

WATER GOVERNANCE AND SUSTAINABLE SERVICE DELIVERY IN RURAL TAJIKISTAN

How regulations and accountability measures improve water supply service delivery



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ACRONYMS

NGO	Non-government organisation
O&M	Operations and maintenance
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SUE KMK	State Unitary Enterprise Khojagii Manziliyu Kommunal
TajWSS	Tajikistan Water Supply and Sanitation
WASH	Water, sanitation and hygiene
WS	Water supply
WUA	Water users association

EXECUTIVE SUMMARY

Ensuring equitable and sustainable access to safe water continues to be one of the most pressing issues in Tajikistan, despite the country having abundant water resources. The still low coverage of the population with access to drinking water has been attributed to cross-cutting governance problems such as the relationship between the state and other social actors, poor water management and coordination, and systemic challenges such as low capacity.

During the Soviet era, water provision was the sole responsibility of the state, and users had no role to play. After its demise, the state-led water supply (WS) was considered ineffective and less economically resilient, given the limited government resources. In the past decade, a demand-driven approach has become a widespread policy trend in Tajikistan and community-led management is seen as the main attribute for achieving effective water governance. The transfer of responsibility to local government and users is intended to promote local governance as a means of ensuring equitable access and sustainable use of water through users' participation in water-related decision making and service delivery.

Under a demand-driven model applied by the TajWSS project, users take more responsibility before, during and after WS system installation. For example, users are expected to contribute at least 5% of the initial capital costs of the water infrastructure and also participate in major decisions. Meanwhile the local government is expected to contribute at least 10% of the overall cost, providing at least the operations and maintenance (O&M) plan, collectively engaging in O&M-related activities and providing labour for water source protection and maintenance.

The model assumes that water users have the necessary information and capacity to carry out the delegated duties and obligations and this automatically translates into equitable access and sustainable use of safe water. Yet despite improvements in access to safe water in rural Tajikistan, O&M and lack of governmental support are still great challenges. This has been attributed to institutional challenges such as ambiguous and unclear rules and roles of different actors at national level.

*Under a decentralised water governance model, local government and communities take a lead in decision making.
Photo credit: TajWSS*



The project described in this learning report – part of the Tajikistan Water Supply and Sanitation (TajWSS) project – has invested significantly in developing a (demand-driven) decentralised water governance model where the local government and communities take a lead in decision making and build their resilience to sustain the WS service for future generations and scale, if possible. This experience shows that if the quality of service is high and users are satisfied with that, willingness to pay will gradually improve, contributing to sustainability, and this should be embedded in effective water governance.

As of now, Tajikistan is not on track to achieve its Sustainable Development Goal (SDG) targets by 2030. There is high disparity in access to water and sanitation services between urban and rural communities. Many rural communities struggle to access safe, adequate and affordable WASH services and receive little government support, due to limited human, equipment and financial resources.

The services set up by the TajWSS project may perform well for some years but there are persistent problems and critical factors for long-term sustainability still to be addressed. And it would make sense to continue to support communities and local government on these issues through capacitated local organisations. It is also recommended that Oxfam and SDC share this concern with wider stakeholders in the WASH sector and define how local expert support to communities and local governments could be allocated, while encouraging others to engage in wider systems-strengthening work with government.

INTRODUCTION

TAJIKISTAN CONTEXT

The landscape of Tajikistan is mainly formed by mountains and foothills resulting in high drainage and return flows. The country's glaciers and snowfields are the main water towers for the whole of Central Asia and thus critical for the economic development of downstream countries. Being water rich with huge reserves of hydrological resources, Tajikistan has strong hydropower potential, but uses only 5% of this, which is the source of over 90% of its electricity. Although Tajikistan enjoys abundant freshwater resources in its rivers, lakes and glaciers, access to improved drinking water sources and sewerage systems remains significantly low, compared with other Central Asian countries.¹

There is high disparity in Tajikistan in access to drinking water and sanitation facilities between urban and rural populations. Rural areas are particularly badly affected and progress in achieving sustainable WS and sanitation services has been frustratingly slow for rural populations. Although access to basic water in rural areas in Tajikistan increased,² this was mainly driven by replacing 'surface water' with water from 'public standpipes and neighbours'. In contrast, the proportion of rural households with access to improved water on premises has declined from 24 to 21%. And the proportion of rural households who gained access to improved WS on their premises largely remained unchanged from 2000 to 2016.

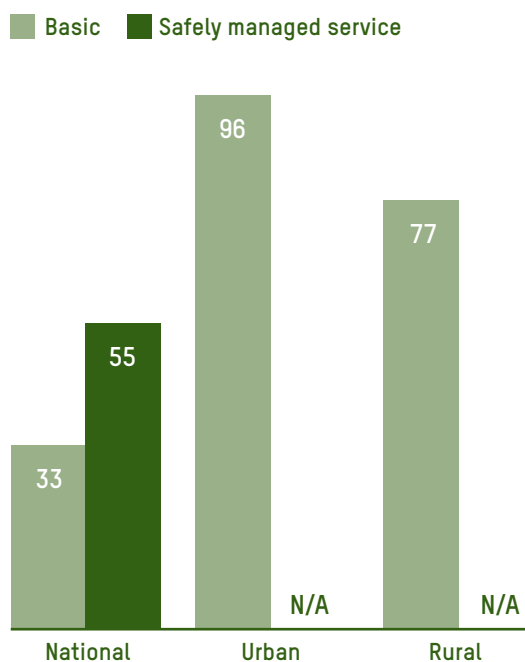
*Mountains, foothills, glaciers and snowfields make Tajikistan a country with plentiful freshwater resources.
Photo credit: TajWSS*



As of 2017, only 55% of the population of Tajikistan have access to a safely managed drinking water service, but access to basic water services in rural areas in Tajikistan is 77% (see figure). This implies a stronger focus on sustaining WS systems that require customer-oriented and full-cost recovery service delivery.

However, the institutional structure of the water, sanitation and hygiene (WASH) sector is so complex and fragmented that establishing service provision poses significant barriers to sector improvement. The State Unitary Enterprise *Khojagii Manziliyu Kommunalii* (SUE KMK)³ remains both the regulator and operator for drinking water and sanitation services in Tajikistan, on one hand, and the Ministry of Energy and Natural Resources acts as the water sector policy regulator, on the other. And there is great uncertainty about the relationship between these two state bodies which has further exacerbated the problem in rural areas with insufficient capital investment. This shows that the low access to drinking water and sanitation is clearly not due to absolute water scarcity but the lack of good governance, contradictory legislation and blurred state responsibilities.

Percentage of population in Tajikistan using drinking water services, by service level and location



Source: UN Water, 2021⁴

Main bottlenecks in the water governance sector



Unclear roles and responsibilities over WS and sanitation system regulation, O&M



Limited state financing into WASH infrastructure and its maintenance



Lack of financing mechanism for market-based WASH service delivery and product promotion



Low institutional capacity to manage WS and sanitation services in line with watershed management principles



THEORY

GOVERNANCE MODEL

MARKET-BASED WASH PROGRAMMING

The key drivers of change for WASH sector reform in Tajikistan are population growth (including demand for better services), increased water demands from agriculture and industry, climatic variability and climate change. These growing pressures mean that the country must continue to invest and develop its WASH services for social and economic growth.

The WS service delivery in rural areas is being implemented by a *TojikObiDekhot* (a rural subsidiary of SUE KMK). However, most *TojikObiDekhots* are located in district centres and serve mostly peri-urban areas, where there are existing WS systems. If there is no existing WS system, *TojikObiDekhots* rarely provide any service, let alone investment. Moreover, given the mountainous landscape and challenging accessibility to remote villages, the state subsidiary organisations are not in a financial and operational position to provide services, which means that water services are not within the reach of the population who were accustomed to getting those services from the government during the Soviet period. However, people still hoped that those services would be established by the government, although their hopes have waned through generations. For that reason, the communities have nurtured a feeling of non-ownership over their assets and do not possess a shared responsibility (or feeling) for any assets or infrastructure ever built in their areas.

Despite widespread poverty, dilapidated infrastructure and an economy highly dependent on remittances and vulnerable to external shocks, there is general recognition among the international donor community and international non-government organisations (NGOs) operating in Tajikistan that supply-driven (or humanitarian) solutions to the country's water problems over the last few decades were not sustainable.

Since Oxfam prioritises market-based WASH programming in its project delivery, its main specifications in its rural water governance model are based on *customer orientation, decentralisation of services and sustainable management for scale*. To achieve this, Oxfam takes UN SDG 6 on clean water and sanitation (2015–2030) as the core in its programming and underscores safely managed drinking water as the key priority in the ladder.

SDG 6. Ensure availability and sustainable management of water and sanitation for all

Target 6.1:

By 2030, achieve universal and equitable access to safe and affordable drinking water for ALL

➔ **6.1.1:** Population using safely managed drinking water services

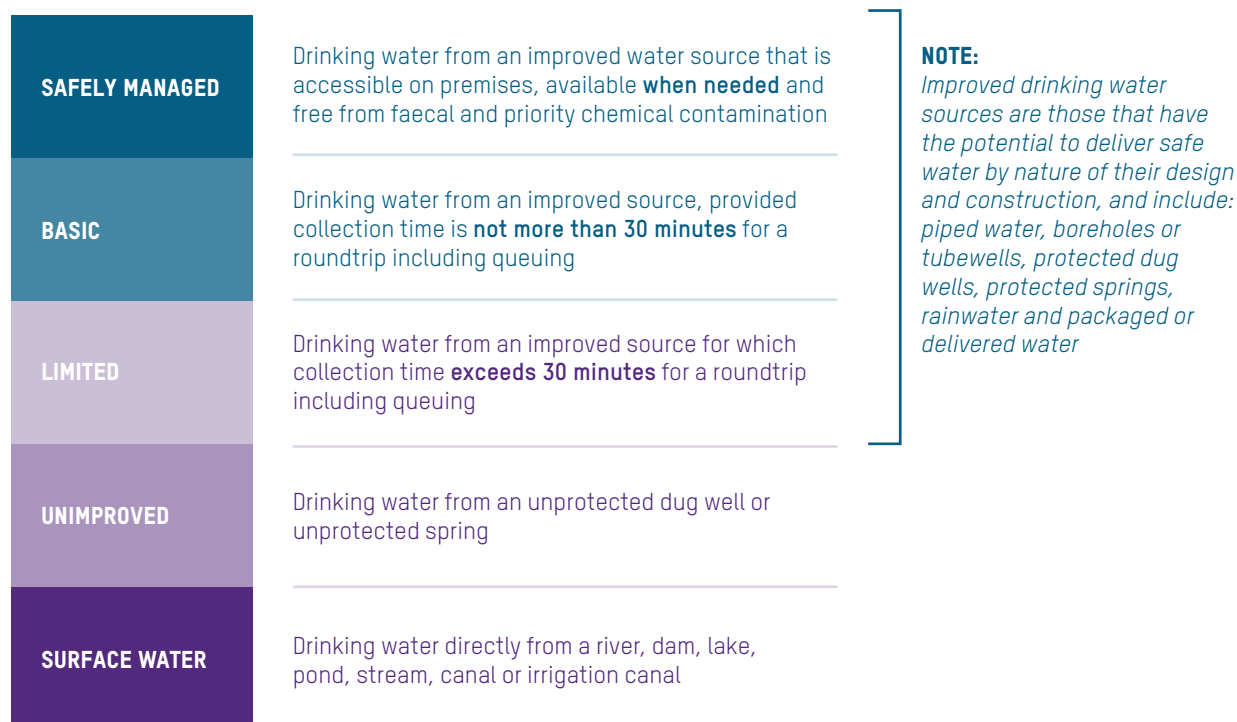
Service ladder:

- ✓ Safely managed drinking water
- ✓ Improved facility located on premises, available when needed, and free from contamination

Safely managed drinking water

This means that the target population has access to drinking water through the service provider, who supplies safe water to household premises in a sustainable manner. And to meet the SDG standard for ‘safely managed services’, improved sources must be accessible on premises, available when needed and free from contamination. Improved sources include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water.

Drinking water ladder

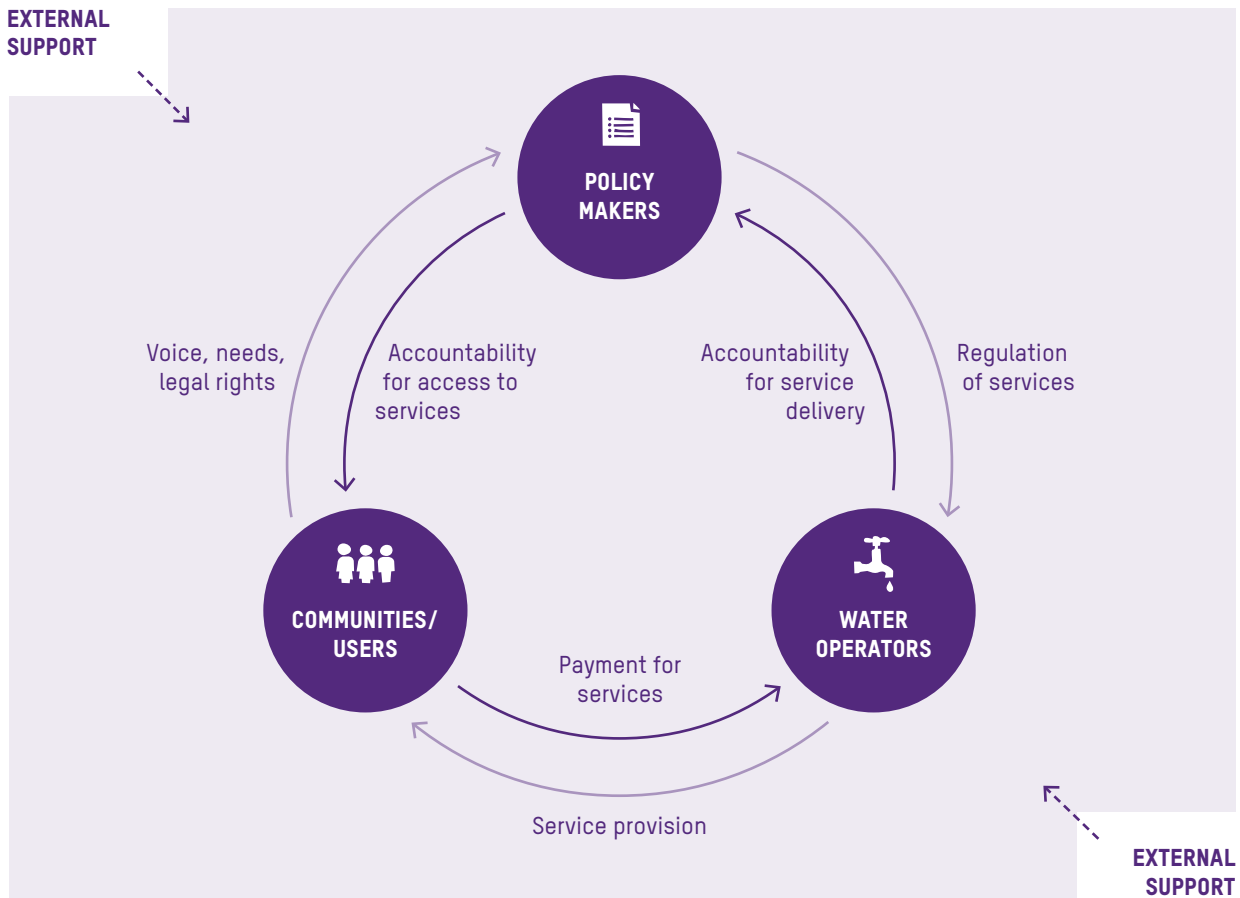


Source: WHO/UNICEF Joint Monitoring Programme⁵

However, the sustainability of a WS service still fails within a few years of completion, if a proper management system is not in place. The solution is not so much about installing new infrastructures, but about building systems that can deliver reliable water and sanitation services over the long term. Good governance at local and national level is crucial to deliver sustainable results at scale. According to the OECD’s definition, good governance⁶ encompasses participation, transparency and accountability of all parties involved, where the public authorities create an environment where public or private operators function to serve people in need. The government, service providers, regulators and communities must all play their role and cooperate to better protect the right to safe water and sanitation.

The project pays great attention to building strong ties between water users (or communities) and service providers (water operators) who are in a position to challenge the policy reforms at a higher level through their experience and the challenges faced in their relationship with the water users. To attain local-level ownership and community resilience over the water utilities, this project prioritised a decentralised management model, where the operator is physically based in the villages where the WS system is built.

Decentralised water management model



In the case of Tajikistan, given that connecting villages to a centralised WS system is very expensive and extremely bureaucratic, the decentralised WS system is considered more appropriate in ensuring sustainability through a community-based management system. Plus, there was general consensus among stakeholders that the decentralised WS system would lead to large improvements in public health by making water available, reliable and safe to drink in areas where the centralised supply fails to do so.

Ultimately, a water utility management model was designed that encapsulated all essential factors around the selection of an appropriate WS system. As the next step, a community-based WUA was established within the local government unit (*jamoat*). The WS system as an asset belongs to the local government but the management duty is handed over to the WUA. The local government acts as the supervisor to regulate and monitor the WUA’s performance, while the WUA is tasked with day-to-day management, service delivery and technical maintenance of the system. In case of capital reinvestment, the government is engaged to finance the restoration of the functions of the WS system in the village.



PRACTICE

WATER MANAGEMENT MODEL

IDENTIFICATION OF PREFERRED WATER OPERATOR

Project staff discuss the options with the community and district government about the management models to be put in place. Depending on the service availability and community preference, the management of the WS might differ. The project has opted for different decentralised management models and agreed the most appropriate one through Water Trust Fund meetings (see box) with district government and national stakeholders. The following models have been used to serve populations in rural and peri-urban areas:

Water supply management models





MANAGEMENT OF WATER SUPPLY SYSTEMS (PRIVATE CONNECTIONS)

Factors	Options	Lessons learned
SERVICE AVAILABILITY	REMOTE	
	If the WS system is located remotely and far from centralised water services, then community-based WUAs or LLC are established to operate the system.	Community-based WUAs or LLC perform more responsibly and sustainably due to system mobility and active community engagement in decision making. Given that they feel more ownership over the system, they act in unity for its sustainability. The water tariff is relatively higher to cover at least the O&M cost.
	PERI-URBAN	
	If the WS system is in a peri-urban area close to water services, then <i>Tojikobidehot</i> (state enterprise under SUE KMK responsible for WS and wastewater in rural areas) operates the system.	<i>Tojikobidehot</i> reports to SUE KMK and takes less responsibility for the service quality. Due to mandatory payments for the upkeep of central administration and inadequate staff ratio per assigned water network, the service quality is mediocre. The water tariff does not cover most O&M costs.
COMMUNITY PREFERENCE	MORE RESPONSIBILITY	
	If the community prefers to have their own decentralised and autonomous system (more responsibility).	The community prefers to have their own independent system that they are responsible for. Such systems are mainly sustainable and perform as a community-based entity. The water tariff is relatively higher.
	LESS RESPONSIBILITY	
	If the community prefers to handover the system to <i>Tojikobidehot</i> (less responsibility).	Under such a scenario, communities take less responsibility and pay a cost with lower service quality, supply disruption and lower customer feedback.

All these factors are also influenced by the nature of the asset. In most cases, by law of Tajikistan, the WS asset belongs to the government, who has a right to decide on ownership types and operational model. In this project's case, all WS systems are state-owned but handed over to either the *Tajikobidehot* or WUAs through Mahalla Committees to operate the system.

The market-based WASH programme was implemented with a governance model where all stakeholders are incentivised to invest first before any action is taken. The table below shows the overall governance stages in WASH programming.

Stages of water governance

	COMMUNITY-LEVEL RESILIENCE 	SERVICE-LEVEL MANAGEMENT 	DISTRICT-LEVEL GOVERNANCE 	POLICY REFORMS 
1	Building awareness of the community's right to access clean water and safe sanitation	Community-based WUAs with the authority to provide water services	Water Trust Fund (district government, project team, local government and communities)	Partnership and cooperation
2	Improving the community's knowledge and awareness about their roles and responsibilities in a relationship with service provider	WASH infrastructure building and its O&M	Co-financing and monitoring	Expert-level discussion and consultation
3	Hygiene promotion and campaign activities	Establishment and execution of service performance indicators	Commissioning and handover	National-level discussions
4	Improved public health status	Scaling and replication	District-level WASH investment plan	Water sector reform

Water Trust Funds

Water Trust Funds were established by the project within district government bodies. Their aim was to improve the financial sustainability of WS and sanitation systems, to strengthen local capacity in management and decision making, to promote local ownership, and to advance transparency in decision making regarding construction, management and monitoring of WS systems.

The Board of a Water Trust Fund brings together a wide range of stakeholders who are active in the rural drinking water and sanitation sector at district level and establishes a coordination/decision making body, organised under the authority of the Chairpersons of District *Hukumats**. Members include representatives of the local governments, the private sector, community members (or civil society organisations) and Oxfam.

***District *Hukumats*:** A government body at district or city level responsible for administration of government duties and allocation of funds in their respective administrative territories.

Community-level resilience

Active citizens' engagement through a human rights approach is rigorously promoted alongside women's empowerment in target communities as water is very much a driver of economic development. Ironically, efforts to increase access to improved WASH services at the household level often do not adequately consider the risk related to public health. Moreover, in community awareness sessions, health-related costs that are often given little weight are highlighted. The community resilience entails activities to ensure that WASH systems and services and hygiene practices meet the needs of children and their families and communities. It also takes into account the potential risks and processes of change that require community engagement and the opportunity to respond adequately and in a timely manner.

Oxfam usually encourages community engagement in WASH-related activities to trigger consumer responsiveness towards service quality where it is very important to prepare the communities for service payment.

Service-level management

Initially, the new water utility is established and trained in technical and financial management aspects of the infrastructure work and WS system. Once it is set up, the construction of the WS system is tendered and the newly established water utility is tasked with regular monitoring of the construction work on-site. Before the construction stage is completed, the water utility is involved in a series of training on tariff setting, technical and operational maintenance, taxation and accounting, customer database collection and update, social accountability tools and communication. All these service performance metrics are developed inclusively for rural water operators and their existing WS systems.

District-level governance

The WS infrastructure project is tendered with the announcement of an investment plan in rural areas through district governments. The announcement mentions the project's conditional funding requirements in the WS system and the requirement from the community to contribute a minimum of 5% of the overall infrastructure cost. Once applications are received from rural municipalities, the project team and the district government shortlist the villages and carry out initial technical cost estimation, a community willingness survey and disaster risk reduction assessment. After careful analyses, the selected village is notified about the result and memorandum of understanding are signed between the project and the district government, as well as the central government (SUE KMK) on cost sharing at 10% and 15%, respectively. After the technical design and cost calculation for the WS system are complete, the final cost is assessed by project staff and district government engineers for fine-tuning. Once finalised, the project design, cost and management details are discussed with the central government, district government and communities.

Overall, the following key issues are verified and contractually agreed before the project starts:

Co-financing arrangement	Identification of water management body	Connection type	Payment condition
70% The project 15% Central government 10% District government 5% Community	<ul style="list-style-type: none">PublicPrivateCommunity-based WUA	<ul style="list-style-type: none">WS connection on premises	<ul style="list-style-type: none">Volumetric tariff system with meters installed in each household

The project team and the district government convene Water Trust Fund meetings – the governing body for decision making – where they agree on investment lines and funding delivery means. After selecting the construction company through bidding, they sign a separate contract for the building of the WS system. The communities either pay in cash to the construction company or contribute in-kind (labour force) for the designated amount of work. This way, all parties, from the very beginning of the project, become shareholders and establish a solid ownership over the assets and further processes. At this stage, the business plan is also discussed with the water utility where the project and the government facilitate the design and possible funding and expansion plan.

Policy reform

The WS sector in Tajikistan had an acute need for an arena where stakeholders could meet and share experience, ideas, views, knowledge and particular experiences related to the WASH sector. To respond to this need, the project, in consultation with the government and the Swiss Agency for Development and Cooperation (SDC), as well as other stakeholders, initiated the Network of Stakeholders on Sustainable Water Supply and Sanitation (TajWSS Network)* that was launched in November 2009. The network's financial support was provided by the SDC and facilitation was taken forward by Oxfam as an implementer of the SDC-funded TajWSS project.

The network is now represented by more than 70 stakeholder organisations from the government and parliament to the UN, donors, academia, international NGOs, civil society, the private sector and the media. Its goal is to advocate for policy reforms in the WASH sector and provide expert-level support to the government based on the lessons learned from the field, that align with the SDG 6 targets. The TajWSS Network played an important role, alongside the government and international organisations, in reforming the water sector in the absence of government-led coordination. The role has since been adopted by the government, which now leads on the coordination of water sector reforms.

*www.tajwss.tj

SERVICE PERFORMANCE




SERVICE METRICS OF RURAL WS SERVICE

Today, the average price for a cubic metre of water provided by SUE KMK is 1.09 somoni⁷ (0.08 cents or 0.06 pence) – roughly the same as the price of two loaves of bread. Considering that the price of fuel and other goods has increased due to the economic crisis, it is clear that water has become relatively cheap in comparison and its price does cover the real cost. By law, the charges for water should cover all the expenses for WS, but tariffs set by the Antimonopoly Agency are often not financially viable and consider the creditworthiness of users more than the cost recovery of the system.

Today, the issues connected to WS in Tajikistan are governed by an extensive and complex set of regulations, most of which have been revised through the TajWSS project in partnership with UNDP. The actions of buying, selling and owning were clearly defined in the Law on Drinking Water and Wastewater of the Republic of Tajikistan (2019) and associated sub-laws, and it is assumed that the increasing enforcement of these laws was an important factor for trade and spread of WS networks.

To measure the quality of service performance, the project has developed customised service performance indicators that track the key technical, financial and social processes of water operators. It also produces a regular report about the status of WS systems and gaps that require a response. Based on many discussions internally and with experts, three main dimensions were identified to be the core indicators for rural WS systems: **service delivery, technical functionality and sustainability.**

This level of data collection requires a certain skillset to build it at the initial stage and test it in the field to understand how to measure the indicators and develop a protocol of documents for data aggregation. The table below shows the detailed matrix with explanations.

Dimensions	Indicators	Explanation
SERVICE DELIVERY 	Availability of service	Proportion of time that a service is provided to a user
	Coverage ratio	Number of people served versus the population living there
	Quality	Frequency of water quality test that falls within national standards
TECHNICAL FUNCTIONALITY 	Maintenance	Percentage of breakdowns over last 12 months repaired within the established (national) norm for response time
	Physical condition of WS infrastructure	Status of WS infrastructure based on physical condition of main components (e.g. pumps, intake, reservoir)
SUSTAINABILITY 	Governance	<ul style="list-style-type: none"> ▪ A legal entity with an authority to provider water service ▪ Percentage of complaints handled within an established period ▪ Financing available within the district authority for technical assistance
	Finance	<ul style="list-style-type: none"> ▪ Tariff collection rate ▪ Financial reports (billing receipts, operating expenditure, volume of water produced and sold) ▪ Ratio between operational income and expenditure (working ratio)

ACCOUNTABILITY PERFORMANCE

From 2016 Oxfam began to establish a social accountability mechanism within water utilities as part of the project funded by the Global Platform for Social Accountability of the World Bank Group. Social accountability can be defined as an approach towards building accountability that relies on civic engagement, that is, in which ordinary citizens and/or civil society organisations participate directly or indirectly in executing accountability.⁸ The project aimed at improving responsiveness and accountability in service delivery by supporting service users to act collectively to influence key decisions, monitor service quality and demand better services.

Since then Oxfam has used this tool and all water service providers have confirmed that developing and maintaining continuous dialogue with consumers and the district government is critical to success. This has helped them raise more awareness about issues that they would like to solve and develop solutions in close coordination with community members. Given that all households are shareholders in the water scheme, they understand that for the effective and efficient use of water resources, a joint decision making body – in this case the community advisory boards – should act as the platform for communication between users and service providers to settle issues of concern. The purpose of the project was to provide a basis for constructive engagement between service users and service providers for sharing information on service performance, discussing discrepancies and issues, and identifying solutions that can be implemented through joint action.

Despite water utilities' inability to address the complaints adequately due to financial capacity, the assessment of data about the number of complaints received versus resolved shows very promising progress. And during project implementation from 2016 to 2021, there was continuous improvement in the customer satisfaction rate across the three water utilities because of the application of a social accountability mechanism through community advisory boards within each.

PERFORMANCE ANALYSIS OF RURAL WATER OPERATORS

SERVICE QUALITY AND CUSTOMER SATISFACTION

The financial and operational sustainability of WS refers to recovery of O&M costs intended to achieve a fully functioning water system to ensure the capture, treatment-purification, transport and active supply of water to consumers. The project developed a plan for a cost-recovery tariff that can be used by WUAs. It is based on recovering reoccurring O&M costs, giving operators the ability to sell their services in exchange for water consumption. This cost-recovery tariff-setting plan provides water utilities with financial means to cover their O&M expenses to reach a certain level of financial independence. The O&M services include:

Operations

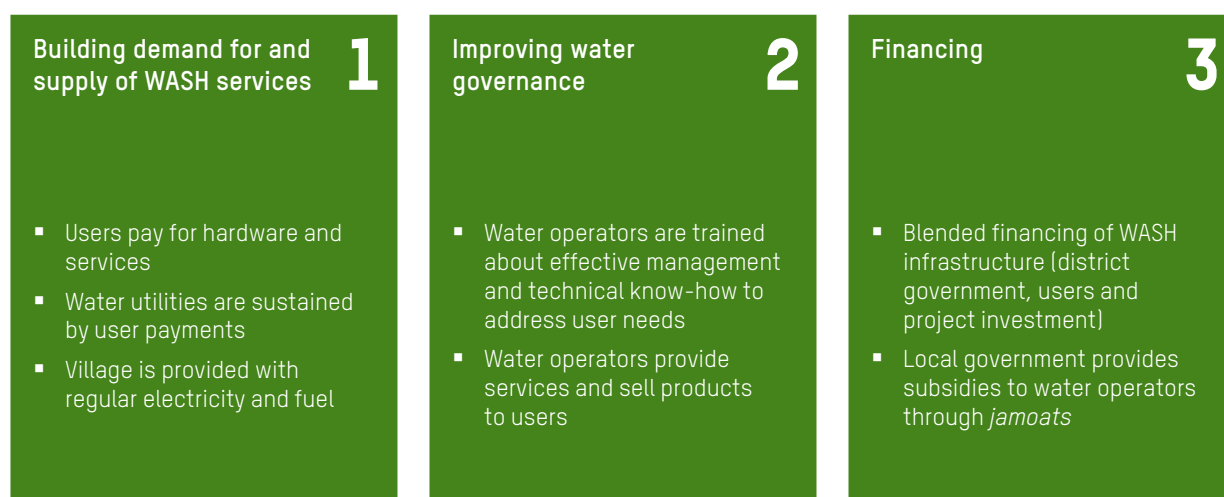
- Supervision and monitoring of equipment, machinery and other constituent parts
- Operation and management of technical elements, machinery and distribution intervals
- Process control (e.g. flow rates, sampling)
- Consumption management (electricity tariff optimisation)
- Risk and administrative management (e.g. risk assessment, mitigation plan, invoicing)
- Waste management
- Reports

Maintenance

- Electromechanical maintenance (e.g. equipment, repair, replacement)
- Regulatory maintenance
- Upkeep (e.g. painting, leaks, carpentry, gardening, cleaning)

The programme is built on three pillars (see below) that act as the transition into market-based WASH service delivery, and it incentivises business models to sustain economically viable service delivery in Tajikistan.

WASH programme strategy in three pillars



An interaction between these pillars is built based on best practices in the field so to incrementally improve the management. Moreover, the market interaction between the service providers and consumers is the interaction with the most potential to transform the WASH system in the country. The market could play a crucial role in people’s behaviour, as it can respond quickly to people’s needs when demand grows and offers a solution to consumers to contribute financially by buying its services or products. Moreover, the choice of the village also depends on the local context (the level of demand) and availability of public utilities, primarily a regular electricity supply.

The project invested in the development and creation of decentralised water utilities (community-based WUAs or state-owned water enterprises), and market-based solutions such as working with sanitation product retailers (latrines, toilets and hygiene products for households) and wastewater treatment systems. All these entrepreneurial-type activities rely on consumer payments. This is a key element in developing and sustaining the service delivery with some degree of dependence on external funding, which builds the resilience of the water utilities to be robust and resourceful enough to withstand economic and environmental risks.

The table below shows the key service performance indicators based on three dimensions where the service delivery performance is measured.

Service performance indicators of water operators (2021)

Water operators	Service delivery			Technical functionality		Sustainability		
	Availability of service (hours/day)	Coverage ratio	Water quality	O&M (%)	Physical condition	Tariff collection rate	Gross profit margin*	Customer satisfaction rate
Delolo WUA	24	100%	Available	12	Functioning	92%	0.30	91%
Muminabad Vodokanal	8	65%	Data not available	Data not available	Partially functioning	75%	Data not available	Data not available
Dahana SUCE	24	100%	Available	14	Functioning	91%	0.10	91%
Ziraki SUCE	24	100%	Available	11	Functioning	96%	0.17	91%
Choryakkoron WUA	24	100%	Available	20	Functioning	89%	0.25	91%
Tezgari Poyon	24	100%	Available	8	Functioning	97%	0.70	91%

*Total operational revenues/expenditures. If the figure is above 1, it indicates cost recovery.
SUCE: State Unitary Communal Enterprise

Tariff collection rate, 2018–2021 (%)

Water operators	2018	2019	2020	2021
Delolo WUA	81	85	87	92
Muminabad Vodokanal	70	71	71	75
Dahana SUCE	85	87	89	91
Ziraki SUCE	73	82	88	96
Choryakkoron WUA	72	85	87	89
Tezgari Poyon	81	90	95	97

Customer satisfaction rate, 2019–2021 (%)

Water operators	2019	2020	2021
Delolo WUA	85	90	91
Muminabad Vodokanal	85	Data not available	
Dahana SUCE	85	90	91
Ziraki SUCE	85	90	91
Choryakkoron WUA	85	90	91
Tezgari Poyon	33	76	91

However, as rural water entities, the water operators also acknowledge that certain business opportunities exist in this work due to population growth and the potential for expansion to neighbouring villages. The project has identified four key areas to watch that water operators think could be a good set of circumstances to grow as a social enterprise:

- Management based on service performance indicators
- Possibility to expand
- Tariff setting
- Social accountability

Management based on service performance indicators

The project, in partnership with local NGOs, set up service performance indicators for rural water utilities to measure their financial and operational progress. Those indicators are shown in the table: Service performance indicators of water operators (2021) on p17. The indicators-driven water management from 2019 onwards incentivised the water utilities to perform better for higher profit and better customer support. Given that all households are connected to water meters, the water operators monitor them to detect leaks and eliminate wasteful uses, as well as to ensure sufficient drinking water is in the reservoir and that communities are practising adequate sanitation and hygiene behaviours. These serve as success indicators for the water utilities to measure their progress.

Possibility to expand

The water operators have received multiple requests to expand their household connections, which they see as an opportunity to obtain more profit in the long run. And indeed the water systems were designed and built with the potential for future expansion. The project also provides consultancy support to water utilities on revenue generation as part of the business. As of 2020, most water utilities expanded on their spending with some financial contribution from potential customers. The extension of service networks certainly promises more income over the long term, however, the process is investment heavy and requires certain skills to negotiate with the new users and agree on terms of payment. In most cases, the local government is brought into the process to handle conflicts and address sustainability issues.

Tariff setting

Under Soviet times, citizens did not pay for water services, and after the independence of 1991, tariffs have historically been set below the level at which service providers can conduct basic O&M, thus leading to underperformance and a dependence on external funding. In Tajikistan, users pay too little for water services and the revenue from water charges does not even cover the O&M cost, let alone reinvestment for the infrastructure. Often, users are not aware of the real costs associated with the WS services because these have historically been heavily subsidised by the government. The present project employs a cost-recovery tariff methodology* (although the actual approved tariffs of the WUAs were below cost recovery rate) and tariff-setting process that covers recurring O&M costs of the WS system. Decision making is organised through involving community members in identifying local needs, the cost of sustainable O&M of the WS service, and the potential for reinvestment in the infrastructure. Moreover, to address the needs of poor households, the government identifies the poorest and either subsidises their consumption or the community members pay for them.

Disagreements mostly arise between users who prefer to pay less and service providers who lean towards having a higher tariff level for stable revenue generation. The analysis of tariff collection rates for the last

**In 2020, a full cost-recovery tariff methodology was developed under the TajWSS project and approved by the Antimonopoly Agency of the Republic of Tajikistan.*

five years demonstrates that the average annual tariff collection rate stands at around 90%, which is considered satisfactory for cost recovery and expansion. The highest tariff collection was recorded at 97% in Tezgari Poyon in WUA in Rudaki district in 2021 with the lowest being 85% in Dahana in Kulob district in 2019 (see table: Tariff collection rate (2018–2021) on p17).

Also, men and women relate to water supplies in different ways. In rural Tajikistan, most service caretakers, service suppliers and managers are men. Most household-level decisions are taken by men, whereas women are responsible for household tasks such as fetching water. The experience over recent decades does show that the power dynamics are changing slightly, but it is not only women who benefit from household WS connections, rather society as a whole. And now the time saved from fetching water could be sold for economic activities and increase family income, which provides another strong incentive for setting up higher tariffs.

Social accountability

As mentioned earlier, a community advisory board is set up in the water utility to hold it accountable for its operations. The observation shows that this model helps hold the service providers and local government more accountable and responsive towards users' needs and empower them to claim their constitutional rights. However, it is equally important to train the users about adequate measures of appeal so they know how to complain properly. The project established a complaint mechanism called *Murojijat* ('Appeal' in English) where the service providers register each complaint on a computer and track the progress to bring it to completion.

CHALLENGES IN OPERATIONS AND MAINTENANCE

Most rural water utilities who were interviewed mentioned five key challenges that pose risks to the functionality of the WS system. And these challenges pose risk to their business, income generation and sustainability of the system. Those are:

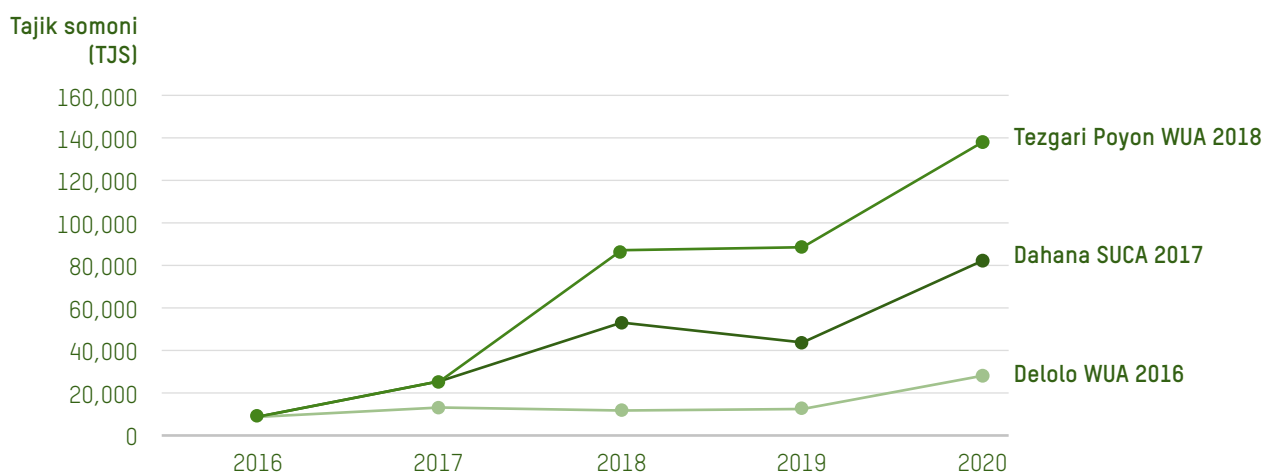
- High operational cost
- Operational malfunction
- High employee turnover rate
- Illegal connection by communities
- Limited support by the government and community

High operational costs

The operational cost of WS systems increases with every passing year. Thus, the water utilities try to save money while running the system and/or negotiate with the communities to increase the tariff in order to cover the cost. Given the instability in the economy and rising inflation rate, the O&M of the WS system increases every year leading to rises in the tariff.

From 2016 to 2020, the operational cost increased 206% in Delolo WUA in Muminabad district, 349% in Dahana WUA in Kulob district and 74% in Tezgari Poyon WUA in Rudaki district. This clearly demonstrates the WS infrastructures are typically capital intensive and require a high sunk cost for longer operational functions. The WUAs can increase the operational efficiency through regular maintenance control and a risk register for communication with the customers, who could potentially contribute to the mitigation activities. It also illustrates that the tariffs for water services can generate only a share of the revenues needed, and a government subsidy is required to provide an appropriate level of service and mitigate the risks associated with the cost.

Operational cost of water users associations, 2016–2020



Source: Oxfam Management Information System, 2021

Operational malfunction

The water operators have mentioned four main areas where an engineering intervention is inevitable, namely, water leakage from pipes, disruption of water meters (especially in winter), overconsumption through illegal connection and pump malfunction. These technical problems demand specialised expertise that is lacking in the villages, and water utilities are obliged to seek paid labour from neighbouring cities.

High employee turnover rate

The water operators have seen the substantial risks caused by the departure of technical or financial staff for better jobs in the cities. Moreover, sometimes the district government unofficially dismisses the WUA chairperson and replaces them with their subordinate, which is seen as an abuse of power. This causes a severe disruption in the system and requires additional training and induction. Normally, the chair of a WUA is selected by the community, and if the person is not respected or recognised by the community, a power struggle occurs.

Illegal water connection

The WUAs have detected more than 50 illegal water connections, either by households or neighbouring villages, to avoid payment. This causes a conflict in the community due to rapid consumption of water from the tanks that goes unnoticed by the water utilities.

Limited support from the community and government

Unfortunately, in all target districts, there is no subsidy scheme in place by the government to support the rural water utilities. The WUAs have also reported that community members become less supportive when there is an interruption in the water delivery due to the adverse impact of environmental changes, for example flooding, landslide, rockfall, pipe breaks or pump malfunction.

KEY LEARNINGS

LESSONS LEARNED

By promoting an effective water governance model and improving the financial and managerial capacity of water operators, there is a high chance that the WS service will be more resilient and efficient to respond to users' needs. The programme analysis has shown that building such systems requires a blended funding mechanism and ownership by all interested parties, in a context where services had previously been provided for free. And if the cost recovery is not secured in the service delivery, there is a slim chance of managing the WS system sustainably.

OPPORTUNITIES

1 → Sense of community ownership

The community engagement and social accountability mechanism (community advisory board) anchors a great sense of ownership for the sustainability of the system. Rich and poor users alike have an interest in getting the services they want at the minimum possible cost. Although community-based management systems are preferred in most Oxfam projects, the sustainability challenges still persist. The current option may be the only viable service delivery model for more remote rural communities until local authorities are willing and able to play a more direct role in O&M.

2 → Gradual tariff increase

Increases in the price of water might generate revenue for water utilities further enabling them to address water issues and grow their customer base. Although willingness to pay for water service is high (as a proportion of income), the costs of O&M are so steep that the system cannot operate without subsidies to cover the capital cost. Also, the results show a highly significant relationship between user satisfaction and contribution to O&M of the water infrastructure. These results are very encouraging for the demand-driven approach policy that virtually depends on water users' financial contribution towards the O&M of the water infrastructure. Moreover, the communities also contributed during the construction phase, paying at least 5% of the cost through cash or in-kind support, which shows there is high demand for services and willingness to pay. However, there is still an issue with the tariff rate. The rate set by government is generally low and does not reflect the true costs of service delivery. Furthermore, government provides limited financial support for O&M, major repairs and replacements (termed 'capital maintenance expenditure') and wider recurrent costs. These gaps in WASH recurrent finance will serve to undermine sustainability, and many systems are at the moment operating with modest profits or struggling to cover their true running costs. This will become apparent when capital maintenance expenditure is needed, or when services need to expand to meet growing demand.

3 Decentralised service delivery

The management model applied in rural areas does not require significant investments and is more cost effective than connection to the centralised system. Accordingly, where the institutional environment is such that subsidies can be obtained through lobbying, powerful interest groups will inevitably lobby for such subsidies. This needs to be resolved by the community with meaningful support of government. To address these challenges, local authorities need to provide more effective financial and technical support to water operators when breakdowns occur that exceed community capabilities. More effective independent regulation would also help to ensure the appointed operator is accountable to its service users.

RISKS

1 Local human resources to maintain the WS system

All water utilities report high turnover and the loss of staff trained under the projects to operate and maintain the service delivery. There are often limited resources to sustain service delivery or monitor every aspect of service quality. Therefore, the monitoring is undertaken not regularly, but when a problem occurs. Much of this responsibility sits with the water operator, and part with the government, but there are also some simple monitoring activities that could be performed by the operator. A simple performance indicator and collection method might be of great help to track the O&M of the WS system.

2 Governmental buy-in

Government agencies have significant potential to impact project sustainability either positively or negatively. However, what is unclear is the government's financial contribution (or subsidy) in maintaining the WS system. Government buy-in in water service delivery in rural areas is essential to promote future expansion and quality application. This encapsulates technical, managerial, financial and regulatory support. It is important to identify which duties water operators can perform routinely and which lie outside of their capabilities. Community-based management will likely remain the only viable option for rural WS systems for many years to come, particularly for those that are more remote. However, the approach requires effective support from local government to resolve disputes and ensure a rapid response when breakdowns occur. At the moment government institutions do not appear to have a strategy for sustaining interventions by local organisations.

3 Aged infrastructure

As consumers become more engaged in management processes and advocate for their rights, they become accustomed to getting stable and quality service from WUAs. However, as the infrastructure ages the reinvestment responsibility lies outside the control of WUAs and users. The government has to step in and ensure that state funding is within reach to rehabilitate the infrastructure every 10–20 years, to avoid any disruption in service delivery and keep the public trust. The asset management planning is a weak area generally. Operators have received training and support from the project but in many of the assessments, WUAs struggle to maintain asset registers and detail the cost of repairs undertaken. This means they may struggle to apply the training they have received, and they have insufficient resources to employ additional staff.

4 Capacity building

Based on the project's experience, even very well-built water systems have a higher degree of failure during the first few months of operation. Therefore, it is critical during this initial period that there are always funds, spare parts and expertise available for emergency repairs. It is essential to provide necessary technical guidance and coaching to the water operators for at least a year after the construction period is over. The project team has put significant focus on the post-contraction period. Moreover, it is necessary to achieve a certain level of ownership by the operator and communities.

Drawing from the results, it can be concluded that failing to consider the interests of the water users negatively impacts their motivation to engage in collective action towards the O&M of the water infrastructure. Hence, while collective action is key for the success of effective water governance, it cannot be assumed or taken for granted. Decentralisation of water management, monitoring of both WS and water use and a tailor-made approach to each village are necessary to ensure sustainability of services. It is only in cooperation with the local community that government bodies can identify systemic sustainability problems, and develop and implement policies for water access in individual premises. This cooperation will also ensure sustainable public health and bring economic benefits to villages.

In conclusion, managing the WS system requires a combination of factors to ensure its sustainability and scalability. It requires investment not only in infrastructure, but also in institutional development of water operators and data analysis for informed decision making. The water operators can deliver expected economic and health benefits to the community only when they are backed by appropriate support systems such as customer and government financing, skilled staff, an accountability mechanism and guidance. Addressing this requires long-term strategic district WASH planning with clear investment pathways that increase the government and communities' resilience to adapt over time in response to environmental risks and developments.

FINAL REMARKS

Providing water and sanitation services to people in need in Tajikistan is a daunting task. This project uses a decentralised water governance approach that prioritises providing services at reasonable costs to poor people. Hence everyone, especially poor people, are provided services that they want and are willing to pay for, by institutions that have incentives to be efficient and responsive. Essentially, what poor people need is not charity but a choice of services at a fair price.

In summary, large gains can be realised by adopting an approach that comprises four key elements:

- 1 Managing water resources responsibly at community level
- 2 Providing O&M cost recovery services that people want and are willing to pay for
- 3 Engaging local government primarily for financial support or subsidy allocation
- 4 Developing flexible and responsive institutional mechanisms for providing these services, with a larger role for community organisations and the private sector

As the WS systems have been built with intensive community engagement and participation, the know-how transfer on technical and administrative procedures took place during the programme implementation. The high level of community involvement is a guarantee by itself that the community has its interest in securing the functionality of the system. Despite the differences between the WS systems across different districts they are designed on strong economic principles, where consumers need to pay for the services they receive.

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