



# **Determining possible ways to introduce market instruments in the management of transboundary waters in Central Asia**

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The threat of reduction in water resources in Central Asia has increased due to the construction of Qush Tepa Canal in Afghanistan, which will take away at least a third of the Amu Darya flow.





Qush Tepa Canal



The spending and losses of irrigation water exceed all permissible standards. Contamination of water by runoff from fields makes it unfit for consumption.



A study by Doctors Without Borders found that the concentration of persistent organic pollutants (POPs) in the food of the population of Karakalpakstan are several times higher than norm.

**Persistent Organic Pollutants are a group of organic compounds that have toxic properties, persist in the environment, accumulate in food chains and pose a risk to human health and the environment.**

**The first 12 POPs under the Stockholm Convention were aldrin, chlordane, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene, polychlorinated biphenyls (PCBs), DDT, PCDD (dioxins) and PCDF (furans).**

Climate change is exacerbating the problems. Government agencies are not trying to change the principles of water resource management, taking into account the water rights of the population located downstream. There has been little progress in using water wisely and safely.

The shortage and pollution of water in rivers has a detrimental effect on the situation of the population and their health in the lower reaches. For example, anemia and other diseases caused by environmental deterioration are widespread among women in Karakalpakstan.

It is clear to everyone that this cannot continue. It has long been necessary to take radical measures to solve the Aral problem. Many proposals have been put forward over the past 40 years, but significant progress has not yet been seen. One of the stumbling blocks is water fees. First of all, we are talking about agricultural water. If we all pay for drinking water and tariffs are growing rapidly, then for irrigation water the fee is simply symbolic, and flushing water is free. It is known that farmers have to wash their fields with relatively clean water twice a year, and its volume is comparable to irrigation water. However, the question arises: is the farmer able to pay for irrigation water? In modern Uzbekistan – it is hardly. To do this, the farmer needs to get rich, and this is impossible without gaining economic freedom. Our farmer, in fact, is a servant of the state, or more precisely, of the hakim.

While remaining within the framework of traditional relations in transboundary water management, international experts have identified certain difficulties in promoting integrated water management. This is what was published in the final documents of the International Water Decade, 2005-2015.

[https://www.un.org/ru/waterforlifedecade/transboundary\\_waters.shtml](https://www.un.org/ru/waterforlifedecade/transboundary_waters.shtml)

**“...Experts agree that agreements on international watercourses should be more specific and include measures to ensure mandatory implementation of concluded agreements, as well as include detailed conflict resolution mechanisms in case of disputes. Improved cooperation also requires clear yet flexible allocation of water and definition of water quality standards, taking into account hydrological phenomena, changes in basin dynamics and societal values. Finally, in the process of developing international watercourses, there may be a need for certain compensation mechanisms, for example, the purchase of water rights.”**

It is obvious that the conditions for a transition to new relationships in water management are ripe.

The issue of introducing payment for irrigation water has been discussed for a long time. It is expected that such a fee will encourage consumers to save water. There were efforts in Soviet times of introducing water fees. However, without a market, this does not work. In Soviet times, consumer costs for water were compensated from the governmental budget. And the payment went to the general budget of the state, which did not allow them to be spent on restoring water resources. Accordingly, water consumers did not have subjectivity, that is they were not independent market subjects with the ability to decide whom to sell their product to, when and at what price. Administrative pressure on them was not effective and did not lead to any significant water savings. Even an increase in yield, for example, cotton, was undesirable for state farm workers as it led to an increase in planned targets for the next year. High profits were also undesirable, since they could not be used to increase workers' wages and/or purchase new equipment or expand the infrastructure of state farms. Usually this profit was dissolved in the state budget. In market conditions, competition and freedom not only economic but also moral incentives appear to increase the efficiency of resource use. As in any other market, financial flows between entities appear in the water market, connecting these entities into a single system that stimulates the expansion and increase in the speed of these flows. As has long been known, these financial flows are the "lifeblood" of the economy, without which the effective operation of the complex socio-economic mechanisms of the modern world is impossible.

Thus, in order to effectively use the economic incentive mechanism, it is necessary to create a market structure, both at the level of an individual country and at the intercountry level in the Aral basin.



# The main components of any market

To a first approximation, the components of the market are: - the owner of the product, the buyer and the legal field in which these entities operate. A field that includes a system of checks and balances, courts and insurance, etc. The owner of the goods must be responsible for the quality, quantity and timely delivery of the goods to the consumer. The buyer or, in other words, the consumer must guarantee timely payment for the goods. In addition, the buyer should be free to choose whether to buy or not to buy. Otherwise it's not a market.

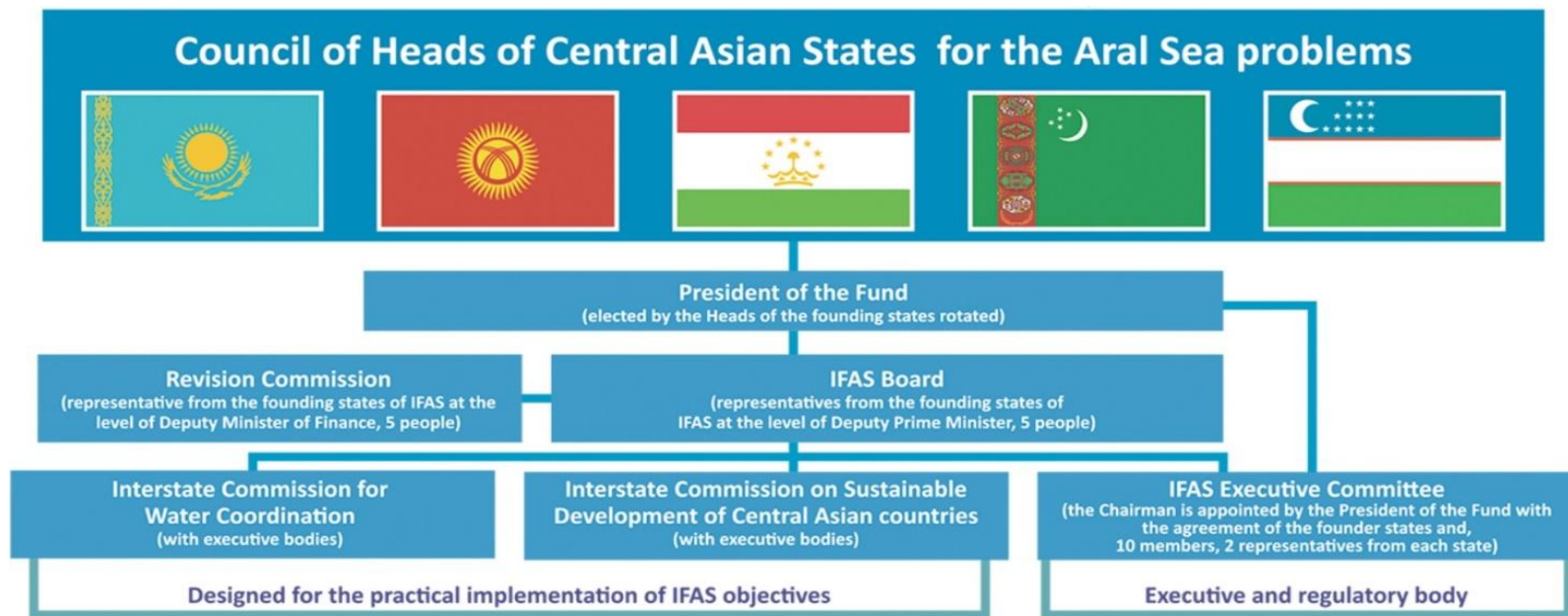


The legal field is formed by states and includes regulations, contracts, arbitration, courts, the banking system, and insurance agencies.

Thus, it is necessary to find out the existence and/or possibility of creating conditions for the introduction of market mechanisms in the Aral basin.

One of the tasks is to determine who or what is the “Owner” of the water. Ideally, this should be an entity that is delegated the power to charge for water pollution, for using water for profit, and that uses the funds collected to maintain water sources in a viable condition. That is, in a state in which the “Owner” has the opportunity to guarantee consumers the provision of water for a long time comparable to the lifespan of one generation.

Today, the role of “Owner” can be played by IFAS. Its BWOs Amu Darya and Syr Darya (Basin Water Organization), vested with the powers of transboundary control over the collection of fees, the awarding of fines, and the management of watercourses can serve as executive bodies.



IFAS consists of six main subdivisions:

- Board of IFAS.
- Revision Commission.
- IFAS Executive Committee
- Branches of the Executive Committee of IFAS in Central Asian states.
- Interstate Commission for Water Coordination (ICWC), ICWC Secretariat, ICWC Scientific Information Center (SIC ICWC) and two Basin Water Organizations (BWOs) «Amu Darya» and «Syrdarya».
- Interstate Commission on Sustainable Development (ICSD), ICSD Secretariat, Scientific Information Center at the Institute of Deserts of Turkmenistan (SIC ICSD).

It is obvious that the need to pay for water used to create an economic product can cause misunderstanding and even dissatisfaction among water consumers, who are not yet free in their relations with states. Therefore, the introduction of market instruments should be gradual, spread out over time, and agreed upon with all interested parties. In this regard, it would be logical to start with charging for water pollution, since the “polluter pays” formula is met with understanding by almost all water consumers. At the same time, the introduction of fees for water pollution should also be gradual, spread out over time. The tariff growth schedule should be known to all parties, which will allow them to be prepared in advance for an increase in the amount of payments for pollution. Control over the activities of the “Owner” should be exercised by the Council of Presidents. Indicators of operational efficiency can be the quantity and quality of water entering the Aral Sea.

Then, once experience and substantial capital have been gained, preparations can begin to implement charges for water that provide economic benefits to consumers. First of all, it is irrigation water for the agricultural industry and water for industries that produce material assets. It must be emphasized that water for municipal needs and environmental purposes will not be included in the scope of the “Owner-Consumer” relationship. Utility consumers will only pay for water pollution at sources. For example, for sewage discharges.

The introduction of water fees will also be introduced in stages, according to the calendar plan, which must be sent to each consumer. And in this case, the tariff growth schedule must be known in advance to all parties in order to have time to be prepared for the fee increase.

Thus, the time interval for implementation of pollution charges should be 5-7 years and then the implementation interval for water charges 6-10 years. In total, the entire process of introducing market mechanisms can take at least 10 years.

From the life time of our UDASA we are trying to convince decision makers to pay attention to our concept but did not succeed yet. Even we sent the concept to all Presidents of Central Asia but the only President of Kyrgyzstan responded. It was disagreement with the point of giving rights for water management to independent entities like BWOs. We are keeping our efforts and believe in this way we will achieve sustainable environmental management in Central Asia.





# Thank you for your patience!

Yusup Kamalov. Chair.

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