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Report No: PAD5560

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL CREDIT
IN THE AMOUNT OF US\$7.64 MILLION

TO THE

KYRGYZ REPUBLIC

FOR A

Second Additional Financing for
Sustainable Rural Water Supply and Sanitation Development Project

January 4, 2024

Water Global Practice
Europe and Central Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2023)

Currency Unit = Kyrgyz Som (KGS)

KGS 89.35 = US\$1.00

KGS 1.00 = US\$ 0.01

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ACM	Asbestos-containing Material
AF-1	First Additional Financing
AF-2	Second Additional Financing
AM	Accountability Mechanism
AO	<i>Aiyl Okmotu</i> (Local authorities)
ARIS	<i>Agentstvo Razvitiya I Investirovaniya Soobschtv</i> (Community Development and Investment Agency)
CDWUU	Community Drinking Water Users Union
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CRWSP	Climate Resilient Water Services Project
DDWSWD	Department of Drinking Water Supply and Wastewater Disposal
E&S	Environmental and Social
EA	Environmental Assessment
ERR	Economic Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emission
GoKR	Government of the Kyrgyz Republic
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDA	International Development Association
IP	Implementation Progress
IPF	Investment Project Financing
KGS	Kyrgyz Som
NDC	Nationally Determined Contribution
NPV	Net Present Value
O&M	Operation and Maintenance
OP	Operational Policy
PDO	Project Development Objective
PIU	Project Implementation Unit
POM	Project Operational Manual
RBIG	Results-Based Incentive Grant
RF	Results Framework
RVP	Regional Vice President
SES	Sanitary Epidemiological Surveillance
SRWSSDP	Sustainable Rural Water Supply and Sanitation Development Project
WASH	Water, Sanitation, and Hygiene
WSS	Water Supply and Sanitation

Kyrgyz Republic

Second Additional Financing for Sustainable Rural Water Supply and Sanitation Development Project

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BASIC INFORMATION – PARENT (Sustainable Rural Water Supply and Sanitation Project - P154778)

Country	Product Line	Team Leader(s)		
Kyrgyz Republic	IBRD/IDA	Odete Duarte Muximpua		
Project ID	Financing Instrument	Resp CC	Req CC	Practice Area (Lead)
P154778	Investment Project Financing	SCAWA (9392)	ECCCA (1608)	Water

Implementing Agency: Community Development and Investment Agency (ARIS), Department of Drinking Water Supply and Wastewater Disposal

Is this a regionally tagged project?	
No	

Bank/IFC Collaboration	
No	

Approval Date	Closing Date	Expected Guarantee Expiration Date	Original Environmental Assessment Category	Current EA Category
30-Sep-2016	30-Jun-2025		Partial Assessment (B)	Partial Assessment (B)

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Development Objective(s)

The project development objectives (PDO) are to assist the Kyrgyz Republic to (i) improve access to and quality of water supply and sanitation services in the Participating Rural Communities; and (ii) strengthen capacity of the Recipient's institutions in the water supply and sanitation sector.

Ratings (from Parent ISR)

	Implementation					Latest ISR
	14-May-2021	13-Oct-2021	26-Apr-2022	21-Oct-2022	15-May-2023	19-Oct-2023
Progress towards achievement of PDO	MS	MS	MS	MS	MS	MS
Overall Implementation Progress (IP)	MS	MS	MS	MS	MS	MS
Overall Safeguards Rating	MS	MS	MS	MS	S	S
Overall Risk	M	M	M	M	M	M
Financial Management	S	S	S	S	MS	MS
Project Management	MS	MS	MS	MS	MS	MS
Procurement	MS	MU	MU	MU	MS	MS
Monitoring and Evaluation	MS	MS	MS	MS	S	S

BASIC INFORMATION – ADDITIONAL FINANCING (Sustainable Rural Water Supply and Sanitation Development Project - Second Additional Financing - P181421)




Project ID	Project Name	Additional Financing Type	Urgent Need or Capacity Constraints
P181421	Sustainable Rural Water	Cost Overrun/Financing Gap	No

	Supply and Sanitation Development Project - Second Additional Financing		
Financing instrument	Product line	Approval Date	
Investment Project Financing	IBRD/IDA	31-Jan-2024	
Projected Date of Full Disbursement	Bank/IFC Collaboration		
31-Oct-2026	No		
Is this a regionally tagged project?			
No			

Financing & Implementation Modalities

<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a Non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)
<input type="checkbox"/> Contingent Emergency Response Component (CERC)	

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed	
IBRD					%
IDA	59.50	44.10	15.10		74 %
Grants					%

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Sustainable Rural Water Supply and Sanitation Development Project - Second Additional Financing - P181421)

FINANCING DATA (US\$, Millions)

SUMMARY (Total Financing)

	Current Financing	Proposed Additional Financing	Total Proposed Financing
Total Project Cost	62.60	7.64	70.24
Total Financing	62.60	7.64	70.24
of which IBRD/IDA	59.50	7.64	67.14
Financing Gap	0.00	0.00	0.00

DETAILS - Additional Financing

World Bank Group Financing

International Development Association (IDA)	7.64
IDA Credit	7.64

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Kyrgyz Republic	7.64	0.00	0.00	0.00	7.64
National Performance-Based Allocations (PBA)	7.64	0.00	0.00	0.00	7.64
Total	7.64	0.00	0.00	0.00	7.64

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any other Policy waiver(s)?

Yes No

INSTITUTIONAL DATA

Practice Area (Lead)

Water

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Verena Schaidreiter	Team Leader (ADM Responsible)	Water Supply and Sanitation	SCAWA
Odete Duarte Muximpua	Team Leader	Water Supply and Sanitation	SCAWA
Irina Goncharova	Procurement Specialist (ADM Responsible)	Procurement	EECRU
Tural Jamalov	Financial Management Specialist (ADM Responsible)	Financial Management	EECG1
Fajar Argo Djati	Social Specialist (ADM Responsible)	Social Safeguards	SCASO
Lulwa N GH H Ali	Environmental Specialist (ADM Responsible)	Environmental Safeguards	SCAE1
Adis Medetov	Procurement Team	Procurement	EECRU
Cecilia Belita	Team Member	Operations	SCAWA
Dilip Kumar Prusty Chinari	Team Member	Financial Management	WFACS
Jaime Palalane	Peer Reviewer	Water Supply and Sanitation	SAEW3
Jenny Helena Dangre	Team Member	Legal	LEGLE
Khairy Al-Jamal	Team Member	Water Supply and Sanitation	SSAW1
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Natalya V. Iosipenko	Team Member	Team Assistant	ECCKG

Ndeye Awa Diagne	Peer Reviewer	Water Supply and Sanitation	SAWW4
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Sylvie Ngo-Bodog	Team Member	Team Assistant	SCAWA
Togzhan Alibekova	Team Member	Water Supply and Sanitation	SCAWA
Extended Team			
Name	Title	Organization	Location
Elisabeth Sherwood	Economist	Independent Consultant	Washington
Leyla Talipova	Water Supply and Sanitation Specialist	Independent Consultant	

I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Introduction

1. **This Project Paper seeks the approval of the World Bank’s Board of Executive Directors for an additional IDA credit in the amount of US\$7.64 million for a second Additional Financing (AF-2) to the Sustainable Rural Water Supply and Sanitation Development Project (SRWSSDP).** The parent project in the amount of SDR 16.90 million (US\$23.50 million equivalent) of IDA financing (IDA credit 59070; IDA grant D1380) was approved by the Board on September 30, 2016, and became effective on February 3, 2017, with the original closing date of June 20, 2022. It was followed by a first Additional Financing (AF-1) of SDR 26.40 million (US\$36.00 million equivalent) which was approved on June 22, 2017, and became effective on September 7, 2018, and extended the closing date to June 30, 2025.

2. **The proposed AF-2 is required to finance cost overruns, on both water supply and sanitation investments.** The AF-2 responds to the request of the Government of the Kyrgyz Republic (GoKR) in a letter, dated September 18, 2023, to cover a financing gap within the existing scope of the SRWSSDP, particularly under Component 1 (Water Supply Investments) and Component 2 (Sanitation Development). The financing gap occurred mainly due to: (a) the complexity of some subprojects and higher market costs for construction materials as a result of the Coronavirus Disease 2019 (COVID-19) pandemic and Russia’s invasion of Ukraine; (b) SDR/US\$ exchange rate fluctuations and subsequent losses; and (c) financial constraints of households, especially poor households, to participate in the results-based incentive grants program (RBIG).

3. **The project is performing well and meets the criteria for additional financing.** It has been rated *Moderately Satisfactory* for implementation progress (IP) and development objectives over the past 12 months. The project is compliant with legal covenants, including audit and financial management (FM) reporting requirements. The project's overall risk rating is *Moderate*.

B. Background and Context

4. **The SRWSSDP has been designed as part of a programmatic framework supporting the government’s vision laid out in the “Program for the Development of Drinking Water Supply and Wastewater Disposal until 2026”.**¹ The Program articulates general principles for sector development such as: (a) a clear separation of functions (policy, operation and regulation); (b) autonomy, accountability, and efficiency in service delivery; (c) principles of cost-recovery and financial sustainability; and (d) environmental sustainability and climate resilience. It also sets out ambitious targets, such as achieving near universal access to safely managed water supply and sanitation (WSS) services in the country.² Despite good progress over the past decade, WSS access rates remain low, with large urban-rural and intraregional disparities: in 2022, 77 percent of households across the country had access to safely managed water supply services, and only 67 percent of households in rural areas.³ The impact of poor WSS is estimated to cost the country about US\$120 million per year or 1.64 percent of gross domestic product (GDP).⁴

5. **The SRWSSDP aims to support the government in developing, implementing, and institutionalizing models for improved rural WSS service delivery, while addressing sustainability holistically, including by building climate resilience.** The Kyrgyz Republic—including the project area covering Chui, Issyk-Kul, and Osh regions—has high exposure and thus vulnerability to extreme temperatures/droughts, extreme rainfall/floods, and geophysical hazards.

¹ At appraisal, the “Water Supply and Sanitation Development Strategy until 2026”, approved by Government Decree #155 dated March 28, 2016, was the main sector strategy; it was later replaced by the current Program, approved by Government Decree #330 dated June 12, 2020.

² In rural areas, the target is to reach 90 percent coverage for water services and 70 percent for sanitation systems.

³ WHO/UNICEF Joint Monitoring Program. Source data for the Kyrgyz Republic: <https://washdata.org/data/household#!/>

⁴ Economic losses due to lack of improved water supply consider health care costs, productivity costs and premature death. Source: World Bank. 2019. Central Asia: Regional Water Security (internal report). Washington, DC.

The country experienced at least US\$14 million in average annual agricultural losses between 1991–2011 which are almost entirely attributable to drought and water shortages.⁵ The annual average population affected by floods is about 27,000, with an annual average loss of US\$73 million.⁶ Between 1960–2010, average annual temperatures in the Kyrgyz Republic have risen approximately 1.1°C. Projections indicate that the country could experience up to 5.6°C of warming—considerably above the global average rise of 3.7°C—by 2090s.⁷

6. As glaciers in the region continue to melt due to rising temperatures, more intense flood events in the winter and reduced water flow in the summer are expected. The likelihood of severe drought events is expected to more than double from 14 percent in 2020–2039 to 31 percent in 2040–2059, putting significant pressure on the country's water supply, and on the poor, typically working, or relying on, rural agriculture for livelihood or subsistence. Likewise, rainfall-induced mudflows are expected to intensify, especially in the country's southern regions. The country has 5,000 zones susceptible to mudflows, of which 3,500 are in the south.⁸ Climate change will also increase sanitation-related risks to public health and, with floods and droughts expected to become more intense and frequent, will exacerbate the spread and transmission of water-related diseases. In addition to supporting the development of climate-resilient infrastructure, the SRWSSDP aims to strengthen institutions and the regulatory environment at the national level and to build the capacity of government entities and service providers at the local level to support climate-informed decision-making and sector reform.

7. The SRWSSDP remains a high priority for the GoKR and an important contribution to its aspirations to achieve the Sustainable Development Goal 6 and its Nationally Determined Contribution (NDC). Water is among the priority sectors for resilience building outlined in the country's NDC. The improvements reached in the WSS systems are in line with the gains derived from the mitigation and adaptation actions identified in the NDC, which pledges to reduce greenhouse gas (GHG) emissions by 11.5–13.8 percent below business-as-usual levels by 2030.⁹ Through the parent project and the AF-1, activities have included: (a) water supply investments to increase water availability, improve service reliability and operational and financial efficiency, thereby reducing greenhouse gas (GHG) emissions and contributing to climate resilience; (b) water, sanitation, and hygiene (WASH) investments to boost positive public health outcomes and protect water resources; and (c) institutional strengthening investments that increase cost recovery and support climate-informed water sector reform. The AF-2 will build upon existing project activities and be used to fully achieve its development objectives. Thus, the project development objectives (PDO) and the project scope, as designed, remain highly relevant in combating some of the most acute development challenges in the country, including the risks of droughts, water shortages, and floods which are further exacerbated by climate change.

8. The SRWSSDP is aligned with the new World Bank's Country Partnership Framework (CPF) for the Kyrgyz Republic for FY24-FY28¹⁰. The project contributes to Objective 2.1 (increase access and efficiency in the water and agriculture sectors) and supports greener and more inclusive growth through investments and reforms targeting WSS services, with a focus on improving operational efficiency and reliability and reducing regional disparities in service delivery. The project has a clear poverty focus, including specific design elements to target and extend benefits to the poorest and most vulnerable households and contributes to reducing gender disparities in rural communities by improving access to water thus enabling women to engage in other economic activities.

⁵ Kyrgyz Republic. 2016. *Third National Communication of the Kyrgyz Republic under the United Nations Framework Convention on Climate Change*. Bishkek.

⁶ Central Asia Regional Economic Cooperation Program. 2022. *Country Risk Profile: Kyrgyz Republic*.

⁷ World Bank Group and Asian Development Bank. 2021. *Climate Risk Profile: Kyrgyz Republic*.

⁸ Global Facility for Disaster Reduction and Recovery. 2011. *Kyrgyz Republic. Climate Risk and Adaptation Country Profile*. Washington, D.C.: World Bank.

⁹ Kyrgyz Republic. 2021. *Updated Nationally Determined Contribution*. Bishkek.

¹⁰ Report No. 182689-KG, discussed by the Board on October 31, 2023.

C. Parent Project and Performance

9. The PDOs of the SRWSSDP are: (a) to improve access and quality of water supply and sanitation services in the Participating Rural Communities; and (b) to strengthen the capacity of the Recipient's institutions in the water supply and sanitation sector. The project consists of four components: (a) Water Supply Investments; (b) Sanitation Development; (c) Institutional Strengthening; and (d) Project Management.

10. To date, the project has gone through two restructurings. The first restructuring was conducted in 2017 to process the AF-1 aimed at upscaling the project activities, and the second restructuring in 2020 with changes aimed at increasing the IDA financing percentage to 100 percent for all works.

(a) First restructuring: AF-1 (scale-up). The AF-1 in the amount of SDR 26.40 million (US\$36 million equivalent) of IDA financing (IDA credit 60880; IDA grant D2040) was approved on June 22, 2017, and became effective on September 7, 2018. The total government contribution was US\$11.7 million. The AF-1 scaled up the scope of the original project activities and increased the number of target beneficiaries. It also introduced a sector-wide professional development program and a pilot to improve household sanitation through the RBIG. The Results Framework (RF) was modified to capture the expanded scope of the additional activities, and the closing date was extended by three years, from June 30, 2022, to June 30, 2025, to ensure an adequate implementation period of the scaled-up project activities.

(b) Second restructuring: change in counterpart funding. A second project restructuring was approved on May 12, 2020. It responded to the GoKR's request to increase the IDA financing percentage to 100 percent for all works (under Components 1 and 2) due to the fiscal impacts of the COVID-19 pandemic, which were limiting the government's ability to co-finance the civil works under the project. Some targets in the RF were adjusted downwards to reflect the reduced total project financial envelope.¹¹

11. Overall project implementation is progressing well, despite some delays caused by technical difficulties in some water supply subprojects as well as due to the COVID-19 pandemic. Both IP and progress towards the PDO are rated *Moderately Satisfactory*. All project component ratings are *Satisfactory* or *Moderately Satisfactory*, except for Component 2, which is rated *Moderately Unsatisfactory* due to delays in the construction/rehabilitation works of sanitation facilities and implementation of the RBIG. During its first years of implementation, the project suffered some delays in the preparation of detailed designs as well as works execution due to technical complexities (for example, rugged topography, hydrogeological context) in some water supply subprojects (for example, in Otuz-Adyr, Gulbaar, Grigorievka and Sultan) as well as under some sanitation investments. From 2020 onwards, some further delays were imposed by the COVID-19 restriction, which delayed the pace of implementation of most components by one year. That said, a number of measures to fast-track implementation have been agreed on (for example, increase the pace of construction works with multiple construction gangs for all contracts under implementation, expedite the design of the outstanding schemes, and close contract monitoring to proactively identify and resolve any potential bottlenecks). Disbursements stand at 74.5 percent (or US\$44.10 million) with 78 percent committed and are projected to increase to 80 percent (or US\$47.40 million) by the end of June 2024.

12. Most project activities are now at an advanced stage of implementation and on track to be completed by the current project closing date of June 30, 2025, except for two key water supply works contracts (Gulbaar and Otuz-Adyr). Gulbaar and Otuz-Adyr are the two most complex water supply subprojects due to their geographical location, hydrogeological features, and associated challenge of finding a suitable water source. Unlike for the other subprojects,

¹¹ The reduced financial envelope resulted in a US\$1.7 million financing gap. The costs of the two water supply subprojects (Gulbaar, Otuz-Adyr) increased from original US\$6.13 million (estimated at approval of the parent project) to US\$17.2 million. The deficit (US\$11.07 million) was subsequently partially reduced due to savings under completed subprojects. The current deficit for the two subprojects is US\$7.1 million.

a regional feasibility study had to be prepared for these two subprojects after the failure to find a cost-effective technical solution. The tender process for the feasibility study took longer than expected due to difficulties in finding suitable bidders during the COVID-19 pandemic. Additionally, at the final stage of the detailed design, a new land plot for Otuz-Adyr subproject had to be identified,¹² all of which resulted in higher costs than expected and cumulative delays of about 12 months.

13. While overall project implementation is on a positive path, there is a financing gap of US\$7.64 million. The financing gap is associated with: (a) the complexity of some subprojects and higher market costs for construction material due to market changes in the aftermath of the COVID-19 pandemic and Russia's invasion of Ukraine; (b) SDR/US\$ exchange rate fluctuations and subsequent losses; (c) change in social fund policies and sales taxes, leading to higher project deductions since 2020; and (d) financial constraints of households, especially for poor households, to participate in the RBIG program. Due to this financing gap, the project is unlikely to fully achieve some outcome and intermediate indicators; additional financing is required to cover this gap and enable the project to deliver all planned results. Specifically, two (out of six) PDO indicators and two (out of 14) intermediate results indicators are unlikely to be fully achieved without additional financing, thus significantly downscaling the original project scope. Without additional funding, the project impact would be reduced to 86 percent (by 27,013 people)¹³ of the original target for water supply and to 74 percent (by 1,750 people) for sanitation, which would, in turn, affect the Economic Rate of Return (ERR). An overview of the project status per component is provided below.¹⁴

14. Component 1: Water Supply Investments (current financing: US\$49.30 million). This component finances goods, works, and services for the construction and rehabilitation of 57 climate-resilient water supply subprojects, benefiting 193,000 people in 94 villages in Chui, Issyk-Kul, and Osh regions. The water supply investments contribute to both climate adaptation and mitigation through: (a) the diversification of water supply sources and increased storage capacity (of water reservoirs) to better confront droughts; (b) the replacement of key assets (for example, intake structures, pumps, distribution network) to reduce non-revenue water and overall energy requirements, thereby reducing GHG emissions, and to increase operational and financial efficiency; and (c) installation of water meters to regulate water consumption and adapt to climate change. The progress of the component is *Moderately Satisfactory*. To date, 34 water supply subprojects, considering beneficiaries' feedback on their designs, have been completed and commissioned, benefiting 138,104 people (72 percent of the target) in 58 villages. Civil works are ongoing in 15 subprojects (average physical works progress: 68 percent), four subprojects are under tendering, and detailed designs for the last four subprojects are under finalization. The actual works implementation for two subprojects (Gulbaar, Otuz-Adyr) is compromised by a cost escalation and requires additional financing.

15. Component 2: Sanitation Development (current financing: US\$4.45 million). This component finances goods, works, consultancy services, trainings, and RBIGs for climate-resilient, improved sanitation facilities in the project villages. Through the installation of proper wastewater collection and treatment facilities at social institutions and at the household level, the sanitation investments contribute to climate adaptation by reducing: (a) environmental pollution; and (b) public health risks associated with exposure to untreated wastewater in the event of flooding exacerbated by climate change. The progress of the component is *Moderately Unsatisfactory* due to delays in the rehabilitation of sanitation facilities and the implementation of the RBIG. **Sub-component 2.1: Rehabilitation of Sanitation Facilities** is financing the retrofitting of existing sanitary facilities in social institutions (for example, schools and other eligible public buildings). To date, WASH facilities in 44 of the planned 99 social institutions were rehabilitated. Despite slow progress, primarily due to delays in the preparation of the detailed designs, 90 percent of the designs have now been completed and will be further adjusted, following public consultations involving disabled

¹² The land plot recommended earlier in the feasibility study was allocated for the new Osh international airport.

¹³ Otuz-Adyr subproject covers 10 villages (16,898 people) and Gulbaar subproject covers one village (10,115 people).

¹⁴ Project costs per component as revised at the second project restructuring.

people, to make the WASH facilities to the maximum extent possible accessible to all. The target is expected to be fully achieved. **Sub-component 2.2: Enabling Environment, Capacity Development and Communications** supports the development and implementation of a communications strategy to promote improved WASH practices in social institutions. To date, 62,979 people (of which 57 percent are female) were trained, exceeding the target of 30,500. **Sub-component 2.3: Results-Based Incentives for Household Sanitation Development** provides grants to households in all project villages to partially finance the upgrades of their sanitation facilities. To date, 2,545 people in 509 households (out of the planned 6,750 people in 1,350 households) have benefited from the RBIG. Reasons for slow progress include: (a) low priority given to WASH by households; and (b) lack of financial resources, especially for poor households, to participate in the program. To accelerate the RBIG, ARIS has already started to enhance its outreach activities through: (a) expanding media outreach to the national level (for example, TV spots, radio); (b) organizing peer-to-peer exchanges among subproject beneficiaries; and (c) establishing group discussions for women on WASH. Climate resilient standard designs have been prepared and are ready to be implemented in all remaining households. However, to address the financial constraints of households, especially of poor households, an increase of the grant contribution is required.

16. Component 3: Institutional Strengthening (current financing: US\$5.35 million). This component finances goods, services, and training to strengthen sector institutional capacity at the national and local levels for sustainable service delivery and climate-informed sector reform. The progress of the component is *Satisfactory*. **Sub-component 3.1 National Level** assists the GoKR in the implementation of WSS sector reforms. Remarkable progress has been made to date, including the revision of the current WSS law and design norms and constructions standards, as well as the development of an Institutional Support Plan for the Department of Drinking Water Supply and Wastewater Disposal (DDWSWD) under the State Agency for Architecture, Construction, Housing and Public Utilities (Gosstroy),¹⁵ and of a Sector Professional and Vocational Development Program. **Sub-component 3.2: Local Level** aims to develop the capacity of local authorities (Aiyl Okmotu (AO)) and rural water service providers,¹⁶ including on operation and maintenance (O&M), tariff setting and billing, water disinfection and water quality testing, customer orientation and human resource management, and the provision of start-up equipment for the O&M of the water supply schemes. To date, 49 service contracts between service providers and AOs have been signed, and 39 service providers signed agreements with district Sanitary Epidemiological Surveillance departments under the Ministry of Health, which are taking water quality samples on a regular basis. A billing system with an integrated call center feature to respond to customer's requests/complaints was introduced in 30 completed subprojects with water tariffs set per cubic meter consumed. **Sub-component 3.3. Sector Professional and Vocational Development Program** finances an institutional capacity and training needs assessment and the preparation and implementation of a certificate-oriented, long-term capacity development program for water sector professionals. The Program and its Roadmap have been finalized, and actual implementation, albeit delayed, will be launched in early 2024.

17. Component 4: Project Management (current financing: US\$3.50 million). This component finances all project management-related costs. The component is rated *Moderately Satisfactory*. The Community Development and Investment Agency (ARIS) (the Implementing Entity) has demonstrated its capacity to carry out all project management aspects effectively. The two current vacancies (one Procurement Assistant, a new position; and one Senior Financial Manager, to be replaced) will be filled by the end of November 2023. In the meantime, the Senior FM Specialist, hired for the parent project, will assume FM responsibilities for the AF-1.

18. Environmental and Social (E&S) Safeguards' performance is Satisfactory with low-risk ratings for both E&S. ARIS is adequately staffed at the national and sub-national levels. Supervision and capacity-building support to the implementing entities, including civil work contractors, have been maintained regularly across subprojects. The

¹⁵ Approved in May 2022.

¹⁶ This includes Municipal Water Enterprises and Community Drinking Water User Unions (CDWUUs).

project has consistently applied impact avoidance measures considered under Operational Policy (OP) 4.12 through engineering designs and use of the existing alignments. Considering the small size of the land required for the water intake and reservoirs and the voluntary approach for such land acquisition, social risks were assessed as *Low*. Environmental, Social, Health, and Safety risks are mainly associated with civil works, which have been addressed as part of the standardized mitigation measures in subproject Environmental and Social Management Plans (ESMPs). A project-level system is in place to monitor E&S risks and impacts; a project-level Grievance Redress Mechanism (GRM) is also in place and operational.

19. Procurement performance is *Moderately Satisfactory*. The procurement arrangements in ARIS remain generally acceptable to the World Bank. ARIS has access to appropriate tools and knowledge that enables it to carry out its functions effectively, with more emphasis required in optimized packaging of procurement activities and contract management.

20. FM performance is *Moderately Satisfactory*. The FM arrangements, established by ARIS—including budgeting and planning, accounting and financial reporting, flow of funds, internal controls, and external audits—have been reviewed regularly during implementation and found to be adequate and acceptable to the World Bank. No major FM issues were raised in the project audit reports and management letters submitted to date. There are not outstanding audits. The latest implementation support mission (April 2023) downgraded the FM performance due to delays in hiring a Financial Manager at the central level of the ARIS which, however, was filled in September 2023.

D. Rationale for the Additional Financing

21. The World Bank received a request from the GoKR in a letter, dated September 18, 2023, for an additional IDA credit in the amount of US\$7.64 million for an AF-2 to the SRWSSDP. The proposed AF-2 will cover a financing gap within the existing scope of the SRWSSDP resulting from a cost overrun, particularly under Component 1 (Water Supply Investments) and Component 2 (Sanitation Development). It will allow to complete the construction of all 57 water supply schemes (against the current projection of 55) and provide access to improved water sources to 193,000 people in 94 villages (against the current projection of 165,987 people in 83 villages). Further, all 6,750 people as initially planned will benefit from sanitation improvements through the RBIG (against the current projection of 5,000 people). Thus, the PDO and all project targets will be fully achieved.

22. The closing date of the AF-2 will be set to June 30, 2026, and the closing date of the parent project and the AF-1 will be extended by 12 months from June 30, 2025, to June 30, 2026, to be aligned with the AF-2 closing date. The extension of the closing date of the parent project and the AF-1 was requested in a letter sent by the Ministry of Finance on October 11, 2023, to allow sufficient time for the completion of all project activities. The extension will compensate for cumulative delays of 12 months, driven by earlier implementation delays and the lack of funding to proceed with the works execution for Gulbaar and Otuz-Adyr subprojects. The duration of the proposed extension was calculated by ARIS and verified by the Bank task team and considers the length of the construction season in the country, including post-construction operational assistance in the project areas.¹⁷

23. The extension will be complemented by a course of tailored actions included in the detailed action plan prepared by ARIS to ensure timely completion of the remaining project activities by the extended closing date. The key actions are listed in Table 1.

¹⁷ Any costs which incur during the Defect Liability Period after the project closing date will be covered by the local administrations on behalf of the GoKR.

Table 1. Action Plan

Activities	Status (September 2023)	Timeline
Component 1		
1. Construction of the WSS system in Gulbaar	Detailed design completed and approved by the state expertise.	<ul style="list-style-type: none"> Finalization of the detailed design by the end of December 2023. Signing of the civil works contract in June 2024. Works completion by the end of November 2025. Commissioning in January 2026.
2. Construction of the WSS system in Otuz-Adyr	Detailed design is 95 percent ready (the land allocation issue has been resolved) and is being finalized.	<ul style="list-style-type: none"> Finalization of the detailed design by the end of February 2024. Signing of the civil works contract in September 2024. Works completion by the end of February 2026. Commissioning in April 2026.
Component 2		
3. Rehabilitation of sanitation facilities in selected schools and other eligible public buildings within the project villages	Rehabilitation in 44 schools completed. Works are ongoing in 21 schools. Detailed designs are ready for 24 schools and kindergartens.	<ul style="list-style-type: none"> Rehabilitation of sanitation facilities in 21 schools (estimated 11,900 beneficiaries) to be completed by the end of December 2023. Rehabilitation of sanitation facilities in 8 schools and 12 kindergartens (estimated 6,500 beneficiaries) to be completed by the end of December 2024. Rehabilitation of sanitation facilities in 4 kindergartens and 10 rural health centers (estimated 3,300 beneficiaries) to be completed by the end of December 2025. School and household outreach WASH outreach will continue until the revised closing date.
4. Construction of a safe conveyance, treatment, and disposal system for wastewater from social institutions and surrounding multi-storey apartment buildings in Kurmontu and Ak-Bulak settlements	TOR is being developed.	<ul style="list-style-type: none"> Tender to be launched in mid-December 2023. Signing of the design contract by the end of June 2024. Detailed designs completed by the end of November 2024. Approval of the detailed design by the end of December 2024. Signing of works contract by the end of June 2025. Works completion by the end of December 2025.
5. RBIG for households	To-date, 509 households received incentive grants; 235 households applied for a grant.	It is planned to provide grants to 480 households in 2024 and 126 in 2025.
Component 3		
6. Implementation of a Sector Professional and Vocational Development Program	The Sector Professional and Vocational Development Program and its Roadmap were developed and piloted.	<ul style="list-style-type: none"> Implementation of Year 1 of the Program from January to December 2024. Implementation of Year 2 of the Program from January to December 2025.

24. The project RF will also be amended to better align the project activities with the expected results, including related to climate change and gender. The adjustments include: (a) the inclusion of two new intermediate results (sub-)indicators on climate change and gender, (b) revisions to the end target values of four intermediate results indicators to reflect implementation progress to date; and (c) an extension of the end target date of all PDO and intermediate results indicators to be aligned with the extended project closing date.

II. DESCRIPTION OF ADDITIONAL FINANCING

25. The key changes under the AF-2 include the following: (a) changes to project component costs, associated with the provision of US\$7.64 million to address the cost overrun; (b) a closing date extension of the parent project and the AF-1 by 12 months, from June 30, 2025 to June 30, 2026; and (c) revisions to the RF to reflect the implementation progress and the remaining project implementation period. The PDO and the project scope remain unchanged, with the existing four components and all original sub-components. No changes are envisioned in the implementation arrangements or project management structure.¹⁸

E. Changes to Project Components and Cost

26. Component 1: Water Supply Investments (total revised cost: US\$56.37 million, of which US\$7.07 million additional financing). This component will continue to finance the construction/rehabilitation of climate-resilient water supply schemes to increase access and improve the quality of services while enhancing operational and financial efficiency by reducing energy costs and GHG emissions, thus contributing to adaptation and mitigation, and enhancing resilience to climate change. The AF-2 will enable to finance the civil works for the last two water supply subprojects (Gulbaar, Otuz-Adyr) and to provide access to safe drinking water to 27,013 people, thereby enabling the project to reach 193,000 beneficiaries as envisaged under the parent project and its AF-1. The detailed designs for both subprojects are almost complete, and works are expected to be contracted in June and September 2024, respectively.

27. Component 2: Sanitation Development (total revised cost: US\$4.82 million, of which US\$0.37 million additional financing). This component will continue to finance sanitation improvements in the project villages. Sub-component 2.1 will continue to finance the construction/rehabilitation of inclusive sanitation facilities in social institutions in selected villages. The AF-2 will enable financing the detailed design and civil works for a safe conveyance, simplified treatment, and disposal system for wastewater from one social institution, including from surrounding communal multi-storey apartment buildings in Kurmontu and Ak-Bulak settlements (in Kurmontu water supply subproject) in Issyk-Kul region, thereby protecting the environment (including surface and groundwater) and increasing resilience to waterborne diseases in the project villages. Sub-component 2.3 will continue to provide grants to households in all project villages to partially finance the upgrades of their sanitation facilities. The total cost per household to upgrade their sanitation facilities is on average US\$1,300. To reach all target beneficiaries as initially planned, the AF-2 will allow to increase the grant contribution by 100 percent from currently on average US\$200 to US\$400 or 15 to 30 percent of the total cost per household, respectively. The overall approach of the RBIG remains unchanged.

28. Component 3: Institutional Strengthening (total revised cost: US\$5.55 million, of which US\$0.20 million additional financing). This component will continue to finance goods, services, and training to strengthen sector institutional capacity at the national and local levels for sustainable service delivery and climate-informed sector reform. The AF-2 will finance machinery and equipment to Gulbaar and Otuz-Adyr subprojects to ensure proper O&M and the sustainability of the water supply investments.

¹⁸ As stated in the legal agreements, ARIS is the only Project Implementing Entity of the parent project as well as of the AF-1 and the AF-2. The "Change in the Implementing Agency" as indicated in the datasheet (page 24) is made only to correct the erroneous entry (Implementing Agencies: ARIS, DDWSWD) under the parent project.

29. A summary of the total project costs per component under the original financing and the AF-1 as well as the proposed allocations under the AF-2 is presented in Table 2.

Table 2. Original and revised project costs per component

Component	Original Financing ¹ (US\$ million)	Current Financing ² (US\$, million)	Proposed AF-2 ³ (US\$, million)	Estimated Cost (US\$, million)
1: Water Supply Investments	21.10	49.30	7.07	56.37
2: Sanitation Development	3.00	4.45	0.37	4.82
3: Institutional Strengthening	2.50	5.35	0.20	5.55
4: Project Management	1.40	3.50	–	3.50
Total	28.00	62.60	7.64	70.24

¹ IDA and government financing, ² IDA and government financing after 2nd restructuring, ³ 15 percent contingencies are included under Component 1 and 2.

F. Changes to the Results Framework

30. **The RF will be revised to better align the project activities with the expected results.** The amendments to the RF will include: (a) the inclusion of one new intermediate result sub-indicator to reflect corporate requirements on climate change; (b) the inclusion of one new intermediate results indicator on gender; and (c) the revision to the end target value of four intermediate results indicators to reflect the implementation progress to date. These revisions are summarized in Table 3. Further, while the PDO indicators will remain unchanged, the end target dates of all PDO and intermediate results indicators will be aligned with the extended project closing date.

Table 3. Summary of changes to the RF

Indicator	Action	Rationale for revision
Component 1		
Intermediate results sub-indicator: New piped household water connections resulting from the project intervention in project areas affected by droughts (percentage)	New indicator	Inclusion of one climate indicator as per corporate requirements.
Intermediate results indicator: Time spent by women and girls per day on water collection in project areas (minutes)	New indicator	Inclusion of one gender indicator to monitor reduced time burden on the female project beneficiaries.
Intermediate results indicator: Social institutions in project areas connected to the water supply network (number)	Revised target value <u>Original target:</u> 99 <u>Revised target:</u> 230	An upward revision of the target value due to connecting a higher number of social institutions to the water supply network under the project than originally planned. The current value is 208 with projections to connect 230 social institutions by the project closing date.
Component 2		
Intermediate results indicator: People trained to improve hygiene behavior and sanitation practices	Revised target value <u>Original target:</u> 34,800	An upward revision of the target value considering a wider outreach to the project beneficiaries to date and planned

(number)	<u>Revised target:</u> 81,000	activities within the extended implementation period.
Component 3		
Intermediate results indicator: Connection plan for low-income households in project areas (number)	Revised target value <u>Original target:</u> 40 <u>Revised target:</u> 56	An upward revision of the target value is related to the actual progress and plans for development of connection plans.
Intermediate results indicator: Implementation of professional and vocational program (number)	Revised target value <u>Original target:</u> 4 Annual Programs implemented <u>Revised target:</u> 2 Annual Programs implemented	A downward revision of the target value given that due to delays in the development and design of the program, actual implementation will only start in 2024. Instead of 4, only 2 Annual Programs will be implemented.

G. Changes to the Closing Date

31. The closing date of the AF-2 will be set to June 30, 2026, and the closing date of the parent project and the AF-1 will be extended by 12 months from June 30, 2025, to June 30, 2026. This extension will provide sufficient time to complete all remaining project activities and enable the full achievement of the PDO.

III. KEY RISKS

32. The Overall Risk for the AF-2 is assessed as *Moderate*, lower than the *Substantial* risk rating at the approval of the parent project and the AF-1. At appraisal, the key risks to the parent project were largely related to the operating environment and to institutional capacity constraints. While some of those risks remain relevant and applicable to the AF-2, the overall residual risk is lowered to *Moderate*. This considers the overall good progress in implementation, lessons, and effective risk mitigation measures implemented to date. Residual Political and Governance, Sector Strategies and Policies, Institutional Capacity for Implementation and Sustainability, and Fiduciary risks remain *Substantial*, while all other risks are *Moderate* or *Low*. A description relevant to each *Substantial* risk category is provided below.

33. The residual Political and Governance risk is *Substantial* due to the potential impact of recurrent changes in the government systems on sector decision-making and ARIS operations. This risk will continue to be mitigated through the provision of training to facilitate the onboarding of new management and ARIS staff. There is also a risk associated with the operating environment and in particular the risk of fraud in the award and implementation of works contracts. These issues are common to World Bank-financed operations in the infrastructure sector and are considered as general portfolio issues. This risk will be mitigated by working with ARIS to increase the verification of bidding documents to identify unqualified bidders prior to contract award and to increase the technical supervision (including by the supervision consultant) and identify areas of concern early.

34. The residual Sector Strategies and Policies risk is *Substantial* and reflects the challenges associated with delays in the approval procedures as well as the implementation of water sector strategies and policies supported by the project, which require substantial financing, strong government commitment and parliamentary support. Also, tariff policies, methods and procedures that govern rural water service providers have not yet been enacted, exposing rural tariffs to political interference at the local government level. To mitigate the risk, the project is providing extensive technical support on institutional capacity building, complemented by the development of pro-poor tariff setting

procedures, and its institutionalization through the World Bank-funded Climate Resilient Water Service Project (CRWSP) (P173734).

35. The residual Institutional Capacity for Implementation and Sustainability risk is *Substantial* at both local and national level and may potentially affect the quality of water service delivery and sustainability of the infrastructure investments. The project is addressing these risks through various measures: (a) regular project implementation monitoring, training, and technical support to service providers of commissioned water systems by ARIS project team¹⁹; and (b) implementation of an institutional development plan for the DDWSWD.²⁰

36. The residual Fiduciary risk is rated *Substantial* and reflects prevalent issues related to weak procurement and contract management capacity. Risk mitigation measures will include: (a) strengthening procurement capacity of the implementing entity (including tender committee members) and efficiency of managing procurement processes; (b) clear definition of decision-making processes, accountability, and integrity standards for procurement decisions (as described in the Project Operational Manual (POM)); (c) regular capacity building of the project staff on contract management; and (d) close supervision by the World Bank.

IV. APPRAISAL SUMMARY

H. Economic Analysis

37. The project economic analysis has been updated as part of the preparation of the AF-2 using the same structure of costs and benefits as in the original economic analysis and that of the AF-1. The socioeconomic benefits from the project are generated by improved quality of water supply services to households and improved sanitation services in schools and other public buildings, as well as in some households. Improving these services is expected to enhance welfare by reducing coping costs (for example, time saved from water collection and reduced need for in-house drinking water treatment). In addition, improving the quality of WSS services, and hygiene practices is expected to produce welfare benefits through improved health.

38. The current economic analysis uses updated project costs and investments timetables and updated beneficiary figures, with projections from late 2023 to the proposed closing date of June 30, 2026. The total project period has been lengthened from 25 to 30 years, reflecting the longer implementation period. The analysis incorporates: (a) the cost of all project components, including estimated O&M costs and project implementation costs; and (b) all measurable benefits, including decreases in the time spent collecting water, welfare gains at household level associated with reduced need for in-house treatment (for example, boiling of water), and reduced incidence of water-related diseases such as infectious hepatitis and diarrhea as a result of improved access to quality water and decline in the reliance on standing water sources as well as improved sanitation facilities. The benefits of sanitation improvements were not included in the economic analysis due to their relatively small size and the difficulty in calculating and ascribing the benefits from sanitation investments in schools and other social institutions.

39. The revised estimated ERR is 11.6 percent, with a Net Present Value (NPV) of US\$35.4 million, assuming a social discount rate of 5 percent. This is less than the estimation conducted in 2017, which was 15.7 percent and US\$59.3 million, which is due to a longer implementation period, a slower receipt of water services by beneficiaries, moderately

¹⁹ Since project inception, the operating cost coverage ratio of the service providers in project areas (intermediate results indicator) increased from on average 0.17 in 2016 to 1.71 in 2023; these results indicate improved performance of service delivery by the service providers as well as increased customer satisfaction.

²⁰ The institutional development plan will be implemented under the CRWSP as well as with support from other donors. One of the recommendations in the institutional development plan (which will be implemented with support of the Asian Development Bank) is to establish a national-level and district-level state enterprises to provide technical support to local service providers thereby supporting economy of scale.

higher costs, a reduction in total beneficiaries, and a lower US\$ value of time spent collecting water. Due to the relative certainty of costs and beneficiaries at this stage of implementation, sensitivity analysis has not been carried out.

40. The project carries GHG reductions. Estimates of GHG reductions were conducted in 2017, indicating that the project is expected to generate reductions of approximately 367,984 tCO₂-eq through the reduction in the amount of water boiled at home, for an average annual reduction in 12,266 tCO₂-eq over the 30 years of the project. Gross GHG emissions were estimated to be 56,106 tCO₂-eq over the life of the project. Incorporating the value of the reductions into the economic analysis results in an ERR of 13.0 percent using the low value of GHG emissions and an ERR of 14.4 percent using the high value. Annex 1 provides additional information.

I. Technical

41. The World Bank has reviewed and confirmed that the proposed investments reflect government priorities, are aligned with strategic sector principles, address key technical issues and are resilient to relevant climate risks. The infrastructure solutions proposed are considered technically sound, supported by engineering investigations and designs, and consider operational capacity constraints and life-cycle costs to promote project sustainability.

42. The water supply investments in Gulbaar and Otuz-Adyr (under Component 1) are based on sound feasibility assessments and climate resilient engineering designs and are expected to enable access and reliability of water supply services in these two target areas. The designs and cost estimates were optimized to ensure high investment efficiency, using a single system to supply multiple villages within the project areas, taking into consideration current and future demand as well as current and projected climate change-related impacts. Further, the proposed investments will leverage and support the institutional reforms by establishing models for aggregated systems, which will extend services to areas beyond local government boundaries. The cost estimates include provisions for escalation and contingencies, and the proposed contract packaging considers potential technical and procurement risks and incorporates in-country and sector lessons learned on infrastructure project implementation.

43. The RBIG to households (under Component 2) will build upon the existing implementation model developed and experience gained under the AF-1, which has been scaled up to all project areas during project implementation. ARIS will continue to work together with the AOs in the dissemination and implementation of the RBIG. Sanitation marketing and behavioral change will be more intensively promoted through the project, to mobilize more households and better target female headed households and women who play a key role in hygiene education at the household level. The grant contribution to the RBIG will be increased, and released throughout the construction, to minimize the financial burden on poor households. Independent verification will continue to be implemented to ensure accountability. The cost estimates have considered the recent changes in the construction market and factored in the required contingencies. Further, the project will support the construction of a safe conveyance, treatment, and disposal system for sewage in one water supply subproject to ensure a full sanitation chain. These interventions were subject to an Environmental and Social Impact Assessment (ESIA) contracted by ARIS in 2022.

44. Climate change considerations. During the preparation of the AF-1 and AF-2 and in accordance with IDA corporate requirements, the project – and in particular Components 1 and 2 activities – was assessed with respect to potential impacts associated with climate change applying the World Bank’s Climate and Disaster Risk Assessment Tool. The country, including the project areas, are exposed to high climatic risks, including droughts, high temperatures and extreme heat, floods, and mudflows. The project is explicitly designed to foster both climate adaptation and mitigation against these climate risks and reduce their impact on people’s well-being, livelihoods, and the rural economy.

45. Climate adaptation co-benefits. Components 1 and 2 support the adaptation of WSS services to climate shocks through efficiency improvements, protection and diversification of water supply sources and enhanced collection and

treatment of sewage. Under component 1, the introduction of water metering will promote water conservation and reduction of water losses in water supply systems, thus increasing the available volume of water for communities which will help them better withstand climate-related shocks to water supply such as droughts and water shortages. The project finances construction and rehabilitation using resilient design principles²¹ to ensure that each infrastructure asset is robust to climate change and capable of maintaining the desired performance across a range of climate conditions and minimize service disruptions in the face of droughts and floods. Institutional strengthening activities under Component 3 are designed to reduce vulnerability to climate risks through activities that build the ability and capacity of national and local institutions to plan for and respond to these risks.

46. Climate mitigation co-benefits. The project has also been designed to optimize climate change mitigation co-benefits through focusing on efficiency improvements. Under Component 1, this approach includes the replacement of key assets (for example, pumps, distribution network, intake structures) to reduce non-revenue water and overall energy consumption requirements for operating the water supply systems. Moreover, improved water quality will eliminate additional energy used in distributing water by trucks and the need to boil water by households. Under Component 2, proper wastewater collection and treatment will reduce GHG emission as well as protect water resources from pollution due to discharge of high biochemical oxygen demand loads from untreated sewage.

J. Financial Management

47. The AF-2 will apply the FM and disbursement arrangements in place for the parent project. ARIS is responsible for implementation of the FM function of the AF-2, including budgeting, flow of funds, accounting, financial reporting, internal controls, and auditing. FM arrangements (including budgeting and planning, accounting and financial reporting, flow of funds, internal controls and external audit) have been reviewed regularly during project implementation and found to be adequate and acceptable to the World Bank. There are no overdue Interim Unaudited Financial Reports or audit reports under the project. Those were submitted in a timely manner and found to be acceptable to the Bank. Audit reports were duly disclosed on ARIS's website. The most recent implementation support mission confirmed the FM performance rating of *Moderately Satisfactory* and the FM risk rating as *Substantial*.

K. Procurement

48. The activities under the project have been and remain subject to the World Bank's Procurement Framework. Any new procurement activities for the AF-2 will be conducted in accordance with World Bank's Procurement Regulations for IPF Recipients-Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services, dated September 2023 (Procurement Regulations). The project will also be subject to the World Bank's Anti-Corruption Guidelines, dated July 1, 2016. The client will process procurement through the World Bank's online procurement planning and tracking tool, Systematic Tracking of Exchanges in Procurement, as is being done under the parent project and AF-1. As required by the Procurement Regulations, the Procurement Plan has been prepared, setting out the selection methods to be followed by the Recipient during project implementation in the procurement of goods, works and non-consulting and consulting services financed by the Bank. The Project Procurement Strategy for Development prepared for the parent project and AF-1 has been updated to include procurement activities under the AF-2.

49. The implementing entities' capacity to perform procurement has been demonstrated to be adequate and acceptable to the Bank. Responsibility for implementation and procurement under the AF-2 will rest with ARIS who will appoint a project-specific procurement officer to oversee implementation of the AF-2. The procurement arrangements in place at ARIS were reviewed during preparation of the AF-2 in parallel to the implementation support

²¹ Based on the World Bank's Resilient Water Infrastructure Design guideline. Source: Engle, Nathan Lee; Daniel, Medina; Felter, Greg; Sean, Nelson. 2020. *Resilient Water Infrastructure Design Brief*. Washington, D.C.: World Bank Group.

arrangements for active projects that ARIS is implementing. Procurement arrangements at ARIS have been assessed to be acceptable to the Bank. The overall procurement risk for the project is *Substantial*.

K. Social (including Safeguards)

50. The project's social rating remains as *Low* and no adjustments to the existing safeguards instruments will be required under the AF-2. The AF-2 is being proposed to address financing gaps and does not envisage additional investments, nor scale-up of the existing activities beyond the approved scope of the parent project and AF-1. The project is designed to generate positive social benefits through improved water accessibility and quality as well as hygiene standards. Women, children as well as vulnerable groups are expected to benefit from the project's investments. Social risks and impacts may likely be attributed to potential impacts on land and land use for the purpose of rehabilitation of the existing and/or construction of new water supply systems (Component 1) and sanitation facilities (Component 2). Other social risks will be residual due to poor implementation. Lack of engagement and inclusive participation could result in social exclusion. Poor structural design and safety features may result in community health and safety risks, such as the spread of water-borne diseases. Such risks have been addressed as part of the subproject design and through implementation of Good International Industry Practices ('GIIPs') in the water and sanitation sector which have been incorporated into the existing Environmental and Social Management Framework (ESMF). The current approach for OP 4.12 on Involuntary Resettlement triggered under the parent project remains relevant. The project's Resettlement Policy Framework (RPF) was previously updated, consulted and subsequently re-disclosed in March 2017 (both in-country and on the World Bank website) under the AF-1. Since the scope of the AF-2 remains the same with the parent's project, no amendment to the RPF will be required and no additional social safeguards policies (OP/BP) will be triggered.

51. The social performance is *Satisfactory*. ARIS is adequately staffed both at the national and sub-national levels, who regularly perform supervision and provide capacity-building to the implementing entities, including civil-work contractors. A system is in place to screen potential land acquisition, resettlement, and land use restriction impacts. To date, the project has consistently applied impact avoidance measures considered under OP 4.12 through engineering design and use of the existing alignments and footprints. Since the start of the project, only two subprojects have required additional land and, in both cases, land plots were acquired through voluntary transactions. A project-level GRM is currently in place, supported by a regular supervision by the national PIU specialists and sub-national technical team. To date, 179 requests/complaints have been received, including 113 general inquiries, 56 complaints, two applications, two positive feedback, and six suggestions; all these complaints and inquiries have been responded to and are considered closed. Community-level engagement and consultations have been performed as part of the project implementation. Further enhancement measures will focus on improving construction safety practices, including Occupational Health and Safety, and proper housekeeping (i.e., material stacking and storage, waste management, access route, etc.) to prevent and/or minimize public safety risks.

52. Gender. The AF-2 narrows a critical gender gap in human endowments by providing access to drinking water supply and better sanitation and hygiene, freeing up time for productive and care activities. The key gender gap identified relates to unequal economic opportunities between men and women, due to the heavy burden of poor access on women. Water collection is time consuming, with 68.6 percent of women spending up to 30 minutes, 14.1 percent spending 31–60 minutes, and 9.9 percent spending one to three hours, and 1.2 percent spending over 3 hours a day on the task, vastly more time than men and boys as women are the primary (80 percent)²² household member responsible for provision of water, cleaning, and sanitation.²³ The AF-2 will increase women's access to safe water and

²² National Statistical Committee and UNICEF. 2019. *Kyrgyzstan Multiple Indicator Cluster Survey 2018, Survey Findings Report*. Bishkek.

²³ Other time-use data points to the scale of this gender gap: For example, a time-use study in 2015 found that on average, women and

reduce the time spent on fetching water, dish washing, laundry, under Component 1. A new indicator “time spent by women and girls per day on water collection in project areas” is included in the Results Framework. The AF-2 will also continue to: (a) actively engage women's groups in the sanitation marketing and behavior change campaigns given their key role within the households; (b) provide menstrual hygiene friendly facilities in schools for adolescent girls, complemented by inclusion of the menstrual hygiene management education in the WASH curriculum; establish girls' clubs and WASH committees involving AOs, village health committees, and parents; (c) support female-headed households through targeted trainings and support to ensure eligibility for the RBIG; (d) encourage female professionals and AO representatives to join the training programs under Component 3 and recruitment of women by service providers; (e) reach female post-graduate students and encourage their enrollment in the professional and vocational program; and (f) monitoring of gender-disaggregated data on WASH training beneficiaries.

53. Citizen Engagement. Citizens will continue to be engaged in project activities through consultations with different groups of stakeholders and feedback from direct and indirect project beneficiaries. Under Component 1, local community members are involved in the project at all stages: detailed design, monitoring, and evaluation, and lesson learning through community meetings, communication through PIU's field-based staff, specific project chat groups in messengers, and the project GRM. Under Component 2, in shaping and implementing information and behavior change campaigns, different groups of beneficiaries, and particularly village health committees and women's groups, have been involved in passing on the messages and providing peer support in adopting proper sanitary practices and hygiene. Feedback from schoolchildren on accessibility of completed sanitation facilities is provided to the PIU through QR codes. Under Component 3, the project promotes service-oriented management that includes feedback from consumers on the services provided to them through a call center module integrated in the service provider's billing application and a hotline for phone calls. The project guides AOs in development of connection plans for low-income households. Regular beneficiary surveys conducted in the subprojects consistently showed satisfactory results (as evidenced in the RF under indicator “Percentage of beneficiaries satisfied with the participatory process in the project”). The results of the beneficiary surveys will be publicly available on the ARIS' digital platform and discussed with AOs, service providers, and project beneficiaries after completion of each subproject. These information and awareness-building and demand-side processes are supplemented by a GRM that covers all aspects of project implementation, including, inter alia, grievances related to involuntary resettlement. The GRM data is collected, compiled, and reported in quarterly reports, including an analysis of the different types of complaints. Grievances are discussed during World Bank implementation support missions with a view to responding to feedback and adapting project procedures causing harm to beneficiaries. The lessons learned from the citizen engagement during project implementation included, among other things, the need for vigilant supervision of works in sanitation facilities, planning civil works in schools during the vacation period to avoid disruption in the education process, consideration of the distance from houses to the manholes to ensure affordable connection fees, early engagement of service providers to increase their capacity in effective management of the connection process, and active involvement of the PIU's field-based staff to immediately address beneficiaries' grievances and resolve implementation issues.

54. Conflict filter. In 2011, the World Bank introduced a conflict filter for its Kyrgyz Republic operations as a screening tool to ensure that World Bank funded projects do not exacerbate conflict risks. The parent project and the AF-1 have considered the findings of a conflict filter assessment carried out during project preparation. Key sources of potential

adolescent girls spend 4 hours and 30 minutes per day on household chores (18.8 percent of their time every day), whereas men and adolescent boys spend 1 hour and 34 minutes (6.5 percent of their time) on these activities. A UNECE study (UNECE. 2021. Childcare, Women's Employment and the COVID-19 Impact and Response: The Case of the Kyrgyz Republic) shows that rural women spend on average 237 minutes on cooking, washing dishes, laundry, cleaning houses, and taking care of children and other family members while rural men spend on average 15 minutes. Further, women reported lower rates of access to sanitation, with about one third reporting poor or very poor access, compared to men for whom only a little over one quarter (26 percent) reported poor or very poor access. This may be driven in part by higher poverty rates among female headed households in two of the three project regions in 2021.

tension and conflict identified included: (a) inequality of services (access and quality) within the project areas; (b) perception of or actual implementation delays; (c) social resistance to tariff increases and introduction of volumetric payments; (d) change in water-use behaviors and practices; and (e) transparency and governance issues. These issues were and will continue to be addressed through a range of technical, social, and institutional support mechanisms. Mitigation measures include: (a) engaging during both (sub-)project preparation and implementation in pro-active communication that explain to both beneficiaries and the public at large the benefits brought by the project to the target communities; (b) applying clear and transparent criteria for investment selection and design, including technical, social and economic/poverty indicators; (c) developing suitable grievance redress standards and measures for the project (not only for safeguards-related issues); and (d) identifying early on the propensity for social tensions and/or possible conflicts in the project areas by requesting ARIS to assess such risks as part of its social and environmental impact checks. These measures will continue to be applicable under the AF-2.

L. Environment (including Safeguards)

55. As the nature of the activities remains the same, no changes to the project safeguards category are expected, and no additional safeguard policies are triggered. The project remains Category B – partial assessment and triggers the same environmental safeguards OP 4.01 (Environmental assessment), and safeguards OP 7.50 (Projects on International Waterways) as the parent project. In compliance with OP 7.50 an exception to the notification requirement was approved by the Regional Vice President (RVP) for the parent project on January 19, 2016. Since this AF-2 covers a cost overrun and project activities remain the same, it is covered by the exception to the notification requirement approved for the parent project.

56. The overall environmental impact of the project investments will be largely positive. These include: (a) improved water management and efficiency; (b) protection of ground and surface water by promoting environmentally sound sanitation facilities for human waste disposal; (c) improved citizens' skills and awareness in planning and implementation of local activities; and (d) sustainable O&M of improved infrastructure. While the environmental impact of the proposed project will be positive, some adverse impacts may be generated. These are primarily activities identified under the parent project; no new activities will be added. The bulk of the environmental impacts will occur during the construction/rehabilitation phases, while some impacts related to wastewater disposal are also expected in some water supply subprojects during the operation phase. However, these impacts will be short to medium-term, localized, and temporary and can be mitigated through compliance with EIA Regulations and an ESMP to be implemented by the contractors under close supervision of compliance by ARIS. Use of construction materials that are hazardous to human health (for example, asbestos and asbestos-containing materials [ACM]) will not be permitted. ACM waste will be collected, transported, and finally disposed by applying special protective measures in accordance with hazardous waste handling standards. Further, in some subprojects, the water supplied to residential multi-story buildings will generate more wastewater, which, in the absence of disposal and treatment facilities, could lead to environmental pollution. To address this issue, an ESIA was conducted by ARIS in 2022 to identify possible mitigation measures. Accordingly, it was agreed to include a simplified treatment and disposal system in the works contracts to ensure a complete sanitation chain. The proposed mitigation measure will be implemented in Kurmontu subproject, Issyk-Kul Region due to the potential hazard of contamination of the Issyk-Kul Lake area.

57. The anticipated environmental and social impacts will be mitigated through the standard and widely used measures in construction practices. They are already well prescribed in the ESMF, prepared for the original project. The ESMF for the parent project was prepared and disclosed in-country and on the Bank's website on July 6 and 7, 2016, respectively. To reflect the scaling up of activities covered by the AF-1, the ESMF has been updated, and the revised final document was disclosed both in-country and on the World Bank website on April 5, 2017. Since the AF-2 supports the same types of activities as for the original project and the AF-1, the ESMF, and the RPF of the parent project, as updated under the AF-1, remain applicable to the AF-2. However, both documents were further updated

only to reflect the scope of the AF-2 and were redisclosed in-country and on the World Bank website on October 5 and 12, 2023, respectively. Each activity financed under the project will be reviewed for safeguards risks in line with OP 4.01 and must obtain the clearances required by Kyrgyz national regulations. Site-specific ESMPs will be prepared for each subproject. Implementation of environmental mitigation and compliance measures will continue to be carried out by the contractors (construction firms) and monitored by ARIS. ARIS, in collaboration with the local authorities of the participating rural communities, will perform the environmental monitoring during both the construction and operation phases, as specified in the monitoring plan of the ESMP. The environmental screening process will check for the presence of physical cultural resources. In addition, chance find procedures will be included in all works contracts. The environmental performance is *Satisfactory* based on the last implementation support mission.

58. Projects on International Waterways (OP/BP 7.50). As in the original project, OP 7.50 has been triggered because the AF-2 will continue to finance rehabilitation, improvement, or minor additions/expansions to drinking water supply systems located within the transboundary basin of the Syr Darya, Talas and Chui Rivers. However, project interventions are not expected to adversely affect water quality or quantity to downstream riparian states. It is anticipated that the nature of the AF-2 activities: (a) will not cause appreciable harm to the other riparian states, as it will not adversely change the quality or quantity of water flows; and (b) will not be appreciably harmed by other riparian states' possible water use. During preparation of the parent project, an exception to the riparian notification requirements under OP 7.50 was granted by the World Bank's RVP on January 25, 2016. Furthermore, for the AF-1, the exception from the requirement to notify other riparians under OP 7.50 has been granted by the RVP on April 3, 2017. Since this AF-2 covers cost overrun and all project activities remain the same, this AF is covered by the exception to the notification requirement approved for the parent project.

M. Other Safeguard Policies

59. There are no other safeguard policies triggered by the original financing, AF-1 or AF-2.

V. WORLD BANK GRIEVANCE REDRESS

60. Grievance Redress. Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's GRS, please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit <https://accountability.worldbank.org>.

VI. SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Implementing Agency	✓	
Results Framework	✓	
Components and Cost	✓	
Loan Closing Date(s)	✓	
Project's Development Objectives		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Other Change(s)		✓

VII. DETAILED CHANGE(S)

IMPLEMENTING AGENCY

Implementing Agency Name	Type	Action
Community Development and Investment Agency (ARIS)		No Change
Department of Drinking Water Supply and Wastewater Disposal	Line Ministry/Ministerial Department	Marked for Deletion



COMPONENTS

Current Component Name	Current Cost (US\$, millions)	Action	Proposed Component Name	Proposed Cost (US\$, millions)
Water Supply Investments	49.30	Revised	Water Supply Investments	56.37
Sanitation Development	4.45	Revised	Sanitation Development	4.82
Institutional Strengthening	5.35	Revised	Institutional Strengthening	5.55
Project Management	3.50	No Change	Project Management	3.50
TOTAL	62.60			70.24

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Current Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-59070	Effective	30-Jun-2022	30-Jun-2025	30-Jun-2026	31-Oct-2026
IDA-60880	Effective	30-Jun-2025	30-Jun-2025	30-Jun-2026	31-Oct-2026
IDA-D1380	Effective	30-Jun-2022	30-Jun-2025	30-Jun-2026	31-Oct-2026
IDA-D2040	Effective	30-Jun-2025	30-Jun-2025	30-Jun-2026	31-Oct-2026

Expected Disbursements (in US\$)

Fiscal Year	Annual	Cumulative
2017	1,000,000.00	1,000,000.00
2018	5,930,253.00	6,930,253.00
2019	6,301,590.00	13,231,843.00
2020	6,922,524.00	20,154,367.00
2021	6,044,610.00	26,198,977.00
2022	4,371,223.00	30,570,200.00
2023	7,688,814.00	38,259,014.00
2024	11,706,584.00	49,965,598.00
2025	11,525,001.00	61,490,599.00
2026	5,000,000.00	66,490,599.00



2027	649,401.00	67,140,000.00
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SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	● Substantial	● Substantial
Macroeconomic	● Moderate	● Moderate
Sector Strategies and Policies	● Substantial	● Substantial
Technical Design of Project or Program	● Moderate	● Moderate
Institutional Capacity for Implementation and Sustainability	● Substantial	● Substantial
Fiduciary	● Substantial	● Substantial
Environment and Social	● Low	● Low
Stakeholders	● Low	● Low
Other		
Overall	● Moderate	● Moderate

LEGAL COVENANTS – Sustainable Rural Water Supply and Sanitation Development Project - Second Additional Financing (P181421)

Sections and Description

No information available

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	Article 5.01(a) of the Financing Agreement. The Recipient has executed the Subsidiary Agreement on behalf of the Recipient and the Project Implementing Entity, in form and substance satisfactory to the Association.



VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Kyrgyz Republic

Sustainable Rural Water Supply and Sanitation Development Project - Second Additional Financing

Project Development Objective(s)

The project development objectives (PDO) are to assist the Kyrgyz Republic to (i) improve access to and quality of water supply and sanitation services in the Participating Rural Communities; and (ii) strengthen capacity of the Recipient's institutions in the water supply and sanitation sector.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
Improved access to and quality of WSS services in Participating Rural Communities												
Number of people in rural areas provided with access to Improved Water Sources under the project (Number)	0.00	0.00	0.00	26,500.00	72,500.00	100,000.00	126,000.00	139,800.00	160,900.00	193,000.00	193,000.00	
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Percentage of female (of people provided with access to Improved water	0.00	0.00	0.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	



Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
sources under the project) (Percentage)												
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Number of people in project areas provided with access to improved sanitation through social institutions. (Number)	0.00	0.00	0.00	3,000.00	11,000.00	16,000.00	19,000.00	24,000.00	29,000.00	34,000.00	34,000.00	34,000.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Percentage of female (of People provided with access to improved sanitation through social institutions) (Percentage)	0.00	0.00	0.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Number of people in project areas provided with	0.00	0.00	0.00	0.00	150.00	750.00	1,415.00	2,545.00	3,720.00	6,120.00	6,750.00	6,750.00



Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
access to improved sanitation through incentive grant (Number)												
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date and delays in implementation progress towards achievement of this indicator.											
Average hours of water supply per day in project areas (Hours)		12.00	12.00	12.00	12.00	14.00	15.00	16.00	17.00	18.00	18.00	18.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Strengthened capacity of the Recipient's institutions in the water supply and sanitation sector												
Operating Cost Coverage Ratio in project areas (Percentage)		0.17	0.00	0.00	0.50	0.60	0.70	0.80	0.90	1.00	1.00	1.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Institutional Support Plan for DDWSWD developed and approved (Yes/No)		No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											



Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
<i>Revised</i>												

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
Water Supply Investments												
New piped household water connections resulting from the project intervention (Number)		0.00	0.00	0.00	3,250.00	8,900.00	12,280.00	15,200.00	18,400.00	21,600.00	28,950.00	28,950.00
<i>Action: This indicator has been Revised</i>	<i>Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.</i>											
of which household water connections resulting from the project intervention in project areas affected by droughts (Percentage)		0.00							50.00	50.00	50.00	50.00



Indicator Name	PBC	Baseline	Intermediate Targets									End Target	
			1	2	3	4	5	6	7	8	9		
Action: This indicator is New		Rationale: <i>A new sub-indicator is added to capture the benefits from the project interventions to ensure resilience of the project beneficiaries to droughts and associated water shortage.</i>											
Time spent by women and girls per day on water collection in project areas (Minutes)		60.00								20.00	15.00	10.00	5.00
Action: This indicator is New		Rationale: <i>A new indicator is proposed to capture the benefits for the female project beneficiaries from increased access to safe water, which frees their time for other activities.</i>											
Number of social institutions in project areas connected to the water supply network (Number)		0.00	0.00	0.00	20.00	30.00	46.00	55.00	210.00	220.00	230.00	230.00	
Action: This indicator has been Revised		Rationale: <i>The end target value and date and intermediate values have been adjusted to reflect the revised closing date and the actual implementation progress.</i>											
Number of service providers with signed agreements with SES Department (Number)		0.00	0.00	3.00	6.00	9.00	12.00	18.00	26.00	34.00	40.00	40.00	
Action: This indicator has been Revised		Rationale: <i>The end target date and intermediate values have been adjusted to reflect the revised closing date.</i>											



Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
Sanitation Development												
Number of social institutions in project areas benefiting from improved sanitation facilities (Number)		0.00	0.00	0.00	10.00	20.00	46.00	55.00	65.00	81.00	99.00	99.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date and delays in implementation progress towards achievement of this indicator.											
Number of households received incentive grant to upgrade sanitation facilities (Number)		0.00	0.00	0.00	150.00	550.00	600.00	700.00	744.00	1,224.00	1,300.00	1,350.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date and delays in implementation progress towards achievement of this indicator.											
Number of people trained to improve hygiene behavior and sanitation practices. (Number)		0.00	0.00	0.00	8,000.00	17,000.00	26,250.00	28,500.00	65,500.00	71,000.00	81,000.00	81,000.00
Action: This indicator has been Revised	Rationale: The end target value and date and intermediate values have been adjusted to reflect the revised closing date, actual progress and projections.											



Indicator Name	PBC	Baseline	Intermediate Targets									End Target	
			1	2	3	4	5	6	7	8	9		
percentage female (of people trained to improve hygiene behavior and sanitation practices (Percentage)		0.00	0.00	0.00	0.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.												
Preparation of standard designs and guidelines for on-site household sanitation (Yes/No)		No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.												
Institutional Strengthening													
Number of services contracts signed (Number)		0.00	0.00	3.00	6.00	9.00	12.00	40.00	40.00	40.00	40.00	40.00	40.00
Action: This indicator has been Revised	Rationale: As part of the ongoing administrative-territorial reform, local self-governments are being merged and consolidated, resulting in a reduced number of service providers in the country including the project areas. The current value of 49 service providers will change downwards within the next year, and the end target value of 40 is considered to be realistic. The intermediate values have been adjusted.												



Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
Commercial systems operating in project areas (Number)		0.00	0.00	3.00	6.00	9.00	12.00	18.00	26.00	34.00	40.00	40.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											
Connection plan for low income households in project areas (Number)		0.00	0.00	3.00	6.00	9.00	12.00	18.00	50.00	54.00	56.00	56.00
Action: This indicator has been Revised	Rationale: The end target date, value and intermediate values have been adjusted to reflect the revised closing date and actual progress.											
Legal creation of aggregated water service provider (pilot) (Yes/No)		No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Action: This indicator has been Revised												
Number of villages with updated information on the water supply and sanitation national database (Number)		0.00	0.00	0.00	200.00	800.00	1,300.00	1,805.00	1,805.00	1,805.00	1,805.00	1,805.00
Action: This indicator has been Revised												



Indicator Name	PBC	Baseline	Intermediate Targets									End Target
			1	2	3	4	5	6	7	8	9	
Implementation of professional and vocational program (Text)		No program			Needs assessment completed	Program Design completed	Program Design completed	Year 1 Pilots implemented	Implementation of Year 1 Program commenced.	Year 1 Program implemented	Year 2 Program implemented	2.00
Action: This indicator has been Revised	Rationale: The implementation of this activity started in 2019 only. Based on the needs assessment conducted and completed in 2019, the Program was designed and customized for subsequent two years and the first pilots implemented in 2023. Due to these delays, the actual implementation of the Program will only start in 2024. Therefore, the end target date and intermediate values have been adjusted to reflect the delays and the revised closing date.											
Project Management												
Percentage of beneficiaries satisfied with the participatory process in the project (Percentage)		0.00	0.00	0.00	60.00	65.00	70.00	75.00	80.00	85.00	85.00	85.00
Action: This indicator has been Revised	Rationale: The end target date and intermediate values have been adjusted to reflect the revised closing date.											

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of people in rural areas provided with access to Improved Water Sources under the project	This indicator measures the actual number of people in rural areas who benefited from improved water	semi-annual	Reports		ARIS



	<p>supply services that have been constructed under the project. Guidance on "Improved water sources": This includes piped household connection (house or yard connections), public standpipe, boreholes, protected dug well, protected spring and rainwater collection. Hence, "Improved Water Sources" do not include, inter alia, water provided through tanker truck, or vendor, unprotected well, unprotected spring, surface water (river, pond, dam, lake, stream, irrigation channel), or bottled water. The definition of what is considered an "improved water source" follows the UNICEF-WHO Joint Monitoring Program definition. Note that "Improved Water Sources" does not refer to the question of new versus rehabilitated water sources, but is the standard</p>				
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	<p>definition used to track progress on the Millennium Development Goals.</p> <p>Guidance on "People with access": The data on the number of people provided with access can be estimated by TTLs by multiplying i) the actual number of piped connections with an estimate of the number of people per household connection; and/or ii) the actual number of community water points with an estimate of the number of people per community water point.</p> <p>Guidance on rural classification: The classification should follow the official definition used in the country.</p>				
Percentage of female (of people provided with access to Improved water sources under the project)	This includes the percentage of females of the population provided with access to an improved water source under the project.	semi-annual	Reports		ARIS
Number of people in project areas provided with access to improved	This indicator captures the cumulative number of	semi-annual	Reports		ARIS



sanitation through social institutions.	people benefiting from access to improved sanitation facilities in schools, kindergartens and other eligible social facilities, financed under Component 2 of the project.				
Percentage of female (of People provided with with access to improved sanitation through social institutions		semi-annual	Reports		ARIS
Number of people in project areas provided with access to improved sanitation through incentive grant	This indicator captures the cumulative number of people benefiting from access to improved sanitation facilities using the incentive grant described in Component 2.3.	semi annual	Reports		ARIS
Average hours of water supply per day in project areas	This quality-of-service indicator tracks progress of outcomes associated with the infrastructure investments under Component 1, including activities that focus on increasing production, improving network distribution, and reducing NRW. To a lesser extent itwill also be influenced by	semi-annual	Reports		ARIS



	<p>institutional support activities implemented through Component 3. Baseline values reflect actual hours of supply at the time of appraisal. These values are expected to increase throughout the project duration, as availability of water improves with support of project-financed investments.</p>				
<p>Operating Cost Coverage Ratio in project areas</p>	<p>This PDO indicator relates to efficiency and financial sustainability of water services in project areas. It captures, outcomes related to the physical investments under Component 1 and the institutional support activities, at the national and local level, financed under Component 3 and for this project it is a proxy indicator to measure strengthened capacity of sector institutions. Specifically, the indicator reflects the financial performance of the service provider as a ratio of total</p>	<p>Annual</p>	<p>Reports</p>		<p>ARIS</p>



	<p>revenues and total operating expenses. The baseline values will be determined during year one of implementation and will be measured by the service providers, thereafter as part of their operating procedures. Average values will be reported to the Bank annually. To facilitate achievement of this indicator and ensure sustainability of investments, ARIS will enter in an agreement with the participating AOAs at the early phases of implementation (prior to commencing works). This agreement will outline conditions for the AOAs related to tariff increases, metering, billing and collection, and other necessary preconditions (including collection of connection fees from community members) to enable household connections to the new</p>				
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	schemes.				
Institutional Support Plan for DDWSWD developed and approved	Achieved. Institutional development plan and Roadmap developed and approved in May 2022.	semi-annual	Reports		ARIS and DDWSWD

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
New piped household water connections resulting from the project intervention	This intermediary indicator measures the number of new connections to be installed under the project – an important input into the estimate of project beneficiaries. The AF project will support the installation of around 15,190 new connections to a household yard stand pipe, which will cover around 70 percent of project beneficiaries. The average household size is 5.0 persons.	semi annual	Reports		ARIS
of which household water connections resulting from the project intervention in project areas	This sub-indicator measures the percentage of new connections	Annual	Reports, surveys	Feedback from beneficiaries to service providers and surveys	ARIS



affected by droughts	installed under the project in project areas which are affected by at least one drought event during the project implementation.				
Time spent by women and girls per day on water collection in project areas	This intermediate results indicator will measure average daily time spent (in minutes) by female members of the households to fetch water from source to the household.	Annual	Baseline and endline surveys, beneficiary satisfaction surveys	Household surveys	ARIS
Number of social institutions in project areas connected to the water supply network	This intermediary indicator measures the number of schools, pre-schools, health clinics and other eligible social facilities, connected to the water supply network in the project areas.	semi annual	Reports		ARIS
Number of service providers with signed agreements with SES Department	This intermediary indicator captures progress towards ensuring improved systems for water quality monitoring. As part of the quality assurance and operating procedures, water quality sampling and testing procedures will be introduced and agreements will be signed	semi annual	Reports		ARIS



	with SES Department for laboratory testing and certification.				
Number of social institutions in project areas benefiting from improved sanitation facilities	This intermediary indicator measures the number of schools, kindergartens, health clinics and other eligible social facilities, in which the project has supported upgrades and rehabilitation of the sanitation facilities.	semi-annual	Reports		ARIS
Number of households received incentive grant to upgrade sanitation facilities	This is a new activity under AF project that aims to promote demand based construction and use of improved sanitation facilities by providing partial incentive grant to households in the project areas	semi-annual	Reports		ARIS
Number of people trained to improve hygiene behavior and sanitation practices.	This gender disaggregated indicator measures training outputs related to the sanitation and hygiene promotion and education activities, both at schools / pre-schools and within the project communities.	semi-annual	Reports		ARIS
percentage female (of people trained to improve hygiene behavior and sanitation practices	This refers to the percentage of females that are trained under the	semi-annual	Reports		ARIS



	project and includes female students in schools, teachers, village volunteers and social mobilizers.				
Preparation of standard designs and guidelines for on-site household sanitation	This intermediary indicator tracks the progress of outputs related to preparation of standard designs, including guidelines for construction and operations, for household latrines and septic systems for rural areas, this together with related education and social mobilization programs (to stimulate demand), will facilitate private household investments for these facilities.	Annual	Reports		ARIS
Number of services contracts signed	This intermediary indicator tracks the progress of outputs related to institutional support activities provided under sub-component 3.1. Specifically, the project will also support the preparation of service contract agreements, to clarify and formalize	Semi-Annual	Reports		ARIS



	respective responsibilities of the operator (CDWUUs) and asset owner (Ayil-Okmotus) and to support governance of service performance, tariffs and financing mechanisms				
Commercial systems operating in project areas	This intermediary indicator tracks progress on the customization and installation of new commercial systems for each service provider. The commercial systems include activities that focus on billing and commercial management, customer-service policies and procedures, and citizen engagement and complaints handling/recourse mechanisms.	Semi annual	Reports		ARIS
Connection plan for low income households in project areas	Component 3 activities will support the Ayil Okmotus and service providers to develop a connection subsidy plan and tariff mechanisms to address the needs of the poorest and most vulnerable groups within the project areas.	semi-annual	Reports		ARIS



	This intermediate indicator will track the progress of this important output				
Legal creation of aggregated water service provider (pilot)	As part of the institutional strengthening activities under Component 3, the project will support the piloting of an aggregated service delivery model, which includes water service provision in more than one Ayl-Okmotu. This activity is designed to enable more efficient and sustainable service delivery models and will be informed by the ongoing ADB-financed Water Sector Reform TA, which is reviewing institutional mechanisms for water service delivery. This intermediary indicator will track progress of this output.	Semi-Annual	Reports		ARIS
Number of villages with updated information on the water supply and sanitation national database	The project will support augmentation and institutionalization of the sector management information system/data base, building upon the work carried out under	ARIS	Reports		Semi-Annual



	<p>RWSSP-2. This system will be used to strengthen sector monitoring, evidence based policy development and investment planning. This intermediary indicator will track progress of this output.</p>				
<p>Implementation of professional and vocational program</p>	<p>This indicator captures the progress of the new activity under component 3 of the additional financing. Details of the programs are reported to the Bank for each of the target activities.</p>	<p>semi-annual</p>	<p>Reports</p>		<p>ARIS</p>
<p>Percentage of beneficiaries satisfied with the participatory process in the project</p>	<p>This indicator aims to report on the effectiveness of citizen engagement processes in the project. It will measure the level of satisfaction of project beneficiaries to the activities intended to engage them in project design, implementation and monitoring. The planned project surveys will be extended to obtain feedback from community members on their</p>	<p>ARIS</p>	<p>Reports</p>		<p>Annual</p>



	<p>satisfaction with: (i) access to project information and awareness of decisions taken, (ii) their opportunities to provide feedback and participate in the dialogue, and (iii) the responsiveness of the implementing entity and AOs to feedback provided. These criteria will be rated on a 1-5 scale and will be equally weighted. ARIS will oversee this survey and report annually. Results will be gender disaggregated. Detailed mechanisms for collecting this data will be developed by ARIS, with support of the Bank, and included in the POM.</p>				
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IX. ANNEX 1. ECONOMIC ANALYSIS

- 1. The project economic analysis has been updated as part of the preparation of the AF-2 using the same structure of costs and benefits as in the original economic analysis and that of the AF-1.** The economic benefits from the project derive from improvements in the quality of WSS services and sanitation services in schools, pre-schools, and other public buildings as well as in a relatively small number of households. Investments in rural water supply systems are expected to result in improved water quality, expanded access to improved water sources, increased duration of water supply, and reduced seasonal variation. Improving these services will enhance welfare by reducing coping costs (for example, time saved from water collection and reduced need for in-house drinking-water treatment). Improvements in the quality of WSS services and practices through the WASH educational program are also expected to have positive welfare effects through improved health.
- 2. At the time of project preparation, around 60 percent of households in the project area did not have in-house or in-yard water connections and spent an average of two hours per day collecting water.** Due to intermittent supply or distant standpipes, many households relied on unprotected standing water sources such as rivers, irrigation canals and shallow wells. Where there was water supply service, the number of hours of water supplied varied from 2-3 hours to 24 hours in some of the villages. Thus, households had significant coping costs. A household survey provided baseline conditions for the villages targeted under the original project.
- 3. The water supply investments of the combined original project and Additional Financings are expected to benefit a total of 193,000 residents.** Within the same target villages, 34,000 persons are expected to benefit from access to improved sanitation through schools and other public buildings, and an additional 6,750 people are expected to benefit from improved household sanitation through incentive grants.
- 4. The current economic analysis has incorporated updated project costs, investment timetables, and beneficiary figures, with projections from late 2023 to the proposed project closing date of June 30, 2026.** The total project period for the purposes of the economic analysis has been lengthened from 25 to 30 years, reflecting the longer implementation period compared to the original analysis. The analysis incorporates: (a) the cost of all project components, including estimated O&M costs and project implementation costs; and (b) all measurable benefits, including decreases in the time spent collecting water, welfare gains at the household level associated with reduced need for in-house treatment (for example, boiling of water), and reduced incidence of water-related diseases, such as infectious hepatitis and diarrhea, as a result of improved access to treated water and a decline in the reliance on standing water sources.
- 5. Operating costs and project benefits are expected to be realized in the year following the implementation of each subproject, and therefore increase incrementally each year until all project investments are completed.** Given the rolling nature of subproject construction, some benefits will begin to be observed in 2019, with full implementation (and benefits) in 2026.
- 6. Project benefits and the main assumptions of the analysis are as follows:**

 - (a) Project Investment Costs:** Component 1: US\$56.37 million; Component 2: US\$4.82 million; Component 3: US\$5.55 million; and Component 4: US\$3.5 million.
 - (b) VAT:** 12 percent, applied to 95 percent of Components 1 and 2 costs.
 - (c) Operating costs:** 5 percent of investment Components 1 and 2 costs.



- (d) Reduced time in collecting water:** Based on results obtained from similar operations in the country (Rural Water Supply and Sanitation Project 1 and 2), a reduction from approximately 2 hours to around 30 minutes of time for collecting water has been assumed (this is considered a conservative assumption as most households will benefit from in-yard or in-house water connection by the project and time savings will therefore be greater). One half of the average rural hourly wage of KGS100²⁴ is used as a conservative measurement of the opportunity cost of this time savings. Under these assumptions, the project is projected to generate annual benefits of US\$5.6 million upon full project implementation.
- (e) Reduced coping costs from boiling water:** It is common practice in the country for households to boil water prior to consuming it. Energy savings associated with reduced need to boil water due to improved water quality are estimated based on a 5 liters per day per capita benchmark. The team estimates that by the end of the project only a negligible percentage of households will boil water. In the absence of updated economic costs of energy, the economic analysis uses the original assumptions: energy requirements to boil water of 0.09 kWh per liter of water and an economic cost of US\$0.27 per kWh.²⁵ Under these assumptions, the project is expected to generate annual benefits of US\$5.0 million from energy savings linked to boiling water.
- (f) Benefits from reduced incidence of waterborne diseases.** Data on the incidence of waterborne diseases has been collected in beneficiary villages identified under the original project; villages in Chui and Osh regions reported relatively low levels of infectious hepatitis, with villages in Issyk-Kul reporting higher incidences (under 1 percent incidence in Chui and Osh; approximately 6 percent incidence in Issyk-Kul). With respect to hepatitis, the team assumed that people lose around 10 days of work/school and that treatment costs around US\$186 per person. Although underreported, diarrhea is significantly more common, with 15 percent of the population affected each year, although with lower lost productivity (one day) and treatment costs of only US\$3 per incidence. A reduction in waterborne diseases could lead to annual savings of around US\$102,519 in reduced costs for treatment and US\$153,933 in reduced losses of days of work.

7. In addition to the foregoing quantified benefits, the climate-resilient infrastructure financed by the project is expected to lower the financial impact of future weather-related disasters. This has not been quantified in the economic analysis.

8. Based on the foregoing assumptions, an implementation period of 10 years, and a total projection period of 30 years (including implementation), the projected net cost-benefit stream yields an ERR of 11.6 percent and an NPV (using a 5 percent social discount rate) of US\$35.4 million. The ERR is moderately lower than the 15.7 percent estimated at the time of the AF-1. This is due to the longer implementation period, the slower start of improved water services to beneficiaries, moderately higher capital costs, and a lower US\$ value of the value of time spent collecting water. As there is greater certainty regarding costs, the timing of implementation, and the number of beneficiaries, no sensitivity analysis has been conducted.

9. Estimates of GHG reductions were carried out in 2017, indicating that the project is expected to generate reductions of approximately 367,984 tCO₂-eq over a 30-year period (or an average annual reduction of 12,266 tCO₂-eq) due primarily to reductions in the need to boil water for drinking.²⁶ Incorporating the value of the reductions

²⁴ Based on discussions with the client and the World Bank country team.

²⁵ World Bank. 2012. Europe and Central Asia Balancing Act: Cutting Subsidies, Protecting Affordability, and Investing in the Energy Sector in Eastern Europe and Central Asia Region.

²⁶ The 2017 estimate of GHG emissions reductions included a reduction in the use of tanker trucks to deliver water. A baseline beneficiary survey completed in 2019 indicated that only a very small percentage of beneficiaries use tanker trucks as a source of water; for that reasons, GHG emissions reductions estimated to be due to avoidance of tanker trucks has not been included in the GHG benefit calculations at this time.

into the economic analysis results in a small, but distinct, improvement in the economic returns of the project, as shown in Table 4.

Table 4. ERR and NPV results

	Economic Analysis	Incorporating the High Value of tCO2-eq Reductions (US\$95 in 2020)	Incorporating the Low Value of tCO2-eq Reductions (US\$47 in 2020)
ERR	11.6 percent	14.4 percent	13.0 percent
NPV (at 5 percent discount rate)	US\$35.4 million	US\$53.7 million	US\$44.6 million