fixed limits use is following:

1. Upper reaches - 75,2 %.
2. Middle reaches - 97,5 %, including the Republic of Uzbekistan 97,5 %, Turkmenistan 97,5 %.
3. Lower reaches - 97,3 %, including the Republic of Uzbekistan 102,1 %, Turkmenistan 87,1 %.

Three main consumers provision in the lower reaches of the river for the current period is following:

1. Khorezm - 115,3 %.
2. Dashkhvus- 87,1 %.
3. The Republic of Karakalpakstan - 95,5 %.

The schedule of water supply for the Aral sea river deltas was fulfilled on 714 %, under the schedule 2000 mln cu m, actually 14299 mln cu m was supplied.

Foreseen water supply and created water storage in water reservoirs absolutely cover water consumers demands within the fixed limits on hydrological year and create favourable conditions for water supply to the Aral sea and river deltas.

According to UzHydromet forecast water supply on Kerky gauging station upstream Karakum canal in 3rd quarter of 1998 is expected within 109-127 % or in average 118 %. In August water supply on above pointed gauging station is expected within 95-107 % in average 101 %

Estimating actual and foreseen water situation in the river basin, BWO «Amy-darya» considers that by its dynamics and phase, the present humidity is close to actual humidity of 1992.

Considering Nurek hydrostructure operation actual regime it is important to notice that in spite of the water reservoir storage going ahead the fixed schedule, there is certain stability in its operation, which doesn't bring serious changes in operation regime of the river channel, on the contrary, Tuyamuyun reservoir operation actual regime influences greatly water situation in the lower reaches. Within the current year it was happened that Tuyamuyun reservoir leadership has taken decision not taking into account all sides interests, setting actual regime of the hydrostructure operation, they have created a serious tension in water release to the river channel.

Our offers on the stabilization of the total release from Tuyamuyun reservoir not always taken into consideration. At present time there is a positive direction of the total release to the river.

About additional measures on successful cfrringout of irrigation within the

vegetation period.

1. To follow strictly coordinated regimes of water intakes and water reservoirs cascade operation.
2. To provide continiuos water systems under extreme conditions.
3. To carry out coordinated water policy with account of foreseen situation.

In conclusion BWO «Amydarya» offers:

1. To approve BWO report on fixed water intake limits use for four months of vegetation period of 1998 (according to appendix).
2. To approve corrected regimes of water reservoirs ' cascade operation, submitted to ICWC members ' consideration.

Appendix

About timely and regular provision of all water consumers in accordance with fixed limits and water supply schedule over **«Amydarya»** river for period since 1.04.97 till 1.07.98 by stated plans (mln cu m)

State, province, water intake	For the non-growing period of 1997-1998 (January, February, March)			For the growing period of 1998 (April, May, June)			Total for I - half year of . 1998.			% of use
	limit	open limit	actual	limit	open limit	actual	limit	open limit	actual	
TURKMENISTAN. TOTAL	4001,2	3838,2	3583,6	7414,6	6783,6	6783,6	11415,8	10621,8	10367,2	97,6
Karakum canal	1808,4	1795	1680,5	3974,4	3776,6	3776,6	5782,8	5571,6	5457,1	97,9
lebap veloyat - TOTAL	801,8	764,8	695,6	1181,1	1215,5	1215,5	1982,9	1980,3	1911,1	96,5
Dashkhovus veloyat - TOTAL	1391	1278,4	1207,5	2259,1	1791,5	1791,5	3650,1	3069,9	2999	97,7
Besides that sanitary release	0	0	0	0	0	0	0	0	0	0,0
Energency-ecological release.			113,7	0	0	334,5	0	0	448,2	0,0
UZBEKISTAN - TOTAL	3699,3	4373,5	3830,5	7097,8	7201,2	7201,2	10797,1	11574,7	11031,7	95,3
Karshi canal	728,9	997,9	998,5	1353,9	1341,6	1341,6	2082,8	2339,5	2340,1	100,0
Amubuhara canal	924,1	885,2	885,9	1153,4	1251,2	1251,2	2077,5	2136,4	2137,1	100,0
Khorezm veloyat - TOTAL	1140	1083,9	773,9	1638,2	1678,7	1678,7	2778,2	2762,6	2452,6	88,8
Besides that sanitary release	98,4	97,1	15,3	0	0	0	98,4	97,1	15,3	15,7
Besides that energency-ecological release.						565,7	0	0	565,7	0,0
KARAKALPAKSTAN - TOTAl	906,3	1406,5	1172,2	2952,3	2929,7	2929,7	3858,6	4336,2	4101,9	94,6
Besides that sanitary release	173,4	265,1	265,1	0	0	0	173,4	265,1	202,6	76,4
Energency-ecological release.	0	0	227,6	0	0	356	0	0	583,6	0,0
The TOTAL from Amudarya	7700,5	8211,7	7414,1	14512,4	13984,8	13984,8	22212,9	22196,5	21398,9	96,4
Besides that:										

State, province, water intake	For the non-growing period of 1997-1998 (January, February, March)			For the growing period of 1998 (April, May, June)			Total for I - half year of . 1998.			% of use
	limit	open limit	actual	limit	open limit	actual	limit	open limit	actual	
Surkhndarya province	67,9	36,1	35,7	415,3	312,1	312,1	483,2	348,2	347,8	99,9
TAJIKISTAN - TOTAL	626,4	669,6	540,3	2781	1935	1935	3407,4	2604,6	2475,3	95,0
Pyandj river	91,7	13	0	540,1	283,7	283,7	631,8	296,7	283,7	95,6
Vakhsh river	496,8	651	540,3	1997,5	1466,6	1466,6	2494,3	2117,6	2006,9	94,8
Kafirnigan river	37,9	5,6	0	243,4	184,7	184,7	281,3	190,3	184,7	97,1
The total from river basin.	8394,8	8917,4	7990,1	17708,7	16231,9	1231,9	26103,5	25149,3	24222	96,3

ANALYSIS

of water intake fixed limits use during the growing period by 01.08.98 in Amudarya river basin.

Name	Limit on period	Accumulated by 01.08.98 г.		Over taken	Saved	%	Actual 1997 y.	% of 1998/ 1997
		Limit	Actual					
The republic of Tajikistan	6198,9	4081,3	3068		1013,3	75,2	3382,5	90,7
The republic of Uzbekistan	15247	11215,4	11276,1	-60,7		100,5	9366,2	120,4
From them: КМК	2700	1862,8	1808		54,8	97,1	1870,2	96,7
АБМК	2832	1948,3	1907,4		40,9	97,9	1501,4	127,0
The total: middle reaches	5532	3811,1	3715,4		95,7	97,5	3371,6	110,2
Khorezm	3315	2462,7	2840,4	-377,7		115,3	2279,8	124,6
Karakalpakstan	6400	4941,5	4720,4		221,1	95,5	3714,8	127,1
The total: lower reaches	9715	7404,2	7560,8	-156,6		102,1	5994,6	126,1
Turkmenistan	16000	10858,5	10222,5		636	94,1	9493	107,7
From them:								
Karakum kanal	8059	5533,9	5336,1		197,8	96,4	4861,9	109,8
Lebap veloyat	2811	1851,6	1862,9	-11,3		100,6	1790,2	104,1
The total: middle reaches	10870	7385,5	7199		186,5	97,5	6652,1	108,2
Dashkhovuz veloyat	5130	3473	3023,5		449,5	87,1	2840,9	106,4
The total over basin	37445,9	26155,2	24566,6		1588,60	93,9	22241,8	110,5
including:								
The upper reaches	6198,9	4081,3	3068		1013,3	75,2	3382,5	90,7
Middle reaches	16402	11196,6	10914,4		282,2	97,5	10023,7	108,9
Lower reaches	14845	10877,2	10584,3		292,9	97,3	8835,5	119,8

Name	Limit on period	Accumulated by 01.08.98 г.		Over taken	Saved	%	Actual 1997 y.	% of 1998/ 1997
		Limit	Actual					
Besides that, Surkhandarya veloyat.	1000	670,8	468,5		202,3	69,8	608,1	77,0
Emergency-ecological release from them:			1457					
Uzbekistan, including:			1122,5					
Khorezm			565,7					
Karakalpakstan			556,8					
Turkmenistan, meluling:			334,5					
Dashkhovus			334,5					

ABOUT WATER SUPPLY TO THE ARAL SEA AND AMYDARYA RIVER DELTA DURING THE GROWING PERIOD BY 01.08.1998.

NAME	April	May	June	July	August	September	Water supply since 01.04. till 01.07.98 г		Percent of fulfilment
							plan	actual	
g/s Samanbay	133	3107	5365	4288			1333	12893	967
Total release from canal system Kyzytken and Suenly	73	131	151	201				556	
Collector-Drainage network	144	192	254	260			667	850	127
The total:	350	3430	5770	4749	0	0	2000	14299	714
Accumulated	350	3780	9550	14299	14299	14299			

Remark. Data about water supply to the Aral Sea Coastal Zone are coordinated with Gravhydromet of the Republic of Uzbekistan.

OPERATION SCHEDULE

of Nurek and Tuyamuyun water reservoirs on period since April 1998 till September 1998.

Nurek water reservoirs	Measure-ment unit	Actual				Forecast		TOTAL
		April	May	June	July	August	September	
Inflow	m cu/sec	912	1416	1566	2259	1321	684	21578
Water losses	m cu/sec	-89	82	-8	1	-1	31	49
Volume: on the beginning of period	mln m cu	5879	7256	7733	8356	9942	10673	5879
at the end of the period	mln m cu	7256	7733	8356	9942	10673	10552	10552
Accumulated.(+), released(-)	mln m cu	1377	477	623	1586	731	-121	4673
Altitude: the end of the period	m	874,20	880,15	887,57	904,65	910,73	910,52	
Release from water resevoir	m cu/sec	469	1156	1334	1666	1048	700	16856

Tuyamuyun water resevoir	Measure-ment unit	Actual				Forecast		Totalo
		April	May	June	July	August	September	
Inflow	m cu/sec	1394	3643	3247	5281	2511	1383	46244
Water losses	m cu/sec	406	711	81	775	133	302	6382
Volume: on the beginning of period	mln m cu	5425	5528	5842	4916	6198	5045	5425
at the end of the period	mln m cu	5528	5842	4916	6198	5045	4978	4978
Accumulated.(+), released(-)	mln m cu	103	314	-926	1282	-1153	-67	-447
Altitude: the end of the period	m	128,32	128,42	126,31	129,64	126,84	126,54	
Release from water resevoir	m cu/sec	949	2815	3523	4027	2808	1107	40310

ABOUT THE GROWING PERIOD 1998 IRRIGATION AND ADDITIONAL MEASURES ON ITS SUCCESSFUL COMLETION (BWO «SYRDARYA»)

Water intake limits on the second half of growing period were approved on ICWC meeting in Askhabad on February 21, 1998, and in relation with the water provision change in SyrDarya basin were corrected together with water reservoirs Naryn - Syrdarya cascade operation regime in Shymkent on May 15, 1998

Forecasts of Central Àsian countries Glavhydromets couldn't reliably enough prove the volume of expected water resources in the Syrdarya basin: initially dry season was expected (according to forecast of 9.01.98 65-81% of normal inflow to the upper reservoirs and lateral inflow), after that expected volumes increased (up to 81-130% of norm according to the forecast of 10.04.98.). Cascade operation regime and water intake limits were corrected taking into account these data.

It should be noticed that the tendency of water provision increase was marked in some cases already during non-growing and growing period and releases in Arnasay sink in February-March 1998 had place not only because of deflections of Toktogul and Kairakkum water reservoirs operation regime, but also due to the value of lateral inflow to Syrdarya trunk on Kairakkum - Chrdara site turned out almost two times more than expected (185 %).

But actual water supply during the last half of the growing period exceeded all forecasts and in some cases one could say about its abnormal character (Kardarya and Chirchik),besides that in June average monthly inflow to Andijan water reservoir turned out the highest for all period of observations on this gauging station (since1925). Pointed factors significantly changed water situation in the basin.

Firstly, this touched main water reservoirs of Naryn-Syrdarya cascade, which regime (change of volumes and dynamics of releases from them during four months of vegetation period) in shown in Table 1 and 2.

Table 1

Water reservoir	Reservoirs volume mln m cu			
	By 1.04.1998	On 1.08. 1998		By 1.08.1997
		Schedule	Actual	
Toktogul	7247	10332	13629	11449
Andijan	632	1130	1723	745
Charvak	566	1691	2006	1818
Kairakkum	3211	2025	2883	2130
Chardare	5218	1408	3504	1577
Total	16874	16586	23745	17719

Table 2

Water reservoir	Releases mln m cu	
	Schedule	Actual
Toktogul	4356	2172
Andijan	1505	3503
Charvak	4016	4623
Kairakkum	5410	7562
Chardare	6100	9728
Total	21387	27588

If by the beginning of the growing period water stores in main water reservoirs of Naryn-Syrdarya cascade were 3,6 cu km less, than on same date of the last year, so, as the Table 1 shows, after four months of the growing period it was already 6 cu cm more, than on August 1 last year. During four months 6,2 cu km water more were releases from reservoirs to compare with foreseen by schedule (Table 2).

Tables 3 and 4 present data about water diversion from Syrdarya river during growing period and other characteristics of water management since April 1 till August 1, 1998. Water supply was fulfilled according to limits and applications of state-water consumers.

Table 3

Republic, water management area	ICWC limit, mln cu m	Actual	%
Kyrgyz Republic	200	86	43,2
The Republic of Uzbekistan	8800	5408	61,5
The Republic of Tajikistan	1800	1037	57,6
The Republic of Kazakhstan (canal «Dostik»)	800	247	30,9

Besides:

Table 4

Parametrs	By schedule, mln cu m	Actual
In flow to Chadara water reservoir	3558	9471
Water supply in Aral Sea	664	2234

In the result, within four months of 1998 there were following changes in Syrdarya water-management complex operation:

past period is characterized by small water diversion;

release of cascade channel water reservoirs began only in July;

Charvak water reservoir kept entire volume, operating in ordinary regime;

sanitary releases regime is provided in the middle and lower reaches of Syrdarya, that promotes to keep favorable ecological-epidemiological situation in the basin;

in June 1998 under filled channel water reservoirs increased inflow to Charvak and Andijan water reservoir and increased lateral inflow in the middle reaches of Syrdarya to Charvak water reservoir more than 1800 cu m/s, that resulted in near 2 cu km release into Arnasay sink;

release volumes to the Aral sea increased on more than 2,2 cu km in comparison with ICWC approved 1 cu km for all vegetation period;

chance appeared to change Toktogul water reservoirs operation regime and instead of for seen by schedule 4,4 cu km till 1 August, 2,2 cu km were released; water reservoir volume at August 1 was 13,6 cu km, and by the end of vegetation period not less than 15 cu km is expected.

It should be admitted that this fact is the most important result of the last vegetation period.

Actual regime of Naryn-Syrdarya cascade operation for first five months of the growing period and corrected forecast of cascade operation on the remained period are presented in Table 5. Generally acknowledged, that for efficient use of the water-power resources of Syrdarya it is necessary to involve all states of the basin in corresponding intergovernmental agreements; in given case it deals with the republic of Tadjikistan and Kajrakkum water reservoir's operation regime. The first step was done in the current water year, when on February 4, 1998 in Dushanbe Agreement was signed between governments of the Republic of Tadjikistan and the Republic of Uzbekistan, in article 1 of which there is an obligation of Tajic side to realize Kajrakkum water reservoir's operation in accordance with BWO «Syrdarya» regime.

Unfortunately, this condition is sometimes being broken. Besides that, almost cubic kilometers of water, not used for irrigation and kept in water reservoir during the vegetation period for providing Makhram pumping station's operation, continues to be delayed in October-November - in interests of energy generation. But in such case practically within whole year water horizon in water reservoir doesn't sink lower 343,5 m what makes Agreement's Article 2 realization difficult, in which obligation to clear up conducting canal to Makhram pumping station is charged on the Republic of Uzbekistan.

In the next 1998-1999 water year it is necessary to realize in whole volume signed agreements and to get maximum effectiveness of Syrdarya river water resources use.

Table 5

SCHEDULE-FORECAST
of water reservoir s Naryn Syrdarya cascade operation on period
sinse April 1, 1998 till Septembers 30, 1998 by Hydromet forecast data.

	Measure unit	April	May	June	July	August	Sep-tember	Total, mln m^3
		actual	actual	actual	actual	actual		
Toktogul water reservoir								
Inflow to water reservoir	cu m/s	272	508	1224	1312	760	400	
	mln cu m	705	1361	3173	3514	2036	1037	11825
Volume: the beginning	mln cu m	7247	7451	8522	11290	13629	14604	
the end of period	mln cu m	7371	8366	11310	14022	14759	15130	
the end of period (actual)	mln cu m	7451	8522	11290	13629	14604	-	-
Release from water reservoir	cu m/s	223	165	147	288	332	190	
	mln cu m	578	442	381	771	889	492	3554
Kairakkum water reservoir								
Inflow to water reservoir	cu m/s	465	595	930	474	342	467	
	mln cu m	1205	1594	2411	1270	916	1210	8606
Volume: the beginning	mln cu m	3211	3463	3493	3463	2883	2090	
the end of period	mln cu m	3372	3101	3133	2681	2015	2303	
the end of period (actual)	mln cu m	3463	3493	3463	2883	2090	-	-
Release from water reservoir	cu m/s	442	705	1031	693	612	350	
	mln cu m	1146	1888	2672	1856	1639	907	10109
Chardare water reservoir								
Inflow to water reservoir	cu m/s	800	1042	1314	448	220	370	
	mln cu m	2074	2791	3406	1200	589	959	11019
Volume: the beginning	mln cu m	5218	5283	5268	5182	3504	2321	
the end of period	mln cu m	5399	5270	4973	3173	2197	1966	
the end of period (actual)	mln cu m	5283	5268	5182	3504	2321	-	-
Release from water reservoir	cu m/s	610	974	1004	1096	644	490	
	mln cu m	1581	2609	2602	2936	1725	1270	12723
Charvak water reservoir								
Inflow to water reservoir	cu m/s	342	550	707	634	313	170	
	mln cu m	886	1473	1833	1698	838	441	7169
Volume: the beginning	mln cu m	566	1055	1570	1870	2006	1942	
the end of period	mln cu m	921	1509	1839	2050	1956	1783	
the end of period (actual)	mln cu m	1055	1570	1870	2006	1942	-	-
Release from water reservoir	cu m/s	205	380	602	565	330	230	
	mln cu m	531	1018	1560	1514	884	596	6103
Andijan water reservoir								
Inflow to water reservoir	cu m/s	164	457	648	452	196	105	
	mln cu m	425	1224	1680	1211	525	272	5336
Volume: the beginning	mln cu m	632	996	1866	1880	1723	1423	
the end of period	mln cu m	945	1844	1873	1743	1410	1252	
the end of period (actual)	mln cu m	996	1866	1880	1723	1423	-	-
Release from water reservoir	cu m/s	43	140	645	502	312	170	
	mln cu m	111	375	1672	1345	836	441	4779
Release to Kzylkum canal	cu m/s	15	68	73	72	69	20	
	mln cu m	39	182	189	193	185	59	840
Discharge to Arnasay sink	cu m/s	69	0	328	0	0		
	mln cu m	179	0	850	0	0		1029
Water supply to Aral sea	cu m/s	270	217	192	170	235		
actual	mln cu m	700	581	498	455	629		2863

ABOUT WATER RESERVOIRS' NARYN-SYRDARYA CASCADE OPERATION REGIME ON THE NON-GROWING PERIOD OF 1998-1999

It is necessary to base optimal regime of water reservoirs' Naryn-Syrdarya cascade operation on non-growing period of 1998-1999 year to the coming meeting on efficient use of Syrdarya river water-power resources. BWO «Syrdarya» prepared its proposals on this question and brings in as an additional question for ICWC present meetings' consideration.

The main problem of cascade operation optimization in the non-growing period is do not permit water release from Chardara water reservoir to Arnasay sink to bring its value up to minimum (in humid years). There are some restrictions in cascade channel water reservoirs', which together with power regime of Toktogul operation promote pointed releases appearance. In case of humid years release value can increase very much. Therefore it is so important to correct Kairakkum and Chardara cascade channel water reservoirs operation. It's high time to consider this problem practically.

As original premises for forecast calculations it was adopted that basin water reservoir value on the non-growing period is within the norm. Toktogul water reservoir operation regime is taken analogous to the fixed at the last year working meeting, when firstly for last years releases volume from Toktogul during the non-growing period were lowered to 6 cu km.

There is a principle difference in the proposed approach, the necessity of changing channel water reservoir filling rate during the non-growing period. While till 1992 from Toktogul water reservoir in autumn-winter it was released 3-4 cu km, channel water reservoir s filling rate was enough uniform during the whole period of the non-growing period (fig. 1,a and 2,a). But since 1992 release from Toktogul increased 2-2,5 times and accordingly inflow to channel water reservoir s increased too an (fig. 1, b and 2, b). This has led to the fact that Kairakkum water reservoir began to be filled by December-January, and Chardara water reservoir filling rate increased.

But if Kair akkum water reservoir then passed to ordinary regime, increasing releases up to 900, 1000 cu m/s and more, so Chardara regime was formed in another way. Because releases from this water reservoir are limited by ice situation in Syrdarya lower reaches and passing ability of several hydrostructures downstream Kzyl-Orda, in consequence of that after filling reservoir rest of water was released to Arnasay sink (fig. 2, b).

Additional difficulties are related with Kajrakkum water reservoir which during the growing period contains water volume, providing possibility of Makhram pumping station normal operation, as a consequence release from water reservoir daring irrigation is limited by mark 343,5 m (not less than 1716 mln cu m).

This water, reserved here in power interests after October 1, under the sharp growth of inflow during last years and of water reservoir bowl s filling rate, becomes additional load and after water reservoir s filling is released increasing inflow to Chardara, at the end, falling in the Arnasay sink. Therefore concerning Kairakkum water reservoir the task for the non-growing period comes to the following: firstly, release in the initial period, even partially, such volume, which was reserved during the growing period for Makhram pumping station and create, by means of this, reserve capacity and/ secondly, such reconstruction of water reservoir regime, under which its filling would not uneven, increasing sharply in February and

March (fig. 1, b). Such level of releases which are within 500-600 cu m/s, is profitable in aspect of reduction to the minimum of unproductive releases through hydrostructure (fig.1, b).

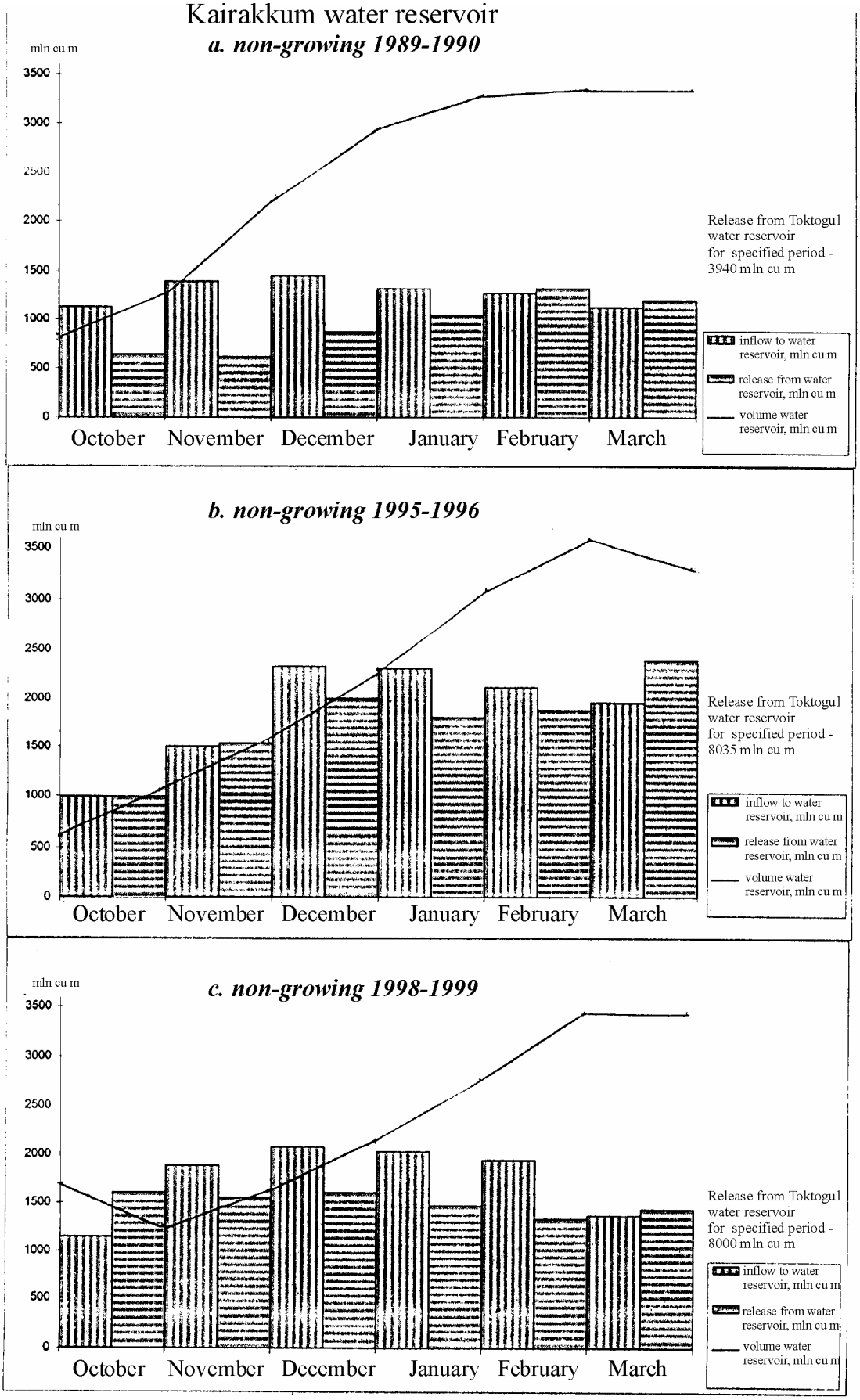
Kairakkum water reservoir
a. non-growing 1989-1990
mln cu m
3500
3000
2500
2000
1500
1000
500
0
October
November
December
January
February
March
Release from Toktogul water reservoir for specified period - 3940 mln cu m
inflow to water reservoir, mln cu m
release from water reservoir, mln cu m
volume water reservoir, mln cu m
b. non-growing 1995-1996
mln cu m
Release from Toktogul water reservoir for specified period - 8035 mln cu m
c. non-growing 1998-1999
mln cu m
Release from Toktogul water reservoir for specified period - 8000 mln cu m

Fig.1

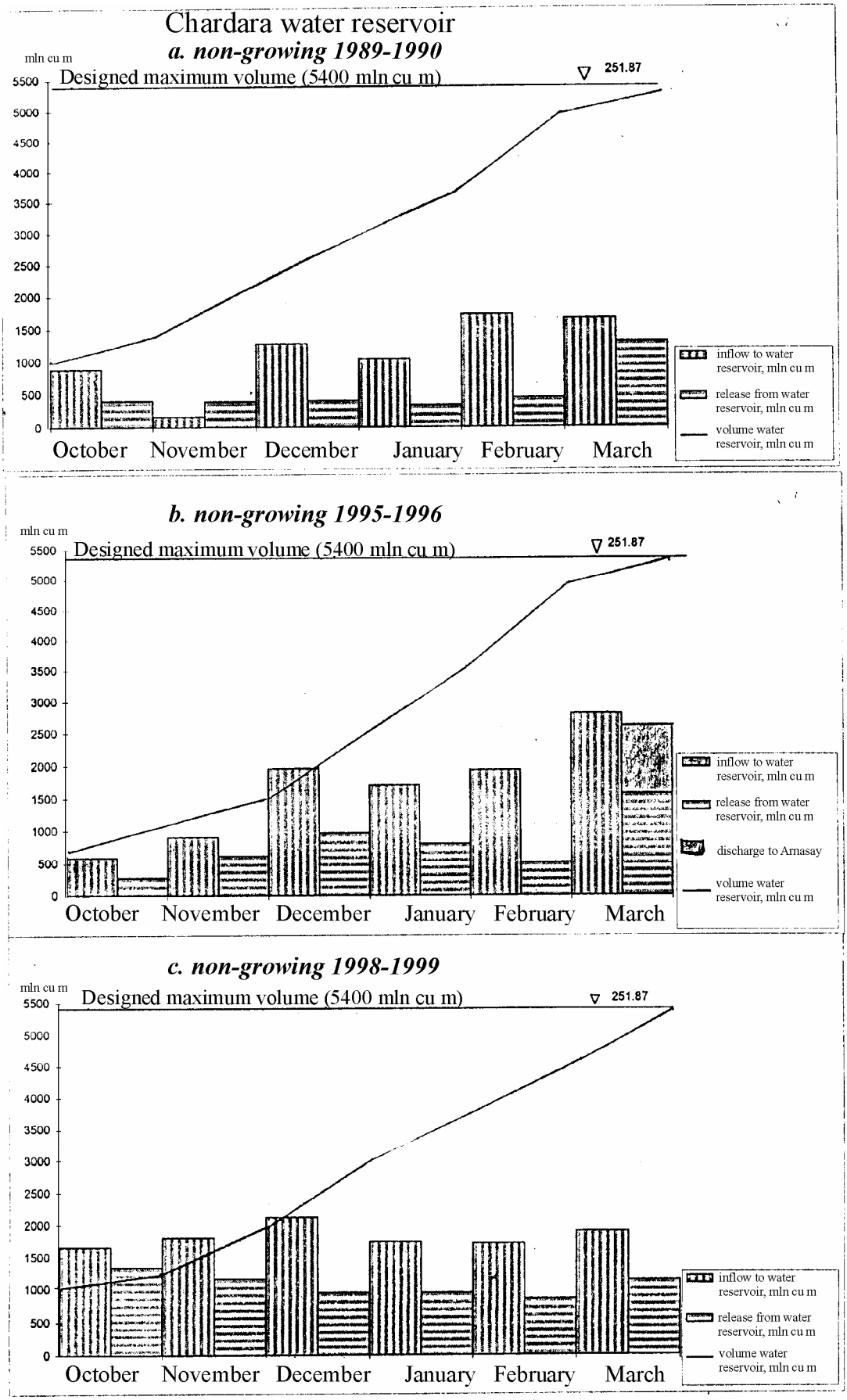
Chardara water reservoir
a. non-growing 1989-1990
mln cu m
Designed maximum volume (5400 mln cu m)
251.87
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
October
November
December
January
February
March
inflow to water reservoir, mln cu m
release from water reservoir, mln cu m
volume water reservoir, mln cu m
b. non-growing 1995-1996
mln cu m
Designed maximum volume (5400 mln cu m)
251.87
discharge to Arnasay
volume water reservoir, mln cu m
c. non-growing 1998-1999
mln cu m
Designed maximum volume (5400 mln cu m)
251.87

Fig. 2

Different situation is formed in Chardara water reservoir, released by the end of the vegetation period to the dead volume. In order to achieve optimum, it is necessary to make timely downstream Kzyl-Orda so called «ice tube» of maximum possible dimension, for what the constant rate of releases should be kept from Chardara in December-February, which maximum possible value, taken into account by BWO, is within 350-360 cu m/s. As enclosed table and fig. 2, b, show, for Chardara small dispersion is provided from 500 cu m/s in October up to 355 cu m/s during tense winter months. So water reservoir is filled by April 1 and releases to Arnasay sink are not necessary.

Main premises of water reservoir Naryn-Syrdarya cascade operation regime on the coming non-growing period are the following:

1. The period humidity is within the norm.

2. Water intake limits for all republics- water consumers are kept in former scale, approved by ICWC for non-growing period of last years.

3. Toktogul water reservoirs' operation regime is adopted as analogous to recommended by the working meeting of representatives fuel-power and water-management branches of the Republic of Kazakhstan, the Kyrgyz Republic and the Republic of Uzbekistan on the question of water-power resources use of water reservoirs' Naryn-Syrdarya operation regime on 1998-1999 (Bishkek, September 4-5, 1997), total volume of releases during non-growing period - 6 cu km.

The most important parameters of channel water reservoirs operation are the following:

1. Kajrakkum water reservoir in October is released lower the mark 343,5 m and starts to fill evenly for the rest period - since November 1 till March 1, 1999.

2. Releases from Chardara water reservoir during the ice period in the lower reaches of Syrdarya (December-February) are reserved within 350-360 cu m/s, in the rest time they do not exceed 400-500 cu m/s.

Taking into account all pointed factors water reservoir Naryn-Syrdarya cascade operation regime on the non-growing period 1998-1999 was prepared and submitted for ICWC meeting consideration (see enclosed Table.1 and fig 1 and 2). The most significant purpose of offered regimes realization is optimization of cascade operation and elimination of releases to Arnasay sink, became constant after 1992. During period 1992-1998 from Chardara water reservoir in Arnasay sink almost 21 cu km of Syrdarya water already released.

Under ICWC members agreement pointed regime of water reservoir Naryn-Syrdarya cascade operation is proposed to be approved and submitted for consideration of next working meeting of Syrdarya river basin s Central Asian states fuel-power and water-related branches' representatives. If the meeting adopts this regime of water reservoirs' Naryn-Syrdarya cascade operation on the non-growing-growing period 1998-1999 and works out measures on its successful realization, which will be recommended for including into intergovernmental agreements between states, so the chance appears to solve the problem of release to Arnasay sink in the coming winter-spring 1999.

Table 1

SCHEDULE-FORECAST
of water reservoir Naryn-Syrdarya cascade
operation regime on period since October 1, 1998 till March 31, 1999
on Glavhydromet forecast data.

	Measure unit	October	Novem-ber	Decem-ber	January	February	March	Total mln cu m
Toktogul water reservoir								
Inflow to water reservoir	cu m/s	224	194	160	150	147	157	
	mln cu m	600	503	429	402	356	421	2709
Volume: the beginning	mln cu m	15040	15153	14641	13848	12937	12119	
the end of period	mln cu m	15153	14641	13848	12937	12119	11736	
the end of period	cu m/s	180	390	455	490	485	300	
Release from water reservoir	mln cu m	482	1011	1219	1312	1173	804	6001
Kajrakkum water reservoir								
Inflow to water reservoir	cu m/s	428	728	776	757	803	513	
	mln cu m	1145	1886	2077	2029	1944	1375	10456
Volume: the beginning	mln cu m	1716	1249	1605	2115	2747	3418	
the end of period	mln cu m	1249	1605	2115	2747	3418	3418	
the end of period	cu m/s	600	600	600	550	553	537	
Release from water reservoir	mln cu m	1607	1555	1607	1473	1338	1437	9018
Chardara water reservoir								
Inflow to water reservoir	cu m/s	620	699	793	653	714	715	
	mln cu m	1661	1811	2124	1748	1727	1916	10986
Volume: the beginning	mln cu m	1000	1276	1882	3028	3810	4663	
the end of period	mln cu m	1276	1882	3028	3810	4663	5400	
the end of period	cu m/s	500	450	355	355	355	430	
Release from water reservoir	mln cu m	1339	1166	951	951	859	1153	6419
Charvak water reservoir								
Inflow to water reservoir (amount from 3 river)	cu m/s	96	85	71	63	61	80	
	mln cu m	258	220	191	169	147	214	1198
Volume: the beginning	mln cu m	1644	1524	1378	1220	1092	1021	
the end of period	mln cu m	1524	1378	1220	1092	1021	913	
the end of period	cu m/s	140	140	130	110	90	120	
Release from water reservoir	mln cu m	375	363	348	295	218	321	1920
Andijan water reservoir								
Inflow to water reservoir	cu m/s	65	66	56	49	49	65	
	mln cu m	174	172	151	132	118	175	922
Volume: the beginning	mln cu m	1544	1423	1413	1456	1454	1426	
the end of period	mln cu m	1423	1413	1456	1454	1426	1387	
the end of period	cu m/s	110	80	40	50	60	80	
Release from water reservoir	mln cu m	295	207	107	134	145	214	1102
Release to Kzylkum canal	cu m/s	5	5	5	5	5	5	
	mln cu m	13	13	13	13	12	13	79
Water supply to Aral sea	cu m/s	430	380	285	286	286	359	
	mln cu m	1152	985	763	766	692	963	5321

THE 49 th MEETING EC IICID and 10 AFRO-ASIAN CONFERENCE IN INDONESIA in JULY 20-25, 1998

ICWC delegation consisted of Deputy Minister of Water Resources of Turkmenistan M. Sarkisov, Deputy Chief of Balkhash-Aral BWO M. Musayev, Deputy Director of SIC ICWC P. Umarov and Chief of SIC ICWC Overseas Department A. Shapiro took part in the conferenceevents. Visit was supported by the Canadian Development Agency.

This Conference was carryied out under slogan «Sustainable management of the water and land resources" and took place in Indonesia, on the Bali island. Indonesia is a big country, situated on 3 000 islands in the Indian Ocean, with population equaled 205 mln people, the area of irrigated land 10,5 mln ha and rice production of the 49,7 mln tons

The program was very tense because at the same time the49 th Conferences of EC ICID, the 10th Afro-Asian Conference, seminar of young specialists, seminar on the salt water use in the irrigation and IPTRID seminar were carried out so CAR group couldh t participate in all meetings.

1. Special meeting was dedicated to the Aral Sea basin problems (there were heard reports of V. Dukhovny, T. Sarsenbekov, M. Sarkisov). At the meeting of the special group on the Aral Sea basin the following questions were considered:

approval of «Aral» group working protocol 4th meeting's proceeding;

reconsideration of the working group's stuff: Peter Lee was appointed as new Chairman, Shakhrizalla Bin Abdulla and John Hennessy were remained as observe;

about ICID membership of Turkmenistan and Kyrgyz Republic. It was recommended to accept Turkmenistan and speed up the preparation of Kyrgyz Republic s acceptance;

further progress in the Aral Sea basin problems after the meeting in Oxford.. D-r Nayrizy from Iran ICID NC reported about seminar in Meshkhed. D-r Tsusui reported about the seminar, financed by Japanese non-grovernmental organizations on 20.09.97 in Republic of Kazakhstan. John Hennessy reported about the technical meeting of the donors in Tashkent in October 1997 and estimated its as successful. The group appealed to ICID with the help of John Hennessy in order to organize constant representation on the Aral Sea;

the working plan on Aral problem solution. IPTRID network activity and its perfecting ways were considered. It, was decided to set control under other ICID working groups, concerning with Aral Sea basin s problems.

V. Dukhovny's report has been head "Strategy of water resource management in Aral basin", which was approved by working group;

organization of ICID national committees of CAR countries structure was discussed. Prof. Farkhudy from Iran was appointed responsible for the assistance in their organizations;

regarding technical tours organization the questions of terms, program and financing of tours to India in November 1998, to Australia (Murrey-Darling Basin) in February 1999 and in Spain in October 1998 were considered.

D-r Hennessy has read the letter of EC IFAS Chairman R. Giniyatullin and asked all attendees to disseminate information about Aral Sea basin s situation more actively, to look for donors to support activity on these problems solution.

On the meeting there were discussed organizational questions of the technical tour for seven high officials of Central Àsia water-related sector to Spain in October 1998.

2. On ICID committee meeting on publishing activity, CAR group tried to include SIC ICWC in ICID issues list Offer might be adopted after CAR countries working group creation under the condition of their entire membership.

3. On the meeting, dedicated to IPTRID SIC ICWC activity, as the program active participant, there were accepted offers of participants from CAR on the network perfection.

4. On seminar, dedicated to saline and brackish water use for irrigation there were considered examples of such use in the different regions, including Republic Kazakhstan (Japanese delegation report). The report contained description of common characteristics of environmental conditions and irrigated farming in Republic of Kazakhstan and didn't, cause any discussion.

Some questions, presenting mutual interest, were discussed with the meetings participants in the lobbying:

- With IPTRID program coordinator Mr. Pearce. Proposals on IPTRID program perfection were handed and accepted with interest. An agreement was reached about the joint participation of SIC ICWC and IPTRID in NATO Program «Science for Peace». Mr Pearce would like to visit Uzbekistan in September 1998.
- With Asian Development Bank representative Mr. Mannan. Possibilities of more close collaboration between SIC ICWC and ADB were discussed. Together with technical assistance within realized projects in Republic Kazakhstan, Republic of Uzbekistan the questions was discussed on possible ADB help to IPTRID network in CAR.
- With International Water Management Institute (IWMI) representative Mr. Maklin. Mutual aspiration was expressed to further collaboration according previously signed protocol between SIC ICWC and IWMI.
- With ICID Vice President Deputy Minister of the Science and Education of Iran Mr. Farkhudy, who was charged by ICID obligation on the technical assistance to Central Asian National Committees in their establishing and activity. Mr Farkhudy would like to visit Central Asia and to have close contacts with national committees.
- With Australian National Committee representatives Mrs. Mepson and Mills. Details of CAR representatives technical tour to Australia in February 1999 were discussed.
- With the honourable Vice- President of ICID Mr. Pereira. Possibilites of further collaboration and support of Aral Sea basin program were discussed.
- With IHE Delft Institute Rector prof. Segeren there were discussed questions of the collaboration in the project of wetlands creation in the central part of the Amudarya delta..

Meeting had place in the lobby:

with Chief of the Department of Irrigation of the Planting Institute of Yugoslavia Mr. Dragovich; with President of National Committee of Slovenia Mr. Bruno Matiehich; with ILRI representative Mr. Vlotman; Minister of the Agriculture of Chech Republic Mr Punchachar; with President of Chech EC ICID Mr. Mishkovieh; Director of the Water Department of Syria Mr. Gadban; Deputy Director of the Water Department of Laos Mr. Untkhoang; Deputy Director of the Water Resources Center of the Water Resources Institute of Vjetnan mr. Nguyem Vjot Chjen, manager of Water Museum of Iran Mr. Shayan, Manager of RAJAD project in India Mr. Bower (Canada), with MCID Vice- President of Spain Mr. P. Granyo, with MCID President of Japan Mr. Sh Ota, with Director of the Irrigation and Drainage Development Department of Iran Mr. Assodalahy. There were discussions on Aral sea basins problems and mutual collaboration.

Delegation was accepted by ICID President Mr. Aly Shady, Honourable Presidents Mrs. D. Hennessy and M. Shakhrizajla, Vice- Presidents Mrs. Peter Lee and Larry Stefenson,

ICID Secretary Mr. Sarsena. Delegation have presented ICID leadership souvenirs.

ceremony of the official acceptance of Turkmenistan as ICID member had place on the closing meeting of Executive Committee on 24.07.98.

Delegation also took part in receptions, organized by ICID Secretariat; National Committee of Indonesia and Governor of Bali province, Australia and South Africa National committees.

5. During the conferences there were given invitations to participate in expected ICID measures:

- 51th ICID Conference in Kapetown, South Africa, October 22-27, 2000;
- the 1st International Conference on Water and Environment in Jisabon, Portugal, on September 16-18, 1998.
- International Conference on Problems of Irrigation and Drainage in next century in Fort Collins, Colorado, USA, on June 20-24, 2000.
- the 2nd Inter-Regional Conference "New technologies for water and land resources sustainable management" in the Lozanna, Switzerland, on September 1-3, 1999.
- the 52nd ICID Conference, in Monpelie, France in 2001.
- the 53ch ICID Conference in Montreal, Canada on July 14-23, 2002.

6. When the conference finished certificates were handed to countries-participants' representatives.

PROCEEDING OF THE FIFTH MEETING OF SPECIAL WORKING GROUP ON ARAL SEA BASIN (SWG-ARAL)

BALI, Indonesia July 20, 1998: 09:00-12:00

members: (1) M-r Peter Lee, Chairman (UK); (2) M-r M. Boss (the Netherland); (3) D-r Nakomura is presented by D-r Tsutsui (Japan); (4) D-r P, Umarov (Uzbekistan); (5) A.Kolganov (Russia); (6) M-r Gef Pearce secretary (UK); (7) M-r L. Smedema is presented by M-r G. Pearce (IPTRID); (8) M-r G. Osterberg (USA); (9) M-r M. Mesni (France); (10) D-r A. Shapiro (SIC ICWC); (11) M-r Musayev (Kazakhstan); M-r M. Sarkisov (Turkmenistan); (12) D-r Thatte ICID General Secretary.

Supervisors: M-r Shakhrizalla Bin Abdulla (Malaisia), mr. J.Hennessy (UK), D-r Sayed Nairizi (Iran), m-r Rod Bower (Canda), Prof. Takeshi Khata (Japan), Mr. Fernando Jyron (Spain), Vr. Mupson (Australia), Mr. S.Mills (Australia), Mr. Mitsumiro Goto (Spain), D-r Ioshykhiko Ogyno (Japan), Mr. Muhammad Mannan (ADB), Mr. Shynzuko Ota (Japan), Mr. N.Khacho (Japan), Mr. P.Parabrakhan (National Committee on Irrigation and Drainage of Indonesia).

Item 1. Approval of the Proceeding of SWG-Aral 4th meeting

Proceeding was approved.

Item 2. Reconsideration of the Working group's membership.

a) Working group.

ICID Managerial Board appointed Mr. Peter Lee as a new chairman.

Ex-Chairman, Mr Ì.Shakhrialla Bin Abdulla and his Deputy Mr. J.Hennessy remained in the Working group as observers.

Mr. M. Mesny replaced Mr. M. Joice, Mr. Bos became a group s member and Mr. Pearce replaced Mr. A. Hell as group secretary.

б) National Committees.

At the meeting it was recommended to accept Turkmenistan (application is adopted) and Kyrgyz Republic (application's preparation is under completion) as ICID Working Group members.

A. Previous questions discussion.

Item 3. Further progress in the Aral Sea after the meeting in Oxford.

Dr. Nairizi from Iran National Committee of ICID reported about seminar on Aral Sea, successully carryied out in Meshkhed on November 15-20, 1997. More than 200 partici-

pants, including CAR delegates, during 2 days were considering specially selected articles and for the next 2 days visited areas adjacent to the Kaspiy Sea and Central Desert, demanding reconstruction works. At the meeting collection of articles was presented and questions of drainage water re-use micro-irrigations in fruit gardens, watershed protection were considered in detail.. Iran National Committee is ready to continue this work.

Dr. Tsutsui reported about seminar, financed by Japanese non-governmental organizations, which had place in Republic of Kazakhstan onSeptembers 20,1997. More than 200 participants, including CAR and Russia representatives, discussed Aral Sea problems and necessary future programs. He underlined necessity in wide-scale activity. Dr. Tsutsui has to submit brief report on seminar.

Mr Henessy outlined the history of the conference on Aral Sea problems, having place in Tashkent in October 1997. It was was very successful meeting for its participants, all CAR deputy prime-ministers and international organizations. Report on meeting's results was presented to group. Group's members appealed for help in information dissemination about Aral Sea situation and looking for donors to provide better support within existing structures. With the help of Mr. Hennessy they appealed to ICID in order to organize constant representation on Aral Sea and the answer from Central office is expected.

Mr. Hennessy and D-r Tsutsui marked the problem of donors means shortage, but Mr. Bos told about programs, which wiil provide more efficient assistance.

D-r Shapiro has submitted report on acting and expected projects. There were described measures on the regional cooperation in CAR and outlined developed Strategic plan of action. Plan is worked out for short-term period (economic stabilization), medium-term period (economic growth) and long-term period (establishing of economic well-being in the region). This plan can be separated into the following categories: the public opinion formation, regional and national programs and institutional structure perfection. Further, more detailed information could be received from regular bulletins, published and disseminated underthe SIC ICWC subscription.

Item 4. ICID National Committees establishing in each country of the Aral Sea Basin.

See item 2 (b). Chairman appealed to recently accepted National Committees to organize their own structure and work, basing on the common approach, for which there are many models in the rest acting National Committees.

Item 5. Organization of technical seminars on Aral Sea problems

5.1. Seminar on Aral Sea in India

ICID Indian National Committee organizes two-days seminar and two-days technical tour to CSSRI, Karnal for CAR delegates. Seminar's carrying out is planned for the end of November 1998. All expenses in India will be covered by Indian side, rest expenses have to be provided by sponsors. Mission will study IGNP; Rajasthan project and salinization problems in state Khariana staff. Mr. Bower offered study of RAJAD Project in case of solution of organizational problems of the visit. The Working Group underlined the necessity of translation into Russian.

5.2. Seminar in Australia

It is planned two-week seminar for CAR delegates in the Murrey-Darling bassin. Seminar will consider such questions, as water allocation between states and basin management and will be dedicated for participants at the rank of ministers during the first week and for the technical personnel during the second week. Financing source is not yet found, but it is possible to ask support from GEF project, when it will start in January-February 1999. Seminar will be carried out after project starting, but before irrigation season completion in May.

5.3 Technical tour to Spain

Small number of high officials (at the level of Deputy Ministers) will visit Spain for discussion of questions related with the Aral Sea Basin including basin s management and legal questions of the water transportation. Visit is planned on the beginning of October 1998 and probably will be financed by EC-TACIS program.

Mr. Manan told in detail about works, carried out by Asian Development Bank.

Б. New question.

Item 6. The working plan on the Aral Sea Basin problems solution

Basic elements of the future working plan of the Working group were coordinated.

IPTRID network activity was defined earlier as an efficient mean for the collection of information circulating between Central Asian states. For instance, 140 research programs brief description was sent to IPTRID data base. Mr. Pearce explained briefly common tasks of IPTRID network and determined the base for the financial support finding. D-r Shapiro outlined the benefit achieved from information network establishing and noted difficulties marked by SIC ICWC. Although the offer sent to EU INCO Copernicus Program on support of IPTRID network activity in CAR was not successful, in future IPTRID will work with SIC ICWC for further possibilities revelation (for instance, TACIS) and will try to establish donor's support through further targeted offers preparation.

The Working group considered other of agenda regarding future technical activity. They have achieved agreement, that the group itself will not participate in this activity directly, but will check ICID another groups activity concerning Aral Sea problems. It was noted that they carry out some works directly, related with salinization and drainage problems in the region.

Here upon questions' discussion was completed.

Proceeding of the of National Hydromet Services chiefs (NHMS) and National Working groups (NWG) heads on realization of GEF project component D «Transboundary water resources monitoring»

September 17, 1998 Tashkent

1. To agree with offered specification of all equipment to be purchased.
2. To agree with the list of devices and equipment for GEF project component D «Transboundary Water Monitoring» stations
3. To ask an Agency on EC IFAS GEF project realization under contracts signing on equipment procurement to foreseen equipment delivery from firm-deliver to Tashkent, Glavhydromet of the the Republic of Uzbekistan and to Dushanbe for Republic of Tajikistan. From Tashkent equipment should be delivered to the Republic Kazakhstan, Kyrgyz Republic, Turkmenistan,.
4. NHMS chiefs and National Groups (NWG) leaders from GEF project component D take responsibility for equipment exploitation and maintenance requirements of the firm-deliver.
5. During a month NHMS chiefs and NWG leaders should submit to Director of component D schedule of devices and equipment setting on GEF projects stations.
6. NHMS chiefs and NWG leaders till November 1, 1998 should submit whole project-estimate documentation on new constructed stations and repair-reconstruction works on existing stations and also copy of official documents on lands offtake under constructed stations to the component D Director.
7. In the case of prices change on the world market Component D Director S. Aslonov, should correct the list of equipment delivered by coordination with NHMS chiefs.

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Proceeding
of the working meeting on WARMIS Information System Development program

September 3, 1998 Tashkent.

AGENDA.

1. Report of national coordinators about technical tasks (TT) results of June 23, 1998.
2. TT Coordination for National Working Groups (NWG) on broadening subbases "Water resources", "Water Quality" and "Economics".
3. TT Coordination for NWG coordinators.
4. Further works direction (GIS Atlas, interfaces, modeling, users demands).

Exchanging by opinions, the meeting's participants noted

1. Preliminary results of TT of June 23, 1998 are the following:

1.1. NWG of the Republic of Kazakhstan
The work is carrying out, but all group is new; the work on TT completion possible till the end of September.

1.2. NWG of the Kyrgyz Republic.
The work is carrying out, but in relation with Kijashkina absence, Artyukhin could not say anything.

1.3. NWG of the Republic of Tajikistan.
They answered to all comments and fully fulfilled TT. Reports and diskettes were given to RWG, fulfillment is 100%.

1.4. NWG of Turkmenistan.
TT is fulfilled on 30%.

1.5. NWG of the Republic of Uzbekistan.
They have fulfilled TT on 70 %, till September 30 promise to submit it entirely.

In relation with TT completion on 23.09.98 NWG have to do their best for the timely work entire submission.

NWG results are handed to Regional Working Group for review in advance. After review RWG (WARMAP project) calls according to schedule under necessity by one representative for 2-3 days for coordination and TT completion.

2. National coordinators coordinate TT for the widening of subbases "Water resources", " Water Quality" and "Economics", for a week NWG have to submit in RWG their comments and offers on transmitted to DB structure.

3. National coordinators coordinate personal TT for work organization within own NWG.

4. Having discussed "Atlas of GIS" content interface withs major users, approaches to economic and mathematical model of planning zone, national coordinators in a whole agree with approaches proposed.

The Working seminar considesr as necessary:

4.1. To discuss "Atlas of GIS" content and interfaces with basic users (IFAS, leadership, Minselvodkhoz, etc). Discussion results have to be submitted to RWG till 20.09.98.

4.2. Comments on economic part of "Planning zone models" should be directed to RWG till 15 09.98.

5. To ask EC IFAS to explain to Miselvodkhoz (state committees) importance of information system of water and land resources use and necessity of financial support of this work by local departments.

6. WARMAP project leadership notes, that according to EU regulation TACIS payment for information including its collection, is not foreseen.

Proceeding was signed by:

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