



EFFICIENCY OF PUBLIC-PRIVATE PARTNERSHIP IN THE WATER SECTOR

N.N.Alibekova

Assistant «Jizzakh Polytechnic Institute» Jizzak city,
Republic of Uzbekistan

<https://doi.org/10.5281/zenodo.10117801>

ABSTRACT

Today, the problem of water resources and their efficient use is topical in many countries of the world. Due to the geographical features of the country, this problem has a serious impact on the economy of the country. The Decree of the President of the Republic of Uzbekistan dated November 30, 2018 № PP-4040 "On additional measures for the development of drinking water supply and sanitation systems in the Republic of Uzbekistan" was published.

The essence of this decree determines the consistent implementation in our country of projects of construction and reconstruction of water supply and sewerage networks within the framework of state programs. In this regard, it was decided to further improve the quality of services in the sphere of water supply and sanitation, efficiency of the sector enterprises, attracting foreign direct investment, creating reliable sources of funding through the development of public-private partnerships.

KEY WORDS: Water supply, sewerage, implementation, investment, reconstruction, efficiency, current issues, public-private partnerships.

Water management and service organizations are divided into 3 types.

- Public organizations;
- Public-private partnership organizations;
- Private companies.

Despite measures taken, there is still a number of unresolved problems that hinder implementation of planned activities in the sphere of drinking water supply and sanitation. In particular, absence of unified system that provides input, storage, regular update and online monitoring of all necessary information related to metering devices of drinking water consumption as well as facilities of water supply and sanitation system is one of the reasons of increased water losses and costs. Inefficient use of water supply networks and facilities, as well as unreliable financing of modernization projects and drilling of fixed assets locally, leads to rapid failure of equipment and machinery. In the settlements, due attention is not paid to the construction of sewage systems and the connection of apartment buildings under construction to them. Insufficient introduction of modern forms and methods of management, low staff capacity does not allow effective management and operation of water supply and sanitation facilities. Today, the effective use of public-private partnership (PPP) relations in solving problems in such areas as water supply, domestic waste management, wastewater disposal is particularly evident as a solution.

In Uzbekistan, a number of works are carried out to improve the living standards of the population and develop local infrastructure. At the same time, the gradual introduction of the system of public-private partnership, based on global experience, allows to achieve the expected results. That is, the public-private partnership becomes the financial support of the government. This, in turn, makes it possible to improve the quality of services provided. Accumulation of large capital investments allows to provide large integrated structures in the sphere of water supply. Guarantees the manufacturability of the process of production of drinking water and wastewater treatment, purchase, operation of energy-saving equipment, etc. Concession activities at water supply and sewerage facilities on the basis of PPP is one of the priority aspects of the targeted management of water resources of the world. The structure of public-private partnership companies includes the following structures:

- Complex of water supply facilities (water intakes, water treatment facilities, fresh water reservoirs, water towers, pumping stations, water supply networks).
- Complex of sewage facilities (sewage networks, pumping stations, treatment facilities, systems of treated wastewater return to water bodies).

Thus, as far back as in Ancient Rome, the construction and operation of the water supply system was carried out at the expense of the city administration, since meeting public needs and achieving the public good, the main goal of their public utilities. Today, in most developed countries, due to the increasing state budget deficit, growing demand for drinking water quality, industrial financing and urbanization, the functions of water services are transferred to private specialized companies. Below, as an example, is a table of the results of the 16 largest private companies in the world in terms of revenues and the number of consumers served in the last 2020.

Table 1

**Performance of the 16 largest private water companies in the world
by revenue and number of customers served**

The companies	The countries	Gross income (million U.S. dollars)		Number of consumers (persons)	
		2019 y.	2020 y.	2019 y.	2020 y.
SABESP	Brazil	3 747	3 892	24 560 000	25 780 000
SUEZ	France	4 694	4 786	24 000 000	24 500 000
Thames Water	Great Britain	2 625	2 901	15 000 000	15 400 000
COPASA	Brazil	996	1 037	14 550 000	15 010 000
American Water	USA	2 879	3 011	14 000 000	15 000 000
Grupo Agbar	Spain	2 219	2 403	13 000 000	13 381 141
Lyonnalse DE	France	2 146	2 209	12 000 000	12 000 000
ManilaWater	Philippines	360	370	8 400 000	8 870 000
Odebrecht Ambiental	Brazil	646	646	13 200 000	13 200 000
SANEPAR	Brazil	846	932	10 406 000	10 830 000

ACEA	Italy	867	1 184	8 463 002	8 783 002
Maynilad	Philippines	382	415	8 400 000	8 870 000
Severn Trent	United Kingdom	2 227	2 306	8 000 000	8 400 000
FCC Aqualia	Spain	1 017	1 026	7 296 656	7 300 000
Acciona	Spain	532	440	7 294 373	7 346 227
Groupe Saur	France	1 319	1 319	7 000 000	7 000 000

In the water sector, which is directly related to national security of the state, the water supply and sanitation system (W and K) is the most important system in the water sector in terms of the scope of tasks set out in the competent state management body and development strategy. Strategic directions of energy saving, along with electricity and heat, in recent years are one of the areas that require a special approach to improving the management system. At the same time, the lack of a unified urban water management body in our country leads to the fact that water management enterprises do not have their own design nomenclature (or do not have their own face). In developed countries, there is a need to move to strategic, environmental, economic, organizational and financial problems in water supply, mainly for faster solution of technical problems. In the absence of financial resources (budget subsidies) for the development of engineering infrastructure, the task of increasing the efficiency of water supply management system of cities (districts) is of particular socio-economic importance in order to provide the population with quality drinking water supply.

According to the UN Social Development Research Center, in 2006, 90 percent of the world's population was supplied with water and sanitation by public water companies. In 2017, the figure was 52 percent. This means that the task of providing water and sanitation services to the population is being transferred from public enterprises to private companies. Analysis of the development of public water management in the global economy shows the need for further implementation of existing water management models in PPP companies. The distinguishing feature of public-private partnerships and the provision of public services from the municipal form is that contracts are concluded between the parties and the distribution of risks and responsibilities is achieved.

Table 2

Description of some privately authorized forms of government

Parameters	Management Agreement	Lease	Concession	SVUP (construction, ownership, management, privatization)
Engineering	State (municipality)	State (municipality)	State (municipality)	Private company (construction, maintenance)
Infrastructure Owner	Private company	Private company	Private company	Private company
Operation and maintenance	State (municipality)	State (municipality)	Private company	Private company

Investments in fixed assets	State (municipality)	Private company	Private	Private company
Investments in working capital	State (municipality)	Public-private company	Private company	Private company
Responsibility for investment risk	No	Below	Medium	Higher
Construction risk	Below	Medium	Higher	Above

The above table shows that decentralization of water infrastructure, improvement of all services and tariff policy, improvement of quality of construction and maintenance, attraction of foreign investments and right to receive specific group of organizations - which is responsible for everything. In addition, such organizations enter into long-term contracts to prevent any negative changes in public health and, if necessary, to compensate for them. This means that the creation of PPPs and part companies, gives a higher efficiency.

CONCLUSIONS

Summarizing all the above information and comments, the following conclusions can be made.

1. based on the experience of the U.S., UK, France, Germany, Sweden, Finland given in the example of the above-mentioned developed countries, it is theoretically important to have a public-private partnership organization and part of the organization, which works responsibly.

2. such organizations have much more opportunity to improve the quality of drinking water and maintenance of sewage systems, as well as to achieve economic efficiency through accurate calculations.

3. the world's clean drinking water resources are shrinking every year. Water economy in many countries of the world - continues to be used without accounting and without control. Unfortunately, Uzbekistan, which is our Motherland, also is not free from such mismanagement.

References:

- 1.Алибекова, Н.Н. (2020). Сувдан фойдаланиш жараёнларида ахборот тизимларини қўллаш. Scienceand Education, 1(3).
- 2.Alibekova, N.N.(2020).U seofin format i on system sin water useprocesses. Scienceand Education,1.
- 3.Алибекова, Н.Н.(2020).Зонирование водопроводных сетей. Science and Education.Scientific jour.

4. Alibekova, N.N. (2021) Reliability and cost - effectiveness of Polymer pipes. Euroasiaconference. com. Evro Science: Internasional Conference on Sosial and Humanitarian Research, Hosted. Germany.
5. Кутлимуторов У. М. Загрязнение атмосферы вредными веществами и мероприятия по его сокращению // Экология: вчера, сегодня, завтра. – 2019. – С. 249-252.
6. Кутлимуторов У. М. Решения для эффективного использования водных ресурсов в регионах республики Узбекистан // Символ науки. – 2021. – №. 3
7. Кутлимуторов, У. М. (2020). Некоторые аспекты экологических проблем, связанные с автомобильными транспортом. In European Scientific Conference (pp. 50-52).
8. Masharipovich, Q. U. (2021). Laboratory Equipment of Overpressure Determination on Standard. International Journal of Development and Public Policy, 1(6), 138–143. Retrieved from.
9. Алибекова Н.Н. (2021) Насос станциялари гидромеханик жихозларининг тўла ишонглик ишлашини таъминлаш йўллари. Science and Education. Scientific journal.
10. Алибекова Н.Н. The Importance of Quality Control of Drinking Water and Wastewater. European Journal of Innovation in Nonformal Education on (EJINE). Volume 2 (Issue 5); 27958612 28.05.2022.
11. Алибекова Н.Н. Необходимость установок и систем обессоливания (опреснения) воды в Узбекистане “Меъморчилик ва қурилиш муаммолари” Илмий-техник журнал. Самарқанд, 2022 йил № 2-сон.
12. N.N. Alibekova The Importance of Quality Control of Drinking Water and Wastewater. European Journal of Innovation in Nonformal Education on (EJINE). Volume 2 (Issue 5); 27958612 28.05.22
13. Qutlimurodov U.M. Ko'cha va avtomobil yo'llarini atmosfera-yog'ingarchilik oqava suvlaridan tozalash usullari. // conf2021@tstu.uz. 2021/4/25. Том-1. С. 55-58.
14. Saydullaev, S. R. (2020). Decision-making system for the rational use of water resources. Journal of Central Asian Social Studies, 1(01), 56-65.
15. Obidovich, S.A. (2020). The use of Modern Automated Information Systems as the Most Important Mechanism for the use of Water Resources in the Region. Test Engineering and Management, 83, 1897-1901.
16. Ergashev, R., Azimov, A., Kholbutaev, B., & Mavlonov, L. (2021). Influence of cavitation on pressure pulsation through impeller of large pumps. In E3S Web of Conferences (Vol. 264, p. 03004).
17. Султонов А.О. Методы рационального использования воды в орошении сельскохозяйственных культур // Современная экономика: актуальные вопросы, достижения и инновации 2019. – С. 207-209.
18. N.N. Alibekova Analytical laboratory results of continuous control of drinking water quality and wastewater treatment. World bulletin of social sciences (wbss) available online
19. N.N. Alibekova Economic efficiency of using aquatic plants in biological wastewater treatment. British Journal of Global Ecology and Sustainable Development, 11, 150–156. Retrieved from
20. N.N. Alibekova Analysis of External Effects on Heating of Existing Power Oil Transformers. Vital Annex: International Journal of Novel Research in Advanced Sciences (IJNRAS)

- 21.N.N.Alibekova Cleaning oil and mechanical particles of oil refinery wastewater and unconventional methods of oil sludge separation. The Computing Science and Technology international Journal.
- 22.N.N.Alibekova The role of irrigation systems basin administrations in the effective organization of water management. The Computing Science and Technology International Journal ISSN 2162-0660
- 23.Khazhimatova, M. M. (2021). Some hydrodynamic effects exhibited by bubble and projectile modes of gas-liquid mixture flow. Science and Education, 2(4), 257-264.
- 24.Хажиматова М. М. Некоторые гидродинамические эффекты, проявляемые при пузырьковом и снарядном режимах течения газожидкостной смеси//Science and Education–2021–Т.2.–№.4. – С. 257-264.
- 25.Хажиматова М. М. Сооружение для забора подземных вод //Символ науки.–2021.– №. 4.– С
- 26.Хажиматова М. М.,Саттаров А. Экологик таълимни ривожлантиришда инновация жараёнлари //Ме' morchilik va qurilish muammolari. – 2019. – С. 48.
- 27.Мусаев Ш.М. Ишлаб чиқариш корхоналаридан чиқадиган оқова сувларни механик услублар билан тозалаш самарадорлигини ошириш тўғрисида //Science and Education.–2021.– Т. 2.– №. 5. – С. 343-354.
- 28.Мусаев Ш. М. и др. Насос агрегатларини ҳосил бўладиган гидравлик зарблардан ҳимоялаш усуллари тадқиқ этиш //Science and Education. – 2021. – Т. 2. – №. 3. – С. 211-220.
- 29.Махмудова Д. Э., Мусаев Ш. М. Воздействие промышленных загрязнителей на окружающую среду //Академическая публицистика. – 2020. – №. 12. – С. 76-83.
- 30.Мусаев Ш. М., Саттаров А. Умягчение состав воды с помощью реагентов //Ме' morchilik va qurilish muammolari. – 2019. – Т. 23.
- 31.Сайдуллаев С. Р., Сатторов А. Б. Анъанавий қозонхона ўчоқларида ёқилғи сарфини таҳлил қилиш ва камчиликларини бартараф этиш //Научно-методический журнал "Uz Akademia. – 2020. – С. 198-204.
- 32.Сайдуллаев С.Р. Система принятия решений по рациональному использованию водных ресурсов // Вестник центральноазиатских социальных исследований.-2020.-Т.1.-№.01.- С. 56-65.
- 33.Сайдуллаев С. Р. Сувдан самарали фойдаланишда ахборот тизимларини қўллаш //Science and Education. – 2020. – Т. 1. – №. 7.
- 34.Qutlimurodov, U.M. Suv ta'minoti va oqava suvlarni oqizish tizimlari; Darslik. 246 стр. Toshkent - 2021/8/18 - Т.: "IMPRESS MEDIA" MCHJ.
- 35.Qutlimurodov, U.M. (2020). Suv ta'minoti va oqava suvlarni oqizish tizimlari: O'quv qo'llanma. Toshkent