



## ITI Model of Achieving the 3C in Drinking Water Supply

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**Abstract:** The essay demonstrates the objective need for the "ITI of reaching 3C" model in drinking water supply, as well as its interconnectedness and significance. It is also appropriate to use water towers organized near the source of water to ensure economy and efficiency in the delivery of drinking water to the people.

**Key words:** water, quality, efficiency, science, experience, investment, clean drinking water, water tower.

**Introduction. Relevance of the topic.** Clean, high-quality drinking water has long been a people's ideal. Spring does not emerge because rivers do not flow in all inhabited regions. Drinking from a well was the primary source of consumption. Water in the well has recently dropped after water from the well (underground) has been pumped for crops. This exacerbated the population's troubles. As a result, the subject of supplying safe drinking water to the country's population has recently received a lot of attention. On July 22, 2022, in particular, the President of the Republic of Uzbekistan signed Law No. ORQ-784 "On Drinking Water Supply and Wastewater Discharge." The goal of this regulation is to govern relationships immediately relevant to drinking water supply and wastewater outflow. As a result, this legislation covers all matters pertaining to this sector. Importantly, providing clean drinking water to the community is an indication of policy implementation aimed at boosting the worth of people by taking their health and well-being into account. One of the most pressing challenges, in their opinion, is the proper distribution of high-quality drinking water to the populace.

**Literature review.** Several experts and professionals in our nation are working with issues concerning drinking water, such as assuring its quality and efficiency in supply, as well as its scarcity. A is one of them. Examples include Abduganiev, A.A. Abduganiev<sup>1</sup>, O.P. Umirzakov, A.J. Toshboev, A.A. Toshboev<sup>2</sup>, O. Murtazaev, F.B. Ahrorov<sup>3</sup>, R.Kh. Ergashev, S.N. Hamraeva<sup>4</sup>, M.B. Kolonov<sup>5</sup>, N. Ahadova<sup>6</sup>, and Z. Boltaeva<sup>7</sup> These scientists primarily examined the water problem in a broad sense,

<sup>1</sup> Abdug'aniev A., Abdug'aniev A.A. Agricultural economy. Textbook. - T.: Literary Fund Publishing House of the Writers' Association of Uzbekistan, 2006. - 288 pages.

<sup>2</sup> Umirzakov O.P., Toshboev A.J., Toshboev A.A. Farm economy. Study Guide. - T.: "ECONOMY-FINANCE", 2008. - 276 pages. Umirzakov O.P., Toshboev A.J., Rashidov J., Toshboev A.A. Agricultural economics and management. Study Guide. - T.: "ECONOMY-FINANCE", 2008. - 268 pages.

<sup>3</sup> Murtazaev O., Ahrorov F.B.. Agricultural economy. Textbook. - T.: "ILM ZIYO" publishing house., 2017. - 416 pages

<sup>4</sup> Ergashev R.H., Hamraeva S.N. Economics of agricultural infrastructure. Study Guide. - T.: "New century generation", 2012. - 232 pages.

<sup>5</sup> K Kolonov M.B. Dress up water shortage. // Newspaper "People's word". No. 222. 27th October. 2021 - 1.4 pages.

<sup>6</sup> Nailakhan AHADOVA, Uzbekistan is on the brink of water shortage. // "Family and nature" newspaper. No. 38. September 23, 2021. - 11 pages.

<sup>7</sup> Boltaeva Z. Rashod vody v regime online. // Newspaper "Samarkandsky Sestnik" #27. April 6, 2022. - 1 p.

with a focus on the challenges of exploiting water resources in agriculture. The problem of directly distributing drinking water to the public has received little attention. This issue is quite significant in this regard.

**Result and discussion.** Water is essential to human survival. Because water makes up 80% of the human body. As a result, good water is the foundation of his happy existence. After all, for a person, every drop of water is worth a roll of the dice. No surprise, supplying clean drinking water to the community is always relevant and has not been identified as a critical requirement. It is clear from these that providing the public with safe drinking water is one of the most pressing challenges that has become a critical requirement. Because our people's well-being and health are dependent on this drinking water.

We came to the conclusion that, before examining the quality and efficacy of drinking water, it is essential to first define it. Because its quality is standard, it is appropriate to evaluate the essence of its delivery services. According to our findings, the economic literature provides insufficient coverage of the concept of drinking water and its delivery services. Only on July 22, 2022, will the new Law No. The President of the Republic of Uzbekistan signed ORQ-784 "On Drinking Water Supply and Wastewater Discharge" which defines drinking water as "water that is safe for human health, prepared in accordance with sanitary rules, norms, and state standards to satisfy the body's demand for drinking water, as well as sanitary needs."<sup>8</sup>

Based on the notion offered in this statute, we attempted to establish a definition of the concept of drinking water. "**Drinking water is defined as water that is safe for human health, produced in accordance with sanitary norms and state standards, and aimed at satisfying the body's desire for drinking water,**" we think.

It should be noticed that the above-mentioned statute does not provide a description or explanation of drinking water supply services. However, without defining this notion, it is hard to measure its quality and efficacy. Taking this into consideration, we decided to describe this idea as follows. hygienic regulations must fulfill the requirements, "**Drinking water supply services are defined as the continuous delivery of drinking water to customers in suitable amount and quality by organizations delivering drinking water through drinking water supply networks or in transit.**"<sup>9</sup>.

Theoretically, this definition may be justified as follows.

To begin with, entities that provide drinking water supply services are those that provide drinking water separately.

Second, it should be emphasized that these entities provide drinking water via drinking water delivery networks or vehicles.

Third, we're talking about providing drinking water to actual people, not abstract things. Because drinking water is specifically prepared and must be delivered in a transparent manner.

Fourth, it was considered that customers receive enough quantities and quality of drinking water. Because if it is below the acceptable level, there will be a water scarcity, and if it is over the standard level, drinking water will be squandered. As a result, sufficient quantity and quality are delivered.

Fifth, it should be mentioned that consistent on-time delivery is understood. Water is so perishable that if it is transported by truck, it must arrive on time. If there is a water facility, a constant supply is required. We may now discuss the execution of its organizational and economic systems.

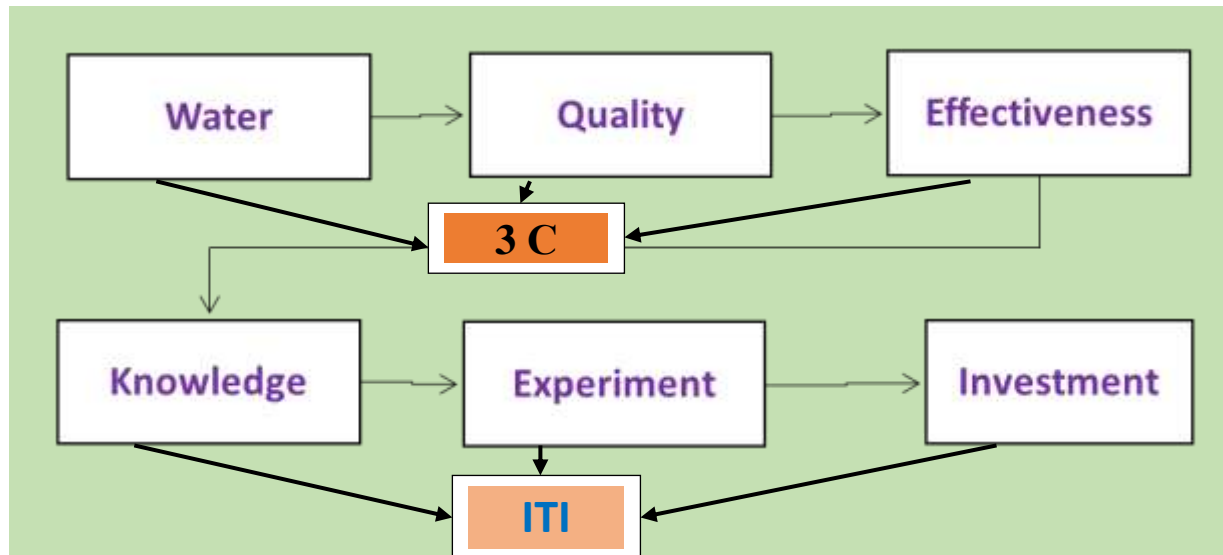
The "hardness" of drinking water is used to determine its quality. Water hardness should be 7-10 equivalents, according to him. In the meanwhile, the water is of high quality. To do this, ordinary water must be cleaned (filtered) using proper technical treatment. Such processes are currently taking place in all parts of our nation. Along with quality, efficiency metrics should be prioritized in the delivery of

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<sup>8</sup> Law No. ORQ-784 of the Republic of Uzbekistan "On drinking water supply and waste water discharge". Signed on July 22, 2022.

<sup>9</sup> Author's construction

drinking water. There are several approaches to achieving efficiency in this field. **Water towers** are being employed to provide drinking water to the populace. Their height is determined in such a manner that water is provided at the same rate to the last dwelling in the region, based on its flow. Importantly, because the drinking water from the water tower was transported to the residences in a medical orientation, there was no need for extra power or pumps. Funding for this is being used cautiously. This situation is being realized using the "ITI model for obtaining 3S," which was established as a consequence of our study. This approach incorporates the categories and ideas of Water, Quality, Efficiency (3S), and Science, Experience, and Investment (ITI). The illustration below depicts their interconnectedness. (Figure 1).



**Figure 1. Interdependence loop of "ITI model of achieving 3C".**

The major product, as shown in the image, is **water**. To be consumed, it must be of high quality. **Quality** comes second in this regard. Given that it necessitates a significant investment in today's creative economy, it is critical to assure its efficacy. As a result, the next step is **efficiency**. All of them are summed up as "3C." **Knowledge** is required initially in order to attain the three Cs listed above. However, as with any procedure, expertise is vital in this circumstance. As a result, the **experiment** is the next stage. However, it must be realized that significant **investment** will be required to put all of this into action. Буларнинг жамламаси "ITI" is established. Currently, investments are made by the government, individual enterprises, foreign companies through foreign investment, and public-private partnerships. Which one to employ will be decided on the basis of the scenario.

It is critical to provide clean water to the people in an effective manner. They are as follows:

To begin with, water-supplied places will become more prosperous, and people's well-being and living situations will be significantly enhanced by offering various fruits and vegetables.

Second, clean drinking water protects individuals from ailments such as kidney stones and liver disease. Clean drinking water also aids in the restoration of the human body's overall health.

Third, clean drinking water is piped into every home, and it is both inexpensive and handy for the inhabitants. Drinking water was carried by transit and stored in proper containers in various places. This water is three times more expensive than current clean drinking water. Because formerly, 1 m<sup>3</sup> of water was transported for 60,000 soums, the price of water delivered via pipeline is now on average 2500 soums. This indicates it is 24 times less expensive (60000/2500).

**Conclusion and recommendation.** Several results and recommendations were generated after examining the model "ITI of attaining 3C" in drinking water supply.

First, based on the importance of science-experience-investment to attain drinking water quality and efficiency, we were able to build a model in which these ideas are inexorably connected.

Second, a definition of the notion of drinking water was produced as a consequence of the research. "Drinking water is defined as safe for human health water produced in compliance with sanitary norms and state requirements, with the goal of satisfying the body's need for drinking water."

Thirdly, as a result of the study, a definition of the concept of drinking water delivery services was also developed. "Drinking water supply services are defined as continuous delivery of drinking water by entities that supply it through drinking water supply networks or in transport to consumers at the appropriate quantity and quality."

Fourth, in order to ensure the harmony of quality and efficiency indicators in the supply of drinking water, it was recommended to use **water towers** established at the starting point of water supply to the population. Its height is determined in such a way that water is provided at the same rate to the final residence in the region, based on its flow. In this situation, the expenses associated with the consumption of power are avoided, and the process is completed effectively.

In summary, if our findings are published in the economic literature and implemented, they will aid in the implementation of New Uzbekistan's development strategy for 2022-2026, which aims to provide drinking water to the population while also raising their living standards and well-being.

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