INSTITUTE for DEVELOPMENT and DIPLOMACY

ROUNDTABLE DISCUSSION SUMMARY

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Azerbaijan's Current Water Resource and Supply Perspective

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Topics of Discussion

Water management in Azerbaijan, sustainable development, water security, climate change, agriculture.

This document summarizes a roundtable discussion led by Rovshan Abbasov, the director of Khazar University's Department of Geography and Environment. The discussion took place on 31 March 2023 at ADA University under the auspices of the Institute for Development and Diplomacy (IDD), which was hosted by IDD Director Dr. Fariz Ismailzade.

The Importance of Water Management

On 31 March 2023, Azerbaijani President Ilham Aliyev signed a decree to merge all water-related agencies into the State Water Agency of Azerbaijan. This development increases the importance of this event, as the new water agency can utilize the ideas related to improving Azerbaijan's access to fresh water that the attending industry experts imparted. Moreover, this event was especially critical considering the far-reaching impacts of climate change. Predictions suggest that the average temperature across all regions of Azerbaijan could increase by 1.5 degrees Celsius, and precipitation is expected to be reduced by 10-20 percent by 2040. These impacts could potentially cause a 5-10 percent reduction in river water and result in a further drop in the level of the Caspian Sea.

It is imperative for Azerbaijan to prioritize water management and security, considering its geographical position as a downstream country. 70 percent of all water in Azerbaijan originates outside of its boundaries, so the security of Azerbaijan's waterbodies somewhat depends on the actions of Armenia, Georgia, and Türkiye. Although Azerbaijan has

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signed a decree on the protection of international lakes and rivers, no other country in the region has similarly done so. As a downstream country, Azerbaijan has a national interest in signing such agreements, but upstream countries are often unwilling. It was suggested that Azerbaijan should foster more bilateral agreements and engage in direct negotiations to foster a sense of communal good among its neighboring countries.

Water Management in Agriculture

As agriculture is the biggest water user in Azerbaijan, all attempts to improve water management and security must start there, as various IDD Analytic Policy Briefs have examined. Moreover, as more severe droughts have been observed since 2010, with this trend expected to rise due to climate change, it is essential to address the water problems in agriculture to protect the industry. Between 2000-2019, the total area of planted crops has increased, and there are now over 500,000 farmers working in the sector, resulting in a higher demand for water. However, currently between 50 and 70 percent of water in the agricultural sector is being lost, primarily due to improper infrastructure, outdated irrigation methods, and a lack of incentives for farmers to save water.

One idea discussed was the controversial method of 'virtual water import.' In this approach, crops that require a lot of water are not grown within the country but are imported. While this may be successful in reducing the water demand of the agricultural sector, it is potentially risky as it reduces the food security of the importing country. There is a debate as to whether reducing the demand for water or ensuring food security should be a higher priority for Azerbaijan, therefore this method is only attractive in a worst-case scenario.

The improvement of irrigation technology and methods was considered paramount to water management within agriculture. As the area of irrigated lands in Azerbaijan has doubled in the last 15 years, extensive planning, development, and education are needed to reduce water losses. As the current irrigation systems are often outdated earth-based canals, water salinization often occurs, which can destroy crops and the wastage of water. Therefore, the installation of modern irrigation and drainage infrastructure was suggested as a partial solution to water losses in the short term. Then, by utilizing a participatory approach, which considers the interests of all stakeholders, Azerbaijan can further capitalize on the modern irrigation infrastructure by assisting farmers in not only installing the new systems, but also training them to use and understand the benefits of efficient irrigation and drainage methods and technologies.

Similarly, education was also suggested as a valuable tool in crop productivity. Farmers should be informed as to exactly how much water needs to be used for a successful harvest. It was additionally noted that soil and chemical analysis should be undertaken before planting any crop in any area, this information can then be passed on to the farmers. This is important as it allows all parties to benefit—farmers can grow crops more efficiently

and successfully, providing economic benefit, and the state water agency ensures the minimum amount of crop, and therefore water, wastage.

A further issue surrounding farmers' lack of incentive to save water was raised: the price of water. As the price is currently low, farmers use it more freely than they would if it was more expensive. Although the need to raise prices was noted, it was agreed that a participatory approach needs to be taken. Farmers should trust that by agreeing to pay extra for a higher quality of water, they will, in turn, reap the benefits of better harvests and further economic growth.

Water Management in Cities

A similar issue persists in the cities. The coping strategies for Azerbaijani households to acquire drinking water are expensive, such as buying bottled water or installing filters. Due to this, water-providing companies considered that users would choose to pay more upfront for their tap water with the promise of receiving a higher quality of water in the future, once the funds for the new infrastructure had been raised. Despite this, it appears the population will only accept higher rates after the infrastructure and systems that will provide better-quality water are already in place. Therefore, it was suggested that water providers should instead focus on finding investors and loans to facilitate this change.

The use of overhead tanks on the rooftops in Baku is very common. However, these tanks are a further source of pollution and water loss. Although companies like AzerSu clean the water outside of the city, the water becomes re-polluted while in the tank, resulting in hard water. Moreover, water tanks lead to heavy water losses, as they were built before water meters, so households do not see the benefit of saving water within this system. It was suggested that as the water distribution network in Baku is outdated, a modernized system, financed initially by investment and then via increased rates among users, would reduce water loss and pollution, provide clean drinking water, and educate consumers on the importance of saving water.