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TASHKENT STATEMENT OF HEADS OF STATE OF THE REPUBLIC OF KAZAKHSTAN, KYRGYZ REPUBLIC, THE REPUBLIC OF TAJIKISTAN AND THE REPUBLIC OF UZBEKISTAN

Heads of State having discussed topical issues of the regional development and international policy,

basing on traditional relations of friendship and good neighboring, historical and cultural community of the peoples of Central Asia,

coming out existing practice political dialogue and achieved level of the regional collaboration,

noting meaning of mutually beneficial relations of the states for strengthening stability in the region and international security,

taking into account dynamically changing situation in the region and around it,

expressing preoccupation by threats from international terrorism, political and religious extremism, drug invasion, transboundary organized criminal for the regional and international security,

recognizing importance of rational and mutually beneficial utilization of water-power resources, transport communications and existing economic potential in the region,

paying special attention to further deepening collaboration between the states of the region based on mutual understanding and benefit in political, humanitarian and other spheres, state the following:

1. Heads of State confirmed, that mutually beneficial collaboration in political, economic, scientific-technical, cultural and other areas as well as close interaction on international scene meets national interests of all countries of the region and plays important role in peace and stability keeping at the regional and global level.

Heads of State noted that, in line with the world tendencies, multilateral relations would benefit all peoples.

Heads of State underline, the main priority in interrelations should be mutually beneficial economic collaboration.

2. Heads of State, noting necessity of further development of economic relations, commissioned their governments to make interactions at all levels more active for:

-practical realization of unused potential of economic collaboration and new impulse of its development;

-development of effective forms and mechanisms of achieved bilateral and multilateral agreements realization in sphere of economy and trade.

3. Heads of State are convinced, that coordinated and agreed actions in rational and mutually beneficial water structures, water-power resources and water bodies use in Central Asia based

on commonly recognized principles and norms of international water right will serve a base for effective use of existing agricultural and power potential for benefit of all peoples.

Heads of State commissioned their governments to speed up work on mechanism of interstate use of transboundary water resources.

4. Heads of State noted, that interaction in common transport and power infrastructure creation is one of the most important directions of multilateral collaboration.

Heads of State noted necessity to follow previous agreements in transportation and defined ways of further collaboration in “Europe-Caucasus-Asia” communication system efficiency increase.

Heads of State recognized importance of agreed tariff policy in all kinds of transport within framework of Euro-Asian transport network TRACEKA.

5. Heads of State underlined importance of juridical arrangement of frontier crossing between states based on norms and principles of international right. Borders between countries of the region should be borders of friendship, peace and good neighborhood.

6. Heads of State positively assessing beginning of Afghan problem solution process supported provisional government of Afghanistan led by Hamid Karzai, UN and world community efforts directed to country restoration.

Taking into account traditional relations between peoples of Central Asia and Afghanistan, their historical and cultural community, Heads of State express readiness to help Afghan people in new democratic state building living in peace with all neighbors and integrated in the world community.

7. Heads of State are concerned with tension between India and Pakistan. They condemn terrorist act in the parliament of India, Heads of State apply to leaders of India and Pakistan to regulate existing problems by political means. Heads of State express hope for establishing good relations between India and Pakistan that would meet the regional stability and security.

8. Heads of State having as priority the regional stability and security, will undertake all necessary joint efforts within framework of Agreement on fight with terrorism, political and religious extremism, transnational and organized criminality of April 21, 2000.

Heads of State greet the world community’s efforts in contraction to terrorism, political and religious extremism, transnational and organized criminality.

9. Heads of state note necessity of interaction in cultural and humanitarian sphere as an important factor of collaboration and good neighborhood strengthening.

10. For further political dialogue promotion, regional economic integration forms and mechanisms perfecting, mutual understanding in security, peace and stability keeping, Heads of State supported idea about multifold collaboration within the region and Central-Asian Economic Community transformation in Central-Asian Collaboration.

11. Heads of State commission their governments to consider all questions connected with this transformation including juridical status of this organization, statutory documents, legal base inventory and submit relevant proposals for consideration by the Heads of State.

12. Heads of State underline that negotiations in atmosphere of openness and mutual understanding significantly contributed to further development of collaboration of Central-Asian states.

Heads of State agreed to continue meetings in given format and expressed gratitude for hospitality to the Republic of Uzbekistan President I.Karimov.

President
of the Republic
of Kazakhstan
N.Nazarbayev

President
of the Kyrgyz
Republic
A.Akayev

President
of the Republic
of Tajikistan
E.Rahmonov

President
of the Republic
of Uzbekistan
I.Karimov

Tashkent, December 28, 2001

**JOINT STATEMENT OF
THE PRESIDENT OF THE REPUBLIC OF UZBEKISTAN I.KARIMOV
AND PRESIDENT OF THE REPUBLIC OF TAJIKISTAN
E.RAHMONOV**

On December 27-28, 2001 on invitation of the President of the Republic of Uzbekistan I.Karimov the President of the Republic of Tajikistan E.Rahmonov visited the Republic of Uzbekistan.

Having discussed questions related to Uzbek-Tajik relations, key regional and international problems, highly appreciating spirit of constructive dialogue and mutual understanding during negotiations,

Recognizing importance of further deepening of collaboration between two states based on common interests and agreed actions in political, economic, humanitarian and other spheres,

Following the Treaty on eternal friendship between the republic of Uzbekistan and the Republic of Tajikistan of June 16, 2000 having high importance for further strengthening friendship and peace, coming out historical and cultural community of peoples, taking into account new political and economic realities both in the region and all over the world,

state the following:

1. Presidents of the Republic of Uzbekistan and the Republic of Tajikistan confirmed their unchangeable commitment to develop collaboration between two countries based on principles of equality, non-intervention in internal affairs of each other, mutual assistance, respect of sovereignty, territorial unity and traditional friendship between the peoples

Heads of State note wide possibilities for further interstate collaboration in all spheres being important factor of security and stability in the region.

Heads of State express readiness for consultations at various level on issues of mutual interest.

2. Paying attention to security and stability in the region, Heads of State confirmed necessity of further development of collaboration in fight with international terrorism, drug traffic and other kinds of organized criminality on bilateral and multilateral basis.

3. Presidents of the Republic of Uzbekistan and the Republic of Tajikistan underlined importance of further delimitation of state border between Uzbekistan and Tajikistan in constructive spirit and on international right and world practice base. They expressed satisfaction with these negotiations and wish their soonest completion.

Heads of State agreed that border between the states will remain the border of friendship and good neighborhood connecting friendly peoples of two countries and spoke for coordinated joint actions of law-enforcement agencies, frontier, custom and intelligent officers.

4. Presidents of the Republic of Uzbekistan and the Republic of Tajikistan express readiness to support peace process in Afghanistan, building new democratic state living in peace and harmony with all neighbors and international community as a whole.

5. Presidents of the Republic of Uzbekistan and the Republic of Tajikistan par first attention to economic relations between the countries, greet development of frontier economic contacts and commission their government to undertake measures on legal base perfection and strengthening.
6. For further bilateral collaboration Heads of State commissioned their governments to establish joint economic commission and carry out its first meeting
7. Heads of State noticed that interaction in transport communications is one of priority directions in bilateral relations and outlined mutually beneficial directions in automobile, railway, air and other kinds of transport.
8. Presidents of the Republic of Uzbekistan and the Republic of Tajikistan noticed necessity of coordinated and agreed actions in rational and joint water objects, water-power resources and water related structures using principles and norms of international right.
9. Heads of State underlined importance of collaboration in humanitarian sphere including science, culture, education and interaction in information sphere.
Governments are commissioned to activate communications between relevant cultural, educational and scientific centers, continue work on legal base widening for humanitarian collaboration.
In order to develop further cultural and information exchange, Heads of State noticed necessity exchange of television programs between two states.
10. President of the Republic of Tajikistan E.Rahmonov highly appreciated warm reception and invited the President I.Karimov to visit Tajikistan. Invitation was accepted with gratitude. Terms of visit will be agreed on diplomatic channels.

President of the Republic of
Uzbekistan
Islam Karimov

President of the Republic of
Tajikistan
Emomali Rahmonov

Tashkent, December 27, 2001

**PROTOCOL No 31
ICWC MEETING OF THE REPUBLIC OF KAZAKHSTAN,
KYRGYZ REPUBLIC, THE REPUBLIC OF TAJIKISTAN,
TURKMENISTAN AND THE REPUBLIC OF UZBEKISTAN**

November 23, 2001

Kurgan-Tube

Attendees

ICWC members

Ramazanov Amanvek Mirzaahmedovich	Chairman Committee of Water Resources of the Ministry of Natural Resources and Environment of the Republic of Kazakhstan.
Koshmatov Baratali Turanovich	Deputy Minister, General Director Water Department, Kyrgyz Republic.
Nazirov Abdukohir Abdurasulovich	Minister of Reclamation and Water Resources of the Republic of Tajikistan.
Kurbanov Sahatmurat Kurbanovich	Deputy Minister of Water Resources of Turkmenistan.
Gapparov Khozhimurat Kobilovich	Acc. Power of Attorney of Head of Department First Deputy Minister of Agriculture and Water Resources of the Republic of Uzbekistan.

From ICWC organizations

Khudaibergenov Yuldash Юлдаш Khudaibergenovich	Head BWO "AmuDarya"
Khamidov Mahmud Khamidovich	Head BWO "SyrDarya"
Dukhovny Victor Abramovich	Director SIC ICWC
Negmatov Gairat Abdusatarovich	Head ICWC Secretariat
Atamuratov Maksudbek Masharipovich	Senior Specialist BWO "AmuDarya"
Baratov Safarali Baratovich	Head Verhnedaryinsk board, BWO "AmuDarya"

Invitees

Koimdodov Kozidavlat Koimdodovich	Vice Prime-Minister, Republic of Tajikistan
Miraliev Amirsho Miralievich	Hakim Hatlon oblast, Republic of Tajikistan
Nazriev Musayabsho Nazrievich	First Deputy Minister of Reclamation and Water Resources, Republic of Tajikistan
Shaimardanov Subhonkul Shaimardanovich	Deputy Minister of Reclamation and Water Resources, Republic of Tajikistan
Abdujabarov Tursunboi	Deputy Minister of Reclamation and Water Resources, Republic of Tajikistan
Abdujabarovich	Head Operation Division Water Department, Kyrgyz Republic
Zhusumatov Esen	Director SIC ICWC Tajik Branch
Nosirov nabiKasimovich	

Ikramov Rahimjon Karimovich	Director General SANIIRI
Pulatov Hakimjon Pulatovich	Director “Yugvodkhoz”, Republic of Kazakhstan
Kholmatov Anatoliy Pulatovich	Head Science and Technique Department Ministry of Reclamation and Water Resources, Republic of Tajikistan
Pulatov Yarash Ergashevich	Director General “TajikNIIGiM “
Yusupov Barotali Yusupovich	Head Kurgan-Tube oblvodkhoz
Sharipov Sharof Sharipovich	Director General United Direction of Minvodkhoz
Kurbanov Abdullo	Head of division

Chairman is Minister of Reclamation and Water Resources of the Republic of Tajikistan Mr. Nazirov Abdukohir Abdurasulovich.

Agenda

1. Results of the growing season 2001 and reservoir cascade operation regime and water intake limits from AmuDarya and SyrDarya for hydrological year 2001-2002 (responsible: BWO “AmuDarya”, BWO “SyrDarya”).
2. Program of ICWC and its executive bodies financial-economic activity for 2002:
 - Plan of operation cost financing;
 - Plan of design activity;
 - Plan of scientific research;
 (responsible: BWO “AmuDarya”, BWO “SyrDarya”, SIC ICWC, CMC ICWC).
3. Measures on draught 2001 mitigation (responsible: BWO “AmuDarya”, BWO “SyrDarya”, SIC ICWC, ICWC members).
4. Preparation of ICWC jubilee meeting and conference (Organizing Committee, N.Kipshakbayev).
5. Project «Order of ICWC executive bodies financing» (responsible: SIC ICWC).
6. (Additional question) "Program of action on the regional collaboration establishing in Central Asia".
7. Agenda and place of next 32nd ICWC meeting.

Having heard participants reports and exchanging opinions ICWC members have decided:

Regarding the first question

1. Accept BWO “AmuDarya” and BWO “SyrDarya” information on water intake limits and reservoir cascade operation regime realization during growing season 2001.
2. ICWC members and executive bodies to analyze their activity in past period and improve complex readiness for future.
3. Approve water intake limits on AmuDarya (Annex 1) and SyrDarya (Annex 2) as well as AmuDarya reservoir cascade operation regime according to Annex 3 for non-growing period 2001-2002.

4. Accept for consideration SyrDarya reservoir cascade operation regime (Annex 4) while preparing interstate agreement.
5. ICWC members from Kazakhstan, Tajikistan, Kyrgyzstan and Uzbekistan undertake measures on the soonest conclusion of interstate agreements on SyrDarya water-power resources rational use.
6. Heads of BWO "SyrDarya" and BWO "AmuDarya" to submit monthly data on actual water intakes from the river trunks and releases compared with limits agreed by ICWC.

Regarding the second question

1. Approve cost breakdown for BWO "SyrDarya" and BWO "AmuDarya" operation needs financing on 2002.
2. Approve cost breakdown for SIC ICWC and its branches on 2002.
3. Taking into account, that SIC ICWC plan on 2000-2002 has been approved on ICWC 25-th meeting to approve its realization for 2002.
4. Approve cost breakdown for KMZ ICWC on 2002.
5. ICWC members to take measures on financing mentioned activity in full volume.
6. To charge SIC ICWC:
 - organize SIC and other organizations' reports on 33rd ICWC meeting;
 - give proposals on methodology and organization of repair-operation measures norms.

Regarding the third question

1. Accept information that BWO "AmuDarya", BWO "SyrDarya", SIC ICWC and water related organizations carried out certain work on draught mitigation and water distribution regularity in SyrDarya basin.
2. Taking into account draught continuation, to consider expedient to follow up with water management and allocation perfection paying special attention to:
 - preventing ICWC established and BWO controlled limits violation;
 - increase measurements accuracy both on hydroposts and headworks;
3. Charge BWO "AmuDarya", SIC ICWC to strengthen activity on donors attraction to SCADA system introduction on headworks, especially downstream Tuyamuyun reservoir;
 - water distribution modeling to assure water supply regularity to water-related zones;
 - work continuation on making more precise losses in AmuDarya downstream.
4. Charge KMZ ICWC to calibrate all headworks on AmuDarya under BWO "AmuDarya" administration including these costs in its annual cost breakdown.
5. Consider expedient to follow up with channel losses definition in AmuDarya lower and middle reaches (fulfillment of item 1.5 ICWC decision of April 12-13,2001) with Hydromets and BWO "AmuDarya" attraction.

Regarding the fourth question

1. Endorse organizing committee activity on preparation of ICWC jubilee meeting and conference.
2. Charge SIC ICWC to inform ICWC members about applications for participation in scientific-applied conference.
3. ICWC members to solve issue with financing their participation in the conference.

Regarding the fifth question

1. All procedural measures are fulfilled for “Provision on ICWC executive bodies financing” approval by the governments. Only IFAS status agreement has not been ratified. By the Parliament of Kazakhstan.
2. Ask ICWC member from Kazakhstan Ramazanov A.M. to speed up this problem solution.

Regarding the sixth (additional) question

1. Accept information about SIC ICWC report about ICWC activity and “Program of action on regional collaboration establishing in Central Asia”.
2. Ask ICWC members consider it as soon as possible and give comments and complements.

Regarding the seventh question

Next 32nd ICWC meeting to carry out in Almaty, Kazakhstan on February 20-22, 2002.

Agenda

1. Reservoir cascade operation regime and water intake limits amplification in SyrDarya and AmuDarya basin for non-growing period 2001-2002 (responsible: BWO “AmuDarya”, BWO “SyrDarya”).
2. Jubilee measures.
3. Ask ICWC honorable member R.Giniyatullin to consider possibility making presentation on GEF project component A-1.

ICWC members

For the Republic of Kazakhstan	Ramazanov A.M.
For the Kyrgyz Republic	Koshmatov B.T.
For the Republic of Tajikistan	Nozirov A.A.
For Turkmenistan	Kurbanov S.K.
For the Republic of Uzbekistan	Gapparov H.K..

Annex 1
To the first question
of ICWC meeting protocol No 31,
Kurgan-Tube, November 23, 2001

Water intake limits from AmuDarya and water supply to the Aral Sea
and delta for growing season 2001-2002, km³

River basin, state	Limits reduction on 25,0% compared with initial
Total from AmuDarya	11.974
including:	
Kyrgyz Republic	0.000
Verhnedarinsk board	2.614
Republic of Tajikistan	2.164
Surhandarya oblast	0.450
From AmuDarya at	
Kerki hydropost	9.360
Turkmenistan	4.875
Republic of Uzbekistan	4.485
Besides:	
- water supply to Priaralie with regard for	
Irrigation releases and collector-drainage water	1.500
- sanitary-ecological releases	
In irrigation systems:	0.600
Tashauz veloyat	0.113
Khorezm veloyat	0.113
Karakalpak Republic	0.374

Notes

1. Water intake limits foresee water supply for irrigation, industrial and domestic needs. Under water availability changes limits will be also corrected.
2. Under AmuDarya water availability increase all water volume will be directed to the Aral Sea.

Annex 2
 To the first question
 of ICWC meeting protocol No 31
 Kurgan-Tube, November 23, 2001

Water intake limits from SyrDarya and water supply to the Aral Sea
 and delta for non-growing season 2001-2002, km³

River basin, state	Limits reduction on 25,0% compared with initial
Total from SyrDarya	3.07
including:	
Republic of Kazakhstan	0.50
Kyrgyz Republic	0.02
Republic of Tajikistan	0.20
Republic of Uzbekistan	2.35
Besides,	
Water supply to the Aral sea	2.30

Note

1. Water intake limits foresee water supply for irrigation, industrial and domestic needs. Under water availability changes limits will be also corrected.

Work plan
of Nurek and Tuyamuyun reservoirs
since October 2001 till March 2002

Nurek water reservoir	Unit	Forecast						Total
		October	November	December	January	February	March	
Inflow	m ³ /s	318	235	205	160	170	200	3385
Water losses	m ³ /s	0	0	15	1	17	0	84
Volume: beginning	mln. m ³	10357	10051	9520	8637	7591	6631	10357
End of period	mln. m ³	10051	9520	8637	7591	6631	5827	5827
Accumul. (+), release (-)	mln. m ³	-306	-531	-883	-1046	-960	-804	-4530
Altitude: end of period	m	903.48	900.58	890.75	878.4	865.98	855.1	
Release from reservoir	m ³ /s	432	440	520	550	550	500	7833

Tuyamuyun water reservoir	Unit	Forecast						Total
		October	November	December	January	February	March	
Inflow	m ³ /s	270	264	421	517	508	330	6033
Water losses	m ³ /s	76	58	30	73	73	84	1037
Volume: beginning	mln. m ³	1710	1692	1838	2555	3450	3639	1710
End of period	mln. m ³	1692	1838	2555	3450	3639	1972	1972
Accumul. (+), release (-)	mln. m ³	-18	146	717	895	189	-1667	-262
Altitude: end of period	m	116.28	118.06	124.86	126.18	126.5	120.12	
Release from reservoir	m ³ /s	201	150	123	110	357	868	4740
Including to the river	m ³ /s	166	127	106	100	261	594	3547

Annex 4
to the first question
of ICWC meeting protocol No 31
Kurgan-Tube, November 23, 2001

Schedule-forecast
of Naryn-SyrDarya reservoir cascade
since October 1, 2001 till March 31, 2002

		October fact	November fact	December fact	January fact	February	March	Total mln.m ³
<i>Toktogul reservoir</i>								
Inflow to reservoir	m ³ /s	283	240	180	165	162	173	3159
	mln.m ³	758	622	482	442	392	463	
Volume: beginning	mln.m ³	12100	11943	11447	10426	9180	8241	
end of period	mln.m ³	11943	11447	10426	9180	8241	7418	
Release from reservoir	m ³ /s	318	430	560	630	550	480	7770
	mln.m ³	852	1115	1500	1687	1331	1286	
<i>Kairakkum reservoir</i>								
Inflow to reservoir	m ³ /s	409	794	877	928	895	797	12288
	mln.m ³	1095	2058	2349	2486	2165	2135	
Volume: beginning	mln.m ³	1195	1389	1967	2626	3038	3275	
end of period	mln.m ³	1389	1967	2626	3038	3275	3418	
Release from reservoir	m ³ /s	398	600	650	800	820	761	10527
	mln.m ³	1066	1555	1741	2143	1984	2038	
<i>Chardara reservoir</i>								
Inflow to reservoir	m ³ /s	311	640	769	875	940	947	11706
	mln.m ³	833	1659	2060	2344	2274	2536	
Volume: beginning	mln.m ³	786	1014	1597	2666	4031	5056	
end of period	mln.m ³	1014	1597	2666	4031	5056	5400	
Release from reservoir	m ³ /s	245	400	360	360	360	528	5907
	mln.m ³	656	1037	964	964	871	1414	
Release to Kyzylkum canal	m ³ /s	3	5	5	5	5	5	73
	mln.m ³	8	13	13	13	12	13	
Release to Arnasay depression	m ³ /s	0	0	0	0	150	280	1113
	mln.m ³	0	0	0	0	363	750	
Water supply to Aral Sea	m ³ /s	34	104	189	189	154	206	2299
<i>Charvak reservoir</i>								
Inflow to reservoir	m ³ /s	116	95	60	62	60	78	1238
	mln.m ³	311	246	161	166	145	209	
Volume: beginning	mln.m ³	1089	957	993	912	836	762	
end of period	mln.m ³	957	993	912	836	762	690	
Release from reservoir	m ³ /s	157	80	90	90	90	105	1609
	mln.m ³	421	207	241	241	218	281	
<i>Andijan reservoir</i>								
Inflow to reservoir	m ³ /s	62	65	54	46	46	62	880
	mln.m ³	166	168	145	123	111	166	
Volume: beginning	mln.m ³	559	513	603	712	809	908	
end of period	mln.m ³	513	603	712	809	908	959	
Release from reservoir	m ³ /s	71	30	13	10	12	43	474
	mln.m ³	190	78	35	27	29	115	

RESULTS OF GROWING SEASON 2001 AND FORECAST OF RESERVOIR CASCADE OPERATION AND WATER INTAKE LIMITS FROM AMUDARYA FOR HYDROLOGIC YEAR 2001-2002¹

Bad starting conditions of the growing season 2001 (actual supplies in reservoirs snow stock in the mountains, weather) were confirmed and negatively impacted water related situation.

Actual water availability for growing season was 68,6 % of norm and 95,6 % of last year level (norm-45.6km³, fact-32.7 km³) against 34.2 km³ in last year.

Actual AmuDarya flow at Kelif site was 94,4 % of last year level (fact on 2001 is 26,9 km³, fact on 2000 is 28,5 km³).

This situation created high tension and required big efforts from all participants.

In spite of efforts undertaken by BWO "AmuDarya jointly with Minselvodkhozes of Turkmenistan and Uzbekistan it was impossible to avoid irregularity in water supply.

Results of revised water limits use during the growing season 2001 by the states in the AmuDarya basin are presented below.

Table 1

Established water limits use during the growing season 2001 by the states in the AmuDarya basin

Name	Limit	Increasing by 01.10.01		Saved	Fulfillment %
		revised limit	fact		
Kyrgyz Republic	450	450	38,9	411,1	8,6
Verhnedaryinsk board (upstream) including:	6924	7304	7109	195	97,3
Republic of Tajikistan	5904	5904	5709,1	194,9	96,7
Surkhandarya oblst	1020	1400	1400	0	100,0
Water intake from AmuDarya At Kerki site	23640	23640	17180,8	6459,2	72,7
Republic of Uzbekistan, total: including:	12015	12015	8400,6	3614,4	69,9
a) water intakes in midstream					
Karshi canal	2100	2465	2464,4	0,6	100,0
Amu-Bukhara canal	2276	2704	2704	0	100,0
Total for midstream:	4376	5169	5168,4	0,6	100,0
б) Water intakes in downstream					
Khorezm oblast	2625	2580	1378,4	1201,6	53,4
Karakalpak Republic	5014	4266	1853,9	2412,1	43,5
Total for downstream	7639	6846	3232,3	3613,7	47,2
Turkmenistan, total: including:	11625	11625	8780,2	2844,8	75,5

¹ Information on first question of agenda

Name	Limit	Increasing by 01.10.01		Saved	Fulfillment %
		revised limit	fact		
a) Water intakes in midstream					
Garagumdarya	5611	5501	4444,3	1056,7	80,8
Lebap veloyat	2173	2283	2278,6	4,4	99,8
Total midstream	7784	7784	6722,9	1061,1	86,4
б) Water intakes in downstream					
Tashauz veloyat	3841	3841	2057,3	1783,7	53,6
Total for basin	31014	31394	24328,7	7065,3	77,5
including:					
Verhnedaryinsk board					
(upstream)	6924	7304	7109	195	97,3
Midstream	12160	12953	11891,3	1061,7	91,8
Downstream	11480	10687	5289,6	5397,4	49,5
Water intakes of AmuDarya downstream					
total:	11480	10687	5289,6	5397,4	49,5
including:					
Khorezm oblast	2625	2580	1378,4	1201,6	53,4
Karakalpak Republic	5014	4266	1853,9	2412,1	43,5
Tashauz veloyat	3841	3841	2057,3	1783,7	53,6

1. Kyrgyz Republic used its limit only on 8,6 %.

2. In river upstream (BWO “AmuDarya” Verkhnedaryinsk board) limit is used on 97,3 % (under limit 7,304 km³ fact was 7,109 km³ including:

- Republic of Tajikistan-96,7 % (limit - 5,9 km³, fact - 5,71 km³);

- Surkhandarya oblast- 100,0 % (limit - 1,4 km³, fact - 1,4 km³);

3. Revised limit at Kerki site - 72,7 % (limit -23,64 km³, fact-17,8 km³);

- Republic of Uzbekistan-69,9 % (limit - 12,05 km³, fact - 8,40 km³);

- Turkmenistan-75,5 % (limit - 11,625 km³, fact - 8,78 km³).

4. Total for basin established limit is used on 77,5 % (limit - 31,394 km³, fact - 24,328 km³).

Established limits use over river sites are presented in table 2 below.

Table 2

Established water intake limits use during growing season 2001
over AmuDarya river sites

Name	Limit for period	Increasing by 01.10.2001		Saved	Use %
		Revised limit	fact		
VDB including:	6924	7304	7109,4	194,6	97,3
Tajikistan	5904	5904	5709,1	194,9	96,7
Uzbekistan	1020	1400	1400	0	100,0
SDB including:	12160	12953	11891,3	1061,7	91,8

Name	Limit for period	Increasing by 01.10.2001		Saved	Use %
		Revised limit	fact		
Turkmenistan	7784	7784	6722,9	1061,1	86,4
Uzbekistan	4376	5169	5168,4	0,6	100,0
Upradik including:	5206	5370	3411,1	1958,9	63,5
Khorezm	2625	2580	1378,4	1201,6	53,4
Karakalpakstan	767	976	954,5	21,5	97,8
Total for Uzbekistan	3392	3556	2332,9	1223,1	65,6
Tashauz (Turkmenistan)	1814	1814	1078,2	735,8	59,4
NDB including:	6274	5317	1878,5	3438,5	35,3
Turkmenistan	2027	2027	979,1	1047,9	48,3
Uzbekistan	4247	3290	899,4	2390,6	27,3

1. BWO "AmuDarya" Verkhnedaryinsk board (upstream) – 97,3 %.
2. Midstream – 91,8 %, including Uzbekistan - 100,0 %, Turkmenistan - 86,4 %.
3. Downstream – 49,5 %, including Uzbekistan - 47,2 %, Turkmenistan - 53,2 %.

Plan of water supply to the Aral sea is fulfilled on 4.9% (plan-2550 mln.m³, fact- 126,0 mln.m³ (table 3), last year it was - 614 mln.m³).

Table 3

Water supply to the Aral sea and AmuDarya delta
During growing season (April-July) 2001

Name	April	May	June	July	August	September	Water supply since 01.04. till 01.08.00		Fulfillment %
							limit	fact	
G/s Samanbai	9	8	9	9	8	9	1700	52	3,1
Total release From canal system Kyzketken and Suenli	0	0	0	0	0	0		0	
Collector-drainage system	22	11	9	11	7	14	850	74	8,7
Total	31	19	18	20	15	23	2550	126	4,9
Increasing	31	50	68	88	103	126			

Note: Water supply data are agreed with Glavhydromet of the Republic of Uzbekistan.

By October 2001 water volume in Nurek reservoir was 10 357 mln.m³ under plan 10 500 mln.m³ (last year-10 098 mln.m³) (table 4).

Due to low actual inflow during growing season 2001 water volume in Tuyamuyun reservoir by 01.10.2001 was 1710 mln.m³ (last year-1820 mln.m³) (table 4).

According to Uzglavhydromet data, water availability at Kerki site for non-growing period 2001-2002 is expected within 64,7 – 86,3 % or 75,0 %, that matches non-growing period 2000-2001 (75,5 %).

In table 5 water intake limits for hydrological year 2001–2002 over states are presented including alternatives of water intake for non-growing period 2001-2002.

Table 4

Actual regime of Nurek and Tuyamuyun reservoirs since April 2001 till September 2001

Nurek reservoir	Unit	Fact						TOTAL
		April	May	June	July	August	September	
Inflow	m ³ /s	461	794	1327	1461	1038	500	14750
Water losses	m ³ /s	9	0	-1	70	1	4	222
By the end of period	mln m ³	5935	6323	7895	9678	10428	10357	10357
Accum. (+), release(-)	mln m ³	-18	388	1572	1783	750	-71	4404
Altitude: end of period	m	856,74	862,1	881,7	902,07	908,30	908,62	
Release from reservoir	m ³ /s	459	650	721	725	757	523	10125

Tuyamuyun reservoir	Unit	Fact						TOTAL
		April	May	June	July	August	September	
Inflow	m ³ /s	252	465	1297	915	629	463	10596
Water losses	m ³ /s	27	166	376	218	136	110	2703
By the end of period	mln m ³	2119	1872	1803	1912	1779	1738	2119
Accum. (+), release(-)	mln m ³	1872	1803	1912	1779	1738	1710	1710
Altitude: end of period	m	-247	-69	109	-133	-41	-28	-409
Release from reservoir	m ³ /s	116,50	117,5	118,25	117,55	117,62	116,37	
Inflow	m ³ /s	320	325	879	747	508	364	8302
Including to the river	m ³ /s	225	238	663	523	364	311	6121

Table 5

Options of water diversion limit from AmuDarya and water supply to the Aral Sea and delta correction for non-growing period 2001-2002 (with regard for limits use by 01.08.01)

River basin, state	Water intake limit ,km ³					
	Total for year (since 01.10.2001 till 01.10.2002)	Including non-growing period 2001				
		Limits acc. to states' request	1 option limit re- duction on 15% from initial.	2 option limit re- duction on 20% from initial.	3 option limit re- duction on 25% from initial.	4 option limit re- duction on 30% from initial.
Total from AmuDarya including:	55,020	15,965	13,570	12,772	11,974	11,176
Kyrgyz Republic	0,450	0,000	0,000	0,000	0,000	0,000
Vernedaryinsk board	10,570	3,485	2,962	2,788	2,614	2,440
Republic of Tajikistan	9,170	2,885	2,452	2,308	2,164	2,020
Surkhandarya oblast	1,400	0,600	0,510	0,480	0,450	0,420
From AmuDarya						
By g/s Kerki	44,000	12,480	10,608	9,984	9,360	8,736
Turkmenistan	22,000	6,500	5,525	5,200	4,875	4,550
Republic of Uzbekistan	22,000	5,980	5,083	4,784	4,485	4,186
Besides:						
Water supply to Priaralie with regard for irrigation releases and CDW	5,000	2,000	1,700	1,600	1,500	1,400
Sanitary-ecological releases						
In irrigation systems:	0,800	0,800	0,680	0,640	0,600	0,560
Tashauz veloyat	0,150	0,150	0,128	0,120	0,113	0,105
Khorezm veloyat	0,150	0,150	0,128	0,120	0,113	0,105
Republic of Karakalpakstan	0,500	0,500	0,424	0,400	0,374	0,350
Total to the Aral Sea and Priaralie						

Notes

1. Water intake limits foresee water supply for irrigation, industrial and domestic needs. Under water availability changes limits will be also corrected.
2. Under AmuDarya water availability increase all water volume will be directed to the Aral sea.

BWO "AmuDarya" has worked out version of Tuyamuyun reservoir operation regime for non-growing period under 65% probability and average flow 13.4 km³ at Kerki site. BWO'AmuDarya together with Center "Energy" has worked out version of Nurek reservoir operation regime for non-growing period 2001-2002.

Taking into account current situation, is proposed to establish plan of water supply to the Aral sea and Priaralie, with regard for collector-drainage waters, 1400mln.m³.

In conclusion BWO "AmuDarya" suggests:

1. Accept water diversion alternative for non-growing period 2001-2002 according to Annex 3 of ICWC meeting protocol No 31.
2. To approve submitted to ICWC AmuDarya reservoir cascade regime for non-growing period 2001-2002.

SYRDARYA WATER RELATED COMPLEX OPERATION DURING GROWING SEASON 2001²

Naryn-Syrdarya cascade regime and water intake limits during growing season 2001 were approved on 29-th ICWC meeting in Kokshetau (12-13 April 2001). With regard for expected draught and releases from Toktogul reservoir water intake limits were approved reduced on 10% compared with year of average water availability (norm). Intermediate results for the first 4 months were considered on 30-th ICWC meeting in Bishkek.

It worth to note, that forecast for the basin as a whole turned rather correct – 83% of norm but actual inflow to upper reservoirs exceeded expected value (for Charvak and Andizhan reservoir) and lateral inflow to SyrDarya, Kokdarya and Chirchik turned less than expected. Most deviation from forecast was fixed between Kairakkum and Chardara that influenced on inflow to Chardara reservoir. With regard for above mentioned situation was less tense compared with 2000, especially for Chirchik and Karadarya basin. During the first half of growing period satisfactory water supplies were accumulated in Charvak and Andizhan reservoirs and provide transfer of additional volume from Andizhan reservoir to g/s Akjar on SyrDarya (near 80mln.m³) mitigating situation in midstream.

It worth to note, that states’ obligations taken in interstate protocol between Kazakhstan, Kyrgyzstan and Uzbekistan on water-power resources use during growing season 2001 (signed on May 20, 2000) were not fully completed. For example, in summer 2001 Uzbekistan accepted about 89% of planned electricity volume from Kyrgyzstan and Kazakhstan –68%, that impacted Toktogul reservoir regime. Besides, protocol fulfillment started one month later and releases from Toktogul were less than expected, in result actual lateral inflow to SyrDarya and Karadarya within Ferghana valley and to Kairakkum reservoir was less than expected.

To assess water related situation and correct Kairakkum reservoir regime working meetings were conducted regularly in Khujand where ICWC members from Kazakhstan, Kyrgyzstan and Uzbekistan together with BWO “SyrDarya” analyzed situation and worked out measures on water allocation. In result of accepting electricity by systems of Kazakhstan and Uzbekistan from Naryn hydropower cascade and decisions made in Khujand to the end of July-beginning of August necessary inflow to Kairakkum reservoir (400m³/s) was provided. At the beginning of August release from Kairakkum reservoir exceeded 600 m³/s. Some indicators of Naryn-SyrDarya cascade are presented in tables 1, 2.

Table 1

Water reservoir	Reservoir capacity, mln. m ³			
	by 1.04.2001	by 1.10.2001		by 1.10.2000
		schedule	fact	fact
Toktogul	8724	11915	12100	13705
Andijzhan	1226	632	559	305
Charvak	710	994	1089	503
Kairakkum	3364	901	1195	1002
Chardara	5227	621	786	757
Total	19251	15063	15729	16272

² Information on first question of agenda

Table 2

Reservoir	Releases, mln.m ³	
	schedule	fact
Toktogul	6002	5923
Andijzhan	2276	2629
Charvak	3700	4004
Kairakkum	7455	6748
Chardara	6422	6181
Total	25855	25485

Water remained in reservoirs by October 1, 2001 (table 1) compared with similar last year indicators shows that last vegetation was not so tense as preceding one. Regarding Toktogul reservoir which volume by October 1 2001 was 1.7km³ less compared with last year, its emptying is determined by operation regime during non-growing period. It is important to note, that common data do not always reflect hole picture. If releases from Toktogul reservoir in summer are determined by volume of accepted electricity, in April and September JSV “Kyrzenergo” releases water by own regardless to ICWC schedule. That is why coincidence of planned and actual releases from Toktogul during growing season (table 2) does not show its optimal operation. Summer releases reduction is covered by 470mln.m³ released in April and September. Regarding Kairakkum reservoir regime, only in the beginning of August after Markham pumping station launching maximum release from reservoir was reached, that does not coincide with peak irrigation demand for one-two decades.

In general, analyzing table 1 and 2 can be said, that deviations from approved schedule are not high. In spite of unfavorable start conditions, cascade work allowed to provide request of states-consumers. Information about planned indicators realization are presented in table 3.

Table 3

Republic-consumer	ICWC limit Or approved indicator, mln.m ³	Fact, mln.m ³	Percentage
Kyrgyz Republic	200	213	106.5
Republic of Uzbekistan	7880	8425	106.9
Republic of Tajikistan	1610	1954	121.4
Republic of Kazakhstan, including: Canal "Dostik"	3428 628	3717 509	108,4 81.1
Inflow to Chardara reservoir*)	2800	3208	114,6

*) Indicator of inflow to Charadara reservoir foreseen by interstate protocol dated May 20, 2000 and schedule for Naryn-SyrDarya cascade approved by 29-th ICWC meeting equals to 2800 mln.m³ for growing season 2001, actual inflow was 2194 mln.m³ (fixed at g/s Kokbulak and Keles) (848 mln.m³, total- 3208 mln.m³ according to other sources).

Let us to explain briefly reasons for significant deviations from established limits during growing season 2001 for Tajikistan and Kazakh part of “Dostik” canal. In first case actual diversion acceded limits because of pumping stations, which are not managed by administration of canals. Regarding Dostik canal, BWO “SyrDarya” repeatedly stated that water consumption regime does not meet consumers’ request. According to request during summer (June-

August) it is necessary to deliver 90% of total volume for vegetation, that is technically not feasible under existing canal's parameters.

It worth to note, that in interstate protocol between three states water supply to Dostik canal has been revised, but protocol has been signed on May 20, 2001 and this means that discharges for April and May could not be corrected. Besides, Kazakhstan accepted only two thirds of electricity mentioned in protocol. Lessons learned during last growing season should be taken into account for future activity.

To the Aral Sea and Priaralie 948 mln.m³ or 104 % of ICWC approved volume has come. Actual regime of Naryn-SyrDarya cascade operation is presented in table 4.

Naryn-SyrDarya reservoir cascade operation regime and water intake limits grounding for non-growing period 2001-2002

SyrDarya water related complex should solve the following tasks during forthcoming period:

- Prepare water related system to next growing season;
- Provide passage of increased discharges and satisfy all water consumers within established limits;
- Optimize Naryn-SyrDarya cascade operation;

Expected water resources volumes for non-growing period 2001 – 2002 compared with average annual values (according to Glavgidromet forecast No 25 - 07 - 18/109 of 27.09.2001).

Table 4

 Naryn-SyrDarya reservoir cascade operation
 Since April 2 till September 30, 2001

	Unit	April	May	June	July	August	September	total
		fact	fact	fact	fact	fact	fact	
Toktogul reservoir								
Inflow to reservoir	m3/s	329	759	898	618	565	377	9359
	mln.m ³	853	2033	2328	1655	1513	977	
Volume: Start of period	mln.m ³	8724	8716	10183	11584	11690	11880	12100
End of period	mln.m ³	8716	10183	11584	11690	11880	12100	
Release from reservoir	m3/s	344	245	391	538	449	277	5923
	mln.m ³	892	656	1013	1441	1203	718	
Kairakkum reservoir								
Inflow to reservoir	m3/s	364	219	249	329	320	286	4655
	mln.m ³	943	587	645	881	857	741	
Volume: Start of period	mln.m ³	3364	3340	2903	2358	1839	1282	1195
End of period	mln.m ³	3340	2903	2358	1839	1282	1195	
Release from reservoir	m3/s	437	350	391	503	536	340	6748
	mln.m ³	1133	937	1013	1347	1436	881	
Chardara reservoir								
Inflow to reservoir	m3/s	351	184	144	129	164	250	3209
	mln.m ³	910	493	373	346	439	648	
Volume: Start of period	mln.m ³	5227	5146	3759	2485	986	476	786
End of period	mln.m ³	5146	3759	2485	986	476	786	
Release from reservoir	m3/s	310	599	512	500	304	113	6181
	mln.m ³	804	1604	1327	1339	814	293	
Release to Kyzylkum canal	m3/s	33	54	68	128	30	7	848
	mln.m ³	86	145	176	343	80	18	
Water supply to Aral sea	m3/s	264	67	12	5	5	10	948
	mln.m ³	684	179	31	13	13	26	
Charvak reservoir								
Inflow to reservoir	m3/s	258	480	512	276	182	138	4866
	mln.m ³	669	1286	1327	739	487	358	
Volume: Start of period	mln.m ³	710	998	1499	1864	1624	1264	1089
End of period	mln.m ³	998	1499	1864	1624	1264	1089	
Release from reservoir	m3/s	120	230	318	348	314	185	4004
	mln.m ³	311	616	824	932	841	480	
Andijan reservoir								
Inflow to reservoir	m3/s	96	203	235	85	70	59	1970
	mln.m ³	249	544	609	228	187	153	
Volume: Start of period	mln.m ³	1226	1211	1411	1574	880	575	559
End of period	mln.m ³	1211	1411	1574	880	575	559	
Release from reservoir	m3/s	93	137	175	337	190	60	2629
	mln.m ³	241	367	454	903	509	156	

Table 5

SyrDarya water resources for non-growing period 2001-2002

Parameter (since 1.10.2001 till 31.03.2002)	Mln.m ³		% of norm
	Norm	Forecast	
Inflow to upper reservoirs			
Toktogul	2720	2987	109.8
Andizhan	921	865	93.9
Charvak	1195	1179	98.7
Ugam river	157	157	100
Total	4993	5188	103.9
Latral inflow:			
Toktogul-Uchkurgan	393	413	105
Uchkurgan-Uchtepe-Kairakkum	3804	3458	90.9
Andizhan-Uchtepe	2075	1965	94.7
Kairakkum-Chardara	2830	2358	83.3
Gazalkent-Chinaz-Chirchik	885	865	97.7
Total	9987	9059	90.7
Grandtotal	14980	14247	95.1

Water resources forecast (table 5) is used while Naryn-SyrDarya cascade operation regime schedule for non-growing period preparation. Water intakes are accepted within the limits of last years for year of average water availability (3.07 km³); limits for each republic are presented in Annex 2.

BWO “SyrDarya has prepared option of Naryn-SyrDarya cascade operation regime (Annex 4). Difficulties are connected with absence of agreement on water-power resources rational use, which is usually signed in August-September and prepared by experts from all countries. That is why Naryn-SyrDarya cascade operation regime is accepted based on analysis of last year information and Glavgidromet forecast.

Main difficulties occurred while grounding Toktogul reservoir regime. Because agreement is not signed, it was decided:

- Preliminary regime of releases from Toktogul reservoir for next growing season to accept as average value for three last years (8.4 km³);
- With regard for the Kyrgyz Republic government’s decision dated October 13, 2001 within Interstate Agreement between Kyrgyzstan and Uzbekistan to accept from Uzbekistan 532 mln. kWt/h to keep 0.6 km³ water in reservoir and establish, that during October-March 8,4-0,6 = 7,8 km³ should be released from Toktogul reservoir.

Negotiations completion between region’s countries and agreement signing will allow fulfill planned tasks and provide water resources rational use.

ABOUT MEASURES ON DRAUGHT 2001 CONSEQUENCES MITIGATION³

AmuDarya river basin

Compared with 1999 – 2000 hydrological year, which was difficult one, 2000-2001 hydrological year turned worse. Comparative indicators are presented in the table below.

Indicators	Non-growing period		Percent	Growing season		Percent	Hydrological year		Percent
	1999-2000	2000-2001		2000	2001		1999-2000	2000-2001	
Water availability, km ³	15,6	10,9	69,87	34,2	32,7	95,61	49,8	43,6	87,55
Flow by Kelif g/s, km ³	20,4	14,5	71,08	28,5	26,9	94,39	48,9	41,4	84,66
Water intake, total:	15876	12098	76,2	27571	24330	88,1	43447	36428	83,84
including:									
Kyrgyzstan	0	0		45	39	86,66	45	39	86,66
Tajikistan	2013	1802	89,52	5849	5709	97,61	7862	7511	95,54
Turkmenistan	6599	4955	75,09	10629	8780	82,6	17228	13735	79,72
Uzbekistan	6948	4824	69,43	9732	8401	86,32	16680	13225	79,29
Surkhandarya oblast	316	517	163,6	1316	1400	106,4	1632	1917	117,5
Upstream diversion	2319	2319	100	7165	7109	99,22	9484	9428	99,41
Midstream diversion	8732	6970	79,82	13177	11891	90,24	21909	18861	86,09
Downstream diversion	4815	2808	58,32	7185	5290	73,63	12000	8098	67,48
Water supply to Aral sea	4191	470	11,21	614	126	20,52	4805	596	12,4
Water losses in AmuDarya									
Kelif-Samanbai	4606	4898	106,3	11056	10871	98,33	15662	15769	100,7
Kelif-Darganata	528	1585	300,2	5041	5124	101,6	5569	6709	120,5
Darganata-Tuyamuyun	2488	1183	47,55	3293	2779	84,39	5781	3962	68,53
Tuyamuyun-Kipchak	741	1143	154,3	1903	2143	112,6	2644	3286	124,3
Kipchak-Samanbai	849	986	116,1	818	826	101	1667	1812	108,7

From table above the following conclusions can be made:

1. Start of rigid draught coincides with start of growing season 2000 and lasts 1,5 year.
2. Water availability by Kerki g/s upstream Garagumdarya in 2000 – 2001 hydrological year was 87,6 % compared with last year including 69,9 % for vegetation and 95,6 % for non-vegetation.
3. Actual flow by Kerki g/s upstream Garagumdarya for 2000-2001 hydrological year was 84,7 % compared with last one including 71,1 % for non-vegetation and 94,4 % for vegetation.
4. Actual water diversion all over the basin amounted for 83,8 % compared with last hydrological year.
5. Draught degree increases from upstream to downstream.
6. Water losses in the river for 2000-2001 hydrological year remained the same as last year. Losses during current vegetation were 98.3% compared with last one.

It worth to note, that conditions by start of vegetation were worse compared with last year and results of vegetation only confirmed this.

Measures undertaken to mitigate draught consequences were as follows:

³ Information from third question of agenda

1. States of the basin were informed beforehand about expected draught and took measures for its mitigation.
 2. At ICWC 29-th meeting in Kokshetau on April 12-13, 2001 decision has been made to cut water intake limits on 15%.
 3. Because of situation worsening during vegetation limits were cut once more on 10 % ICWC members were informed about this measure.
 4. BWO together with relevant ministries of Turkmenistan and Uzbekistan was trying to reduce diversion in midstream and achieved positive results.
 5. Due to low inflow to Tuyamuyun reservoir and absence of regulating capacity in reservoirs water allocation downstream was conducted between three main water users: Tashauz velayat, Karakalpakstan and Khorezm oblast proportionally to inflow and according to each user's multiyear share. Decisions have been made at technical meetings of commission on Tuyamuyun reservoir operation regime which were held 11 times.
 6. To control established limits operative groups were created from representatives of BWO and relevant ministries. Breakers were punished by penalties and other sanctions that gave positive results and allowed to pass water to Tahiatash hydrounit.
 7. Together with Glavgidromet joint measurements were conducted during the growing season on Kipchak and Tuyamuyun g/s in river lower reaches.
- It worth to note, that in spite of efforts taken by states and BWO, disproportion in water consumption between midstream and downstream could not be avoided.
Due to lack of water resources downstream (in Northern Karakalpakstan water availability was 27,3 %).

Measures on water conservation at the national level

1. Strengthening water users' discipline.
2. New irrigation and crop production technologies.
3. Canal efficiency increase.
4. New irrigation and leaching norm development and introduction.
5. Crop pattern revision.
6. Modern equipment and water account systems introduction at all levels of water management and distribution.

Complementary information

Comparative analysis of draught 2000-2001 consequences (according to BWO "AmuDarya" and SIC ICWC data) led to the following conclusions:

1. During 2000-2001 AmuDarya water availability (unregulated flow) amounted for 87,6 % compared with 1999-2000; simultaneously, actual flow (regulated by Nurek reservoir) was 84,7 %. In Nurek reservoir during 2000-2001 0,7 bln. m³ more were accumulated compared with 1999-2000, that made situation even more difficult. Regulating capacity of Nurek reservoir are not used.
2. Generally, in 2000-2001 total water diversion from the river amounted for 83.8 % compared with 1999-2000 годом. Water distribution irregularity between the states and along the river increased. Downstream suffered worst.
3. Though water losses remained the same (15.7 bln.m³) compared with 1999-2000, in mid-stream they grew (120.5%) and in vegetation they equaled 300.2%! At the same time, at Darganata-Tuyamuyun site losses reduced on 1.8 bln.m³.

Flow losses can be divided into two constituents: (1) *natural losses* in the river and reservoirs which can be assessed using some models of calculation; (2) *not-accounted losses* including calculation mistakes, flow account and not-accounted diversion. According to SIC ICWC data, first constituent should not exceed 5-7bln. m³. Losses in amount of 15.7 bln.m³ witness about non-accounted diversion. Especially strange is losses growth in midstream.

SyrDarya river basin

BWO “AmuDarya” have undertaken the following measures to mitigate draught consequences:

ICWC members together with BWO facilitated conclusion of interstate agreements on water-power resources rational use.

Permanent control of above agreements realization regarding electricity receipt from Tajikistan and Kyrgyzstan, energy resources delivery, etc.

This summer during vegetation ICWC members and BWO representatives meetings were conducted where Kairakkum reservoir operation correction and water allocation among mid-stream consumers have been made according to emerging situation.

Necessary works have fulfilled to organize “Makhram-0” pumping station functioning, that allowed to increase releases from Kairakkum reservoir in August 2001 below altitude 343,5 m and reduce tension midstream.

Transfer of 80mln.m³ from Andizhan reservoir in July 2001 to increase inflow to Kairakkum reservoir with further increased release from it.

In August 2001 to increase inflow to Chardara reservoir releases from Charvak reservoir were increased and directed through Akhangaran-Tashkent Sea to SyrDarya.

PROTOCOL OF ICWC TECHNICAL GROUP WORKING MEETING

December 19, 2001

Tashkent

Attendees:

Dukhovny V.A., Umarov P.D., Sokolov V.I., Sorokin A.G., Beglov F.F. – SIC ICWC
Mirhojiev M.M. – Minselvodhoz of Uzbekistan
Kipshakbayev N.K. – SIC ICWC Kazakh branch
Makarov O.S. – MKZ ICWC (Kyrgyz Republic)
Khatamov A.A. - Turkmengiprovodhoz
Nasirov N.K. - SIC ICWC Tajik branch

Participants have discussed the following:

In accordance with ICWC 31-st meeting decision in Kurgan-Tube dated November 23, 2001 (item 6 of protocol) “Program of action on organization of regional collaboration in Central Asia”. This program foresees to organize work of ICWC thematic working groups (consisting of leading specialists of the region) to search agreed solution of the issues in water resources management and use in the region. It is suggested to establish 4 thematic groups:

- Technical aspects;
- Juridical questions;
- Institutional questions;
- Financial aspects.

Each thematic group should assess problem and develop action plan discussing it with a public in order to work out recommendations to decision-makers for their realization in connection with other thematic directions.

After discussion decision has been made:

1. Group «Technical aspects» has determined the following questions in order of priority:
 - 1.1. ICWC Training Center activity – inclusion of all technical issues in training program (to prepare inventory and schedule).
 - 1.2. Flow losses reduction along AmuDarya river
 - 1.3. Amplification of runoff forecast in real time and hydrometric account improvement.
 - 1.4. Modeling development.

Other questions to pay attention:

- Establishing water resources volume for diversion from AmuDarya and SyrDarya and Transboundary ground water without damage;
- Assessment of water conservation: approaches, methods, temporal limits, effectiveness, real size, achievable at certain temporal level;
- Regional criteria and standards of water quality, methods of their achievement, limiting water by quality;
- Water and salt management in separate river basins;

- Ecological and sanitary releases volume;
- Return water management;
- Climatic changes impact on water resources and water consumption.

2. Most urgent issue is to determine courses content and schedule for 2002. Technical group should define what themes from 6 blocks of “Irrigated farming” to be included in courses agenda on February, March and April 2002. Recommendations should also be given what themes should be included in course for center’s branches in Osh and Dushanbe.

Group members agreed to start preparation for special seminar on crop water consumption and model of water allocation within WUA (based on results of Copernicus project) to be held in April-May 2002. It is expedient to invite to this seminar prof.Lpereira, Project Coordinator and EU representative.

Suggestion has been expressed to start preparation to new course on water quality and modeling planned for the second half of 2002.

Group members should submit proposals on all above questions until January 15, 2002 to SIC ICWC.

3. SIC ICWC (Sokolov V.I., Beglov F.F.) until December 28, 2001 should develop package of proposals for investment projects:

- Partnership development in the region (proposal has been prepared and adopted by ICWC);
- Return water management (proposal has been prepared and adopted by ICWC and IFAS);
- AmuDarya hydraulic facilities automation (proposal is prepared by Makarov O.S. should make amendments);
- Zerafshan river basin integrated management (proposal is prepared);
- Ways of socio-economic situation improvement in lower reaches under water deficit (proposal is prepared-it needs translation into Russian).

Package of proposals should be passed to all members of technical group for national opinion preparation on each proposal. National opinions should be submitted to SIC ICWC until the end of January 2002 for donors conference in February 2002 in Almaty.

Technical group members ask representatives of Kyrgyz Republic and Tajikistan to prepare urgently joint proposal on zone of flow formation in order to include it in package of proposals for investment projects.

4. Next group meeting is to be held on January 21-22, 2002 during next Training Center workshop.

PROTOCOL No 1
FIRST MEETING OF ICWC JURIDICAL GROUP

September 27, 2001

Tashkent

Attendees

From the Republic of Kazakhstan	Kipshakbayev N.K.
From the Kyrgyz Republic	Jailooboyev A.Sh..
From the Republic of Tajikistan	Nosirov N.K.
From Turkmenistan	Ovezov A.M., Berdiev A.
From the Republic of Uzbekistan	Umarov H.
From SIC ICWC	Dukhovny V.A., Beglov F.F., Mukhamadiev B.

Agenda:

1. Preparation of work plan for October-December 2001 and for 2002.
2. Definition of moderator and lecturers for workshop on juridical questions.
3. About work on agreements.
4. About further group activity.

Regarding the first question Prof. V.Dukhovny proposed to acquaint with main directions of thematic groups activity and prepare work plan for October-December 2001 and for 2002. Proposal has been accepted. Предложение принято.

Main directions on juridical questions include 7 issues, including agreements preparation:

1) Study and dissemination of local experience in WUA establishing.

This work is being fulfilled except Kazakhstan within the project “Institutional reforms of irrigated farming integrated management in Fergana valley”. In this connection decision is taken to ask group member from Kazakhstan H.Askarov to prepare relevant information (analysis) on this issue. SIC ICWC guarantees payment in amount of oblast monitor’s monthly. Other countries will work within the framework of the project.

On question “Development of proposals on water legislations unification in interest of common management, Transboundary watercourses use and protection, operation measures realization, accidents prevention” it was decided: to analyze national legislations of own states concerning water resources (1st stage) and by-laws on this question (2nd stage).

Ask Jaloobayev A.Sh. to prepare form of comparative analysis.

Regarding the second question is decided to appoint Nosirov N.K, Kipshakbayev N.K and Berdiev A. as a moderator on juridical questions.

To invite for this workshop 4 representatives from each state including representative from the Ministry of Foreign Affairs, Ministry of Justice and 2 water specialists dealing with juridical issues.

For January 2002 workshop appoint Nasirov N.K. and Laloobayev A.Sh. as a moderator. Trainees contingent is the same.

Regarding the third question of agenda is decided to continue work on agreements:

No 1 - "About institutional structure of transboundary water resources common management, protection and use in the Aral sea basin"

No 5 - "About transboundary water protection, rules of their quality control and economic sustainability in the region"

Taking into account, that according to Agreement No 1 there are some comments only from the Ministry of Foreign Affairs and Ministry of Justice of the Kyrgyz Republic, is decided to charge Jaloobayev A.Sh. until 15.11.2001 consider this question with concerned ministries and inform group members about results. Kipshakbayev N.K. proposed to control Agreement No 4 progress.

Regarding fourth question is decided to include in work plan for the second half of 2002 item 4,5, 6 of "Main provisions" and Agreements No 2, 3. Next group meeting is appointed on November 15-20, 2001 combining it with training course.

Kipshakbayev N.K.

Jailoobayev A.Sh.

Nosirov N.K.

Ovezov A.M.

Berdiev A..

Umarov H.

Dukhovny V.A.

Beglov F.F.

Muhamadiev B.

ACTION PROGRAM ON THE REGIONAL WATER PARTNERSHIP ORGANIZATION IN CENTRAL ASIA

INTRODUCTION

Water is key factor of social-economic well-being of the Central-Asian countries. The region still does not feel severe water deficit, though society needs are satisfied mostly at expense of environment interests negligence. In some periods of time in separate zones of the region (particularly, in rivers downstream) water deficit (in amount and quality) already negatively impacts social-economic situation. For example, in AmuDarya lower reaches during last two years (2000-2001) water supply was less than 50% from agreed limit which, in turn, is lower than required. In perspective deficit will increase, taking into account climatic changes, that will lead to risk for sustainable development of not only separate zones, but all region as well. Under modern political and social-economic conditions, the best way to create well-being in the region is realization of integrated water resources management principles, directed to water resources effective use and unproductive water losses elimination through multifold partnership.

Further directions of the regional collaboration

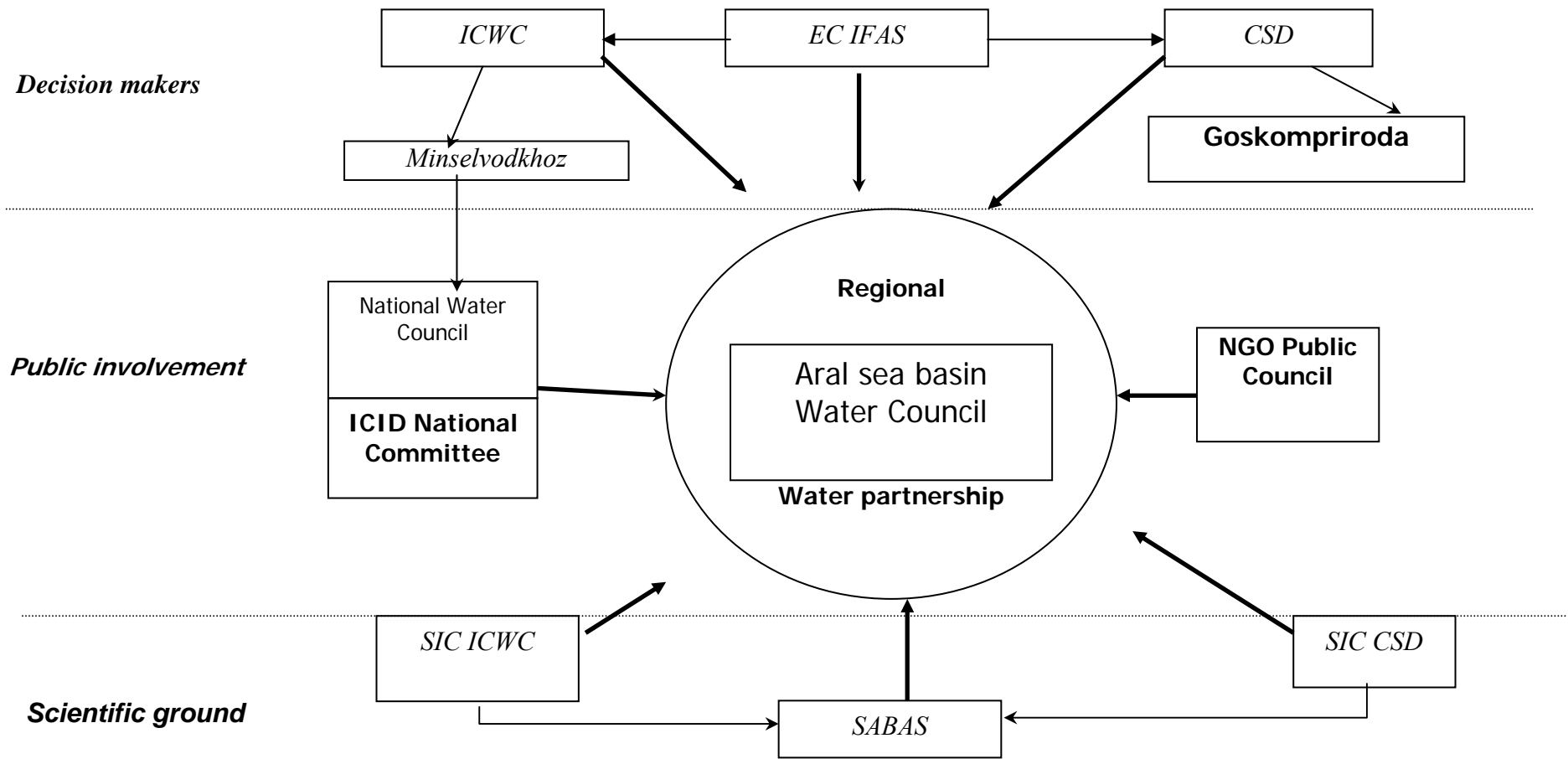
Existing shortcomings in management can be eliminated and water use effectiveness can be achieved through real regional partnership and efforts integration in 6 following directions:

- Countries efforts integration in water basin management and conservation through the partnership at interstate level.
- Economics and environment interests integration through inter-sector partnership in each state with regard for environmental requirements.
- Integration of water management system hierarchic levels through vertical partnership in the chain “state-water system-WUA-territorial water and administrative bodies-water users and water consumers”.
- Integration of water users and water organizations through water users involvement at all levels of water management hierarchy as well as partnership between governmental and nongovernmental bodies.
- Integration of knowledge and practice through partnership of science and production with water users and water organizations (using such tools as base of knowledge, training, consultation).
- Integration of international donors and the region through coordination and partnership of international financial organizations and the region’s countries.

The following action program is suggested for efforts integration:

1. Preparation of water partnership in the region. For the regional partnership coordination, “Aral sea basin Water Council” establishing is envisaged under IFAS through ICWC with CSD attraction and participation of power, ecological centers and NGOs. Recommended scheme of partnership is shown on fig.2. It is necessary to prepare Water Council status and regulation of interaction with partners concerned.

Fig. 1. Scheme of water partnership in Central Asia



2. Under Water Council is expedient to organize thematic groups (including leading specialists of the region) to search of agreed decision of integrated water resources management and use. Taking into account existing regional problems, it is suggested to create 4 thematic groups relevant to ICWC working groups.
 - Technical aspects;
 - Legal questions;
 - Institutional issues;
 - Financial aspects.

Each thematic group according to proposal of ICWC working groups should assess a problem and work out action plan with its discussion by broad public in order to develop general recommendations to decision makers for its realization. It is supposed, that Water Council would approve democratically elected leaders of thematic groups and represent all concerned layers as well as sources of funding.

3. Further development of decision support tools is necessary including two main components:
 - 3.1. Models system, connected with regional information system. Models system is necessary to solve the following tasks:
 - Future development at the regional level as a tool for Regional Water Strategy preparation;
 - Future development at the national level as a tool for National Water Strategy preparation;
 - Multiyear flow regulation fulfilled by ICWC and multiyear planning by BVOs;
 - Annual water allocation planning and its correction in BVO interest;
 - Water management operative tasks in each BVO.

Working out the basin modeling for future development at the regional level as well as planning zone and BVO activity modeling has been started by SIC ICWC together with Minselvodkhozs of all states within the WARMAP-2 project. Besides, within the framework of USAID EPIC program, SIC ICWC, BVOs, national groups and Power Dispatch Center have made basin modeling for purpose of annual planning. Modeling of the regional and national water resources development planning has being developed by SABAS group using Globisight methodology (prof.Mesarovich) with our amendments. Based on this research, forecasts of various scenarios of the regional development for “World Water Vision in 21 century”. Completion of this work will allow to organize strict water resources management and use and to identify priorities of national planning for water resources development..

Information system should include developing WARMIS database combined with GIS and remote sensing. Information system for land and water should be completed, tested and prepared for use by ICWC, IFAS, BVOS and all water related organizations. It is important for social-economic and ecological sectors; more detailed development of water and land use; analysis of river water losses. GIS has been developed by SIC ICWC, Glavgidromet, but was not submitted to BVOs and national organizations.

At the moment, major task should be information service creation and development at the oblast, irrigation system and WUA level on the principles similar to the regional system, which will form common database based on pyramid principle with “information grids”.

- 3.2. Base of knowledge in combination with the tools for experience dissemination through IPTRID and INFO-net as well as periodic publications, bulletins, press-releases and sci-

entific research collections. Knowledge network and information exchange already functions within the region among 5 states and between the region and several world information centers including ILRI, USBR, Cemagref, Wallingford, ICID, FAO, etc. Various bulletins and collections periodic issue help to water specialists to acquaint themselves with modern worldwide methods of water resources and irrigation management.

But knowledge dissemination is insufficient. Main attention should be paid to knowledge and information network development at the level of oblast, system and WUA. Systematic base of knowledge creation is being started by SIC ICWC. SABAS and other organizations, national experts, commissions on irrigation and drainage involvement will allow to create practical knowledge base in short term. This block should lay a base for extension service which success depends on communication.

4. Successful development and coordination of the regional and national water strategy and its monitoring can be realized using existing scientific potential. This work as well as scientific and public expertise of this strategy should be done by ICWC and CSD and SABAS group supported by UNESCO. Main attention should be paid to these programs financing and coordination as well as organization of seminars and conferences for free exchange by opinions and consensus achieving. In turn, science together with public awareness and participation should promote rational water use and management to be implemented. Set of major questions to be considered with public participation and organizations concerned is shown in Annex 1.
5. It is necessary to develop training system for water specialists with NGO involvement. In accordance with ICWC decision and under CIDA financial support the regional Training center has been established in Tashkent in 2000. Main task of this center is to improve skills and, simultaneously, to reproach positions of the specialists from different countries. Monthly courses are organized like round table discussion. Last year more than 250 specialists from five states attended three courses:

- Problems of integrated water resources management based on hydrographic principle;
- Regional collaboration on transboundary watercourses;
- International water right (course is continued up to beginning of 2002).

To the end of 2001 new course “Innovative practice in irrigated agriculture” is being prepared for next 6-8 months. For the future it is planned to prepare set of new courses:

- Environment protection issues;
- Problems of drinking water supply and sanitation;
- Problems of sustainable development of power sector in the region;
- Modeling in water management and irrigation.

For further integration and more participants involvement training activity is planned to be organized in 4 sub-regional centers: Dushanbe (Tajikistan) on the problem of intermountain plains and upper watershed; Osh (Kyrgyzstan) on water problem in densely populated area of Ferghana valley; Kyzyl-Orda (Kazakhstan) on on the problems of downstream and rice cultivation; Tashauz (Turkmenistan) on the problems of downstream and Priaralie. It is planned to use these centers in combination with demonstrative plots in water conservation and WUA development.

6. Communication system based on electronic means among all participants of the regional partnership is necessary precondition of successful activity. Including in electronic communication, except ministries and national centers, oblast and system organizations, major

NGOs and then WUAs will allow to organize free opinion exchange, “electronic conferences”, to inform regularly 200-250 organizations concerned. This will provide trust between partnership participants.

Donors role in Central Asian region

Donors support is very important both for interstate problem and national potential strengthening.

Is it would be possible to restore previous irrigated farming productivity 1600-2000\$/ha against current 500-900\$/ha and water productivity 0,18-0,25 \$/m³ against current 0,03-0,10\$/m³, farmers will have capacity enough to develop and support their potential. Nevertheless, according to our prediction, this would require big foreign investments and long time. In other words, for the region, where 52-53% population is rural one, social factors of water use should be taken into account. Living standard reduction in rural area can lead to social tension.

Taking into account Soviet era heritage (highly skilled personnel, lack of market experience, democracy and machinery), donors should help the region but do not replace local specialists by foreign ones. Moreover, most specialists understand necessity to adapt to conditions of the market. *Thus, the region needs financial assistance regionally, legal and market training, new technologies and equipment without expensive foreign specialists and certain conditions. In this case this assistance would be useful as it was shown by ICWC training course.*

It is necessary for donors to follow “four conditions for consensus” explained earlier (fig. 3). *Donors based on democratic approach should appoint a conductor keeping positions agreed by IFAS and international organization in order to avoid conflict between donors and the states.*

We have brilliant example of collaboration between CIDA, ICWC, Israeli consultants, USAID, EC, GEF, SIDA, the World Bank and the government of the Netherlands. We also had contradictions and misunderstanding in the past, so the first slogan for donors is to be careful.

Donors should create organizing committee (OK) including their representatives who will meet with Water Council to analyze a work and plan the future.

In result of the first donors meeting in Paris in 1994, the Aral sea basin program was declared to support “Concrete actions plan”, approved by the Heads of State on January 11, 1994, with full cost of international obligations \$40mln. and \$160mln. as a soft credit. Most effective was activity of EU (WARMAP Program), GEF (“Main provisions of water strategy”) and CIDA (Program 7). But in general, these obligations have not been fulfilled until now. Donors community mentioned its low effectiveness because of next reasons:

- More than a half of all donations returned to payers as a reimbursement to foreign consultants and their services. Real investments did not exceed 20%.
- Consultant level of knowledge and responsibility led to failure 50% of work. For instance, program 3.1b (ILRI), program 4.1 and program 4.4 (Euroconsult) were unsuccessful. IFAS Board repeatedly required to attract local specialists but without success.
- Bureaucratic procedures of EU, World Bank impose very strict rules and control over expenses but do not control results. In result, previous activity is not taken into account in the next project.

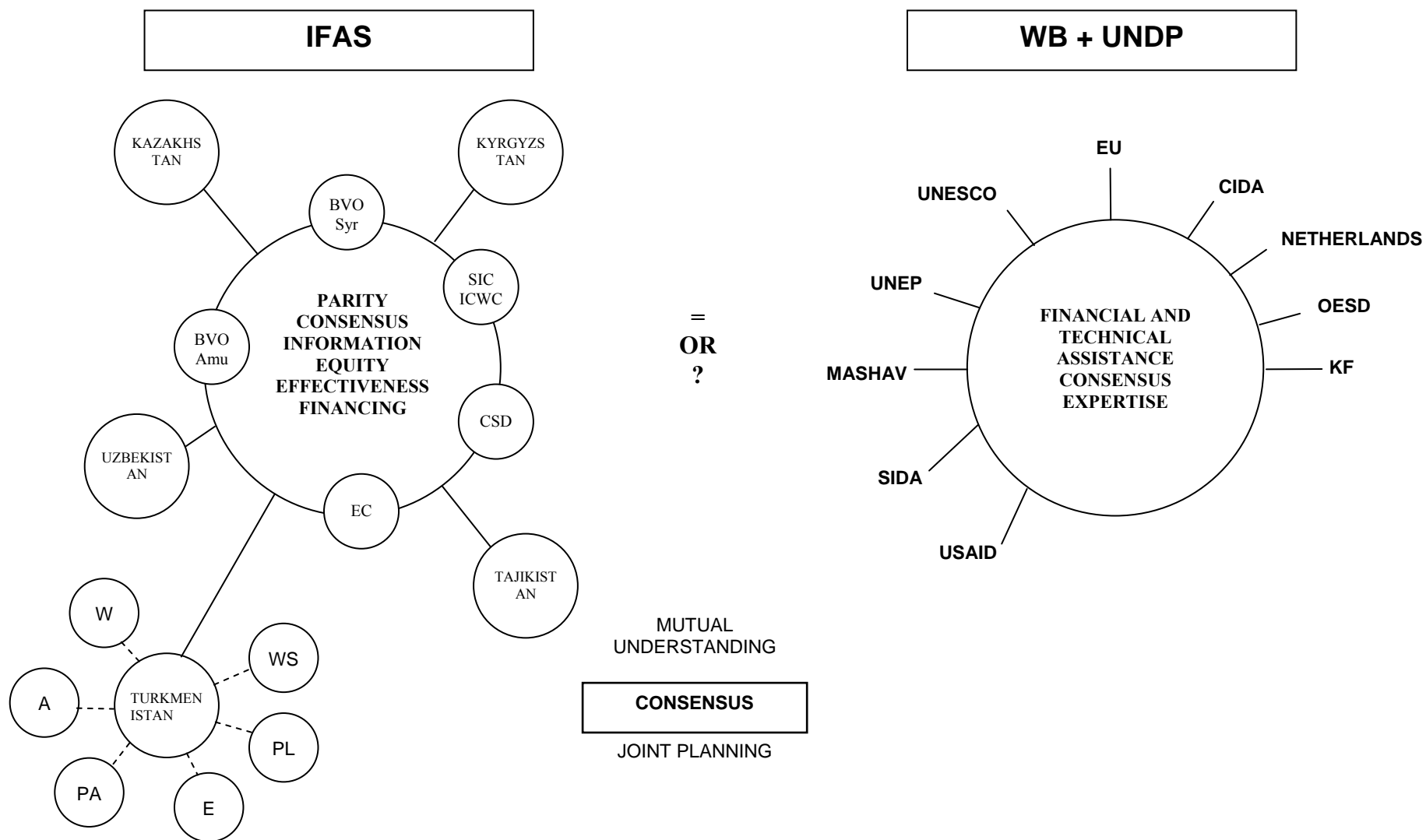
Our proposal – to rise the role of local specialists in project preparation and make them responsible for its results under control of donors. As our experience of work with CIDA, IWMI, SDC shows, it will facilitate work cost effectiveness, responsibility increase and results improvement.

Regional partnership organization cost

In table 1 approximate cost of water partnership development in the region amounted for \$1.700 mln.

Activity	Outcomes	Cost Th.USD
Preparation of institutional set up of the regional water partnership	Status development Negotiation process Working seminars (2) Regional conference	10.0 25.0 10.0 25.0 Total: 70.0
Thematic groups activity organization: Technical aspects Juridical aspects Institutional aspects Financial aspects	Recommendation elaboration for each group Action plan Public awareness 4 group meetings for 2 years Final seminar	Total: 140.0
Instruments development for decision support	Model system Base of knowledge	200.0 100.0 Total: 300.0
Scientific expertise of strategic provisions (Annex 1)	Seminar system (totally 14)	70.0
Training development (organize and carry out 4 new courses) Establish 4 regional sub-centers (Osh, Dushanbe, Tashauz, Kyzyl-Orda)	Environmental problems; Drinking water supply and sanitary problems; Problems of power engineering sustainable development in the region; Modeling in water related sectors and irrigation	Total: 600.0
Communications development	Equipment for e-mail between key partners and providers' services	520.0
Grand total:		1700.0

Fig.2. Four consensuses between regional and international organizations



Prior questions to be considered jointly

1. Technical aspects

- Establishing water resources volume to be diverted from AmuDarya and SyrDarya as well as from aquifers without damage;
- Assessment of water conservation: approaches, methods, time limits, effectiveness, real size, achievable at certain temporal level;
- Regional criteria and water quality standards, methods of their achievement, water quality limitation;
- Water and salt management in separate river basins;
- Ecological and sanitary releases volume;
- Return waters management;
- Climatic changes impact on water resources and water consumption;
- Flow losses reduction along AmuDarya;
- Flow forecast perfection in real time.

2. Legal aspects

Legal structure of water resources management should be a complex of political provisions and agreements. They should strictly regulate water strategy development and implementation as well as be a tool and guideline in all cases related to water resources management for sustainable development without conflicts. Measures on legal documents preparation should include the following questions:

- WUA establishing experience in the countries study and dissemination.
- Proposals preparation on water legislations unification for common management, use and protection of transboundary watercourses and elimination of accident consequences on transboundary water objects.
- Working out standards and procedures for interstate water resources, objects and structures use.
- Working out procedures of water disputes resolution and arbitration, mutual control over obligations of each state.
- Working out procedure of joint water measures implementation.
- Work out on detail mechanisms of collaboration in ecological water related problems.
- Discussion and coordination of draft agreements:
 - About organizational structure of joint management, protection and development of transboundary water resources in the Aral sea basin;
 - About transboundary water protection, rules of their quality control and ecological sustainability in the region maintenance;
 - About major principles of transboundary water use in the SyrDarya river basin;
 - About major principles of transboundary water use in the AmuDarya river basin;

3. Organizational aspects

- Improvement of the regional bodies organizational structure, its analysis, avoiding duplication and contradictions;

- “Water-Power Consortium” establishing;
- Organizational structures build up directed to integrated water resources management.;
- “Water Council of the Aral sea” establishing.

4. Financial aspects

Common tasks of the economic relations mechanism development and introduction at the interstate level are as follow:

- To provide sustainable mechanism of financing and maintaining interstate water resources management system and interstate bodies;
- To create incentives for all states-water users to save water and to free it for environmental needs;
- To apply practically a principle “polluter pays”;
- To create a mechanism of objective expenses and effects distribution at the level of interstate water distribution and use.

INTERNATIONAL CONFERENCE "FRESH WATER - 21"

According to invitation of the Ministry of International Cooperation and Ministry of Environment of FRD SIC ICWC director Prof. V. Dukhovny took part in International Conference "Fresh water-21 century" (December 2001-Bonn) in continuation of platform "From vision to action" developed on the Second World Water Forum in Hague in March 2000.

Participation of Prince Orange, organizer of the Second Forum and Mr. Hideaki Oda, representative of WWF-3 Organizing Committee symbolizes continuation of the process. Conference has been prepared during one and a half year by Organizing Committee and International Steering Committee.

Though all countries of Central Asia received invitation, only Vice Prime Minister of Tajikistan (Mr. K. Kaimdodov) and Uzbek Government's referent Mr. H. Ishanov took part in this conference in particular, in WWF-3 preparation, in workshop "From conflict overcoming to collaboration development", "Medicines sans frontiers", "Toolbox" GWP, etc. There were 119 delegations (including 89 at level of ministries and deputy ministries). Conference accepted several principal documents:

- Conference Declaration;
- Multilateral meeting recommendations;
- Recommendations for actions.

Main achievement of the Conference is definition of major directions of water sector future development:

- Water resources integrated management;
- Active public participation of all concerned water users in planning, management and development;
- Public and private sector collaboration;
- Necessity of international collaboration improvement on transboundary (international waters);
- Priority role of developed countries in technical and financial assistance to developing countries in modern water management and unproductive losses reduction;
- Necessity of capital investments increase in water sector more than by 2 times from \$60-70 bln. to \$150-180 bln.
- Necessity of state participation in water sector activity as immediate participant and contributor recognizing social and ecological value of water. It is very important that Conference rejected recognizing water as commodity and simultaneously supported introduction of economic mechanisms in water conservation and its quality protection.

Unfortunately, Conference did not reflect in its recommendations proposal of Uzbek delegation about change of approach to international financial assistance in water sector. It is worth also to note, that issue of shared water use reflected opposite positions in "transboundary water" and "international water courses" terms utilization.

TEHWARE MANAGEMENT BOARD MEETING

On December 14, 2001 in Paris TEHWARE (Technology for Water Resources) meeting took place. SIC ICWC Director Prof. V. Dukhovny participated in this meeting representing the Central-Asian region. Beside current questions (approval of different protocols, budget consideration) principal attention was paid to TEHWARE activity in EU water principles development. After discussion the following activity directions were adopted:

- Organize exchange by lectures between training centers;
- More actively be involved in ETNEWATER program;
- Use EU electronic educational system;
- Strengthen information about current events;
- Organize participation of Central-Asian specialists in EU program's tenders under auspice of European partners.

McGILL UNIVERSITY IS CREATING UNIQUE PARTNERSHIP WITH WATER RELATED ORGANIZATIONS OF CENTRAL ASIA

In accordance with agreement between Canadian Agency for International Development (CIDA) and Interstate Water Coordination Commission of Central-Asia (ICWC) McGill University has established collaboration with SIC ICWC for 5 years on water resources management improvement. Project is underway and progress has been reached in many areas.

Key problems to be considered are lack of regional collaboration in information exchange and integrated water resources management, necessary equipment for specialists and water users training. Project helps to find solution for many issues in the region.

The following kinds of activity have been completed to the moment:

- Training center establishing in Tashkent including equipment procurement;
- Successful completion of 10 courses in Training Center: "Integrated water resources management", "Transboundary waters: strategy of regional collaboration improvement", "International and national water right", etc. At the moment, near 200 specialists have been trained. Workshops participants were ministers, deputy ministers, oblast and rayon water related bodies directors, leading specialists of water sector.
- Preparation of educational materials and modules for workshops;
- Study tours to Canada of top managers in November 2000. Participants included ministers and their deputies, SIC ICWC, BWO SyrDarya" and BWO "AmuDarya" representatives. Tour included visit to federal and provincial ministries and consulting firms in Saskatchewan, Quebec and Ontario;
- Mount Royal college (Calgary), one of the project's partners helped in business-plan preparation for Training Center. With this purpose two Center's collaborates attended 2-week courses in the college;
- Recently, joint planning of CIDA Center and SIC ICWC future activity took place. The following themes of seminars for current educational year are suggested: modern irrigated farming, draught management and conflict resolution.

SOCIAL ASSISTANCE TO PRIARALIE POPULATION IN ADAPTATION TO MARKET CONDITIONS IN ZONE OF ECOLOGICAL DISASTER

EC IFAS Nukus branch has developed project “Social assistance to Priaralie population in adaptation to market conditions in zone of ecological disaster”. Proposed to give small and short-term loans to support those willing to make business or to be a farmer, produce consumer goods. Main condition for loan allocation is entrepreneurship based on private property, establishing small and medium enterprises, new working places creation, profit obtaining and guarantee of return.

Branch and its subdivisions in form of agencies-funds of social assistance giving short-term loans represent guarantee for their borrowers in project realization. They consult population in private entrepreneurship.

Aral sea shrinking, frequently repeated water resources deficit, extreme pollution of Amu-Darya water and progressing salt-dust transport from drying sea bed negatively impact population health, environment and living standard.

In accordance with Head of State Almaty Declaration (February 1997) and IFAS Board decision of May 29 1997 IFAS applied to international organizations with proposal to take part in fight with poverty through social assistance at expense of donor financial means and soft loans for small business and agribusiness.

Taking into account unfavorable conditions for investors involvement, EC IFAS Nukus branch together with Karakalpakstan government since 1998 has launched program “Social assistance to Priaralie population in adaptation to market conditions in zone of ecological disaster”. At the moment 1623 small enterprises are funded in amount of 784mln.soum and 3334 working places have been created.

During the project implementation lot of people acquainted with legal and economic base of individual entrepreneurship of small and medium private enterprises, evaluation and insurance of real estate, concluding contracts, business-plan preparation and realization, work with banks and juridical entities and other market structures.

Due to extremely limited funding from state budget (at expense of Uzbekistan contribution to IFAS) and 2-year draught, necessary appeared to attract investors for processing equipment purchase and small enterprises for consumer goods production. Equipment lease is also possible. Conditions of financial means, equipment and technique transfer will be agreed with investors during discussion of mechanisms and methods of specific projects implementation.

During project implementation is supposed to reach the following purposes:

- Unemployment level reduction;
- Population cash and in-kind income increase;
- Living standard improvement;
- Attraction and education of population part to private entrepreneurship;
- Region’s economic potential strengthening at expense of small and medium enterprises establishing;
- Internal goods and services market saturation;
- Competition development in goods and services quality improvement and price reduction;
- Specific water consumption reduction in goods and services production.

One of important expected results is recognizing by entrepreneurs their economic rights protected by existing legislation and their aspiration to use these rights through effective entrepreneurship.

Project duration: 2002-2003.

Project cost:

Over years of implementation	Contribution of IFAS Nukus branch	Necessary means from investors
2002	340000,0 th. soum	250,0 th.USD
2003	400000,0 th. soum	250,0 th.USD
Total	740000,0 th. soum	500,0 th.USD

MINUTES OF A WORKSHOP ON INTERNATIONAL AND NATIONAL WATER LEGISLATION AND POLICIES HELD BY ICWC TRAINING CENTER AND DUNDEE UNIVERSITY (GREAT BRITAIN)

January 25, 2002

Tashkent

Participants of the workshop held from 21 to 26 January 2002 were trained in international and national water legislation and policies. They acquainted with relevant papers and discussed international, regional, and national legal aspects, such as development of international legal documents and national legislation, conducting of negotiation, and settlement of international disputes. As a result, practical recommendations were developed on the improvement of cooperation in the region's water management at different levels. The necessity in strict responsiveness both of national and regional interests and tendencies was underlined. The participants also stressed an importance of public participation in developing and making the most urgent decisions regarding regional cooperation and transboundary water management in the Aral Sea basin.

Staff of regional organizations (EC IFAS, SIC ICWC, BWO AmuDarya and BWO SyrDarya), public water management organizations, as well as representatives of the Ministries for Foreign Affairs and the Ministries of Justice of CAR took part in the training workshop.

Training moderators were: prof. Patricia Wouters, Director of International Water Legislation Institute, Dundee University (Great Britain); prof. S.V.Vinogradov and researcher Melvin Woodhouse, Dundee University (Great Britain); T.G.Kalinichenko, State and Law Institute, Russian Academy of Science; prof. N.K.Kipshakbayev, Director of SIC's Kazakh office; A.Sh.Jaylooboyev, Director of SIC's Kyrgyz branch; A.Berdiyev, expert, EC IFAS. Beforehand, trainees were given copies of the papers for their pre-consideration in order to promote discussions organized by the moderators. Papers were represented using modern training facilities.

Opening speeches were delivered by: Christopher Ingham, Ambassador of Great Britain in Uzbekistan; A.A.Djalalov, First Deputy Minister of Agriculture and Water Resources of Uzbekistan; and, R.A.Giniyatullin, GEF Project Manager.

The participants noted wide range of themes covered by the workshop, which was aimed at raising the understanding of international and national approaches, principles, and ways for the legal regulation of water use, conservation and management. Such approach allowed us to analyze water relations from end-user to regional and global level. In turn, this helped the participants to see both causes and most effective ways of problem solving.

Workshop especially stressed the historical and geographical community of CAR countries, the necessary observation of the principle of equality while negotiating treaties, and the need in clear procedures. Measures undertaken in the region to develop cooperation of regional organizations were positively assessed. However, there is an urgent need to further develop legal regulation systems associated with water under transition of the countries to democratic and market relations. It was pointed out that water professionals are ready to negotiate, search consensus, and develop water legislation and interstate agreements.

The participants appreciated the efforts and high professional skills of the following lecturers: prof. Patricia Wouters, S.V.Vinogradov, and M.Woodhouse (Dundee University); and, T.G.Kalinichenko (State and Law Institute, Russian Academy of Science). Perfect training

aids of International Water Legislation Institute at Dundee University allowed trainees to have clear understanding of international water law.

The participants stressed that for equitable and wise water use in the interests of all the states it is advisable to develop measures on connecting of national laws and on improvement of regional agreements. An increased role of parity principles in water relations and a need for strict regulation of procedures and processes were pointed out as well.

Training participants made a range of comments on workshop outcomes. Besides, the following recommendations were offered on the development of water legislation in CAR at national and regional level.

National level:

- water legislative acts of all CAR countries need to be continuously updated and supplemented by additional provisions. Taking into account an importance of irrigated agriculture in the region, land and water laws should be connected;
- under conditions of growing water deficit, it is advisable to find more effective legal and economic instruments to encourage water saving. At the same time ministries and departments responsible for water management and use should act as leading organizer and booster of this process;
- taking into account significance of water sector in socio-economic development and current changes in this sector, it is necessary to secure on legal base distribution of obligations and mainly responsibilities between government and provincial organizations and water users. Individual water user's right to receive water adequate to qualitative and quantitative standards should be secured by law;
- improve economic instruments regulating water use. Those water users that use less irrigation water than established should be exempted from taxation. Economic sectors, which use water in production and derive considerable benefits from it, should pay for water consumption and use. Particular attention should be given to management and use of ground and return waters;
- increase regulation of use and conservation of all waters, particularly small streams and upper watersheds;
- introduce, through legislation, an obligatory water accounting to be conducted by all water users and consumers at their own expense. Make provisions for penalties in case when water meters are not installed;
- it is necessary to enforce internal by-laws.

Regional level:

- increase level of legal knowledge in applying international water legislation to interstate water relations. It is advisable to keep on training workshops on international and national laws with major focus on analysis of available normative base and on development of legal regulation in a field of water use;
- hold training workshops on theory and practices of conducting international negotiations, ways and mechanisms of preventing and settling interstate disputes and developing cooperation. It is necessary to speed up final development and conclusion of Agreements on information exchange, organizational framework of interstate agencies, etc.;
- promote participation of CAR countries in international conventions dealing with water relations regulation in order to develop provisions and principles of these conventions for specific conditions of Central Asian region. While developing Nukus Declaration, it is necessary to initiate elaboration and ratification of Central Asian Convention which would

reflect vital aspects of rational transboundary water use subject to common historical traditions and cultural wealth of five nations as well as with involvement of Afghanistan;

- treat water as a natural resource, which is not a commodity but material substance which can take form of commodity with social and environmental value;
- undertake measures to legally fix obligatory sanitary releases in order to secure status of water as a nature's element. Based on this status, the nature has a right to its own water share. Water bodies should be provided with a right to their natural existence;
- new political situation in Afghanistan requires that interests of this country be taken into account in ICWC's activities and in existing and developed international treaties.

The following current tendencies in the world practice should be reflected both *in national and regional water legislation*:

- transition to integrated water management requires inter-sectoral coordination of plans and actions, denial of territorial and application of hydrographic principles in water management, wide involvement of water users both in management and financing;
- application of market mechanisms includes privatization, water concessions, water rights and other issues to be reflected in water laws of five countries;
- transparency and raised awareness of all involved in water use and management;
- strict division of responsibilities for maintenance and improvement of infrastructure and, particularly, of hydrometeorological services and operations on flow formation, carried out by countries of upper watershed;
- legislative establishment of responsibilities for over-intake and damage;
- extensive involvement of power engineers and professionals of other sectors in operations at interstate water structures;
- inventory of interstate structures and waterways. General approaches should be developed to operation and financing.

While planning next measures on the enforcement of regional water cooperation, it is advisable to develop draft regional convention on transboundary water management, jointly by International Water Legislation Institute, Dundee University and ICWC, and to hold a number of workshops on environmental law and legislation.

Easy and simple presentation of complex and deep training materials together with atmosphere of kindness, openness and creativity allowed trainees to become acquainted with new knowledge and ideas in short term.

Training participants point out the need to cooperate closely with ICWC Training Center and to speed up establishment of Training Center's branches, as well as the expediency of involving Commission for Sustainable Development (CSD IFAS) in training workshops.

Training participants express their gratitude to DFID, CIDA, Dundee University, McGill University, as well as to staff of ICWC Training Center, all lecturers and moderators, SIC ICWC, and BWO SyrDarya, who arranged this training workshop on high level.

ALWAYS TOGETHER⁴

Farmers have established water users association

In Tashkent practical conference took place dedicated to completion of Tacis pilot project on on-farm irrigation and management. It was implemented in Siddikov shirkat in Ak-Altin rayon, Syrdarya oblast.

Conference participants – leaders and specialists of different structures of agricultural complex acquainted with results of experiment conducted during two years by British-Belgium consortium Ager/Landell Mills jointly with Minselvodkhoz and SANIIRI.

In Siddikov shirkat on area of 500ha 13 private farms have been established. Wide educational program was carried out with participants including irrigation water management, irrigation schedule preparation, soil salinization, crop rotation, combat with pests and weeds, agriculture and environment.

Farmers have established Association ‘Suv-Agro’ where all water use mechanisms and Steven Right, project leader says, that EU financed full reconstruction of irrigation and drainage network. Inter-farm collector uniting system with main Glodnostepsky canal has been cleaned by Minselvodkhoz as well as 4 vertical drains on experimental site. Project experts and SANIIRI collaborates helped farmers in farm management, in agrotechnical measures conducting.

During the conference the following data were sound: farmers gained twice bigger wheat and cotton yield compared with last year and yield got in shirkat the same year.

According to Minselvodkhoz representatives, it was important to reveal during experiments some issues in order to work out approach to WUA establishing in other regions of the country. It will help in formation of similar farmer groups during agrarian complex reforming. New WUA will have enough information for successful

⁴ NIA «Turkistan-Press»

ANTHRAX ON VOZROZHDENIE ISLAND⁵

Vasilina Brashko

Muinak (TCA). Aral sea desiccation (previously fourth lake in the world) is well known. This is not only ecological catastrophe, but also threat to people because of air saturated with dust and salt hits people and animals health.

Rusty boats on sandy dunes created surrealistic spot where decades ago port was growing and now it is a deserted landscape.

At the moment shore line is tens kilometers from these boats. Dry sea bed behind these boats causes new threat because of anthrax cases in United States.

Along with sea shrinking, bridge between land and Vozrozhdenie island is being created where USSR tested biological weapon for decades.

Access to Vozrozhdenie island has born a danger that anthrax could be made free from its grave by animals or terrorists. To avoid this danger USA and Uzbekistan have signed agreement on Ireland cleaning in amount of \$6mln.

Even now, when American officials do not know exactly source of anthrax, experts consider taking anthrax from the island as impossible because places of its location are under secret.

Nevertheless, there is evidence that during past decade there were animals on the island eating carrion and people from this region took equipment from the island hoping sell it to anybody.

"Aral Sea grows less", - says Yusuf Shadimetov, ECOSAN President, "Therefore, it is necessary to destroy everything that can be dangerous."

State Department representative Richard Bowcher has noted last month that created bridge between land and island makes threat more realistic. "It is important to clean all facilities, particularly those isolated before", he said.

For decades USSR tried to turn anthrax into weapon. Due to this program anthrax epidemic took place in 1979.

Epidemic occurred in Ural region in Sverdlovsk city. According to Gilleman, who was author of book about this epidemic, anthrax has been made free through air filter and spread over the city.

"It is very easy to breathe it in langue", - Gilleman says. Near 5 thousands people were infected and 64 died. Anyway, accurate information about this epidemic is absent.

Vozrozhdenie island was used as experimental polygon since 1952 till USSR collapse to study anthrax, typhoid, plague and black smallpox. While soviet scientists tried to destroy anthrax by chloride lime before its burying, maybe some microscopic spores survived. Island dry soil provides ideal conditions for its maintaining and it can exist under surface for decades.

If animals are able to come to the island from land, danger is growing. Report 1998 notes, that such rodents as marmot, field mouse and ground-squirrel are natural sources of plague and other pathogens and they can migrate for big distance spreading infectious diseases.

Oral Otniyazova, Director pediatric hospital in Nukus remembers how she was swimming in the Aral sea thirty years ago. Muinak residents told us that at that time the sea depth reached 75 feet near the shore. Presently, Aral sea shifted from Muinak far to the North and Vozrozhdenie island grew in size. It is expected that bridge between land and island will soon appear.

⁵ The Times of Central Asia, December 13, 2001

According to local residents, it is not easy to reach the modern sea shore. Anyway two or three off-road cars are needed to reach it. There is no such transport in Muinak.

"Theoretically it is possible to find places with anthrax spores," -says Dastan Yelyukenov , co-author of Report 1998 and Executive Director of the Center of Non-proliferation in Almaty (Kazakhstan). But in practice it is very difficult task.

Regarding incidental infections from the island, doctors working in Nukus affirm that have never seen anthrax case. Karakalpakstan has many serious problems in health protection including tuberculosis and several kinds of cancer.

Nevertheless, Oral Otniyazova, Director pediatric hospital in Nukus is convinced that main cause is population poverty and pesticides and herbicides availability in the air and water . This is consequence of the Soviet policy in the region where 80% of population is busy in agriculture. Such strategies as intensive chemicals use for cotton growing on arid lands along AmuDarya and SyrDarya led to the Aral sea desiccation.

When Yusuf Kamalov, leader of the "Union for the Aral sea and AmuDarya protection" was asked to visit Vozrozhdenie island, his answer was as follow: "Thanks. I would better visit New-York".

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