

# Friendship and frictions on Central Asia water.

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Meeting INBO, Porto,  
29 September 2011

# **Framework of collaboration**

**Political will of 5 Presidents**

**Creation of ICWC, Agreement 18 March 1992**

**Decisions by the Head of States of March 1993  
and of January 1994 – PBAM 1 and “Concept  
decision of the Aral Sea basin problems”**

**Agreement on IFAS status, 1999**

**Meeting Head of States on 28 April 2009**

**PBAM 3, 2010-2011. Expected success!!!**

# STRUCTURE of Interstate Coordination Water Commission of Central Asian states

## FOUNDERS OF ICWC



State Committee  
on Water  
Resources of  
the Ministry of  
Agriculture of  
the Republic  
of Kazakhstan



Ministry of Agriculture,  
Water Resources  
and Processing  
Industry of the  
Kyrgyz Republic



Ministry of  
Reclamation  
and Water  
Resources  
of the Republic  
of Tajikistan



Ministry of  
Water  
Resources  
of Turkmenistan



Ministry of  
Agriculture and  
Water Resources  
of the Republic  
of Uzbekistan

**ICWC**

Secretariat

Scientific  
Information  
Center  
(SIC ICWC)

BWO "Syrdarya"

BWO "Amudarya"

Coordination  
Metrological  
Center  
(CMC ICWC)

ICWC  
Training Centre

Kazakh Branch

Kyrgyz Branch

Tajik Branch

# **Principles of ICWC works**

**The operation and management of international waters on the basin of two rivers: Amudarya and Syrdarya will be mutual by this Commission on behalf of all five states;**

**All decisions related to water management should be accepted by the members of this Commission on the regular meeting taking place each quarter on the base of full consequences;**

**Executive bodies of Commission take responsibilities for implementation of decision of ICWC members;**

**The water allocation is based on the existing water resources rules;**

**Parties agreed to avoid any actions that can cause harm or damage to other partners.**

# **Water collaboration takes place as**

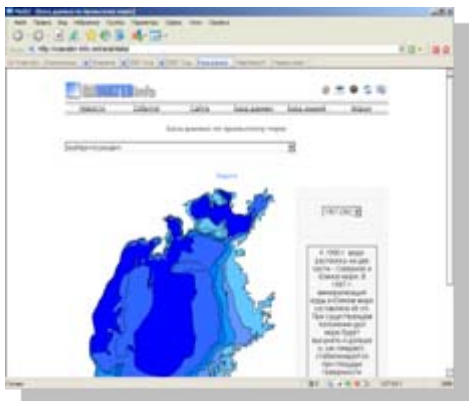
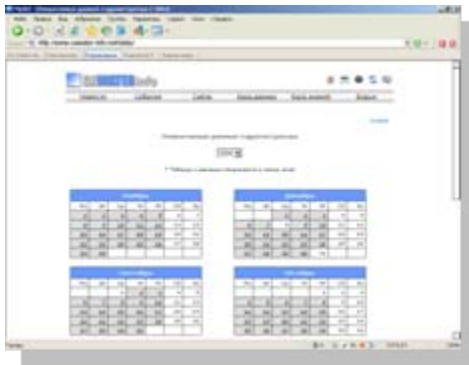
**Mutual planning and control of annual water  
Allocation; operation by two BWO's**

**Capacity building of ICWC**

**Information system – transparency and trust – thanks  
SDC!!!**

**Strengthening legal, institutional, and technical  
Frameworks of executing bodies - ADB;**

**Implementation of IWRM – thanks SDC!!!**



# CAWater-Info

[www.cawater-info.net](http://www.cawater-info.net)

This screenshot shows the ICWC website. The main heading is 'International Commission for the Protection of the Aral Sea (ICWC)'. Below the heading, there is a news article titled 'International Commission for Water Sustainability (ICWC) Announces the Results of the 10th Session of the ICWC Board of Directors, Tashkent, Uzbekistan, 14-18 February 2010'. The article text discusses the Commission's activities and the results of the 10th session of the Board of Directors.

This screenshot shows the CAWater-Info website with a detailed data table and a flowchart diagram. The table is titled 'Таблица с данными о состоянии в море' and has columns for 'Виды рыбы' (Fish species) and 'Плотность' (Density). The flowchart diagram shows the relationship between different water quality parameters and their impact on the environment.

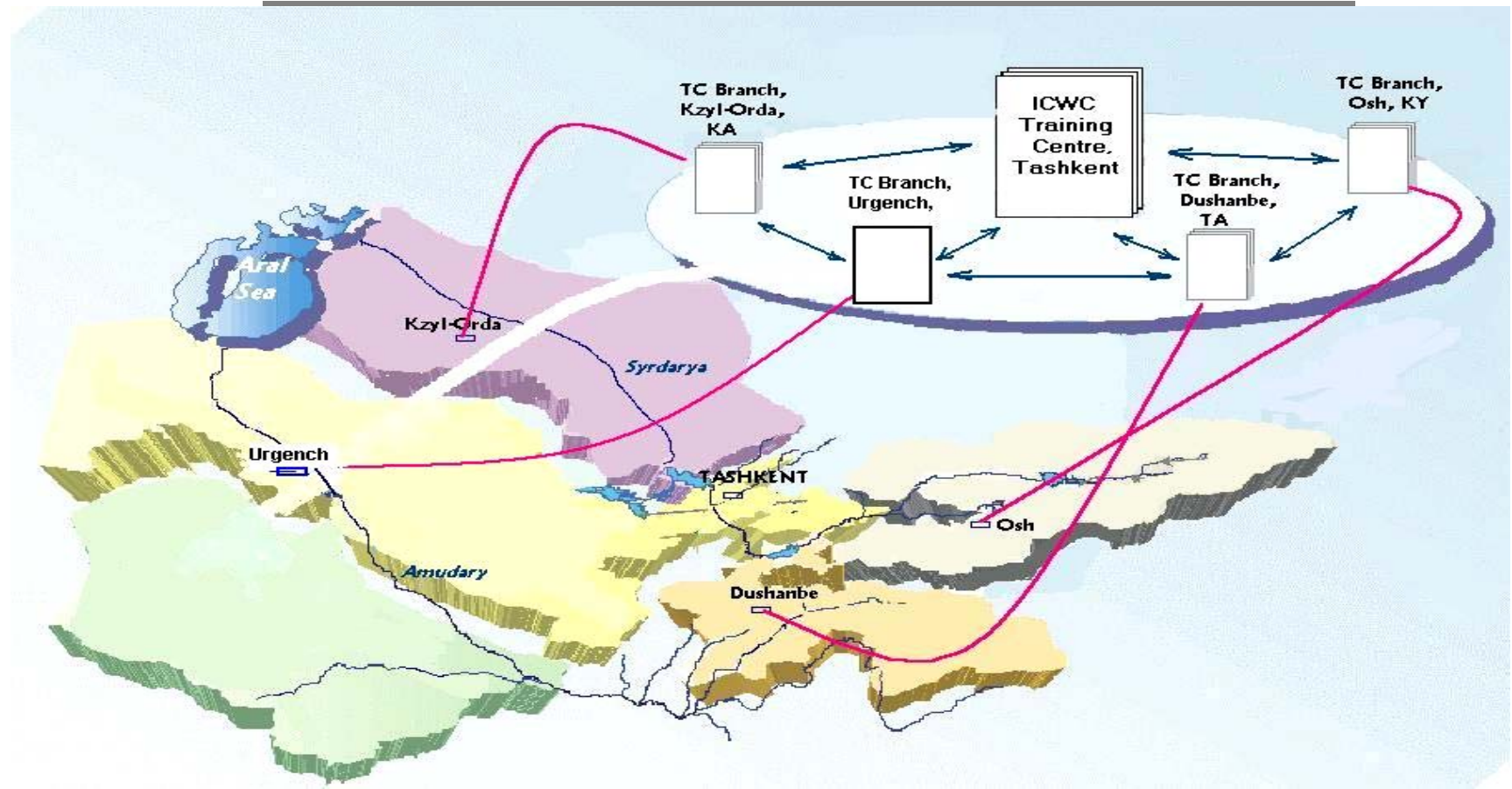
# Widespread campaign on training of water users and water specialists;

Advanced training of 6.000 – 10.000 specialists at middle and lower levels should be provided every year

•SDC

•IHE – UNESCO

Who else?





**With the support of CIDA, USAID and SDC, BWO “Syrdarya” together with SIC ICWC started implementing SCADA in 10 stations.**

**This system allows for continuous registration of water discharge, level, and salinity, as well as for improvement of water distribution accuracy at the main off-takes from  $\pm 10\%$  to  $\pm 2\%$ . It is planned to cover the mid-stream up to Chardara by 2010 together with SDC.**

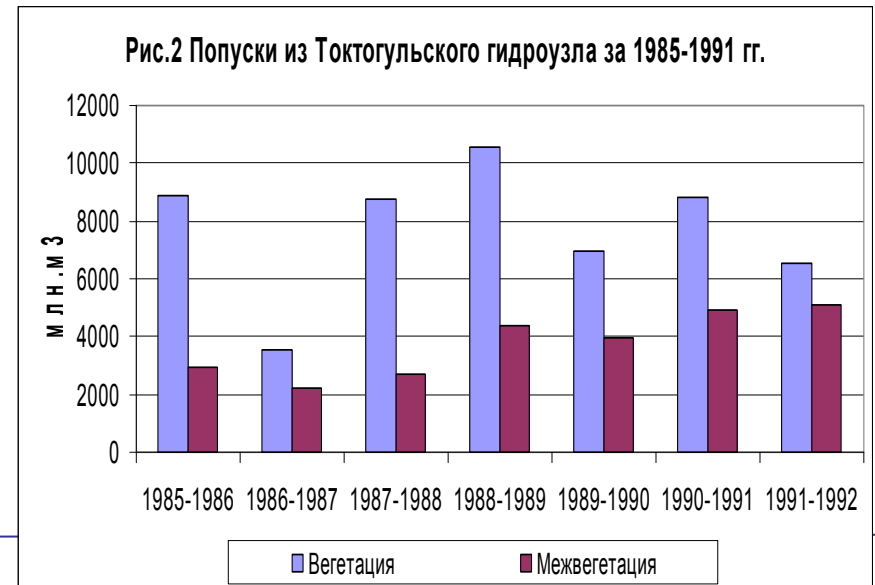
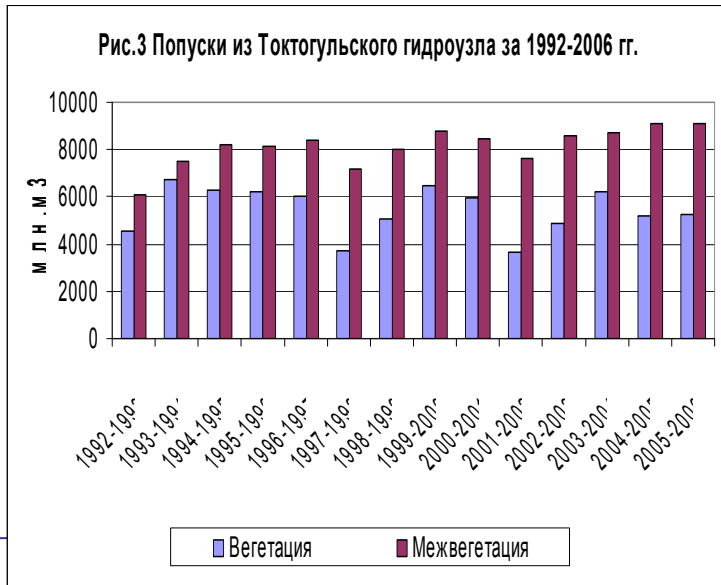


# Syr-Darya River Basin

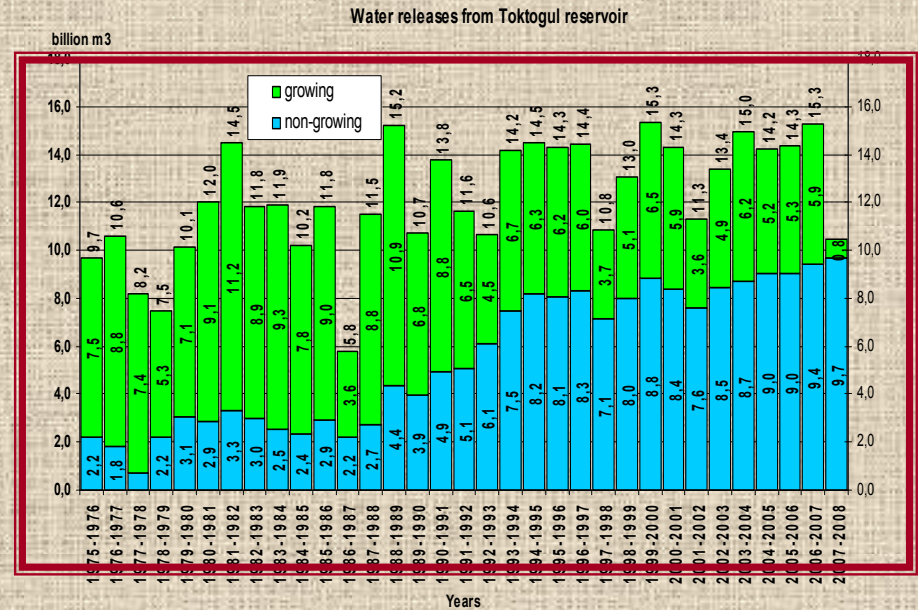
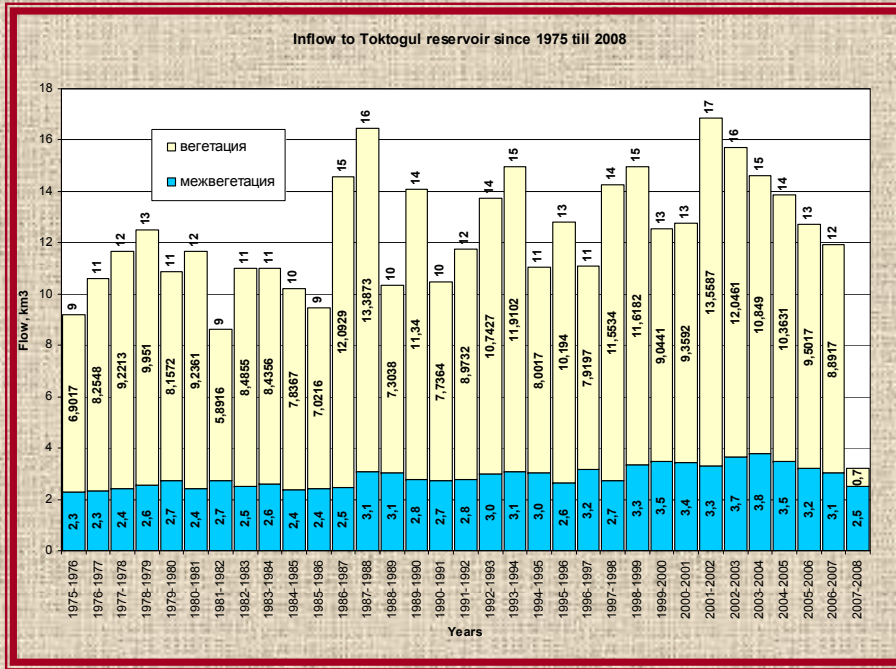
The collaboration between former "brothers" – how it could be keep?

The frequency of the wet years (probability 25 % and lower) and of the extreme wet years (probability 10 % and lower) has increased 1.4 times and 2 times accordingly.

	1985 – 1991		1992 - 2006	
	Non Vegetation period	Vegetation period	Non-vegetation period	Vegetation period
Inflow	2,77	9,29	3,20	10,49
Discharge	3,53	7,93	8,13	5,45



# Case study of Syrdarya basin 2002...2008!



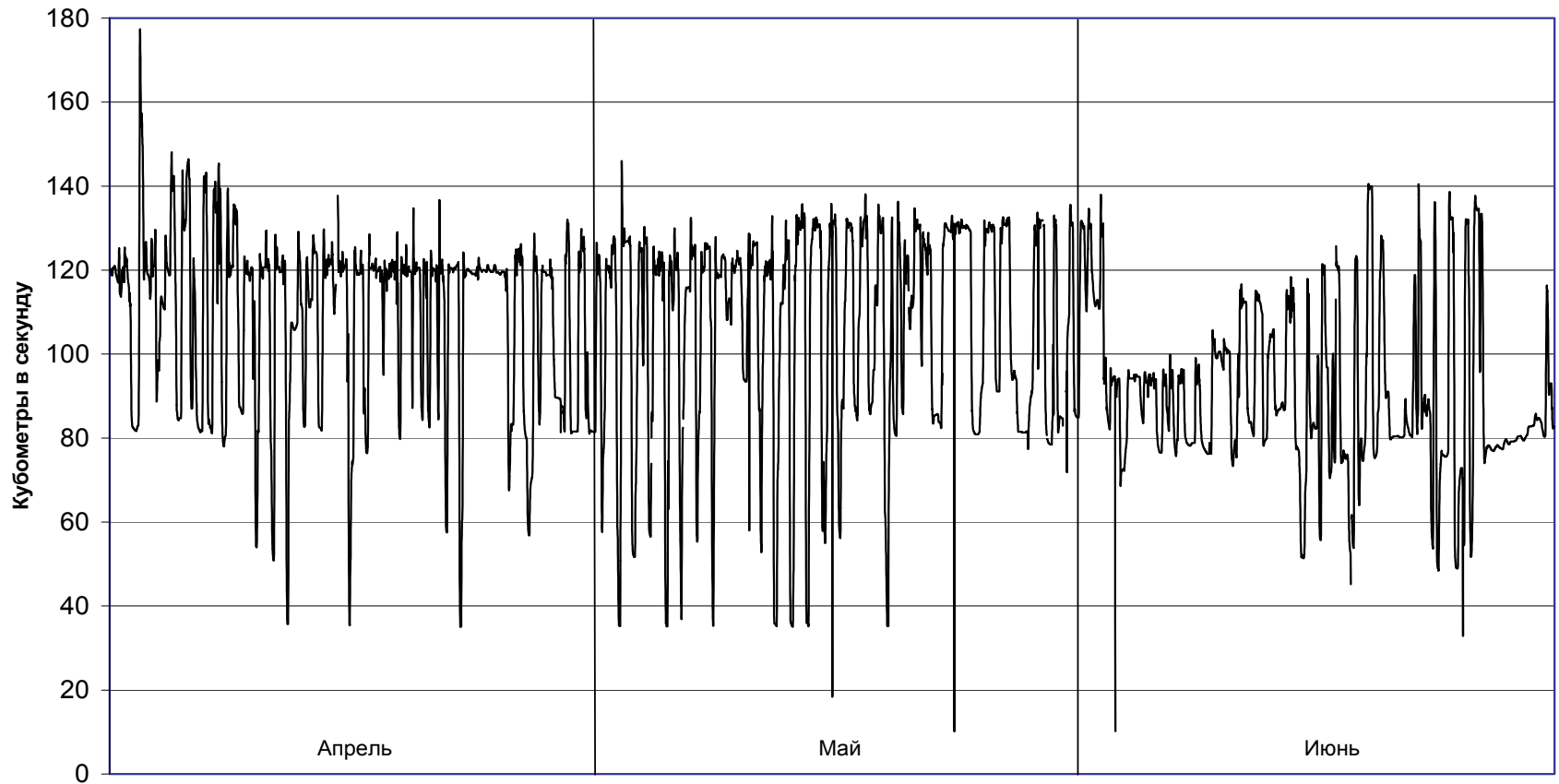
# Water availability in Syrdarya 2008

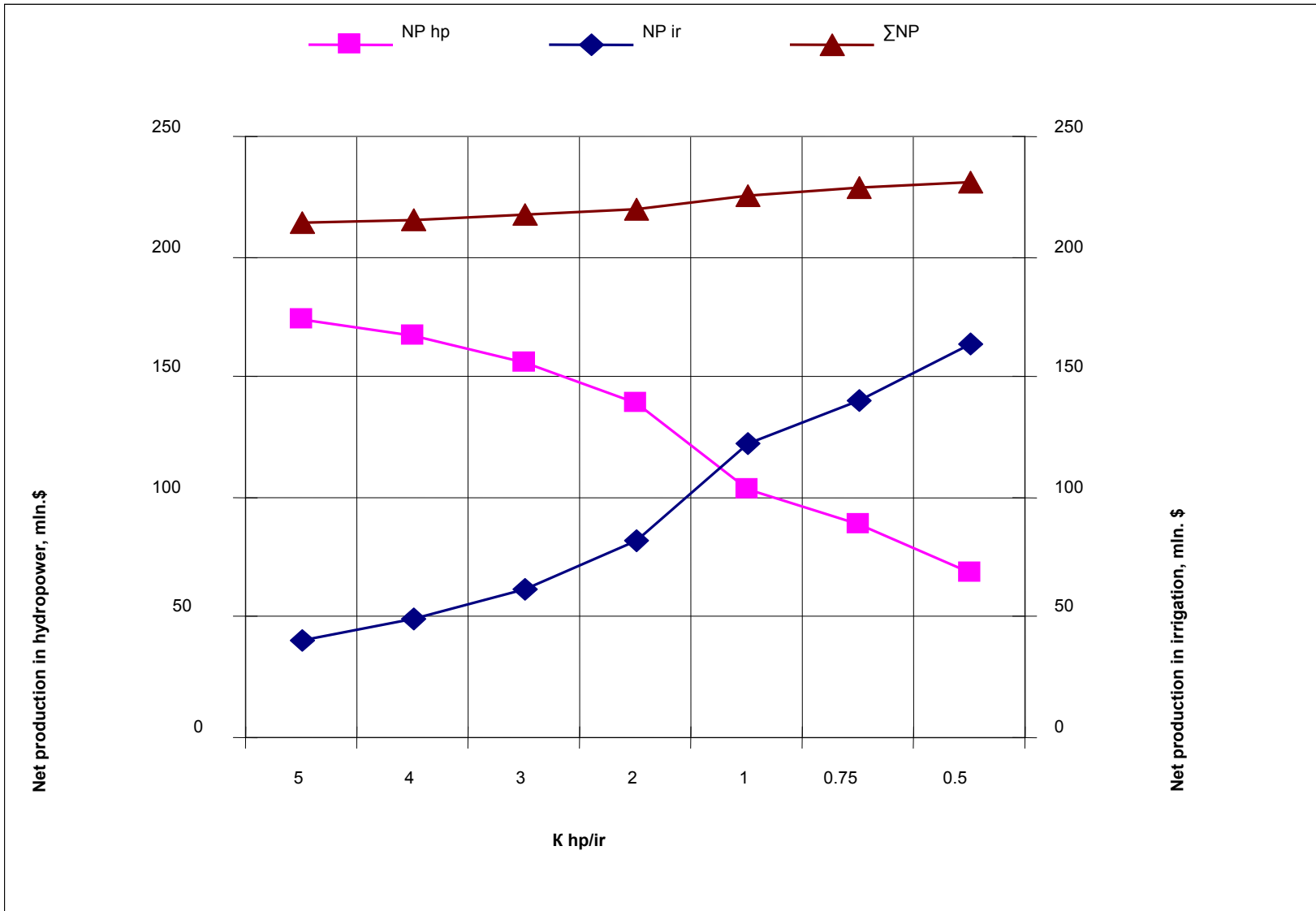
## Summer

Water natural availability of mean long-term norm, %	April	May	June	July	August	Sept.
	77	86	65	55	76	70
Delivery, %						
Kazakhstan	150	147	86	44	58	178
Kyrgyzstan	105	64	57	60	67	81
Tajikistan	34	59	69	74	85	81
Uzbekistan	120	76	60	58	72	105

# Water reservoirs – tool for pressure

Подаваемый расход воды в Канал дополнительного питания Большого Ферганского канала  
с начала вегетационного периода 2008 года



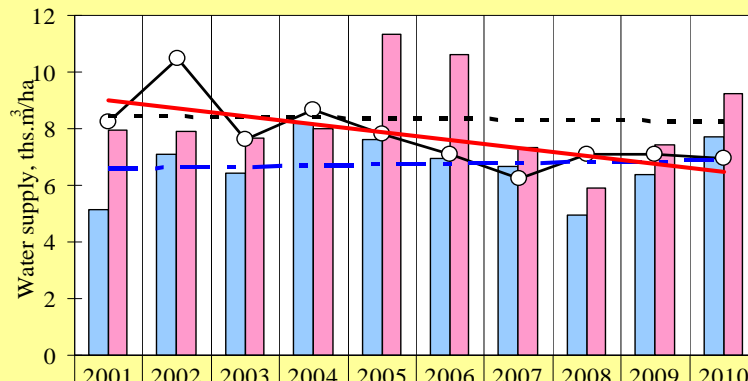


# How we can combat future water challenges?

- **IWRM as measure for strengthening WMO, control losses and growth of productivity of lands and water;**
- **strengthening collaboration;**
- **rehabilitate trust between states;**
- **increase water rights.**

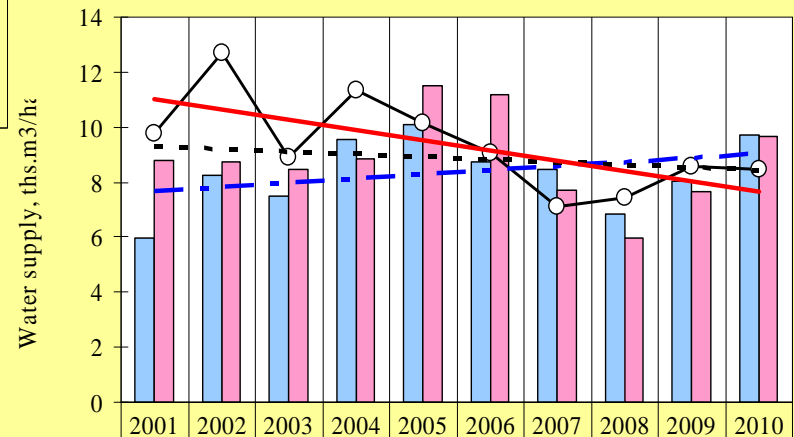
# Trend of water withdrawal reduction in WUAs for water saving purposes

**Water supply to the actually irrigated area at the WUA gate during the vegetation period**



BFC Water supply at WUA gate	5,2	7,1	6,4	8,2	7,6	6,9	6,7	4,9	6,4	7,7
BAC Water supply at WUA gate	7,9	7,9	7,7	8,0	11,3	10,6	7,3	5,9	7,4	9,2
SFMC Water supply at WUA gate	8,2	10,5	7,6	8,7	7,8	7,1	6,2	7,1	7,1	6,9

**Water supply to the MC-command area at the WUA gate during the vegetation period**



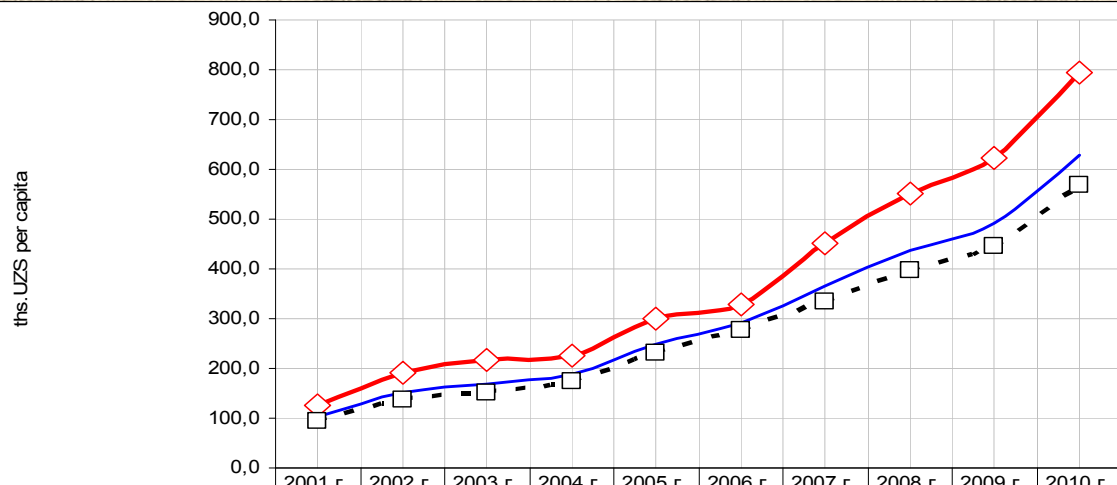
BFC Water supply at WUA gate	6,0	8,2	7,5	9,6	10,1	8,7	8,5	6,8	8,0	9,7
BAC Water supply at WUA gate	8,8	8,8	8,5	8,9	11,5	11,2	7,7	6,0	7,6	9,7
SFMC Water supply at WUA gate	9,8	12,7	8,9	11,4	10,2	9,1	7,1	7,4	8,6	8,4

# Assessment of the showing of vegetation periods based on every-ten day analyses

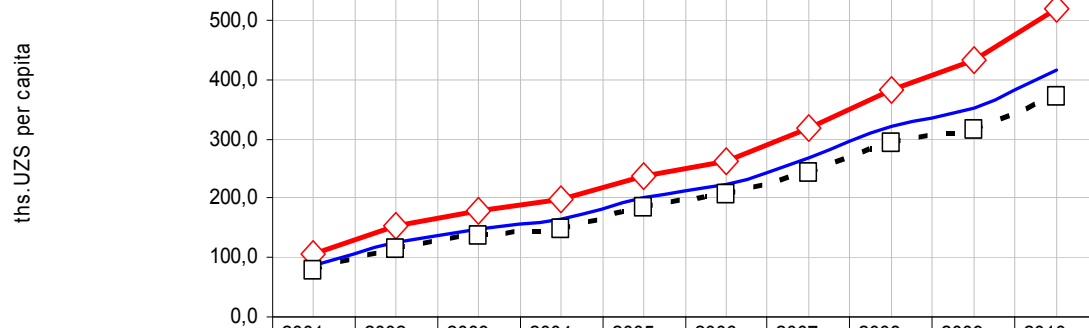
Pilot canals	Showings	Unit	2004	2008	2009	2010	Decrease/increase against 2004, %		
							2008	2009	2010
AAC (KG)	Irrigated area	ths.ha	8.1	8.1	8.0	8.0	-1	-2	-2
	Volume of water withdrawal	mln.m <sup>3</sup>	202	130	158	137	-36	-22	-32
	Volume of water transit	mln.m <sup>3</sup>	27	19	16	12	-32	-43	-56
	Volume of water supply	mln.m <sup>3</sup>	65	49	73	63	-24	12	-4
	Specific water supply	ths.m <sup>3</sup> /ha	8.0	6.1	9.2	7.9	-24	15	-2
SFMC (UZB)	Irrigated area	ths.ha	105.1	93.2	107.5	108.5	-11	2	3
	Volume of water withdrawal	mln.m <sup>3</sup>	1 188	848	1 020	1 319	-29	-14	11
	Volume of water transit	mln.m <sup>3</sup>	124	75	96	379	-40	-22	205
	Volume of water supply	mln.m <sup>3</sup>	912	660	765	754	-28	-16	-17
	Specific water supply	ths.m <sup>3</sup> /ha	8.7	7.1	7.1	6.9	-18	-18	-20
KBC (TAJ)	Irrigated area	ths.ha	8.1	8.5	8.6	11.7	4	6	7
	Volume of water withdrawal	mln.m <sup>3</sup>	176	114	116	154	-35	-34	-13
	Volume of water transit	mln.m <sup>3</sup>	21	9	18	26	-55	-12	26
	Volume of water supply	mln.m <sup>3</sup>	113	75	65	83	-34	-42	-26
	Specific water supply	ths.m <sup>3</sup> /ha	14	8.8	7.6	7.2	-37	-46	-49



# Dynamics of gross agricultural production per capita

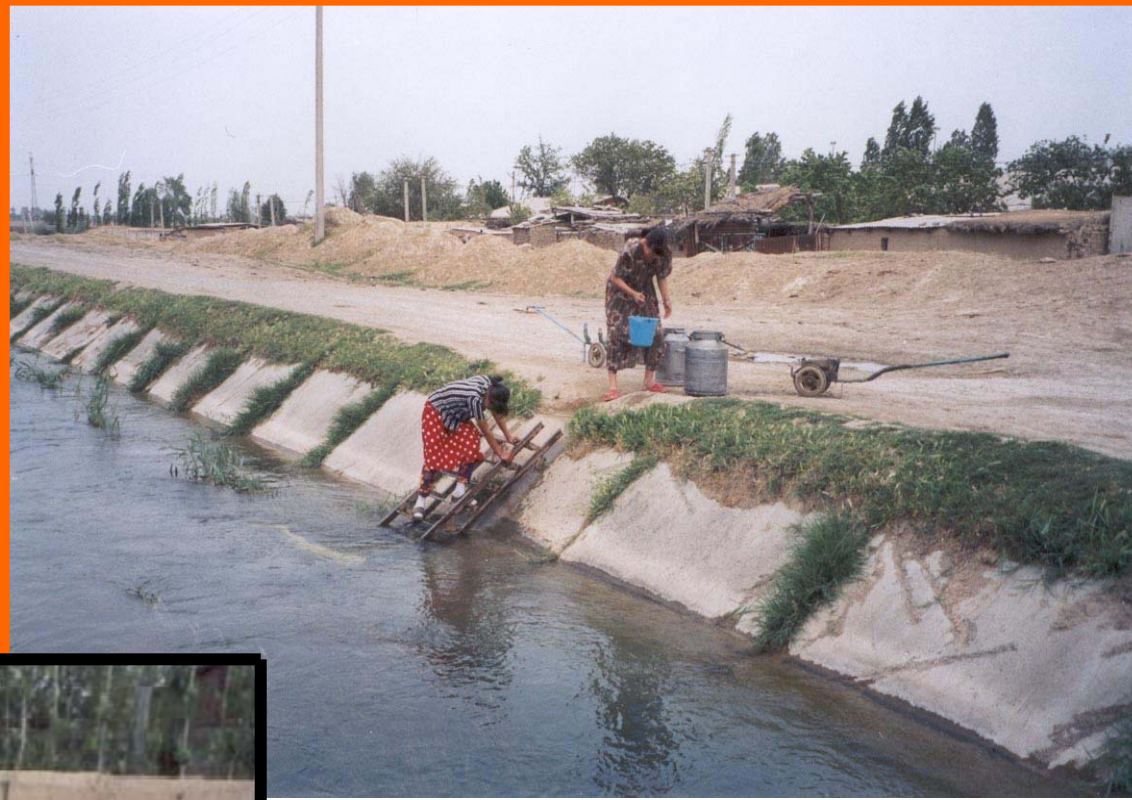


	2001 г.	2002 г.	2003 г.	2004 г.	2005 г.	2006 г.	2007 г.	2008 г.	2009 г.	2010 г.
—◇— In the project zone, ths.UZS per capita	126,8	190,6	216,7	225,2	299,4	330,0	452,4	551,0	623,5	794,5
-□- Beyond the project zone, ths.UZS per capita	94,5	137,0	152,7	174,4	232,3	276,5	335,0	398,2	444,5	567,9
— Andijan province, ths.UZS per capita	102,6	150,5	169,5	187,8	249,9	290,6	365,9	438,4	491,6	627,5



	2001 г.	2002 г.	2003 г.	2004 г.	2005 г.	2006 г.	2007 г.	2008 г.	2009 г.	2010 г.
—◇— In the project zone, ths.UZS per capita	106,8	153,6	177,8	197,6	237,0	261,5	318,5	381,2	432,4	519,6
-□- Beyond the project zone, ths.UZS per capita	77,0	113,2	135,5	148,6	185,5	207,1	244,2	293,6	316,1	370,7
— Fergana province, ths.UZS per capita	85,8	125,1	148,6	163,8	201,5	223,9	267,2	320,7	352,1	416,7

Women play an important role in water diversion, delivery, use and management.



They are also responsible for sanitation. Nevertheless, women's opinion is not practically considered in strategic decision making.

# TRAINING



- women started to take leading positions in agricultural and water sectors.



## Something about trust...

Production of energy, mln.kWt/h per 1mln.person

Страны		Выработка эл.энергии, млн.кВт.ч	Население, тыс.чел	Выработка эл.энергии, млн.кВт.ч на 1млн.чел
Кыргызстан	ГЭС	13641	2992	4559
	ТЭС	840		281
	Итого	14481		4840
Казахстан	ГЭС	546	2908	188
	ТЭС	2275		782
	Итого	2821		970
Таджикистан	ГЭС	16528	7064	2340
	ТЭС	228		32
	Итого	16756		2372
Узбекистан	ГЭС	6241	26759	233
	ТЭС	43075		1610
	Итого	49316		1843
Туркменистан *	ГЭС	0	4730	0
	ТЭС	11422		2415
	Итого	11422		2415
Всего	ГЭС	36956	44452	831
	ТЭС	57840		1301
	Итого	94796		2133
* За 2004 год				