



Policy Brief

Role of water pricing in improving water use efficiency in Central Asia

Georg Petersen

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Central Asia Regional Economic Cooperation (CAREC) Institute
21st Floor, Commercial Building Block 8, Vanke Metropolitan,
No. 66 Longteng Road, Shuimogou District, Urumqi, Xinjiang, the PRC, 830028
f: +86-991-8891151

[LinkedIn: carec-institute](#)
km@carecinstitute.org
www.carecinstitute.org

Introduction

In order to address financial gaps in the water sector, it is important that the fees collected for water services should cover the maintenance and operational costs of the water infrastructure. Currently, this is not the case in Central Asia countries.

This policy brief integrates a review of academic literature, the analysis of current policy frameworks and the empirical evaluation of the current situation in Central Asia related to the role of water pricing in improving water use efficiency.

Literature review

In Central Asia, the water sector is mainly funded by the public budget. Water is considered a public good at low-cost, causing extensive consumption.¹

Infrastructure investment in water, sanitation, and wastewater treatment is capital-intensive and requires high upfront costs and long payback periods. In the region, the public water service providers usually have low finance mobilization capacity and poor creditworthiness to borrow long-term loans from commercial lenders.^{2,3,4}

The service fees charged by state water organizations are not collected in full, because water users are reluctant to pay for an unreliable water supply. Fee collection ranges from 50 percent to 70 percent in Central Asian countries. However, as of late, the collection of household water supply fees has improved thanks to better metering and infrastructure improvements in this area. In irrigation water supply, service fee collection rights are still far too low and do not cover the operation and maintenance costs.⁵

If not adequately addressed, water mismanagement has serious implications for the economic, political, social, and environmental situation in the region. Direct economic effects include the loss of agricultural productivity, which translates into lower GDP in countries with heavy reliance on crop yields. Currently, in each year, reduced water supply, in combination with poor agricultural systems, results in around 2.1 billion USD in annual economic losses in Central Asia.⁶ Indirect economic effects include the costs of infrastructure built in individual countries to account for the lack of cooperation in water-related issues in the region. For example, Uzbekistan has spent around 20 million USD to construct pumping stations to compensate for the undersupply of water resources from Kyrgyz

¹ Tecco, N. (2008). Financially sustainable investments in developing countries water sectors: What conditions could promote private sector involvement? *International Environmental Agreements: Politics, Law and Economics*, 8(2), 129-142. <https://doi.org/10.1007/s10784-008-9066-6>

² Akhmouch, A., & Kauffmann, C. (2013). Private-sector participation in water service provision: revealing governance gaps. *Water International*, 38(3), 340-352. <https://doi.org/10.1080/02508060.2013.793573>

³ Hahm, H. (2019). Current trends in private financing of water and sanitation in Asia and the Pacific. *Asia-Pacific Sustainable Development Journal*, 26(1), 67-83. ISBN: 978-92-1-120797-2

⁴ OECD. (2011). *Meeting the Challenge of Financing Water and Sanitation: Tools and Approaches*, OECD Studies on Water. OECD Publishing, Paris, <https://doi.org/10.1787/9789264120525-en>.

⁵ Abdullaev, I, Akhmedov, S. (2023). *Water Infrastructure in Central Asia: Promoting Sustainable Financing and Private Capital Participation* <https://www.carecinstitute.org/wp-content/uploads/2023/02/CI-Water-Financing-Report.pdf>

⁶ No More Business as Usual: Improving Water Usage in Central Asia. World Bank. <https://www.worldbank.org/en/news/feature/2019/06/28/no-more-business-as-usual-improving-water-usage-in-central-asia>

Republic.⁷ Kazakhstan has also set up the Koksarai reservoir to shield against potential flooding resulting from the extensive winter water releases in the upstream countries.⁸ Regional cooperation in water management will not only allow for increased water availability but will also reduce costs by avoiding redundant investments in water infrastructure.⁹

Policy context

Central Asia's current water sector financing is relying heavily on strained public budgets and inadequate cost-recovery from users, affecting the infrastructure maintenance and subsequently, lowering the reliability of water supply across the region.

Analysis of findings

When water is underpriced or heavily subsidized, users have little financial incentive to use it responsibly. This is especially true in the agricultural sector, a major water consumer in Central Asia. Cheap water can incentivize the cultivation of water-thirsty crops, that would otherwise be unsuitable for the region's climate. Additionally, farmers may not be actively investing in water-efficient irrigation methods, as water itself is perceived as an inexpensive good. These subsidies undermine the efforts to promote water conservation and result in unsustainable patterns of water use.

It is crucial to update the pricing models to reflect the actual costs of delivering reliable services. Properly priced water encourages users to value it and think about its utilization consciously; thus, reducing overall consumption, promoting water saving technologies and encouraging a move towards less-water intensive crops. The revenue from the increased tariffs should be reinvested in the water supply management systems.

While it is necessary to align water prices with real costs, policy reforms must carefully consider implications for equity and affordability. A sudden increase in price could significantly disturb markets and in addition disproportionately affect people most at risk -and restrict access to safe drinking or sanitation services. Targeted subsidies, differentiating billing rates according to varying levels of usage, as well as social programs can limit the negative effects of the higher tariffs to vulnerable customers. Balancing affordability, conservation, and financial sustainability will be key to designing successful and socially responsible water pricing policies in Central Asia.

Recommendations

It is recommended that Central Asia must prioritize the progress towards a more cost-reflective water pricing. This will go hand in hand with the efforts towards strengthening fee collection mechanisms, enhancing metering systems and enforcing payments. Moreover, these pricing reforms should be coupled with a strong focus on promoting water-efficient technologies, especially in the agricultural sector.

⁷ Pohl, Benjamin et al. "Rethinking Water in Central Asia: The Costs of Inaction and Benefits of Water Cooperation". CAREC program report <https://carececo.org/Rethinking%20Water%20in%20Central%20Asia.pdf>

⁸ Gaëlle, Bal. "Koksarai Reservoir". Shymkent Sweet Texas. <http://shymkentsweettexas.com/index.php/2017/05/17/koksarai-reservoir/>

⁹ The vital resource: Water Management in Central Asia <https://api.caspianpolicy.org/media/uploads/2020/11/The-Vital-Resource-Water-Management-in-Central-Asia-01.pdf>

Way Forward / consulting mechanisms

Based on the current climate scenario and the overarching socio-economic context, Central Asia cannot sustain its dependence on heavily subsidized water. Although urgent, switching to cost-reflective pricing must be seen as a gradual process, so as not to damage market mechanisms and make water access unaffordable for vulnerable people. Changes towards cost-reflective water pricing is critical for developing a resilient, financially sustainable water management system in Central Asia.

- Reframing water as a marketable resource: water is not just a social good, but it also has economic values, and this fact needs to be recognized by central Asian countries. This entails open and realistic pricing of water;
- Customized cost recovery with equity considerations: gradually introducing full-cost tariffs that will take into consideration the vulnerable customers;
- Improving revenue collection and enforcement mechanisms: improving billing infrastructure, metering systems, and stricter measures to ensure water users are paying their bills.

To achieve these goals, Central Asia countries could benefit from the experience of international projects and experts. Additionally, civil society engagement is pivotal to build awareness on water conservation measures, explaining the need for pricing changes and demonstrating benefits of efficient water use.