

**Review presentation:
Nexus Issues in the Syrdarya River Basin**

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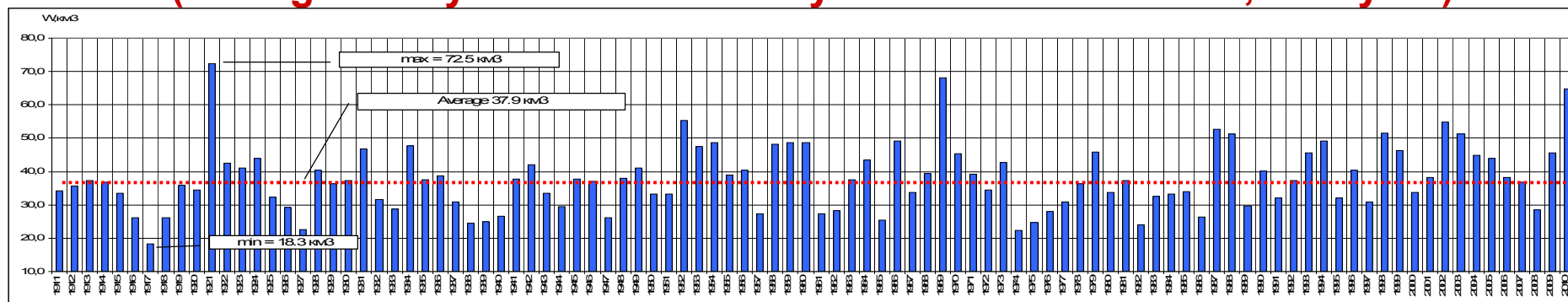
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2nd meeting of the Task Force on the Water-Food-Energy-Nexus under the Water Convention, Geneva, 8-9 September 2014

Population in the Syrdarya basin, beginning of 2013, thousand persons

Country	Province	Population
Kazakhstan	South Kazakhstan	2678,9
	Kyzylorda	726,7
	Sub-total	3405,6
Kyrgyz Republic	Batkent	458,9
	Djalalabad	1076,7
	Naryn	268,0
	Osh	1433,6
	Sub-total	3237,2
Tajikistan	Sogd (total)	2349,0
	Sogd (without Zerafshan)	1739,1
Uzbekistan	Andijan	2756,4
	Dzizak	1205,0
	Namangan	2458,7
	Syrdarya	750,6
	Tashkent	5036,6
	Fergana	3329,7
	Sub-total	15537,0
Total Basin		24528,8 / 23918,9

Natural flow in the Syrdarya basin (average multiyear flow for four cycles within 1951-1999, km³/year)



River sub- basin		River flow formatted within the countries				Total Syrdarya basin
		Kyrgyz Republic	Kazakhstan	Tajikistan	Uzbekistan	
Naryn		14.544	-	-	-	14.544
Karadarya		3.921	-	-	-	3.921
Rivers between Naryn and Karadarya		1.760	-	-	0.312	2.072
Fergana valley right bank		0.780	-	-	0.408	1.188
Fergana valley left bank		3.500	-	0.855	0.190	4.545
Middlestream rivers		-	-	0.150	0.145	0.295
Chirchik		3.100	0.749	-	4.100	7.949
Ahangaran		-	-	-	0.659	0.659
Keles		-	0.247	-	-	0.247
Aris and Bugun		-	1.183	-	-	1.183
Downstream rivers		-	0.600	-	-	0.600
Total Syrdarya basin	(km ³)	27.605	2.426	1.005	6.167	37.203
	(%)	74.2	6.5	2.7	16.6	100

**Agreed Water Resources Allocation for the Syrdarya river Basin
(Decision of Scientific-Technical Council of the Minvodkhov of the the
USSR – Protocol № 413 from 7.02.1984)**

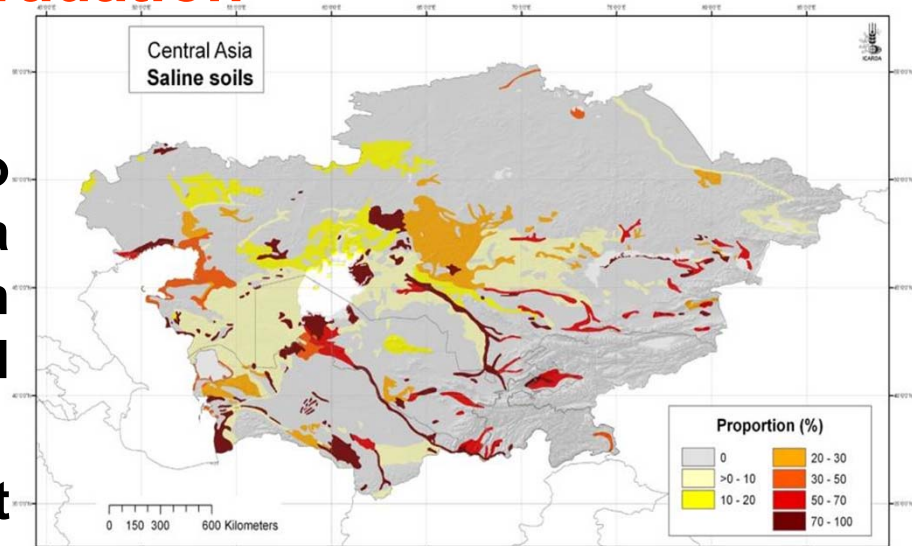
Country	Irrigated Area, thousand hectares	Intake Mln.m3	Including for irrigation	%
Uzbekistan	1892	25,49	21,36	51,1
Tajikistan	262	3,66	3,17	6,4
Kyrgyz Republic	456	4,88	4,38	10,4
Kazakhstan	780	15,29	10,40	32,1
Total	3390	49,32	39,31	100

Sources of Water Resources to Cover Water Demands in accordance with the above-mentioned Protocol

Country	Total	From main river Naryn- Syrdarya	Limit of ICWC, %	From Small rivers	Groundwater and Return flow
Uzbekistan	25,49	10,48	50,5	9,21	5,80
Tajikistan	3,66	1,81	7,0	0,65	1,20
Kyrgyz Republic	4,88	0,39	0,5	3,64	0,85
Kazakhstan	15,29	10,01	42,0	2,28	3,00
Total	49,32	22,69	100	15,78	10,85

Existing Problems came from Soviet times - Land and Water Degradation

- Soviet development plans to increase the irrigated area causing irreversible damage in ecosystem degradation and water quality
- Salinity and water logging affect about 50% of the irrigated area
- Rampant pollution
- Low yields of the main food crops
- Low water productivity at the farm level



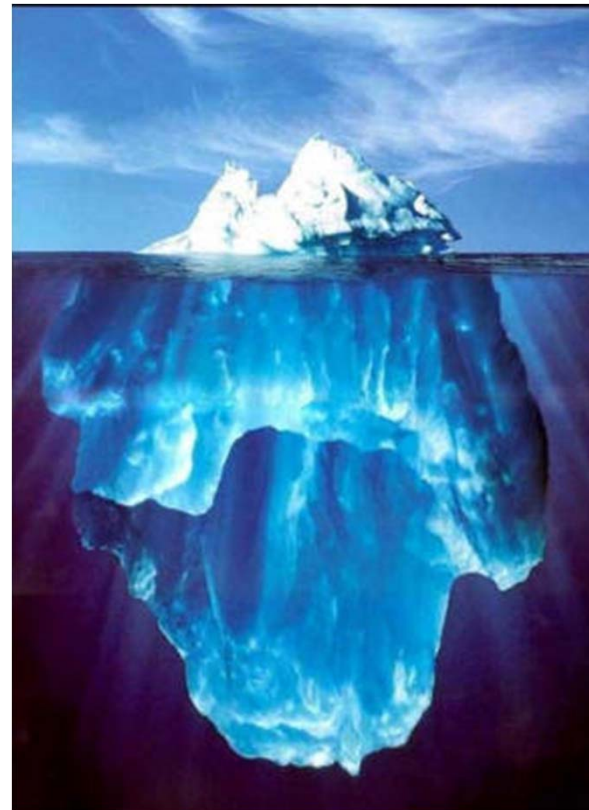
(E. De Pauw et al., ICARDA, 2009)



WHERE IS TRUTH about Cooperation CRISIS within the SYRDARYA BASIN?

**Water Cooperation crisis
looks like huge iceberg
on the way to water
security.**

**It has visible and
invisible parts.**



Visible Challenges for Water Security

- **Population growth, especially in urban areas**
- **Lack of proper access to potable water and sanitation**
- **Conflicts around water resources**
- **Increased Hydro capacity usage**
- **Non-coordinated planning**
- **Unsustainable water resources management**
- **Change in cropping patterns**
- **Low world market prices for agricultural products**
- **Lack of ecosystem approach and IWRM application**
- **Overexploitation and pollution of water ecosystems**
- **Absence of coordinated financial mechanism at the regional level**
- **Climate change**

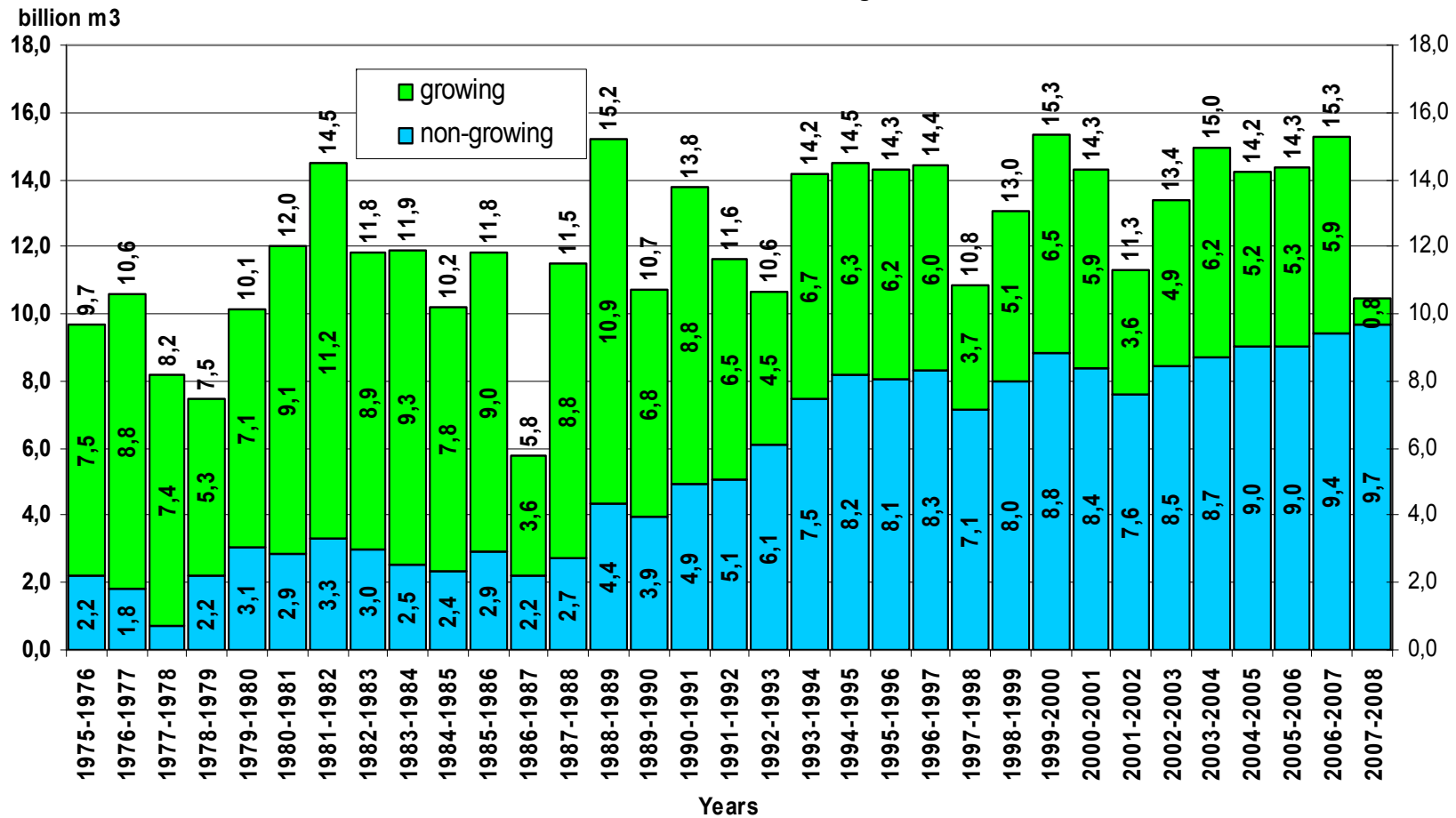
INVISIBLE PART OF THE “ICEBERG”

Absence of conflict resolution mechanisms, mostly because political tensions and weak economic environment.

There are internal and external causes for political tensions among Central Asian countries which led to their economical weakness.

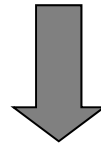
The main visible impact - Instability of Water Delivery in the Syrdarya Basin due to Changed River Flow Regime

Water releases from Toktogul reservoir

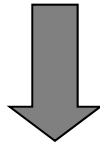


The most sharp is problem of water supply for middle and downstream parts of the Syrdarya basin

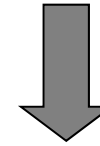
Hydropower regime of operations of existing and planned water reservoirs



Led to problems with water supply

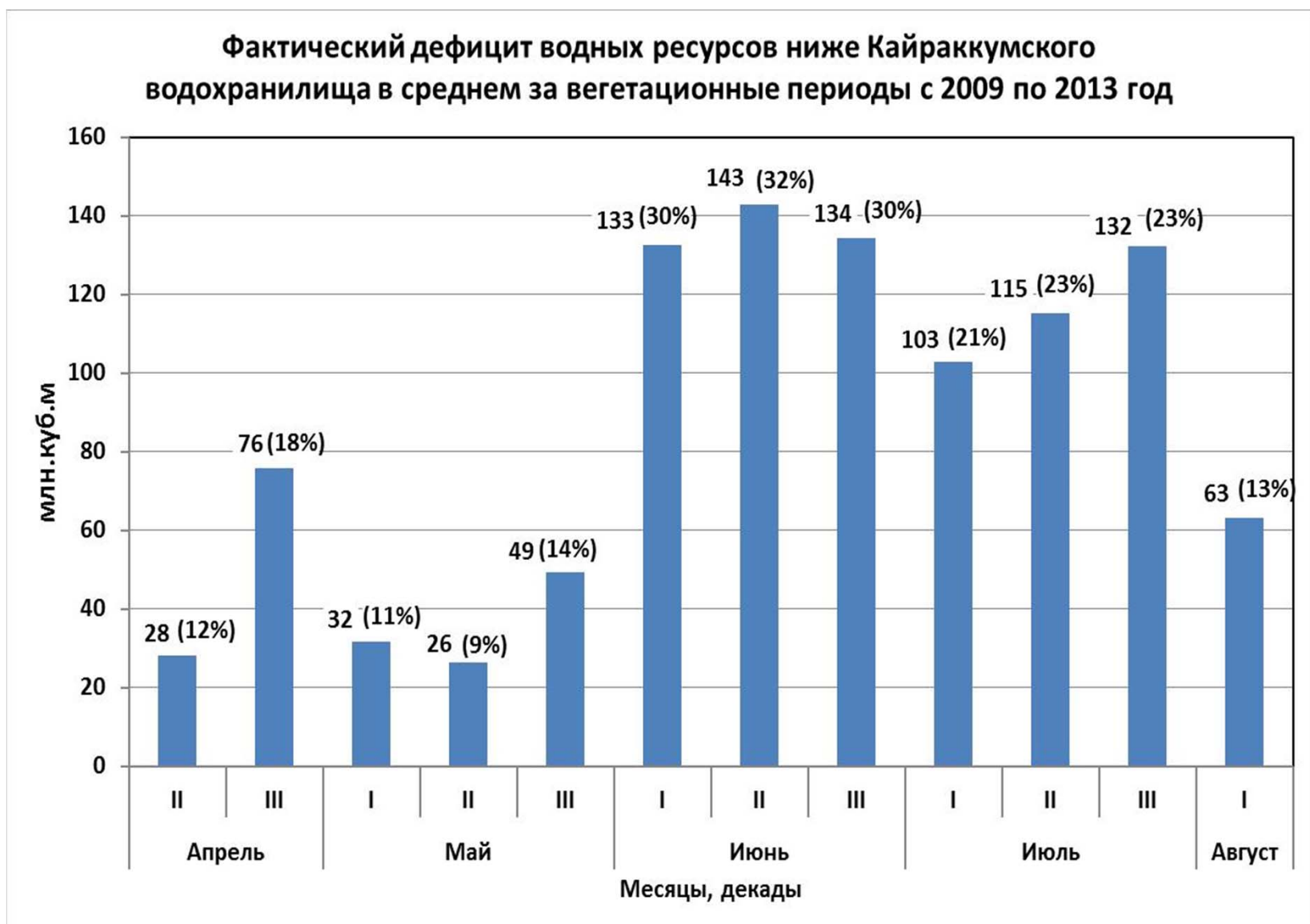


Annually deficit of water during summer period is 20-25% of demanded



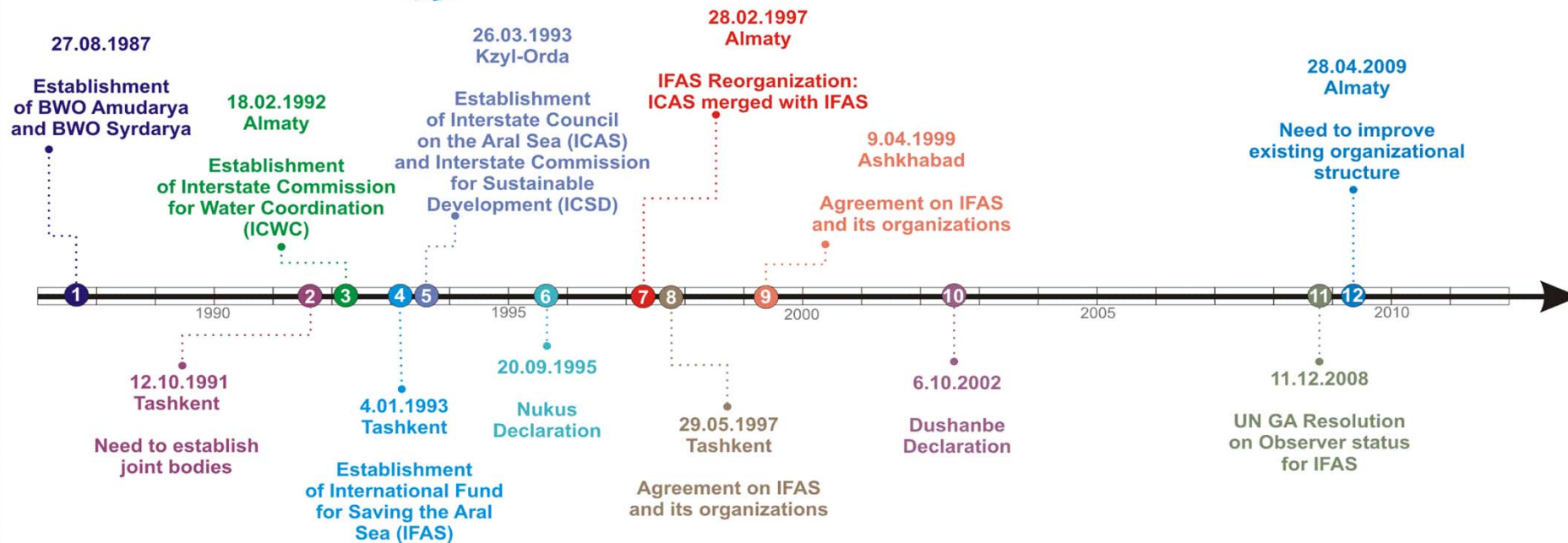
In dry years this deficit will raise up to 35-40% of agreed limit. In some ten-days periods during summer the actual water availability could be 10-15% of demanded

Observed water deficit below Kairakkum reservoir during summer – average for 2009-2013





Aral Sea Basin: Timeline of Regional Bodies Establishment and Reorganization



1. Order of the USSR Ministry of Reclamation and Water Management on the establishment of basin administrations on inter-republican water allocation in Amudarya and Syrdarya (Water Management Administration «Amudarya» and «Syrdarya») (Moscow, August 1987)

2. Statement of the heads of water authorities of the Central Asian Republics and Kazakhstan (Tashkent, October 1991)

3. Agreement between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan, and the Republic of Uzbekistan on Cooperation in the Field of Joint Management of the Use and Conservation of Water Resources of Interstate Sources (Almaty, 18 February 1992)

4. Decision by the Heads of Central Asian Republics on the establishment of International Fund for Saving the Aral Sea (Tashkent, January 1993)

5. Agreement between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan, and the Republic of Uzbekistan on Joint Actions for Addressing the Problems of the Aral Sea and Its Coastal Area, Improving the Environment, and Ensuring the Social and Economic Development of the Aral Sea Region (Kzyl-Orda, March 1993)

6. Nukus Declaration of the Central Asian States and International Organisations on the Problems of Sustainable Development in the Aral Sea Basin (Nukus, September 1995)

7. Decision by the Heads of Central Asian Republics on the reorganization of International Fund for Saving the Aral Sea (Almaty, February 1997)

8. Agreement between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan, and the Republic of Uzbekistan on the Status of International Fund for Saving the Aral Sea and Its Organizations (Tashkent, May 1997)

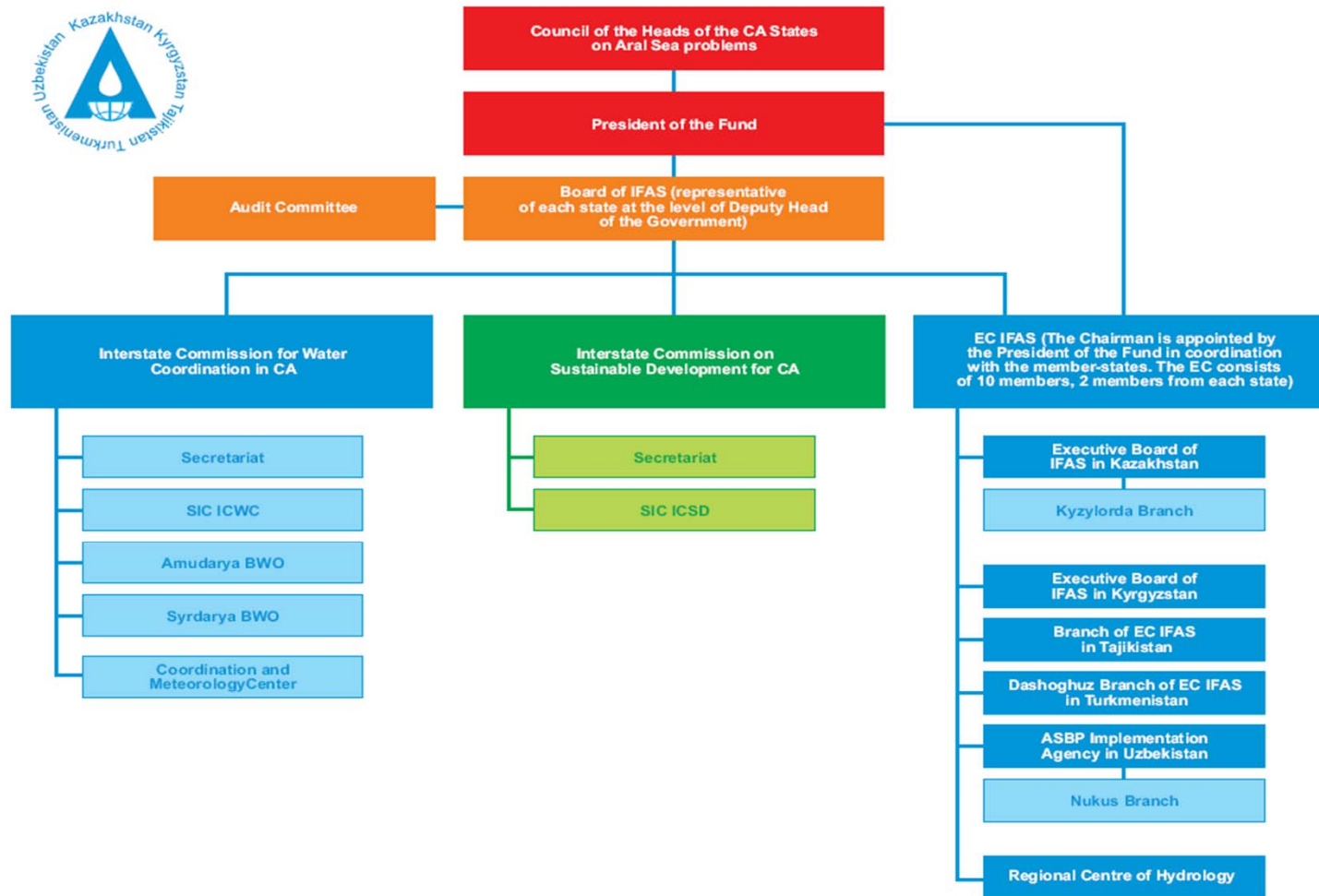
9. Agreement between the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan, and the Republic of Uzbekistan on the Status of International Fund for Saving the Aral Sea and Its Organizations (Ashgabad, April 1999)

10. Dushanbe Declaration (Dushanbe, October 2002)

11. UN General Assembly Resolution on Observer status for the International Fund for Saving the Aral Sea in the General Assembly (December 2008)

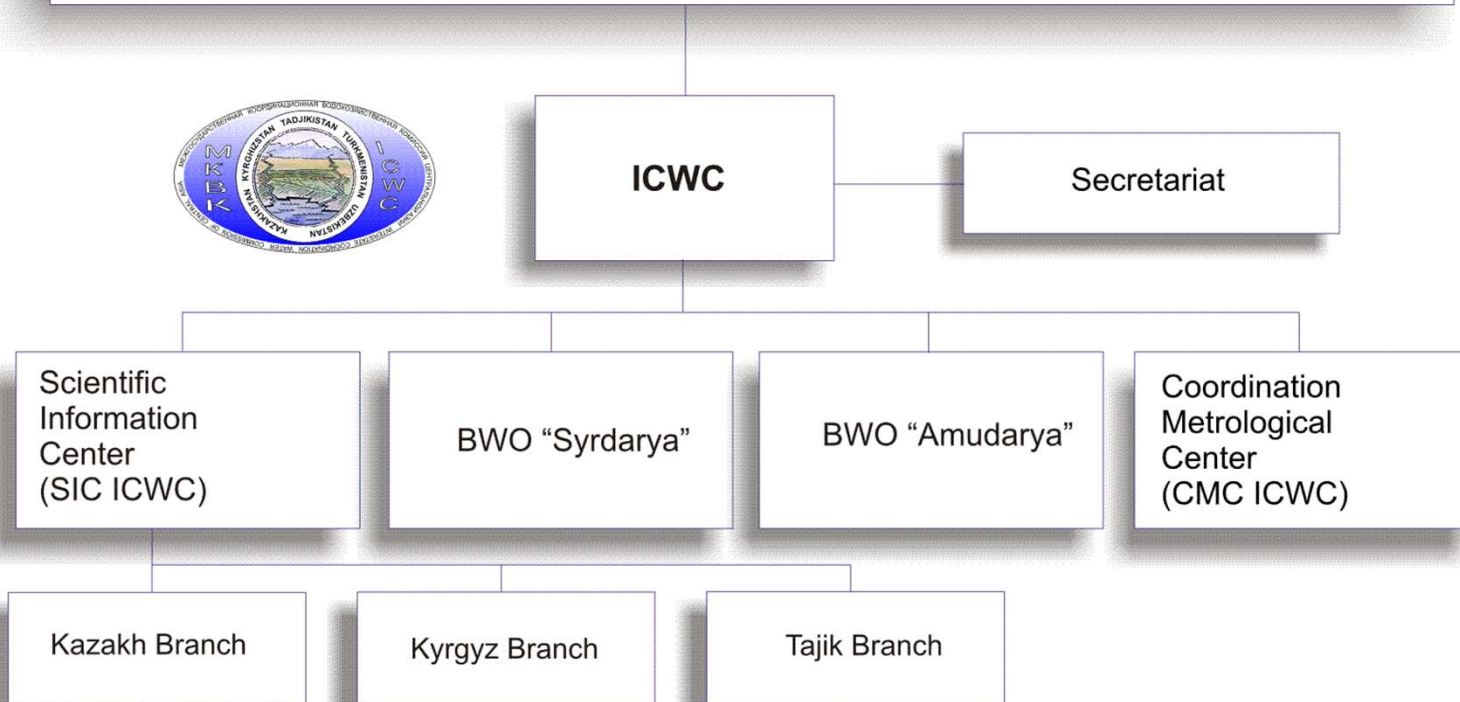
12. Joint Statement Made by the Heads of States Founders of the International Fund for Saving the Aral Sea (Almaty, April 2009)

Structure of the International Fund for saving the Aral Sea



STRUCTURE of Interstate Coordination Water Commission of Central Asian states

FOUNDERS OF ICWC



Principles of ICWC

The operation and management of water resources along two principal transboundary rivers: Amudarya and Syrdarya on behalf of five states

All decisions related to water management should be accepted on the base of full consequences by all members of the Commission during the regular meetings (as a minimum 2 times a year)

Executive bodies of Commission are responsible for implementation of decisions of ICWC members

The water allocation among countries along two rivers is based on the existing agreed by five countries rules (Agreement from February 1992)

Challenges

- Lack of interagency coordination and transparency
 - Insufficient coordination between EC IFAS, ICWC, ICSD
 - Energy sector is missing in the IFAS structure: ICWC cannot deal alone with water-energy exchange
 - ICWC is comprised of respective national water authorities but its mandate exceeds their competences and hence its decisions are hardly enforceable
- Limited BWO jurisdiction - , lack power to control the lower part of Syrdarya
- Low financial sustainability: poor funding, dependence on donors
- Unfair geographical distribution of executive bodies (fairness/efficiency)
- Short-term focus and lack of attention to perspective issues

Policy and legislative properties

Transboundary water issues are more difficult as there are no globally accepted legal principles for allocating water between different riparian states. Generally, upstream state (Kyrgyz Republic) adhere to the 'doctrine of absolute sovereignty' (state has absolute rights to water flowing through its territory), whereas downstream states (Uzbekistan and Kazakhstan) uphold the 'doctrine of absolute riparian integrity' (every riparian is entitled to the natural flow of a river system crossing its borders). Neither position has achieved international acceptance. These positions are also represented by the principle of 'equitable use', stressed by upstream countries, and the principle of causing 'no significant harm' advocated by the downstream countries.

In February 1992, the five countries entered into agreement on *Cooperation in the Joint Use and Protection of Water Resources of Interstate Significance*, affirming the "existing structure and principles of allocation" of transboundary waters.

In 1998 there was signed by four countries an Agreement on Syrdarya basin. The principal subject is mechanism of compensation for energy losses from the upstream storage of water during the winter months. The 1998 agreement was not exhaustive and, as a consequence, the parties had to continually negotiate the exact volumes of water releases and amount of compensation. After 2003 the parties were not able to conclude annual agreements due to some economic and political frictions.

Strengthening transboundary water cooperation in the Syrdarya basin

Established cooperative framework needs further improvement. What is needed now is the good will to encourage more collaborative efforts and accelerate the process of effective communication and dialogue towards lasting cooperation between countries and across communities. The cooperative spirit, in which Interstate Commission for Water Coordination was born in 1992, should be strengthened and supported, whereas unwise interventions that can cement divides should be avoided. It is also necessary to reach out to epistemic communities and bring together science and policy through capacity building initiatives and regional projects. Technical cooperation might demonstrate practical benefits of better water management and sow the seed of trust among riparian countries.

Outlook to future institutional straightening

- **Above mentioned institutional challenges and different level of economic development can be mitigated by cooperative response to common visible challenges for water security through restored trust among the Syrdarya Basin countries**

- **Build on strengths and avoid divides:**
 - **Foster instruments of cooperation such as information exchange, capacity building, regional projects, long-term thinking and commitments**
 - **The 1992 UNECE Convention (Article 9) spells out the basic tasks of joint bodies which can be useful for the current efforts to strengthen the institutional setting of transboundary water cooperation.**

- **Increased partnership: interstate, inter-sectoral, vertical as well as science and technology, more effective involvement of NGOs, ODAs**

Expected outputs – recommendations

The partnership under umbrella of **International Waters Cooperation** will assist the Syrdarya Basin to promote principles of the IWRM. It is expected the following recommendations:

common strategy for water resources management, development of its main provisions for the interests of population and economies of the riparian States

a set of legal, institutional, technical proposals for the improvement of observation networking within the water sector and among water users

coordination of joint activities regional and national institutions with international donors and agencies

an economic analysis of water resources management and water protection activities (territorial restorations)

further development of a regional information system CAWATER and knowledge exchange

platform for consultations and the exchange of opinions and preparation of draft solutions for future

coordination and expertise of all international projects on water related problems in the basin with participation of the key stakeholders

networking the regional training system for common capacity development program .

Thank you for attention !!!

Additional info:

vadim@icwc-aral.uz;

www.gwp-cacena.org

www.cawater-info.net