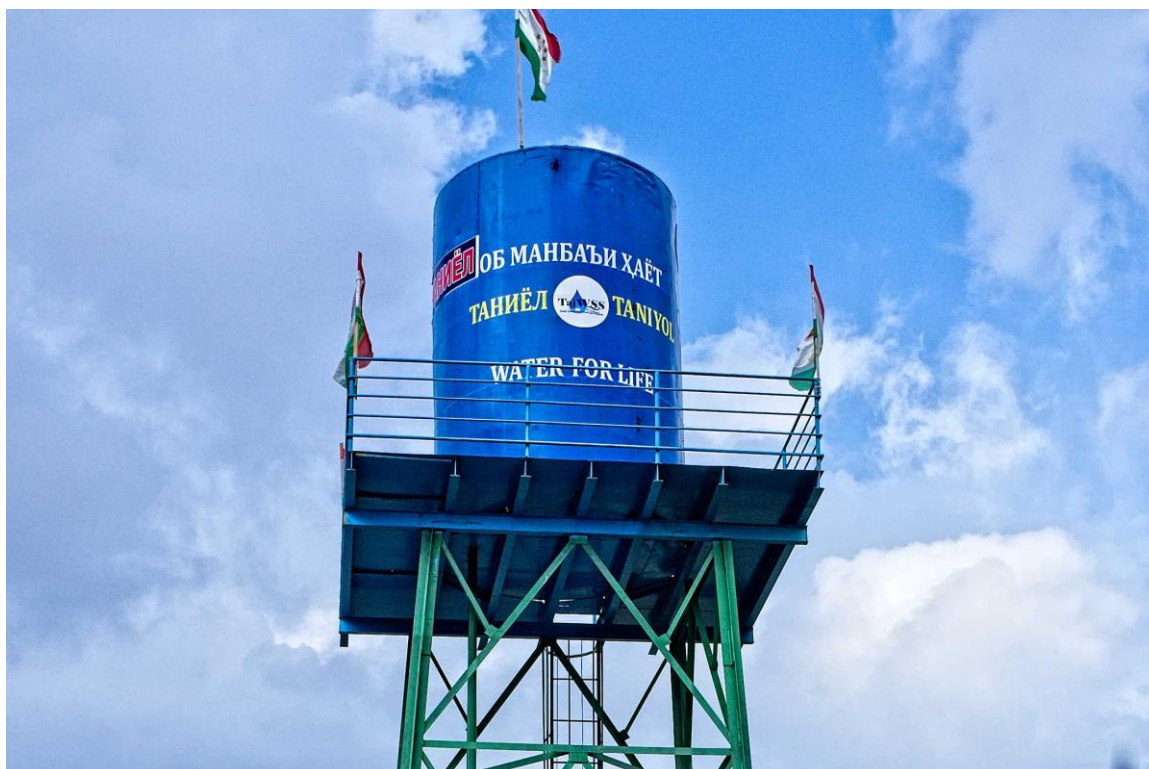


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REPUBLIC OF TAJIKISTAN



EXTERNAL REVIEW OF SDC RURAL DRINKING WATER PROGRAM, TAJIKISTAN WATER SUPPLY AND SANITATION PROJECT (TAJWSS) AND RURAL WATER SUPPLY AND SANITATION FV PROJECT (RWSSP)



*APRIL 17, 2017*

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## ABBREVIATIONS AND ACRONYMS

DWO	Drinking Water Organization
ESA	External Support Agency
ISW	International Secretariat for Water
IWRM	Integrated Water Resources Management
MEWR	Ministry of Energy and Water Resources
O&M	Operation and Maintenance
RWS	Rural Water Supply
RWSS	Rural Water Supply and Sanitation
RWSS FV	Rural Water Supply and Sanitation Fergana Valley Project
SCO	Swiss Cooperation Office
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SNIP	Tajikistan unified system of building regulations
SUE KMK	State Unitary Enterprise Khojagii Manziliyu Kommunal
TajWSS	Tajikistan Water Supply and Sanitation Project
TORs	Terms of Reference
UNECE	United Nations Economic Commission for Europe
UNDP	United Nations Development Program
WASH	Water Supply and Sanitation
WHO	World Health Organization
WUA	Water Users Association

## REVIEW TEAM MEMBERS

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# 1 EXECUTIVE SUMMARY

This report presents the conclusions of the external review of SDC Rural Drinking Water Program, Tajikistan Water Supply and Sanitation Project (TajWSS) and Rural Water Supply and Sanitation FV project (RWSSP) carried out in Tajikistan from February 27 to March 13, 2017.

The purpose of the external review was to evaluate SDC global rural drinking water program in Tajikistan, and particularly the Tajikistan Water Supply and Sanitation (TajWSS) and Rural Water Supply and Sanitation FV projects.

The overall goal of the TajWSS, as described in the project document is “To contribute to the creation of an enabling environment for the sustainable provision of safe drinking water and sanitation in rural Tajikistan.”

The one of the RWSS FV is described as follows: “The RWSS Project continues to improve the rural population health and wellbeing through sustainable RWSS and improved household hygiene and hygienic behavior.”

The bases of the external review are:

- The terms of reference for the external review, dated 28.11.2016
- The logical framework matrices of both projects

The main findings of the evaluation mission are the following:

- The Government of Tajikistan has launched a comprehensive reform program of the water sector covering the period 2016 – 2025. The SDC Rural Drinking Water Program contributes notably to the improvement of the legislative framework and the policy environment by an active participation of the SCO/SDC and the project partners (OXFAM, UNDP, ISW) in the policy dialogue, by the research and policy papers produced, and by the important lessons learnt during the implementation of both projects
- Both projects have achieved the quantitative results for water supply (villages and population served)

- Community participation in decision-making process and in tariff setup is fully achieved
- Community-based organizations manage and operate rural water supply systems efficiently. However, the roles and responsibilities of water user associations and of the official water entity SUE KMK, regarding rural water system ownership and management, need to be clarified further
- The operation and maintenance costs of the systems are recovered entirely by their users, who participate in the definition of the tariff. Long-term mechanisms for the financing and development of rural water supply and sanitation still need to be decided by the national authorities to ensure meetings official commitment to the SDGs.
- Improved sanitation for rural communities and local institutions remains a major challenge that the SDC Program has started to address. Efforts need to be pursued at all levels to ensure the adoption by the national authorities of effective sanitation strategies and standards and by the improvement at the community level of sanitation conditions and hygiene

The Evaluation Team formulates the following recommendations for the future involvement of SDC/SCO in the rural water supply and sanitation sector:

- **Sanitation:** continue the efforts that the Program and the projects have started to address toward a comprehensive approach to on-site sanitation: intensify the activities of sanitation education and marketing in the selected villages; and finalize with the Ministry of Education a realistic program for school sanitation based on appropriate design and construction of collective sanitation facilities, including hand washing facilities. Future investments should focus in priority on sanitation activities.
- **Technical standards:** continue to support the development of appropriate technical standards for rural water production systems and distribution networks, their adoption by the National Building Regulations SNIP, and their dissemination in the technical universities, technical training centers, and private local consulting companies.

- **Policy environment and sector strategy:** among the several topics of policy reform underway with SCO/SDC involvement, the priority should be given to ensure that the principle of ownership and managerial responsibility of rural water systems by community-based organizations is fully acknowledged in the sector reform underway, since it conditions the sustainability of the SDC supported projects; rural sanitation is absent from the National Water Sector Reform Program 2016–2025. SDC/SCO should keep supporting the adoption of a national sanitation strategy for rural areas.

## 2 THE WATER SECTOR IN TAJIKISTAN

### 2.1 ACCESS TO WATER AND SANITATION

According to official statistics<sup>1</sup>, only 51% of the population in Tajikistan have access to drinking water, with 87% in cities, 62% in secondary towns, and 43% in rural areas; and 80%, 18% and 0.2% of the population have access to sewage system and good sanitary conditions.

In cities and towns, only 68% of the existing infrastructure is in working condition while 7% is working partly and 25% is dysfunctional. In rural areas, only 40% of the existing infrastructure is in working condition, 44% working partly and 16% is dysfunctional.

Most of water supply systems in operation were built between 1960–1980. During the last 10–15 years, these systems were poorly maintained and their efficiency was largely reduced, resulting in important losses (up to 60% in urban areas), caused by aging distribution networks and absent or non-functioning water meters on connections. The main reason of this situation is the lack of financial resources of the public institutions to rehabilitate and expand services to the population<sup>2</sup>.

The main limitation to full water service is the lack of financial resources of public institutions, in terms of capital investment that would ensure full supply of water in accordance with norms to their requirements. The low and imposed tariff on communal services (0.88 TJS/m<sup>3</sup> of drinking water), does not cover the costs of operation and maintenance.

During the past 20 years, the rehabilitation of sewerage networks and plants was not carried out and, consequently, the effectiveness of wastewater

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<sup>1</sup> Water Sector Reforms Program of the Republic of Tajikistan (2016–2025)

<sup>2</sup> Source: UNDP (2015): Review of sanitation policy and practices in Tajikistan



treatment decreased, and resulted in the disposal in the environment of raw or poorly treated sewage, creating potential threat to human lives and health.

Emergence of waterborne diseases is recurrent in rural areas and urban settlements where the water supply situation is the most unfavorable.

## 2.2 INSTITUTIONAL FRAMEWORK

The Constitution of the Republic of Tajikistan, Water Code, Law on Drinking Water Supply and other laws and regional agreements, conventions and other legal documents adopted by the Republic of Tajikistan form the basis for the water legislation.

Water resource management is one of the strategic objectives for Tajikistan, in line with its commitment to the SDGs 3 and 6 on access to safe drinking water and basic sanitation. Despite political will, the current levels of progress are insufficient to reach the targets.

The Government of Tajikistan started to reform the water sector and adopted the following programs:

- National Program on Improvement of Safe Drinking Water Supply in Tajikistan (2008–2020) and the
- Water Sector Reform Program (2016–2025)

Several state bodies, such as Majlisi Oli (Parliament), Water and Energy Coordination Council, ministries and agencies, local state executive authorities and public companies are involved with water management. The main governmental departments are:

- Ministry of Energy and Water Resources
- Ministry of Agriculture
- Ministry of Health and Social Protection

The Ministry of Energy and Water Resources conducts the national water policy and regulates the activities of state organizations and local executive authorities involved in the management of water resources<sup>3</sup>.

Despite some progress made in separating policy and regulation functions from operation and management of water systems, the role of some water institutions remains unclear. Often, responsibilities are overlapping and subject to contradictions i.e., the State Unitary Enterprise – Khojagii Manziliu Komunali – SUE “KMK” – the largest state operator, is a public utility created in the 1990s and, is simultaneously an operator and regulator<sup>4</sup>. The roles and responsibilities between MEWR and KMK need to be further clearly defined to streamline the institutions. According to the Resolution 247 dated 18 May 2012, KMK’s responsibilities include the provision of drinking water and wastewater services for cities, regions (districts), towns, villages, and pastures.

The Agency for State Sanitary and Epidemiological Surveillance of the Ministry of Health and Social Protection of the Republic of Tajikistan defines the country’s policy with regards to sanitary and epidemiological safety of population.

The main issues of the water and sanitation sectors, leading to the low quality of services, are the following:

- Lack of stable legislative framework and water policy
- The decentralization and transfer of responsibility to local authorities for the delivery of services is not fully endorsed
- Lack of independent regulator
- Low tariff policy

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<sup>3</sup> Water Sector Reform Program of the Republic of Tajikistan (2016–2025)

<sup>4</sup> SUE “KMK” is a public organization that provides drinking water supply and sanitation services through its subsidiary companies in urban and rural areas. In larger cities, municipalities provide water supply and sanitation services through designated public authorities, (such as the SUE “Dushanbe water supply and sewage” and SUE “Khujaand water supply and sewage”).

- Insufficient capital investment for the development of water and wastewater infrastructure and deterioration of existing water and sewer systems
- Low availability of human resources and lack of expertise

## 3 RURAL DRINKING WATER PROGRAM REVIEW

### 3.1 PROGRAM RELEVANCE

To assess the relevance of the program, the Evaluation Team answered the following questions:

- A. Is the Swiss water program relevant and in line with the on-going Water Sector Reform and Swiss Cooperation Strategy? Are the program objectives coherent with the country's priorities (in terms of the legal and institutional framework) and is there coherence with other donors' interventions?
- B. Does the program effectively address the needs and capacities of the vulnerable population?
- C. Does the program contribute to the education of WASH professionals?
- D. Does the program contribute to the establishment of IWRM?
- E. Does the program contribute to out of fragility and conflict sensitivity?

The water sector reform program of the Republic of Tajikistan (2016–2025) details the proposed water sector reforms in all sub-sectors related to water use indicates that the *“rehabilitation and modernization of existing water supply and sanitation system to increase the potential of infrastructure and improved quality of water delivery services and increased water fee collection should be considered as priorities and as part of an effective economic mechanism and a comprehensive tariff policy.”*

The Swiss Cooperation Strategy for Central Asia 2012–2016 highlights the importance “given to national policy dialogues on the adoption and application of IWRM principles, as well as the production of reliable water-related data.” For Tajikistan, the Strategy specifies that the Program “will continue in the domains of health, rule of law, drinking water supply and sanitation, and private sector development.”

The conclusions of the Evaluation Team are that **the program is fully relevant to the national priorities and to the Swiss Cooperation Strategy.** It supports national priorities related to coverage improvement and sector governance. It addresses real necessities related to the strengthening of the institutional

framework. The program supports the establishment of the IWRM by financing the National Water Resources Management Project implemented in Sughd Oblast.

The Evaluation Team considers that the national technical standards SNIP for rural water supply systems, applied in particular in the TajWSS project lead to complicated and oversized equipment not adapted to simple water production and distribution systems and high project costs. The same consideration applies for collective sanitation. Several systems and facilities visited cannot be considered as state of the art, missing the opportunity to introduce appropriate technologies that would have contributed to implement cost-effective systems and educate WASH professionals

## 3.2 PROGRAM EFFECTIVENESS

To assess the effectiveness of the Program, the Evaluation Team answered the following questions:

- A. How can SDC/SCO effectively strengthen its programmatic approach, team-up with other actors in the sector and increase the sustainability and effectiveness of the program in the next four years? Is the project portfolio set-up adequate (number of projects, different kind of projects) to reach the impact set for the next four years?
- B. Is the financial sustainability of the water supply business models guaranteed (are amortization funds well managed, protected against inflation or misuse)? Is more financial engineering needed?

The Evaluation team considers that the complexity of the institutional reform process has been underestimated during the preparation of the projects. Despite the important involvement of SCO/SDC in the coordination with other ESAs and in the policy dialogue, and the implication of UNDP in the promotion of policy reforms, the expected program outcome related to the enabling legislative framework and policy environment is still under development. The action plan of the Water Sector Reform Program indicates that the National Water Strategy should be achieved in 2018 and that the new edition of the Water Code should be completed in 2019.

Several external support agencies with important financial resources are already involved with the supporting institutional strengthening: The European Union Delegation is providing assistance to the Ministry of Energy and Water Resources in the development of the National Water Sector Strategy; the World Bank is assisting with the updating of the legislative framework (Water Code); the EU Water Initiative is supporting the national policy dialogue on IWRM.

SCO/SDC is coordinating closely with these agencies not to duplicate efforts. Its leadership should be focused on a few topics where it has a specific advantage based on the important lessons learnt during the implementation of the projects, related in particular to rural water supply ownership and management at the community level, the adoption of a comprehensive sanitation approach in rural areas, and the dissemination of appropriate, cost-effective and inclusive technologies for simple water production and distribution systems and on- sanitation.

SDC/SCO is the main agency supporting rural water supply and sanitation. The results achieved so far are important. The infrastructure built under its projects brings real improvement in the life of selected communities. However, the deficit in the access to water and sanitation services in rural areas remains high, and there are no long-term mechanisms at the national level to ensure enough investments for this sector.

In the current context of limited resources, no significant contribution can be expected from the State to finance the development of rural infrastructure. However, the projects, especially the RWSS FV project, have demonstrated that the beneficiaries are willing to pay not only the cost of operation and maintenance of the systems, but also a part of the initial investment and some provisions, in the tariff, for the renewal of the equipment. The current mechanism for cost recovery and tariff setting, discussed and approved upon with the communities, are suitable and guarantee the sustainability of the systems. It shows also that community-based organizations (the WUAs or DWOs) are perfectly able to manage their water supply systems efficiently and make appropriate decisions related to cost recovery.

Instead of keeping this provision for renewal in some bank account for several years, the WUAs could transfer this money to a regional revolving fund for the

development of rural water supply systems, repaying somehow progressively the grant they have received from SDC, allowing thus other villages to gain access to improved water services. SDC could promote the creation of such a revolving fund that would be aimed to create more solidarity and equity among the different villages of a region. Financing a revolving fund for the development of rural water supply instead of specific projects would give more responsibility to the regional authorities in the development of rural water.

Several questions would need to be considered in the development of such a revolving fund: governance, taxes, transparency, level of repayment, etc. Successful models exist and elsewhere that could be adapted to the Tajikistan context.

Improved sanitation and hygiene do not require major investment since most of the financing is covered by the families. Additional support is needed to develop a comprehensive sanitation program (development of appropriate standards, promotion, training, supply chain...) that could be tested in one region of the country before being translated into a national sanitation strategy and expanded countrywide.

The TajWSS and RWSS FV projects have initiated sanitation analyses and surveys<sup>5</sup>. These initiatives constitute a good basis on which a systematic action to develop sanitation promotion and hygiene education could be sustained by SDC in the next program phase.

The current situation of sanitation in schools is very bad. Both projects have addressed this issue and helped a few school to build sanitation modules. Additional efforts need to be carried out to cover more schools and to finalize the agreements with the Ministry of Education related to the hygiene and health curriculum. New projects should be attentive to enhance the design of the school toilets<sup>6</sup>.

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<sup>5</sup> executed in 2015 by Z-Analytics Group for the RWSS FV project and by WSUP in 2016 for the TajWSS project

<sup>6</sup> The deficiencies of newly built toilets in schools observed during the field visits are: absence of washing basins, no gender specific modules, difficulty to empty, no consideration for the safe disposal of septic sludge produced

### 3.3 PROGRAM EFFICIENCY

To assess the effectiveness of the Program, the Evaluation Team answered the following questions:

- Does SDC/SCO have enough and adequate resources to steer and manage the water supply and sanitation program? What would be the wishful setup?
- Is SDC/SCO addressing the critical issues with the right means to reach the set goal? Is SDC's intervention strategy feasibly taking into account the capacities of the local partners and organizations of the civil society?

The current phase of the RWSS Program, once achieved, will have provided improved water services to around 65,000 people in fourteen villages. These figures are quite substantial, but the needs for improved water in rural areas are far from being covered in totality. The TajWSS project received applications from sixty villages in Mumindab, Rudaki, and Kulyab districts but could build six water systems serving ten villages. The RWSS Fergana Valley Project received application of 143 villages in Sughd Oblast out of which four have been selected, and a fifth one is considered.

When it comes to sanitation, the activities implemented in both projects to date have little effects on the improvement of coverage rate. The survey realized in Sughd Oblast shows that 62% of households use pit latrines without slabs or open pit. Only 2% of households use a VIP latrine<sup>7</sup>.

The research carried out in Ayni, Muminabad, and Rudaki districts indicates that 95% of households have a pit toilet, 16% of them reported having a ventilation system<sup>8</sup>.

Switzerland remains the main donor of the RWSS sector. No capital expenses for the development of infrastructure are included in the national Action Plan

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<sup>7</sup> Household Survey on Water and Sanitation in the Rural Water and Sanitation Project Ferghana Valley, Tajikistan Baseline, 2016. Z-Analytics Group

<sup>8</sup> Sanitation Marketing in Tajikistan, 2016. WSUP Advisory.



for the Implementation of the Water Sector Reform Program for the period 2015–2025. The positive results obtained in the management of the water systems by their own users demonstrate that the management model implemented in the projects is adequate and sustainable. SCO/SDC is best positioned to promote actively, among the donor community, the development of rural water supply. The financing mechanism for the development of infrastructure should evolve from a project based budget to a regional (or national) fund in which all contributions (ESAs, public and beneficiaries) should be paid. As described in the previous section, a revolving mechanism, by which the part of the tariff dedicated to cover capital expenses could be put into the fund, would allow further investments in other villages.

Considering the current initiatives on sector policy reform funded by other agencies (especially the World Bank and the European Union), SDC financial support should be focus on some key challenges not addressed by other institutions (for instance: rural sanitation strategy; technical design standards for simple water systems, ownership and management of rural water supply systems, see section 6 hereafter).

Rural sanitation is one of the Program component that has not been fully achieved in the current phase. This limitation had already been identified in the 2012 External Review of SDC RWSS Project in Tajikistan. The experience of several similar projects has shown that sanitation needs to be clearly individualized from water supply, with a specific approach and a dedicated team of professionals. The objectives for water and sanitation should be clearly separated.

Sanitation component requires financing for the development of a sound methodology of intervention (analysis of status and identification of main barriers, sanitation marketing and demand creation, private sector support, sanitation infrastructure financing, supply of affordable sanitation products and services, fecal sludge management, etc.), whereas most of the investments (construction of private improved latrines) are paid by the households.

Project technical design made by the National Design Institute was subject to low adapted level of service and higher costs of infrastructure. The

development of water systems (topographic survey, technical design, procurement of work, and supplies) was not optimal and resulted in lengthy delays in project implementation. This situation well-known by SCO and project teams.

### 3.4 PROGRAM GOVERNANCE

To assess the governance of the Program, the Evaluation Team answered the following questions:

- Are the issues of tariff policy and taxation in the water sector sufficiently addressed and implemented in the program?
- Is the question of water quality and the impact on health sufficiently and adequately taken into consideration by the program?
- Is the right to water and sanitation applied and emphasized in the program?
- Are the rights to access to water duly registered in the municipalities?

The cost recovery policy and tariff definition have been one of the main elements of discussion with the communities during the establishment of WUAs. Cost recovery approach varies according decision made by the WUAs: the tariff in the TajWSS project is calculated to cover operation costs only while the RWSS FV project applies a full cost recovery (operation, maintenance, and renewal of investments). The new water system built in Muminabad center district is managed by KMK, which applied its national water tariff insufficient to cover the O&M costs.

To guarantee the sustainability of the infrastructure built under the Program, the tariff paid by users should include operation, maintenance, and renewal, as this is applied in the RWSS FV project. The water tariff defined by the WUAs needs to be approved by the anti-monopoly agency, whose policy regarding cost recovery is not very clear. TajWSS is currently working with national anti-monopoly agency in order to test proposed cost recovery calculation and a tariff setting. Results are expected soon.

All water systems are based on boreholes capturing deep aquifers, where the water is of good quality. They include a chlorination system that ensures the

disinfection of potential pathogens. Water quality is tested regularly by the National Epidemiological Institute.

The right to water is applied inclusively by the WUAs, which subsidized the household connection and water service of very poor families. As explained above, sanitation objectives are not yet fully covered in the Program.

The right to access to water at the level of municipalities is a theoretical and remote concept since they don't have any budget outside the resources provided by SDC to finance the development of water infrastructure and services in rural areas.

The local governance of the projects (coordination among district and municipal authorities and communities), facilitated by the implementation agencies is reliable and guarantee community participation, cost recovery, transparency, equity, and inclusiveness.

Both TajWSS and RWSS FV projects apply different methods and procedures, some of them being more effective than other. This provides a good opportunity of cross-fertilization between projects on best practices (infrastructure design, cost recovery, financing mechanisms). The Program would benefit of a person that served as support and reinforcement of the technical aspects of water and sanitation (a backstopper), and supports SCO and the projects with quality assurance and mentoring. Therefore, SDC decided to hire such a backstopper.

### 3.5 PROGRAM IMPACT

The Evaluation Team has assessed the project impact of the TajWSS and RWSS FV projects on:

- The beneficiary households
- The involved communities
- The policy reform

The results are summarized in the following table:

Target	Impact	Description
Households	High	Families, and especially women, saved time of water collection. People improved health status by consuming drinking water. They save money by avoiding to buy water from water sellers and tanker trucks. Impact on healthier environment was low, however, due to the very limited results of the sanitation development component. The household surveys implemented in both projects demonstrate the necessity to continue the efforts on sanitation and hygiene promotion
Communities	High	The communities developed positive dynamics and organized themselves to own and operate their water systems. They selected the members of the WUAs responsible for the technical and financial management of the water service. They considered the needs of the poorest families so that they are not excluded from the services
Policy reform	Substantial	Actions implemented to support policy reforms contributed the institutional framework and sector organization. The Program provides important lessons on issues such as ownership and management of RWS systems, O&M responsibilities, financing mechanisms and cost recovery, technical standards,...

## 3.6 TRANSVERSAL ISSUES

### 3.6.1 GENDER

Important efforts have been made by the project implementation agencies to ensure that WUAs are gender balanced and that women are involved with the decision-making process for the organization of the management of water systems. Women who used to spend long time in fetching water from irrigation canals are the clear winners of the projects that built systematically private connections and hence make water available inside the households.

Because of the absence of meaningful results of the sanitation component, the benefit for women and girls of improved sanitation facilities could not be assessed.

### *3.6.2 DISASTER AND RISK REDUCTIONS*

All SDC funded water projects are meant to be DRR mainstreamed and proven to include all measures to decrease impacts from disaster and have no effect of provoked disaster. Generally, all built infrastructure correspond to the severe construction norms and is rather well resilient to disaster. However, differences were noted in some districts as far as the protection of the boreholes is concerned. It reaches from well-protected infrastructure (e.g. by a metallic cabin) to less secured boreholes, sometimes even questionable location (floodable area).

The Evaluation Team would have expected a systematic application of the tool CEDRIG (climate, environment, and disaster risk reduction integration guidance) to standardize the boreholes protection in every constructed water system.

### *3.6.3 TECHNOLOGY*

Technical standards for water systems are defined by a national document called SNIP. SNIP is a set of regulations in the field of construction, adopted by the executive authorities and containing mandatory requirements. The technical design of water systems in one of the projects is done by an official Technical Institute, which applies SNIP standards. The visit of several of these systems has shown that the level of complexity is too high and not adapted to simple water production and distribution systems, over dimensioned, and therefore not cost-effective. Household connections are concentrated in meter boxes that results in unjustified long and expensive private connections.

One of the pilot projects has designed the water distribution network internally and has it approved by the Technical Institute, resulting in more appropriate design and facilitated the management of the network.

Collective sanitation facilities built in some visited schools show several problems:

- They don't include hand washing equipment
- They are not gender adapted (same modules for boys and girls)
- They will likely be difficult to empty

These school toilets have been designed according to the SNIP standards that are obsolete and do not incorporate research, proper project monitoring<sup>9</sup> and development conducted recently on this matter<sup>10</sup>. Any new action aimed to build school toilets should introduce appropriate and cost-effective technology that will contribute to the improvement of the RWSS sector and strengthen the sustainability of sanitation facilities built under the Program.

#### *3.6.4 SUSTAINABILITY*

The major element that will condition the project sustainability is the issue of system ownership and management responsibilities. Community-based management model applied in most of the villages selected by the projects<sup>11</sup> gives good guarantee of effective and sustainable operation and maintenance.

However, the role and responsibilities of WUAs in the management of rural water supply systems is disputed by KMK, which is, according to the Water Sector Reforms Program of the Republic of Tajikistan (2016–2025)<sup>12</sup>, responsible for the supply of water (among other services) in urban and rural areas. The official acknowledgment that water should be managed at the lower level possible (i.e. at the community level) still needs to be included in the national strategy and water code.

Tariff structure should also include a provision for the renewal of the infrastructure, as this is the case of the RWSS FV project. The understanding of this principle by the anti-monopoly agency is key for the sustainability of the investments.

The quality of the water production infrastructure and distribution networks is good (and often over dimensioned when built according to the SNIP

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<sup>9</sup> Oxfam and UNDP have experience several changes of personnel that have likely affected their capacity to supervise the design and construction of school sanitation facilities.

<sup>10</sup> The EAWAG Compendium on sanitation systems and technologies have been recently translated to Russian and will constitute an important reference for future projects.

<sup>11</sup> At the exception of Dushabesha and Khonatarosh (Mumindad district) operated by KMK

<sup>12</sup> As defined in section 2.1.2.2 of the Water Sector Reforms Program: “SUE “KMK” is a service organization and provides drinking water supply and sanitation services through its subsidiary companies in urban and rural areas.” (unofficial translation)

standards), and should not create technical difficulties beyond the capacity of the WUAs.

## 4 TAJIKISTAN WATER SUPPLY AND SANITATION (TAJWSS) PROJECT

The project outcomes, as described in the SDC logframe structure, are the following:

1. An enabling legislative framework and policy environment for the investment, operation and regulation of rural drinking water and sanitation systems at national level is established (implemented by UNDP)
2. Effective, transparent and streamlined processes and mechanisms are in place and implemented at the district level for the investment, operation and regulation of Drinking Water Supply and Sanitation systems in the project targeted districts
3. 15'000 Women, men and children have improved health with a reduction of water borne diseases and saved time by having access to safe drinking water within 75 m in rural areas
4. Both women and men in rural communities of 3 Districts have the knowledge and capacity to act to increase and safeguard their access to safe drinking water and sanitation, thereby promoting gender equality. 3,000 people are reached by the campaigns, and 10 monitoring specialist (at least 8 women) are trained on social accountability and monitoring tools

The project review was based on these outcomes. The Evaluation Team assessed the level of achievement of expected outputs related to these outcomes. Specific answers to the questions asked in the external review TORs are provided in annex 4.

### 4.1 ACHIEVEMENTS OF OUTCOME 1

Five documents produced by UNDP have been provided to the Evaluation Team:

- Analysis of the present state of de-monopolization and of the private sector involvement in the sphere of drinking water supply and sanitation in the Republic of Tajikistan (undated)



- Guidelines on tariff setting for water supply services for operators in the rural areas of Tajikistan (undated)
- Review of sanitation policy and practice in Tajikistan (2016)
- Effective business models in organization of drinking water supply and sanitation services in rural Tajikistan (22/02/2016)
- State regulation of drinking water and sanitation sector in the Republic of Tajikistan (2016)

It is difficult to assess the contribution of these documents to the reform of the water and sanitation sector in Tajikistan. These documents cannot be considered as “policy papers” but more as “working documents”. They lack of strategic vision (analysis of the main challenges from a social, institutional, financial, environmental point of views, main principles to be applied, specific recommendations for policy reforms).

According to the Vice–Minister of Energy and Water Resources, the National Water Strategy is under development with the support of the European Union and should be achieved in 2018. The review and development of a new edition of the Water Code will be supported by the World Bank, which is expected to be published in 2019. SDC/SCO is fully involved in this processes and comments on the draft documents (National Strategy and Water Code), with the support of the policy components of both TajWSS and RWSS FV projects.

Key challenges to the sustainability of the drinking water and sanitation sector (output 2), such as ownership and management of water systems or long–term financing mechanisms for the sector are not yet addressed. Performance standards regarding service provision (output 3) are yet to be developed and enforced.

## 4.2 ACHIEVEMENTS OF OUTCOME 2

Water Trusts Funds (output 4) have been established and function well. They have however limited planning capabilities, and their role is limited to the current project.

Water User Associations (output 5) are effective and function well. As explained in the previous sections, the role of WUAs in the management of

rural water supply systems need to be endorsed in the National Water Strategy under development. In Dushabesha and Khonatarosh villages (Muminabad district), the WUAs established to manage the water system built under the project were replaced arbitrarily by KMK. WUAs can rely on Jamoats (local authorities) for technical assistance.

A Water User Federation was established with the support of Caritas under a previous SDC-funded project. This Federation appears well organized with proper skills and resources. The Federation is represented only in Muminabad district for the time being. Its role could be extended in other districts of the project so that it can provide support and training to the WUAs when needed.

All the water systems visited are in good operational conditions and provide effective service. Discussions with community groups confirm people satisfaction with the service provided.

### 4.3 ACHIEVEMENTS OF OUTCOME 3

The project is not totally completed, but once achieved, it will exceed its quantitative objective related to water supply: over 20,000 people will gain access to improve water supply. Water is pumped from deep aquifers, which are protected from surface pollution. The water system includes household connections, improving greatly the service level.

No improved latrines have been built at household level. The Evaluation Team did not see any evidence of changes in hygiene behavior (for instance washing hands with soap after using toilet).

The Evaluation Team visited sanitary modules under construction in Dushanbecha and Deholo chools. The construction, although representing an improvement compared to the existing latrines, shows design problems: absence of hand washing equipment for pupils, latrine blocks not gender specific, difficulty to empty the big pit collecting urine and feces, once full. The emptying and safe disposal of fecal sludge remain an issue when the toilet will be full.

The water systems built are in good working conditions. The technical standards, based on the SNIP, are not appropriate, too much complex, and over dimensioned, and not cost-effective. The design of the water distribution

system is not optimal and leads to increased costs for household connections to be paid by users.

The tariff for water services is discussed and agreed upon with the community. It covers O&M costs but not the renewal of infrastructure. In Dushabesha and Khonatarosh villages (Muminabad district), where the system built by the project has been taken over by KMK, the tariff applied is the national one (0.8 TJS or 0.1 USD), which is largely insufficient to cover the O&M costs<sup>13</sup>.

#### 4.4 ACHIEVEMENT OF OUTCOME 4

The community representatives met in targeted villages showed understanding and awareness of their rights and responsibilities related to water. They are proactively involved with the management of their own system and accept to pay for the service received.

Poor families are included in the water service, and their water consumption is subsidized by the whole community. Solidarity exists within a specific community but does not extend to neighboring villages. For instance, the water system in Fayzabod served two communities (Fayzabod and Kalot), and is divided into two separated storage and distribution networks because, apparently, each community wants the sole responsibility of managing its own system. The implementation agency (UNDP) has probably missed the opportunity to question this position. A unified system would have been more cost-effective and could have strengthened intercommunal solidarity.

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<sup>13</sup> SCO/SDC is aware of this issue, which is addressed by the national working group on water.

## 5 RURAL WATER SUPPLY AND SANITATION IN FERGANA VALLEY (RWSSP FV) PROJECT

The project outcomes, as described in the SDC logframe structure, are the following:

1. Enhanced policy and legal environment for sustainable provision of hygienically safe rural water supply and sanitation is in place at national level
2. Transparent and streamlined processes for the selection of villages and management of the Water User Associations (WUAs) are developed, integrated and replicated at all levels
3. Rural populations in the target areas (including children), have improved health and conveniently access to safe rural water supply and sanitation
4. Capacities of the Local Water Operators to effectively manage and maintain water supply and sanitation systems are in place

The project review was based on these outcomes. The Evaluation Team assessed the level of achievement of expected outputs related to these outcomes. Specific answers to the questions asked in the external review TORs are provided in annex 4.

### 5.1 ACHIEVEMENTS OF OUTCOME 1

The water legislation (water code) is being updated with the support of the World Bank and is expected to be published in 2019. IWRM and river basin management schemes are still in under development under the Water Sector Reform Program 2015–2025. The national policy dialogue on IWRM is being carried out under the leadership of MEWR, as a component of the EU Water Initiative. The lead of the Working Group Water, which was with EU until September 2016, has been transferred to SDC/SCO in January 2017.

With funding from the SDC, Helvetas is piloting the implementation of a water resource management project aimed to develop local capacities in water

management in the Syr–Darya river basin. The result of the project will provide a useful model for the reform of water legislation underway.

The ISW team, in charge of the project implementation has produced pedagogical material on hygiene education dedicated to the education sector, which has not yet been distributed and applied.

Given the low level of rural sanitation and hygiene, observed during the field visits and confirmed by the recent survey<sup>14</sup>, the education program is to be applied in schools is really needed. The project team is concluding agreements with the Ministry of Education for its application. Existing sanitation facilities in visited schools are below any standards. To provide consistent results, the teaching of improved hygiene to pupils should be concomitant to the construction of hygienic toilets. Any new investment should give the priority to this action.

## 5.2 ACHIEVEMENTS OF OUTCOME 2

Community–based organization (called drinking water organizations DWO) are in place in all four localities where the project is building water systems. These systems are not yet operational; however, the organization of the operation and maintenance is already defined, with credible technical and financial management skills.

Gender balance in DWOs is guaranteed by a policy of quotas. Women took part actively in the decision–making process and are equally represented in the DWOs.

Water tariff is discussed and agreed upon by the community and is based on full cost recovery pricing. The tariff is specific to each locality and is calculated on real cost estimates. Negotiation takes place between the ISW and the anti–monopoly, on tariff calculation.

## 5.3 ACHIEVEMENTS OF OUTCOME 3

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<sup>14</sup> Household Survey on Water and Sanitation in the Rural Water and Sanitation Project Ferghana Valley, Tajikistan Baseline, 2016. Z–Analytics Group.

The total population of the four selected localities represents about 42,000 people. In those localities, 100% of households will be connected to drinking water by private connections.

No improved toilets have been built at the household level, and the Evaluation Team did not see any sign of hygiene behavior change (such as soap and water next to traditional pit latrines).

The water systems are still under construction; therefore, their effect on waterborne reduction cannot be measured.

#### 5.4 ACHIEVEMENT OF OUTCOME 4

Although the water systems are under construction, the DWOs have already defined their organization for the operation and maintenance of these systems. Skilled operators have been identified in the community as well as administrative staff that will take care of the billing and collection function. A financial audit mechanism of DWOs accounts by the community and by the district authorities has already been defined. The general level of the organization is good and let presume of effective technical and financial management.

The technical design of the water systems is appropriate and can accommodate a future expansion.

## 6 MAIN CONCLUSIONS OF THE REVIEW AND RECOMMENDATION FOR SDC FUTURE INVOLVEMENT IN THE RWSS SECTOR

### 6.1 SANITATION

The design of both TajWSS and RWSS FV have adopted the recommendations of the 2012 SDC RWSS Program external review, including sanitation as one of the main goals of the projects. However, the development of on-site sanitation facilities (individual and collective) has not yet achieved the expected outputs. Without improved toilets, it is difficult to expect people and pupils to modify the hygiene behavior.

One of the reasons are in the project formulation and in the organization of the project implementation agencies. The project formulation always refers to the “water and sanitation sector”, with a vision of service delivery. However, water and sanitation are two clearly distinct activities, requiring different approaches, and development strategies. Whereas water supply is clearly oriented towards service delivery, on-site sanitation is a choice of households that need to be supported by a comprehensive approach combining communication, marketing, capacity building, supply chain and subsidies.

SDC/SCO and their partners are aware of this situation. The TajWSS Network members agreed to tackle this issue and work on the development of a national sanitation strategy and the establishment of a sanitation market. The Swiss-funded TajWSS project in collaboration with EAWAG<sup>15</sup>, is currently conducting a study on building up sanitation marketing in Tajikistan. The study will be soon ready and shared with all key stakeholders of the drinking water and sanitation sub-sector.

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<sup>15</sup> Swiss Federal Institute of Aquatic Science and Technology

Future SDC involvement in Tajikistan should implement in priority the sanitation objectives of both projects that were not fulfilled. The recommended actions are to:

- Adopt a comprehensive approach for promoting on-site sanitation (understanding of current practices and behavior, communication, and marketing, capacity building of local artisans, improving the development supply chain for latrine slabs, squat toilets, and washbasins, construction of demonstrations units in public places, etc.)
- Support the Ministry of Education in the development of a realistic program for school sanitation based on appropriate design and construction of collective sanitation facilities, including hand washing facilities. Teaching hygiene education to pupils without having proper toilets is not effective
- Distribute and promote the application of the Compendium on Sanitation Systems and Technologies, recently translated into Russian, to make evolve applied standards to modern approaches and development

If financial resources and time do not allow to implement a comprehensive rural sanitation program, the Evaluation Team would recommend to focus only on collective sanitation development, in schools, health centers and public spaces.



## 6.2 TECHNICAL STANDARDS FOR SIMPLE WATER SYSTEMS

The technical standards defined by SNIP and applied by the National Design Institute are not adapted to simple water production and distribution systems for rural communities. Design standards need to be improved, and construction costs reduced to meet the demand of rural communities and the limited financial resources available for the rural water supply sector. Future activities implemented by SDC could support the development of appropriate technical standards for simple water production systems and distribution networks, their adoption by the National Building Regulations SNIP, and their dissemination in the technical universities, technical training centers and private local consulting companies.

More practically, SDC could, in partnership with the MEWR and the authorities in charge of national standards, and with the support of a specialized consultant:

- Realize a comparative technical diagnostic of the water production and distribution systems of both projects (dimensioning, quality of material, energy consumption, distribution network modelling, cost)
- Review the current literature related to the design and construction of simple water production and distribution systems
- Prepare a design manual (or adapt an existing one to the local context) for water supply systems in rural areas based on cost-effective and sustainable standards
- Prepare a training module aimed at technical universities, technical training centers and private local consulting companies (possibly on-line course)
- Assist SNIP in the adoption of the new construction standards.

## 6.3 CONTRIBUTION TO THE SECTOR REFORM WITH FOCUSED AMBITIONS

The SDC RWSS Program in Tajikistan had ambitious goals to support reforms in the legislative framework, policy, and legal environment for the investment, regulation, and sustainable provision for rural drinking water and sanitation services at national levels. The sector reform is slower and more complex than

expected in the project documents. The Government of Tajikistan has scheduled the achievement of the National Water Strategy in 2018 and the promulgation of a new edition of the Water Code in 2019.

Key issues, related to the sustainability of the investments provided by SDC need to be clarified, particularly the question of ownership and management of community-based water systems, the tariff and cost recovery of water services, the design standards of water production and distribution of infrastructure and of school sanitation facilities.

One of the main success of the SDC-funded program is the involvement of community-based organizations (WUAs and DWOs) in the planning, operation, and management of their water system. This is fully consistent with the Dublin Principles<sup>16</sup> universally adopted by sector professionals, particularly the second principle that states that “decisions are taken at the lowest appropriate level, with full public consultation and involvement of users in the planning and implementation of water projects“. This situation however is not yet endorsed in the national legislation where the central company for water and sanitation KMK is still acknowledged as being responsible the provision of services in urban and rural areas.

Both projects have proven that local communities can make the necessary decisions to organize the technical and financial management of water distribution systems, provided they receive financial and technical support for the construction of the infrastructure. SDC should develop a good case study and disseminate it among the national institutions and external support agencies and ensure that the principle of ownership and managerial responsibility of rural water systems by community-based organizations is fully acknowledged in the sector reform underway (and is clearly stated in the National Water Strategy and new edition of the Water Code, which are under development).

Last but not least, and provided that the national authorities show commitment and interest, SDC could support the development of a national

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<sup>16</sup> The Dublin Statement on Water and Sustainable Development adopted in 1992

strategy for rural sanitation. To ensure the adoption of this strategy, the following steps should be applied:

- Confirm the interest and commitment of governmental decision-makers in the adoption of the strategy (for instance by signing a memorandum of understanding stipulating the roles and obligations of each party)
- Prepare jointly national authorities and other developing partners specific TORs for the development of the strategy
- Develop the strategy, disseminate it and build capacity at national, regional and local levels

## 6.4 FINAL REMARKS

The SDC-funded water program, and the two RWSS projects under review provided very important lessons for the evolution of the rural water supply and the sanitation sectors in Tajikistan. The need to scale-up improved water services and promoting better sanitation facilities remains important, given the still low coverage in rural areas.

The water systems built under the project provide an important improvement in the life of rural communities and families, clearly expressed by their beneficiaries.

The main priority is to ensure that the model of community-based management is officially recognized, to ensure that the efforts dedicated to support the development of WUAs and DWOs is endorsed at the national level. Both projects have clearly demonstrated the efficiency of this management model. Withdrawing this responsibility from the community to a centralized institution could have a negative effect on the sustainability of the system, removing the motivation of households to pay their water bills and take part in the management of the network.

The development of improved sanitation and the promotion of better hygiene practice should be strengthened and be focused on the creation of an enabling environment allowing families to make an informed choice, instead of being considered as a service to deliver by the project. This would allow to achieve

one of the main project objective, which is to improve health and reduce waterborne illnesses of rural population.

Finally, Swiss institutions have been involved for years in the development and promotion of appropriate and cost-effective solutions for water and sanitation in developing countries. Future projects should take advantage of this knowledge and ensure the transfer of know-how to public and private institutions in Tajikistan.

## 7 ANNEXES

1. External review Terms of Reference
2. Evaluation methodology
3. Activity schedule of the mission
4. Map of visited project sites
5. List of villages selected by the projects and population
6. List of persons and institutions met
7. Specific answers to the questions raised in the TORs
8. Evaluation of the level of achievement of projects outcomes and outputs