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Report No: PAD3515

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A PROPOSED GRANT

IN THE AMOUNT OF SDR35.5 MILLION
(US\$50 MILLION EQUIVALENT)

AND

A GRANT FROM THE AFGHANISTAN RECONSTRUCTION TRUST FUND
IN THE AMOUNT OF US\$150 MILLION

TO THE

ISLAMIC REPUBLIC OF AFGHANISTAN

FOR AN

AFGHANISTAN WATER, SANITATION, HYGIENE AND INSTITUTIONAL SUPPORT
PROJECT

November 13, 2020

Water Global Practice
South Asia Region

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The World Bank

Afghanistan Water, Sanitation, Hygiene and Institutional Support Project (P169970)

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2020)

Currency Unit = US\$

US\$ 1 = SDR 0.7084

FISCAL YEAR

December 21 - December 20

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	NHCA	National Hydrology Committee for Afghanistan
AFD	Agence Française de Développement	NRW	Non-Revenue Water
ARTF	Afghanistan Reconstruction Trust Fund	NSIA	National Statistics and Information Authority
AUWSSC	Afghanistan Urban Water Supply and Sewerage Corporation	NWARA	National Water Affairs Regulatory Authority
CERC	Contingent Emergency Response Component	O&M	Operations and Maintenance
COVID-19	Coronavirus Disease 2019	PCC	Project Coordination Committee
CPF	Country Partnership Framework	PCT	Project Coordination Team
ERRP	Emergency Response and Recovery Plan	PIU	Project Implementation Unit
ESCP	Environmental & Social Commitment Plan	POM	Project Operations Manual
ESIA	Environmental and Social Impact Assessment	RPF	Resettlement Policy Framework
ESMF	Environmental and Social Management Framework	SBU	Strategic Business Unit (SBU)
ESMP	Environmental and Social Management Plan	SCoWLE	Supreme Council of Water, Land and Environment
ESS	Environmental and Social Standard	SDGs	Sustainable Development Goals
GBV	Gender-Based Violence	SEP	Stakeholder Engagement Plan
GHG	Greenhouse Gas	SIDA	Swedish International Development Cooperation Agency
GIZ	Gesellschaft für Internationale Zusammenarbeit (German Development Agency)	SOP	Series of Projects
GoIRA	Government of the Islamic Republic of Afghanistan	SSBU	Sub-Strategic Business Unit
GRM	Grievance Redress Mechanism	tCO2	Tons of Carbon dioxide
HSBU	Herat Strategic Business Unit	UNAMA	United Nations Assistance Mission in Afghanistan
IDA	International Development Association	UNDP	United Nations Development Program
IEG	Independent Evaluation Group	USAID	United States Agency for International Development
IUFR	Interim Audited Financial Report	WASH	Water, Sanitation and Hygiene
IWRM	Integrated Water Resources Management	WHO	World Health Organization
JICA	Japan International Cooperation Agency	WSS	Water Supply and Sanitation
KfW	Kreditanstalt fuer Wiederaufbau (German Development Bank)	WTP	Water Treatment Plant
KSBU	Kabul Strategic Business Unit	NHCA	National Hydrology Committee for Afghanistan
KnSBU	Kandahar Strategic Business Unit	NRW	Non-Revenue Water
KOICA	Korean International Cooperation Agency	NSIA	National Statistics and Information Authority
LPCD	Liters per capita per day	NWARA	National Water Affairs Regulatory Authority
LMP	Labor Management Procedures	O&M	Operations and Maintenance
M&E	Monitoring and Evaluation	PCT	Project Coordination Team
MAIL	Ministry of Agriculture, Irrigation & Livestock		

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Afghanistan	Afghanistan Water, Sanitation, Hygiene and Institutional Support Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P169970	Investment Project Financing	Substantial

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input checked="" type="checkbox"/> Series of Projects (SOP)	<input checked="" 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 Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
11-Dec-2020	29-Jan-2026

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to improve access to and quality of water supply in selected cities and to strengthen the capacity of AUWSSC to deliver sustainable services in order to contribute to national efforts to manage COVID-19 and other disasters.

**Components**

Component Name	Cost (US\$, millions)
COVID-19 Emergency Relief and Recovery	30.00
Sector Reform, Institutional Strengthening, and Capacity Building	5.00
Enabling Inclusive Access to Safe Water	160.00
Project Management and Monitoring	5.00
Contingent Emergency Response Component	0.00

Organizations

Borrower:	Islamic Republic of Afghanistan
Implementing Agency:	Afghanistan Urban Water Supply and Sewerage Corporation (AUWSSC)

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	200.00
Total Financing	200.00
of which IBRD/IDA	50.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Development Association (IDA)	50.00
IDA Grant	50.00

Non-World Bank Group Financing

Trust Funds	150.00
Afghanistan Reconstruction Trust Fund	150.00



IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Afghanistan	0.00	50.00	0.00	50.00
National PBA	0.00	50.00	0.00	50.00
Total	0.00	50.00	0.00	50.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026
Annual	0.00	2.75	4.75	13.00	15.25	14.25	0.00
Cumulative	0.00	2.75	7.50	20.50	35.75	50.00	50.00

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

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● High
7. Environment and Social	● Substantial



8. Stakeholders	● Substantial
9. Other	● High
10. Overall	● High

COMPLIANCE

Policy

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

[] Yes [✓] No

Does the project require any waivers of Bank policies?

[] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant



NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

The Project Implementing Entity shall carry out the project in accordance with the Implementation Arrangements set out in the Schedule to the Project Agreement.

Sections and Description

The Project Implementing Entity, shall not later than six (6) months from the Effective Date furnish to the Association the financial statements covering the fiscal years of 2014-2019, prepared in accordance with consistently applied accounting standards and audited by an independent auditor, acceptable to the Association.

Sections and Description

The Project Implementing Entity shall recruit, by not later than six (6) months after the Effective Date, a consulting firm, with qualifications and experience satisfactory to the Association and operating under terms of reference acceptable to the Association, to assist the Project Implementing Entity in redesigning and operationalizing its financial and revenue management system in accordance with appropriate financial management system standards and practices.

Conditions

Type	Description
Effectiveness	The Project Operations Manual, in form and substance satisfactory to the Bank, has been finalized and adopted by the Recipient and the Project Implementing Entity.
Type Effectiveness	Description The Subsidiary Agreement between the recipient and the project implementing entity has been executed on behalf of the recipient and the project implementing entity.



I. STRATEGIC CONTEXT

A. Country Context

1. **COVID-19 is imposing a large social and economic burden on Afghanistan.** As of October 28, 2020, the Ministry of Public Health reported 41,032 confirmed cases in the country, with cases reported in all 34 provinces. While the number of confirmed cases and deaths is relatively low compared to nearby countries, Afghanistan is extremely vulnerable to rapid spread of the virus due to limited access to information, high percentage of poor and vulnerable households who subsist on daily earnings, constrained access to water and sanitation, and weaknesses in basic health systems, and ongoing violent conflict. This year's influx of hundreds of thousands of people crossing back into Afghanistan from Iran has further exacerbated the situation. Economic impacts are already severe and expected to worsen. The pandemic and related containment measures led to: (i) massive disruptions to productive economic activity and consumption; (ii) disruptions to imports, including of vital household items, leading to rapid inflation; (iii) reduced exports due to disruptions at border points; (iv) negative impacts on remittances; and (v) increased fiscal pressures, with government revenues expected to decline by at least 30 percent below budgeted levels.
2. **Due to the impacts of COVID-19, GDP is expected to contract by between 5.5 percent and 7.4 percent in 2020.** Afghanistan's economy was fragile even before the COVID-19 crisis: growth averaged only around three percent since 2012. The economy contracted sharply over the first half of 2020, due to the impacts of the COVID-19 crisis: reduced incomes, disruption to services and retail activities, and lower remittances (declined by around 40 percent from 2019 levels). Investment also sharply declined given the negative impacts of COVID-19 on already-weak confidence. The COVID-19 crisis also drove a significant spike in food prices over the first half of 2020 (more than 20 percent). The trade deficit remains extremely large, over 30 percent of GDP, financed mostly by grant inflows. Economic recovery is expected to take several years, with new investment constrained by political uncertainties, continued insecurity, and uncertainty around international support. With declining grants and lower revenues, fiscal space is expected to remain highly constrained over the medium-term. Available fiscal resources should be used to protect vulnerable households and maintain delivery of basic services including healthcare. Recovery could be supported by rapid action to improve the business regulatory environment, including through measures to expand access to credit.
3. **Afghanistan faces several additional challenges and uncertainties over 2020.** Despite the signing of a peace agreement between the United States and the Taliban in February, active conflict between Taliban and government forces continues, and there is no clear path to a sustained and comprehensive peace. The historic Intra-Afghan peace talks launched in September remain stalemate. Current civilian aid pledges expire in December 2020 and future levels of grant support are not known at least until the 2020 International Conference on Afghanistan takes place in late November. Yet grants equal to around 43 percent of GDP and continue to finance more than 75 percent of total public spending, and around half of budget expenditures. Grants may decline rapidly over coming years in the context of the global COVID-19 crisis. While a power-sharing agreement was reached between the two major factions after the 2019 presidential elections, its implementation remains underway, leading to changes in senior staff across key ministries and posing risks of further administrative disruption.
4. **The poverty rate in Afghanistan has increased markedly** from 38 percent in 2012 to 55 percent in 2017, when the last household survey was carried out. The vast majority of Afghan population was poor and vulnerable before the arrival of the COVID-19 crisis. The official poverty rate at 55 % understates the extent of poverty and vulnerability as illustrated by the fact that 93% of the population lived on less than US\$ 2 a day before the crisis. While new data is not available, **poverty is expected to have a spike from 55 percent in 2017 to 72 percent in 2020.** Poverty co-exists with exposure to many shocks that disproportionately affect the poor. Shocks that are inherent in a conflict affected country (e.g. forced displacement, disrupted access to markets and basic services, price volatility of consumption



staples) are added to high prevalence of food insecurity due to the unique geography of Afghanistan (e.g. droughts, floods, avalanches and infestation of agricultural production). Three in four poor households are affected by at least one shock and 80% of them cannot recover from their shocks within one year; many may turn to harmful coping strategies such as the sale of productive assets and taking children out of school for income generation. Per capita incomes will likely decline substantially over the coming years as the economy contracts in 2020, leading to a likely substantial deterioration in living standards.

5. Afghanistan has a Human Capital Index of 0.4. This suggests that children born in Afghanistan today will be on average 60 percent less productive than they would be if they could enjoy complete education and full health. This is lower than the average for South Asia region but higher than the average for Low income countries. In addition to increasing the intrinsic benefits and values of optimal health and education of its people, Afghanistan could more than double its GDP by improving its health and education outcomes. In contrast, an income and nutritional shock to the population may significantly worsen human capital prospects for the future.

B. Sectoral and Institutional Context

6. Improving access to water supply and sanitation (WSS) services is critical for the containment of COVID-19 as well as to improve long-term human development outcomes in Afghanistan. WHO guidance stresses that “frequent and correct hand hygiene” – which depends on access to water and soap – “is one of the most important measures to prevent infection with the COVID-19 virus”.¹ Beyond the immediate COVID-19 emergency, water and sanitation will always play a vital role in public health. In Afghanistan, inadequate water and hygiene access has contributed to abysmal health outcomes. The country has the fourth highest diarrheal mortality rate globally – approximately nine percent of all deaths among children under five years of age are due to diarrheal diseases.² Afghanistan’s early child mortality is in the bottom quintile globally and up to 41% of Afghan children are stunted. Stunting is a powerful risk factor that increases vulnerability to infectious disease mortality as well as long-lasting negative effects including a reduced capacity for manual work, poor mental development, and behavioral abnormalities. A growing literature shows how poor water, sanitation and hygiene (WASH) contributes to malnutrition by transmitting pathogens and infections that inhibit nutritional uptake through diarrhea, parasites, enteric inflammation and dysfunction (Cumming and Cairncross 2016).

7. The water sector is also essential to improving Afghanistan’s capacity to withstand the socio-economic impacts of climate change. Without better protection of water resources, a more resilient water infrastructure and a greater capacity to operate and sustain it, weak services will continue to expose Afghanistan’s population to the brunt of climate change impacts such as extreme temperature, floods and droughts. While Afghanistan is endowed with significant water resources, these are increasingly under stress and not leveraged effectively to create sustainable services for the population. Between 1990 and 2017, total annual renewable water resources per capita have fallen from approximately 5,000 cubic meters per person to less than 2,000 cubic meters. The country’s total actual renewable water resources were estimated at 65 billion cubic meters per year in 2014, of which about 85 percent is surface water. Approximately 98 percent of the annual water withdrawals of 20 billion cubic meters are used in agriculture. Climate change has resulted in declining and increasingly erratic precipitation, putting additional pressure on water resources already strained from population growth.

8. Access to safe water and sanitation services has been further constrained by insecurity, inadequate investments and weak sector institutions. Only 67 percent of Afghanistan’s population has access to basic drinking

¹ WHO, Water, sanitation, hygiene, and waste management for the COVID-19 virus: interim guidance; WHO/2019-nCoV/IPC_WASH/2020.3

² Aluisio, A. et al.; Risk Factors Associated with Recurrent Diarrheal Illnesses among Children in Kabul, Afghanistan; PLoS One. 2015; 10(2): e0116342.



water services and only 43 percent to basic sanitation services. The reality is even more challenging than these statistics suggest. While “basic access” refers to a technically protected source, such access does not necessarily mean that a regular supply of safe water free of contamination is made available. In fact, a recent survey in ten provinces of Afghanistan found that as many as 77 percent of households consumed water contaminated with E. coli. Water sources are also often at long distances from where the water is consumed – even in urban areas only 21 percent of the population has access to piped water on premises – and supply is typically intermittent. Afghanistan’s water and sanitation services underperform relative to those in neighboring countries and the country is not on track to achieve the Sustainable Development Goal (SDG) of safe, universal access by 2030.

9. Poor water and sanitation services in the three largest cities of Afghanistan – Kabul, Kandahar and Herat – are a particular concern due to these cities’ high share of the country’s urban population (66 percent). The existing piped network operated by the AUWSSC covers less than 20 percent of the population across the three cities and operates only intermittently. At present, all three water systems are exclusively supplied from groundwater, requiring energy intensive pumping. The remainder of the population which is not connected to the piped network also relies predominantly on groundwater, tapping into the unconfined shallow aquifers with private wells. In all three cities, this is putting increasing pressure on groundwater aquifers while contributing significantly to energy use and greenhouse gas emissions. Moreover, water quality is a considerable concern as the shallow aquifers are subject to contamination from surface drainage and untreated wastewater. Wastewater collection is non-existent. Where they exist, onsite household facilities such as septic tanks and manual collection are used to collect and dispose sewage. Across Afghanistan, urban water networks are in a bad state of repair and system water losses (“non-revenue water”) are high, around 50-60 percent in AUWSSC’s estimate. This inefficiency further contributes to excessive energy use.

10. The institutional structure of the sector has undergone reform but remains weak and fragmented. The Water Law (2009) and National Water Sector Strategy (2012) sought to create a modern framework for the sector, espousing principles of Integrated Water Resources Management (IWRM) such as watershed protection, and a strong role for stakeholder participation and sustainability. However, the principles of IWRM have been slow to be implemented, sector institutions have not fully adapted to their intended roles and the sector structure remains fragmented:

- i. The Supreme Council of Water, Land and Environment (SCoWLE) is a governing body focused on water resources management;
- The National Water Affairs Regulatory Authority (NWARA) is the lead regulatory authority for water, responsible for the development and management of water resources, and the implementation of water sector reform, water resources infrastructure (dams, conveyance etc.), supply of water for different users (irrigation, domestic, industrial, and hydropower);
- AUWSSC is the national utility in charge of the management and operation of urban water supply and sewerage, and the implementation agency for the proposed project;
- The Ministry of Agriculture, Irrigation and Livestock (MAIL) is responsible for the development and management of irrigated agriculture;
- The Ministry of Urban Development and Land (MUDL) is responsible for policy and regulation of urban development, including water supply, sanitation and sewerage; in 2005, MUDL adopted the Urban Water Supply and Sewerage Sector Policy to guide the sector during the post-Taliban era, which is now being updated;
- The Ministry of Rural Rehabilitation and Development (MRRD) is responsible for rural WSS, small-scale irrigation (village level) and rural micro hydropower projects;
- The Ministry of Public Health (MPH) regulates and monitors quality of drinking water;
- The National Environmental Protection Agency (NEPA) regulates and monitors activities related to the environment, including water. NEPA is responsible for setting and ensuring compliance with environmental



standards for planning, design, construction and commissioning of water supply and sewerage infrastructure;

- The National Hydrology Committee for Afghanistan (NHCA) provides advisory services, research activities and capacity building support to the water sector;
- Municipalities are responsible for city development plans which provide the strategic planning context within which individual (water) projects are implemented.

11. The large number of sector institutions with overlapping mandates presents a challenge, as does the lack of an independent regulatory authority. The revised Water Regulatory Law (2020) attempts to clarify sector responsibilities, confirming the SCoWLE as the highest leadership, policy and decision-making authority; and expanding and strengthening the role of the NWARA in developing water sector policy, strategy and legislation. Notably, the new law creates a water affairs regulatory department under NWARA. The updated Urban Water Supply & Sewerage Sector Policy is supposed to better outline urban wastewater issues and to highlight areas for integration and coordination within the urban water and sanitation sector, as well as with other sectors such as health. Inclusion is another challenge to effectiveness in the sector, for example, women comprise less than 10% of staff in the AUWSSC and a mere 3% in leadership positions.

12. AUWSSC's mandate is to ensure sustainable provision of safe drinking water supply and sewerage services to the urban population of Afghanistan. AUWSSC was established in 2007 and the World Bank provided the utility with significant support in its early years. In September 2010, AUWSSC was converted to a corporatized urban water and sewerage utility that operates in more than 43 cities across Afghanistan. AUWSSC has six Strategic Business Units (SBUs) which include: Kabul SBU, Kandahar SBU, Herat SBU, Mazar SBU, Jalalabad SBU, and Kunduz SBU. SBUs manage operations in multiple towns in their area of responsibility, with dedicated sub-SBUs (SSBUs) for major cities. Thus, for example, the Kandahar SBU (KnSBU) is responsible for two cities, including a dedicated SSBU for Kandahar which will be one of the focus areas of the project activities. AUWSSC operates as one company and individual SBUs are thus not financially autonomous, but instead transfer revenues to the center which in turn covers operating costs.

13. Over the past decade, AUWSSC has made gradual progress in increasing water production and piped connections in urban areas, though access remains low and is unequally distributed. As of today, AUWSSC is supplying approximately 200,000 households with piped water across its six SBUs. AUWSSC has extended its network length from 3,700 km to more than 4,300 km over the past four years, and improved its level of services, notably by raising average distribution time by two hours. AUWSSC has initiated new measures to improve its financial and operational management in 2019-20. This has included the development of an asset registry; a financial review, in particular of its billings and collections process; a study of a new tariff structure; and other measures. Beyond the investments proposed under this project, AUWSSC is also intensifying its long-term planning, for instance by developing wastewater masterplans for major cities.

14. Recent gains and efforts, however, remain at risk due to corporate governance concerns, weak technical capacity, cashflow constraints and shortfalls in capital investments. While recent audited financial accounts are not yet available, data shared by AUWSSC indicate that the utility's billed revenues covered total costs prior to the COVID-19 crisis (revenue to cost ratio of 1.05). The utility has nevertheless struggled to operate in a financially sustainable manner. Billings are constrained by up to 33,000 connections that remain non-metered, and more than half of the bills issued are not actually collected successfully, thus leading to cash flow shortages. Until collections improve to a point that AUWSSC can cover its operating costs, the utility will have to continue to rely on subsidies and external assistance, in particular for the significant infrastructure investments needed to maintain and improve services.

15. The COVID-19 crisis has aggravated AUWSSC's already precarious operational and financial position. By mid-2020, AUWSSC's revenues had halved relative to the same point in the prior year. Field operations have been complicated by lockdowns and more tenuous supply chains for key inputs such as treatment chemicals. In response,



AUWSSC has developed COVID-19 Emergency Response and Recovery Plans (ERRPs) with the objective to ensure the continuity of services, minimize the impacts of the pandemic on staff, and build capacity to manage future crises. As detailed below, the first component of the proposed project will support the implementation of the ERRPs.

C. Relevance to Higher Level Objectives

16. **The proposed A-WASH project will support key aspects of the Afghanistan National Peace and Development Framework 2017-21.** This national strategy aims to “increase investments in water management” and to provide basic development services, including “universal access to clean water” and “strengthening municipal capacity for revenue collection and service delivery”. At the sector- and provincial levels, the proposed project reflects the priorities of the Urban Water Supply and Sanitation Sector Policy. The A-WASH project is aligned with the National Adaptation Programme of Action for Climate Change, notably its priority of “Improved Water Management and Use Efficiency”, due to its focus on accessing less energy intensive water sources and reducing water losses.³
17. **The project directly supports the World Bank Group’s Country Partnership Framework (CPF) for Afghanistan (FY2017-20), extended to FY2022 on the basis of the Performance and Learning Review dated June 24, 2019 (Report No. 136690-AF).** Notably, the project supports the CPF’s Pillar 1 on Building Strong and Accountable Institutions, as well as Pillar 3 on Social Inclusion. Specifically, by financing and supporting reforms at AUWSSC, the project contributes to the CPF objective 1.1 Improved public financial management and fiscal self-reliance, CPF Objective 1.2 Improved performance of key government institutions and municipalities and CPF Objective 1.3: Improved service delivery through enhanced citizens’ engagement with the state. Moreover, the project will support CPF Objective 3.1: Improved human development through the positive impacts safe drinking water supply is expected to have on child health and nutrition. Addressing inadequate access to basic services will alleviate constraints on human- and economic development and allow beneficiaries to undertake more productive activities. The project thus also supports the World Bank’s twin goals of eliminating extreme poverty and promoting shared prosperity.
18. **The proposed project has been designed in line with the World Bank Group COVID-19 Crisis Response Approach Paper.** The Approach Paper recognizes water and sanitation services as “preventive and essential health services” and “emergency public goods” that are a critical part of the emergency health response. It proposes three stages of crisis response: Relief, Restructuring and Resilient Recovery. The proposed project will provide Relief by enabling implementation of the recently approved ERRPs; it will support Restructuring of the national utility, in particular by enhancing its operational and financial sustainability, tariff setting and human resource management; it will also improve Resilience to disasters, including those intensified by climate change, by increasing access to sustainable water supply through major capital investments to improve access, address groundwater depletion and make services better and more sustainable.
19. **Total additional fiscal financing needs arising from the COVID-19 crisis are expected to reach US\$870 million, reflecting both declining revenues and increasing expenditure needs.** Afghanistan is at ‘high’ risk of debt distress under the World Bank / IMF Debt sustainability framework. Therefore, financing needs can only be met through a combination of: i) additional grant support; ii) new concessional borrowing, including a US\$220 million disbursement from the IMF Rapid Credit Facility; and iii) drawdown of cash reserves. Under the World Bank Sustainable Debt Financing Policy, Government has agreed on a program of Performance and Policy Actions (PPAs) to strengthen debt management, improve fiscal sustainability, and prevent the accumulation of non-concessional external debt. Afghanistan is participating in the G20 Debt Service Suspension Initiative under which approximately US\$3.7 million of debt service payments to official bilateral creditors due during 2020 will be deferred.

³ NEPA, UNEP, GEF; Afghanistan National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA); Final Joint Report; February 2009; <http://bit.ly/NAPA-Afg> [Accessed 10/12/2020];



20. **Recognizing the need for urgent actions, the Government has identified key priorities in a framework document spanning short-term response and medium-term recovery** for: i) expanding the scope and scale of basic healthcare and hospital reform; ii) expanding community driven development and reforming humanitarian programs; iii) enhancing use of technology for distance learning; iv) accelerating access to electricity and internet; v) assisting returning refugees and migrant workers; vi) balancing social and spatial development; vii) assisting provincial, municipal, district, civic organizations, and the private sector; and viii) expanding links with neighboring countries.

21. **The World Bank is providing support to operationalize the Government's response strategy in close coordination with other development partners and humanitarian agencies while building a stronger nexus between the humanitarian and development support.** Overall, the WBG would provide over US\$1.4 billion in new and recommitted funds for COVID-19 programs, including \$37 million under Component 1 – COVID-19 Emergency Relief and Recovery of this A-WASH Project. The World Bank response is aligned with the three interlinked phases – *Relief, Restructuring, and Resilient Recovery* – to sequence and extend the most critical support at the right time. The IFC's US\$8 billion and MIGA's US\$6.5 billion global fast-track facilities to help investors and lenders tackle COVID-19 provide additional opportunities for Afghanistan, in addition to leveraging concessional financing from the IDA Private Sector Window.

22. **In the early *Relief* phase, a US\$100.4 million IDA grant for the *Afghanistan COVID-19 Emergency Response and Health System Preparedness Project* was approved in April 2020 as an immediate response to the health crisis and to strengthen public health preparedness.** A *COVID-19 Response Development Policy Grant* of US\$200 million (US\$100 million IDA and US\$100 million from the Afghanistan Reconstruction Trust Fund – ARTF) was approved in June 2020 to support policy actions linked to the government's relief and recovery measures to respond to the health, social, and economic crisis, and to address critical constraints to longer-term inclusive development while providing immediate liquidity to help recover from the economic shocks.

23. **The World Bank has worked closely with the Government and the ARTF donors to consolidate and reprogram the portfolio resources and to adjust the FY21 pipeline.** The US\$335 million IDA and ARTF released from the portfolio projects are reallocated to the *Restructuring* phase through the *Relief Effort for Afghan Communities and Households (REACH)*, and a proposed *Second Additional Financing to the Citizen's Charter Afghanistan Project (CCAP)* to ensure a nationwide distribution of relief packages. The *Emergency Agriculture and Food Supply (EATS) Project* approved on August 4, 2020 lays the foundation for food security and strengthens agribusiness by supporting smallholder farmers and MSMEs involved in the food supply chain. As noted, this project will focus on a sustainable COVID-19 response in the three largest Afghan cities (Kabul, Kandahar and Herat) that have been particularly hard-hit by the pandemic. It will support emergency relief and restructure the urban water supply and sanitation sector to enable a resilient recovery.

24. **Impacts of these operations will be enhanced by the proposed longer-term *Early Warning, Finance and Action (ENETAFW)* project designed for the *Resilient Recovery* phase.** It will establish an adaptive safety net linked to a drought early warning system and an overall community resilience mechanism. Finally, the *SAFI* project approved on September 28, 2020 will support the private sector to build a resilient economy by providing access to finance for MSMEs and strengthening the institutional capacity for financial stability.

25. Additional details on how the proposed project will support the most urgent needs of Afghanistan in response to COVID-19 can be found in paragraphs 37-38 (Description of Component 1), Paragraph 107 (Risks), with additional information touching on the role of COVID-19 in relation to the project in Paragraphs 6, 14, 15, 18, 26, 26-31, 36, 57, 60, 96 and 99.



D. The Program – Series of Projects (SoP)

26. **The proposed Project is expected to be the first in a Series of Projects (SOP, or “the Program”) to be implemented over a 12-year period.** The overall Program development objective (PrDO) is to improve access to safe water and sanitation in selected areas of Afghanistan as well as to strengthen sector capacity. The programmatic approach will ensure continuity of the sector engagement, facilitate a sustained contribution to the Bank’s support to Afghanistan’s COVID-19 response and also provide a longer time-frame for climate-related outcomes to become apparent. The World Bank has led a robust reaction to the pandemic in Afghanistan with a series of emergency relief projects that support health interventions and agriculture and food supply and cash support to vulnerable households. The proposed Program would complement this approach with emergency support to sustain critical water and hygiene services in priority cities under the first project, while also laying the basis for rebuilding better in the long-term. One of the most cost-effective strategies for increasing pandemic preparedness, ensuring an effective response to disasters and a smooth and fast recovery, especially in resource-constrained settings, is maintaining and investing in core public health infrastructure such as water. The Program will also support the long-term sustainability of WSS components under other ongoing World Bank-supported interventions, including the *Cities Investment Program* (P160619), the *Urban Development Support Project* (P147147) and the *Citizens' Charter Afghanistan Project* (P160567).

27. **The Program is expected to consist of three projects that will overlap in time and vary in geography.** The three projects in the series are expected to commence in 2021, 2026 and 2028, respectively. The first of the series of projects, the Afghanistan Water, Sanitation, Hygiene and Institutional Support Project (A-WASH, “SoP-1”, or “the project”) will focus on the COVID-19 emergency relief in Afghanistan’s three largest cities, helping to build the country’s resilience to COVID-19 and other disasters (including those induced by extreme weather related events), with a particular focus on supporting universal access to safe water for the people of Kandahar, Afghanistan’s second-largest city. Investments in sewerage collection, treatment and disposal or reuse would be included under SoP-2. USAID, which is currently funding a major technical assistance program to AUWSSC, will support a Master Plan for inclusive sanitation in Kandahar. Until a citywide solution can be implemented, a short-term wastewater solution is expected to include regulated disposal at permitted sites (sludge management) to reduce uncontrolled pollution and will be implemented. The SoP-3 will include water and wastewater investments in other cities. The anticipated duration of each project is five years. Overall Program completion is thus expected by 2033.

28. The focus of the proposed SoP on supporting universal access to safe water and sanitation in urban areas is in line with the concentration of need in large cities, the Bank’s earlier support to the national urban water utility, and the Government of the Islamic Republic of Afghanistan’s (GoIRA) desire to improve public services in major urban centers. In Afghanistan’s cities, major infrastructure investments are needed as existing water and sanitation facilities have been damaged by decades of conflict, and the limited existing systems have not kept up with the rapid growth in demand. The proposed rehabilitations and efficiency improvements (e.g. reduction of NRW; use of sources less energy intensive than groundwater etc.) will also contribute to long-term climate targets. To manage this vital water infrastructure sustainably, reform efforts supported under the SoP will focus on the national utility AUWSSC which continues to struggle to provide affordable, reliable, inclusive and sustainable services. More details on the Program, including the proposed sequencing of the individual projects, estimated financing, results chain and indicators, are provided in Annex 1.

II. PROJECT DESCRIPTION

29. **The A-WASH project aims to safeguard essential water services in Afghanistan’s three largest cities (Kabul, Kandahar and Herat) during the COVID-19 pandemic, and to support a sustainable recovery by expanding access to safe water and improving AUWSSC’s operational performance.** The initial Relief phase of the project will focus on the implementation of the AUWSSC COVID-19 ERRPs, complemented by capacity building for AUWSSC and in



particular the SBUs in the three cities to improve their operational and financial performance and reduce energy inefficiency and losses. In order to address the long-term structural challenges of lack of water supply and groundwater depletion, and to contribute to a sustainable and less energy intensive recovery, the project will also undertake strategic capital investments with a focus on Kandahar. The activities financed by the project will safeguard basic water supply in Kabul, Herat and Kandahar, contribute to the containment of COVID-19 and bolster the country's resilience to future disease outbreaks and other disasters, including those induced by climate change-related threats.

30. Kabul is Afghanistan's largest city and its capital. Its existing piped water supply relies exclusively on groundwater which is being abstracted at an unsustainable rate. At present, around 80 million cubic meters (MCM) of water are being extracted per year in Kabul which is nearly twice the sustainable recharge capacity. This has resulted in a rapidly depleting aquifer, risking future supply shortfalls. Kabul's piped network is relatively limited compared to the rapidly growing population, with less than 20 percent of households connected to the network. A number of donor countries, including Germany, France, India and the United States, are financing interventions to relieve the unsustainable pressure on Kabul's groundwater reserves by tapping into surface water sources and to extend network access. To complement these efforts, the focus of the proposed project in Kabul will be on implementation of the COVID-19 ERRP and on utility reform. The capital has been particularly badly affected by the pandemic with the highest case count nationally. This is likely due to its high population and the high degree of mobility in and out of the city, exacerbated by poor public hygiene and limited access to safe and reliable water supply.

31. Herat is Afghanistan's third-largest city with a comparatively well-developed water supply system. Originally built in the 1970s, and partially rehabilitated in 2008-9 with support from KfW, the system supplies over 60% of the population – the highest degree of access to piped water in any large city of the country. Herat's location close to the border with Iran made it an early hotspot of the COVID-19 pandemic. This was driven by Afghan migrant labor returning home in the wake of the severe outbreak in Iran. As the city's water infrastructure is comparatively developed, and the pandemic particularly severe, the focus of the proposed project in Herat will also be on the implementation of the COVID-19 ERRP relief activities and capacity building, to ensure existing services are safeguarded and extended if needed for the COVID-19 response.

32. Kandahar is Afghanistan's second-largest metropolitan area with an officially estimated population of approximately one million people, although unofficial estimates range as high as 1.5 million. Kandahar is in a highly drought-prone part of the country and thus particularly vulnerable to climate change. The city's current domestic water supply is limited and entirely dependent on groundwater which is declining due to excess extraction. The city's historic water infrastructure has deteriorated while demand has increased rapidly. The existing water network covers fewer than 8,000 households, while most of the population obtains water from private wells drawing from a shallow, unconfined aquifer which is depleting and contaminated due to the absence of a sewerage system, as several studies have shown.⁴⁵ The existing piped network was constructed in the early 1970s and has seen only limited rehabilitation and extension since then. The network supply is not being treated as chlorination systems are no longer in working order. The quality of water is reportedly poor, and supply is intermittent. The wells that remain functional supply approximately 5,000 cubic meters per day to AUWSSC network, less than 10 percent of the water needed to ensure that the population's most basic needs are met.⁶

33. To address the challenge of groundwater depletion and contamination, and to ensure sufficient provision of safe water to Kandahar even during extreme weather-related shocks such as droughts, accessing treated surface water is a sustainable, safe solution, which will also reduce energy-related GHG emissions for pumping. The

⁴ JICA, KfW and Feasibility Study financed by ADB and completed in February 2019

⁵ Haziq, M. A., & Panezai, S. (2017). An Empirical Analysis of Domestic Water Sources, Consumption and Associated Factors in Kandahar City, Afghanistan. *Resources and Environment*, 7(2), 49-61.

⁶ The WHO recommends at least 50 liters per day per person.



proposed source is the existing Dahlia Dam reservoir on the Arghandab river located 30 km north of Kandahar. The reservoir has a capacity of approximately 300 MCM, which is assessed to be sufficient to supply the volume of water needed for the project (approximately 54.75 mcm/year, equivalent to 4 percent of the average annual inflow to the reservoir, i.e. 1,380 mcm/year). The use of groundwater and water trucking, and corresponding GHG emissions, will be gradually reduced, with Kandahar relying on conjunctive use of ground- and surface water (Dahlia Dam and existing groundwater wells) until the full operation of the new water treatment plant (WTP). The transition to surface water will require a proactive outreach to communities to communicate the advantages of piped water supply and defuse possible resistance from existing water vendors, enabling their transition to new livelihood opportunities. While Kandahar will also benefit from activities under the local COVID-19 ERRP, a particular focus will be on strategic capital investments in the city to address its structural supply gap and extremely limited distribution system.

A. Project Development Objective

PDO Statement

34. The proposed Project Development Objective (PDO) is to improve access to and quality of water supply in selected cities and to strengthen the capacity of AUWSSC to deliver sustainable services in order to contribute to national efforts to manage COVID-19 and other disasters.

PDO Level Indicators

35. Key indicators to measure progress towards achievement of the PDO include:

- People provided with access to improved water sources (Number)
- Water distributed complies with WHO standards for biological and physical quality (Percentage)
- Improved Collection Efficiency of Kandahar, Herat and Kabul Strategic Business Units (Percentage)
- Increased metering coverage (Percentage)
- Strategic Business Continuity Plan for three major cities adopted by AUWSSC (Number)

B. Project Components

36. **The A-WASH project will consist of five components:** Component 1 will support implementation of AUWSSC's COVID-19 emergency relief measures in the three largest cities of Afghanistan - Kabul, Kandahar and Herat; Component 2 will finance measures to restructure, reform and improve the urban water utility's operational and financial performance; Component 3 will fund technically robust, more sustainable infrastructure, including measures to build resilience to climate change, with a strategic focus on Kandahar. Component 4 will support project management and monitoring; and Component 5 is a Contingent Emergency Response Component. A summary of activities to be financed under each component is provided below, with additional details given in Annex 1. The components are designed to maximize climate change adaptation and mitigation measures as detailed below.

37. **Component 1 – COVID-19 Emergency Relief and Recovery (US\$ 30.0 million):** The project will support the national urban water utility AUWSSC to maintain vital water supply services in Afghanistan's three largest cities despite significant COVID-19 related revenue shortfalls (approximately 50 percent year-on-year decrease, and disruptions to its field operations caused by the pandemic. Water supply and hygiene services are an essential part of preventing transmission and protecting human health during infectious disease outbreaks, including the current COVID-19 pandemic. Maintaining water supplies will also improve resilience to possible overlapping extreme weather events. Protecting staff and assets and safeguarding AUWSSC's existing operations is thus of critical importance. This will be achieved by financing several short-term interventions in the selected Strategic Business Units, including:

- a. Financing of critical operational inputs such as treatment chemicals which are at risk of depletion due to revenue declines and supply chain disruptions;



- b. Rehabilitation and replacement of priority water supply facilities, including water wells, pipes and pumps, water tanks, power generators and chlorine dosing equipment to maintain services during the pandemic;
 - c. Provision of rapid emergency water connections for high-risk areas and key health facilities, as well as support to secure high priority water services by trucks where piped water is not feasible;
38. These interventions are based on the ERRPs which were prepared by AUWSSC as a prior action for the Afghanistan COVID-19 Response Development Policy Grant (P174234) to support recovery and resilience of the water sector.
39. ***Component 2 - Sector Reform, Institutional Strengthening, and Capacity Building (US\$ 5.0 million):*** This component aims to strengthen the capacity of AUWSSC and its SBUs to deliver safe drinking water to the population in a technically, financially, socially and climate-sustainable manner. The institutional strengthening activities will, where appropriate, seek to promote and enhance private sector participation for efficient and sustainable service delivery. The technical assistance will provide general planning and institution-building support to improve AUWSSC's operational performance in line with the PDO. In particular:
- (a) *Sub-Component 2.1 - Sector Reform and Strategic Planning:* this sub-component will provide technical assistance to, and building capacity of, AUWSSC and selected agencies for development and implementation of water sector reforms, including the preparation of a sector strategy, and the identification and implementation of water use efficiency and policy and regulatory framework for private sector participation in service delivery
 - (b) *Sub-Component 2.2 - Improve Financial and Technical Performance of AUWSSC:* this sub-component will provide assistance to, and building capacity of, AUWSSC to design a systematic approach for improving its operational and managerial performance; including financial management and reporting practices, optimization of tariff setting, improvement of billing and collections, and design and roll-out of systems and training for asset management and maintenance .
 - (c) *Sub-Component 2.3 - Improve Social Accountability of AUWSSC:* The project will finance program of activities to strengthen AUWSSC's communications, social accountability, citizen engagement, women's participation and customer responsiveness, including an information campaign, enhancement of the role of women in the water sector, establishment of a grievance redress mechanism, and substantive community consultations on issues of project design and implementation.
 - (d) *Sub-Component 2.4 - Preparation of feasibility studies for the second project:* This sub-component will finance preparation of feasibility studies and the environmental and social studies for the second project in the proposed SoP, . This sub-component will finance development of a water balance⁷ and monitoring of the use of water over the duration of the project taking into account the impact of climate change. It will also finance support to strengthen resilience planning and standards to facilitate future designs of climate-adaptive facilities.
40. ***Component 3 - Enabling Inclusive Access to Safe Water (US\$ 160 million):*** This component will finance the implementation of the water supply infrastructure required to improve access to and quality of water supply in Kandahar while improving sustainability and climate resilience by reducing pressure on depleting aquifers. It will include the following sub-components:
- (a) *Bulk Transmission Pipeline and Water Treatment Plant:* construction of Phase 1 of the WTP⁸ and the construction of the bulk water transmission pipeline to convey water from the Dahla Dam to the new WTP.

⁷ A Water Balance Study for the Dahla Reservoir "Multi-Sector Water Allocation Options" has been completed with ADB funding in 2019.

⁸ The size of the pipe and capacity of the WTP will be confirmed by the detailed engineering design mid-2020.



- (b) rehabilitation and expansion of the water network in urban Kandahar
- (c) Consultancy services for the supervision service for the construction
- (d) Consultancy services for the preparation of environmental and social impact assessments.

41. **Component 4 – Project Management and Monitoring (US\$ 5.0 million):** This component will provide technical and operational assistance to support the AUWSSC Project Coordination Team (PCT) hosted within AUWSSC headquarters and the Project Implementation Units (PIU) in the Kabul, Kandahar and Herat SBUs in overall preparation, coordination, implementation, monitoring and reporting of the Project, including aspects related to social and environmental safeguards, monitoring, reporting and evaluation, grievance redress mechanisms, financial management, financial audits, and citizen engagement.

42. **Component 5 - Contingent Emergency Response Component (CERC) (USD 0.0 million):** This component will improve the GoIRA's ability to respond effectively in the event of an emergency in line with World Bank procedures on disaster prevention and preparedness.

43. **The project components will contribute to both climate change mitigation and adaptation efforts.** Mean annual temperature as well as flood and drought risks have increased in Afghanistan and are projected to further increase in the future as outlined in the project's climate change and disaster screening. Thus, in support of *mitigation efforts*, the emergency response under Component 1 will safeguard existing piped water supplies, thus preventing a switch of existing customers to more energy-intensive private solutions such as trucking or private pumping. New infrastructure financed under Component 3 will use gravity to transmit water from Dahlia Dam to the new treatment plant (Sub-Component 3.1), as well as to distribute it to large parts of the city (Sub-Component 3.2), which will enhance energy efficiency and displace GHG emissions from pumping that requires energy, while improving utility performance. Extending piped access to the entire city is expected to greatly reduce demand for trucked and privately pumped water, further reducing associated carbon emissions. A water management strategy and public information campaign supported by Sub-Components 2.1, 2.2 and 2.3 will help AUWSSC raise awareness of the impact of climate change on groundwater and possible mitigation measures. It will also include planning for a more energy efficient water supply system through improving the operational and managerial performance of AUWSSC, including more effective pump maintenance, installation of meters and more efficient leak detection, which is expected to reduce water losses, and thus increase both energy- and water efficiency. Under the Sub-Component 2.4, a study will examine the introduction of renewable energy for administrative buildings, pumping and treatment processes.

44. In support of *adaptation efforts*, the project will reduce dependence on groundwater thus improving recharge in the aquifer and improving resilience to future water shortages, which will be compounded by climate change and the deteriorating water quality. Flooding has increased the health risk of the population by contaminating existing groundwater sources with sewerage, and drought has increased people's health risks by directly reducing the available volume of potable water. Component 1 and 3 will counter this by enabling the beneficiaries to access safe and continuous piped water. In addition, beneficiaries will have more reliable access to potable water from a professionally managed piped network, especially in the face of climate change-induced droughts, heat waves, and floods, thus building resilience against climate change. Component 2 will invest in activities to strengthen AUWSSC's capacity to ensure supply sustainability in the future. The water management strategy supported by the project will take into account climate change impacts on water resources and promote sustainable use of water resources by conserving groundwater among other measures.

Project Cost and Financing

45. Total project financing made available through the IDA Grant is equivalent to US\$ 50 million, in addition to which co-financing in the amount of US\$ 150 million is allocated from the Afghanistan Reconstruction Trust Fund (ARTF).



The lending instrument is Investment Project Financing to be implemented over a five-year period. Table 2 provides a breakdown of the project costs by component.

46. The project is expected to be complemented by a Bank-executed trust fund of US\$ 400,000 provided by the Government of Japan through the Global Facility for Disaster Reduction and Recovery (GFDRR) to assist AUWSSC to better manage scarce water resources in a time of crisis, to design new infrastructure in a disaster-resilient manner, and to engage the public to increase knowledge of water conservation and hygiene measures.

Table 1: Project Financing Costs (US\$, millions)

Project Components	Project Costs	IDA Funding	Co-financing ARTF
Component 1 - COVID-19 Emergency Relief and Recovery	30	5	25
Component 2: Sector Reform, Institutional Strengthening, & Capacity Building	5		5
Subcomponent 2.1: Sector Reform and Strategic Planning			
Subcomponent 2.2: Improve Financial and Technical Performance of AUWSSC			
Subcomponent 2.3: Improve Social Accountability of AUWSSC			
Subcomponent 2.4: Preparation of FS for the second project			
Component 3: Enabling Inclusive Access to Safe Water	160	40	120
Subcomponent 3.1: Bulk Water Transmission Pipeline and Water Treatment Plant			
Subcomponent 3.2: Water Supply System in Kandahar			
Component 4: Project Management and Monitoring	5	5	0
Component 5: Contingent Emergency Response Component (CERC)	0	0	0
Total project costs	200	50	150

C. Project Beneficiaries

47. **The A-WASH project will have direct beneficiaries in the form of customers obtaining higher quality services, as well as institutional beneficiaries gaining improved infrastructure and capacity:** The primary beneficiaries will be AUWSSC's current and future customers who will benefit from improved water supply and associated gains in health and economic welfare. The population currently connected to piped water in Kabul, Herat and Kandahar, is estimated to be at least 1.15 million. Moreover, capital investments in Kandahar will extend access to safe water to up to an additional 800,000 people. In total, 1.95 million Afghans are thus expected to benefit directly from the project.

48. AUWSSC and its KSBU, KnSBU and HSBU will benefit from enhanced distribution capacity, service quality, reduced losses, as well as training to translate these infrastructure improvements into improved financial sustainability and greater accountability to customers. This will be achieved through investments in water metering, management training, energy efficiency, monitoring and investment planning capacity of AUWSSC and improvement of the regulatory framework for operational and financial sustainability.

49. **Beneficiaries of the institutional component activities will also include government institutions such as the NWARA, municipalities and district institutions within the cities.** Improvements of the internal M&E systems at the AUWSSC will also result in better-quality data flowing into the National Water Information System currently under development by the NWARA. The project will benefit from cooperation with the government agencies for redesigning the norms for urban water supply and development of other technical manuals and guidelines.

D. Results Chain

50. **The project's results chain posits that achieving sustainable Water, Sanitation and Hygiene (WASH) outcomes requires concurrent advances in improving water supply infrastructure, building AUWSSC's capacity as well as raising public awareness on the importance of good WASH practices.** The synergy of infrastructure improvement and capacity building is central to each stage of the project's results chain. As a recent World Bank study on delivering



sustainable water services highlighted, “when institutional reforms do not accompany [capital investments], the sustainability of outcomes can be compromised”. In turn, utility reforms can be undermined if not reinforced by infrastructure investments, because without noticeable service improvements a delivery gap arises that can reduce support for reforms among government, staff and the public.

51. Thus, the project supports improvements in the water systems and in raising public awareness for water conservation and to help prevent and protect against COVID-19 and its public health, social, economic and financial impacts; beyond emergency relief, the project will also strengthen AUWSSC in the long term. Project investments will improve the utility's operational and financial systems and help build a more sustainable and resilient water infrastructure by reducing NRW and increasing energy efficiency, notably by supporting a switch away from groundwater pumping towards surface water primarily conveyed by gravity. Figure 1 below illustrates how specific activities are expected to translate into outputs, outcomes, and the ultimate project impacts.

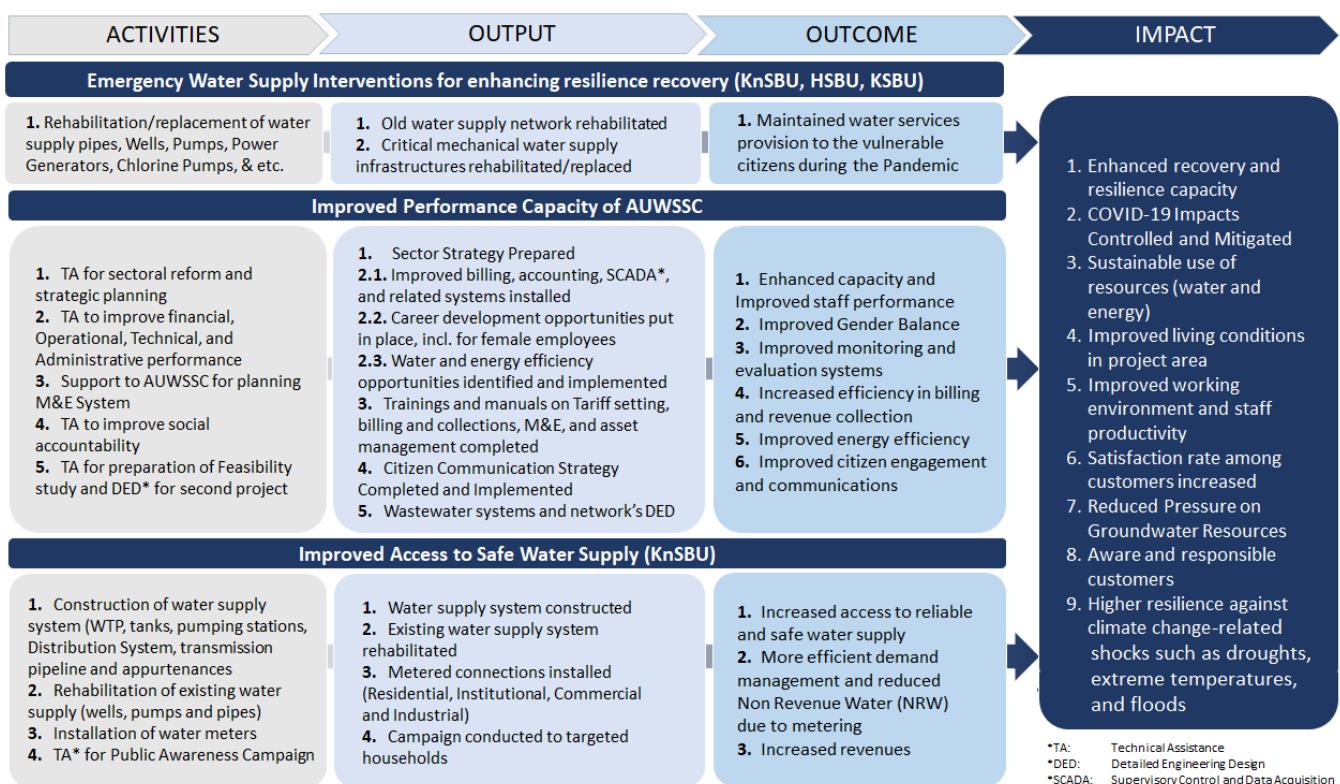


Figure 1: Project Results Chain

52. The results chain is reflected in the project's results framework. To ensure effective monitoring and evaluation, the project will support AUWSSC in building a benchmarking system. This is also expected to improve the utility's performance and to enhance its result orientation. The main function of the benchmarking system will be to collect data on key project indicators and to contribute to sector M&E data. The monitoring system will also record data on contract management, institutional performance, operation and maintenance (O&M), and the GRM. The PIUs' staff will be responsible for collecting the baseline data and for entering data into the monitoring system.

E. Rationale for Bank Involvement and Role of Partners

53. **The Bank is uniquely positioned to help Afghanistan respond to its COVID-19 crisis by mobilizing funds rapidly and within a clear strategic framework. This is particularly the case with respect to the significant unmet needs in the water sector.** The project design is based on the strategic framework outlined in the *World Bank Group COVID-19*



Crisis Response Approach Paper. The proposed intervention in the water and sanitation sector constitutes a key component of the Bank's support to GoIRA's COVID-19 response and reflects the sector's important contribution to "preventive and essential health services" and "emergency public goods", as recognized in the Bank's Approach Paper. It complements other Bank projects that form part of the COVID-19 response, including the Afghanistan COVID-19 Emergency Response and Health Systems Preparedness Project (P173775), the COVID-19 Relief Effort for Afghan Communities and Households (P174119) and the Afghanistan Emergency Agriculture and Food Supply Project (P174348).

54. The Bank's engagement in the water sector is supported by strong existing sector relationships, its global knowledge and a strong staff presence in the country office. In the recent past, the Bank has provided technical support to the GoIRA's water sector reforms and has directly assisted in the set-up, operational management and strategic planning of AUWSSC (2006-2014). This gives the Bank strong experience and a tested relationship with the implementing agency for the proposed project. The Bank also has a strong staff presence in Kabul with international and local staff who play an important role in supporting project implementation and the associated risks. Furthermore, the Bank can draw on its global knowledge and lessons learnt (see next Section) to inform the proposed operation. Moreover, the Bank is among the few institutions in a position to provide large-scale infrastructure financing in a sector in which most projects focused on support to capacity building in recent years.

55. The project will coordinate closely with donor partners, including the United States Agency for International Development (USAID) and the ADB in which is financing the Arghandab Integrated Water Resources Development Project. On November 8, 2018, the World Bank, GoIRA and ADB signed a memorandum of understanding, agreeing to cooperate to develop the water in Kandahar Region. Other key international sector partners include Germany and Japan. The Government of Germany, through its development agency GIZ and its development bank KfW, has been providing technical assistance and investment funds to AUWSSC since 2008. USAID has contributed \$20 million to the KfW-led project, Extension of the Kabul Water Supply System, MTP1 Mid Term Program, Project and in 2019 launched a new technical assistance initiative in support of AUWSSC valued at US\$ 43 million. India also plays a major role in Afghanistan's water sector, in particular through its support to the proposed Shahtoot Dam, which is critical to securing additional water supply for Kabul. The World Bank is coordinating policy- and institutional capacity building with other partners through the AUWSSC – Donors Coordination (ADC) group which has agreed on an action plan to realize synergies and avoid duplication.

F. Lessons Learned and Reflected in the Project Design

56. The Bank's experience highlights that the provision of safe water, sanitation and hygiene is essential to protecting human health during disasters, including infectious disease outbreaks such as COVID-19. This is even more important in fragile and conflict-affected states and takes on a special significance in crowded urban areas which the risk of transmission is great. Global experience – notably the 2014 Ebola crisis in West Africa – has demonstrated the importance of maintaining technical support and providing emergency assistance to urban utilities during such crises. In Liberia, for example, timely intervention prevented a collapse of basic services in the capital Monrovia, helped retain critical staff, built trust in a situation of major stress and paved the way for a significant investment project post-crisis (Liberia Urban Water Supply Project, P155947). Drawing from this experience, the project will (i) strengthen the ability of the utility to maintain basic services and retain staff during the ongoing disaster; (ii) ensure strong outreach, education, and communication with the public to raise awareness; (iii) plan new infrastructure with a focus on critical facilities; (iv) pay attention to constraints on the Bank's supervision capacity in light of security risks; (v) establishing a strong, local project implementation unit staffed primarily with AUWSSC employees, with adequate budget and autonomy to operate efficiently; and (vi) work with local stakeholders to maintain support for the project.

57. The World Bank's global experience in the water and sanitation sector provides other valuable lessons that are reflected in the project design. These have been highlighted in recent reviews, including the Independent



Evaluation Group's (IEG) global review of the Bank's support to WSS in 2007-16⁹. Key lessons included: (a) the importance of focusing on access disparities, which this project does by investing in one of the world's poorest countries, supporting an explicit strategy of achieving universal access to vital water supplies in Kandahar; (b) the importance of including quality of service indicators, rather than just tracking user access. The project aims to do this by integrating indicators measuring customer satisfaction as well as water quality; and (c) the importance of financial viability and tariff reform, which the project is addressing through Component 2 to ensure that infrastructure investments are maintained in the long run. A further lesson the project is integrating is a strong focus on building local capacity, to create and support a capable, motivated workforce that can independently manage service operations successfully and sustainably.

58. Key lessons have also been drawn from the Bank's accumulated experience in fragile and conflict-affected states, and specifically in urban Afghanistan. This includes a focus on (i) simplicity of project design with a limited number of components, implementing agencies and intervention sites to minimize demands on weak and under-staffed institutions, as well as constraints on the Bank's supervision capacity in areas affected by significant security risks; (ii) establishing a strong, locally based project implementation unit staffed primarily with AUWSSC and KnSBU employees, and with adequate budget and autonomy to operate efficiently in the local environment and to swiftly react to challenges in close coordination with project supervisory consultancy firms; (iii) ensuring continuous consensus building, with government counterparts, local beneficiaries and others and, to build broad-based ownership for the project; and (iv) sufficient contingency budgeting to account for market and security uncertainties. To enable close supervision and risk management, the Bank has also strengthened its Water team based in Kabul, with the TTL and other team members based in the country office.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

59. Overall management responsibility for the A-WASH project will rest with the AUWSSC. The project will be implemented by dedicated Project Implementation Units (PIUs) based in Kabul, Kandahar and Herat under AUWSSC's SBUs. The PIUs will receive guidance and support from a Project Coordination Team (PCT) within AUWSSC headquarters. To build long-term capacity, PIU and PCT members will be drawn primarily from existing AUWSSC staff. Core staff have been identified and have been involved in the project preparation since concept stage. For selected specialized tasks such as environmental and social monitoring and communications, AUWSSC has hired an environmental and social specialist as part of the PCT and two specialists were hired for the PIU in Kandahar. The PIU and PCT may engage other consultants with expertise in the implementation of Bank-financed projects as needed.

60. The key PIU staff will consist of a Head, Chief Accountant, Procurement Specialist and SBUs staff engineers. The PIUs hosted in the SBUs will be responsible for day-to-day project implementation, project progress reporting, monitoring compliance with environmental and social (E&S) standards, coordination with other agencies in Kandahar; and coordination with other stakeholders in line with the Project Operating Manual (POM). The PCT Coordinator, supported by the FM and procurement Directorates of AUWSSC, will be responsible for procurement, expenditure, financial reports and audits, in close cooperation the SBUs. In addition, qualified engineering firm(s) will be hired for construction supervision. Municipal authorities and other stakeholders will participate during the implementation of relevant project activities. This organizational structure aims to ensure sufficient implementation capacity for the project.

⁹ World Bank, 2017. *A Thirst for Change: The World Bank Group's Support for Water Supply and Sanitation with Focus on the Poor*.



61. **The GoIRA will create a Project Coordination Committee (PCC) before project effectiveness to coordinate with other stakeholders such as those involved in the USAID and ADB-financed investments.** The PCC will be responsible for overall project coordination, review of progress reporting and coordination with other stakeholders. The PCC will be chaired by the MoF in accordance with the memorandum of agreement between GOIRA, ADB and the World Bank signed on November 8, 2018, to collaborate in the achievement of the projects' objectives. The PCC will nominate representatives of relevant government agencies at managerial and technical level (including AUWSSC, NWARA, Municipalities, MAIL, and the MRRD, etc.). A representative of the donors will provide technical support and advice. This committee will serve as a coordination platform for the multi-faceted interventions and meetings that will be conducted semiannually, and as needed, to report on the project progress and seek support on the multi-sectoral aspects of the project implementation.

62. **An AUWSSC–Donors Coordination (ADC) group has been created.** The ADC includes the World Bank, USAID, KFW, GIZ, ADB and JICA currently supporting AUWSSC, including. The ADC is chaired by the AUWSSC Director General. The ADC has held a series of meetings to develop a donor coordination roadmap to identify and prioritize investments, to avoid duplication, and to manage effectively the planned investments for the performance enhancement of AUWSSC and its SBUs.

63. **AUWSSC will prepare the Project Operations Manual (POM).** The POM will include description of processes, procedures, roles, and responsibilities related to project management and implementation. The POM will be adopted by the AUWSSC as a condition of project effectiveness.

B. Results Monitoring and Evaluation Arrangements

64. **The SBU PIUs will be responsible for the M&E of the project, with support and quality control by the PCT based at AUWSSC headquarters.** Achievements and progress towards results will be measured by the indicators of the results framework. The PIU will collect all data for results indicators monitoring from the field through their supervision teams and with inputs from the construction supervision consultancies. Other independent quantitative and qualitative evaluations (such as hygiene education and promotion, citizen engagement, satisfaction of beneficiaries, gender, etc.) will be conducted by consulting firm, and non-governmental organizations (NGOs) to ensure greater independence. The frequency and methodology for reporting on project results indicators is outlined in Section VI. Results Framework and Monitoring. The M&E arrangements and precise responsibilities will also be detailed in the POM. The project will support environmental and social safeguard monitoring and performance reviews to ensure compliance with its safeguard instruments and to provide guidance for improving future performance. The PMU environmental and social safeguards expert will be responsible for the overall monitoring of safeguards and the reporting on safeguard indicators.

C. Sustainability

65. **The project will be implemented in a challenging, fragile environment that makes a comprehensive approach to sustainability important to increase the probability of maintaining project benefits in the long run:**

(a) ***Financial sustainability:*** AUWSSC is expected to generate sufficient revenues to cover the operating costs of the project-financed infrastructure from additional sales, tariff adjustments and improve collection efficiency, and hence avoid cash flow shortages that would undermine project outcomes. The reduction in water losses, lower dependence on energy resources, improved billing and collection practices (including widespread metering) and a well-functioning financial administration, are all expected to contribute to the improvement in the financial situation of the utility. However, as detailed in the economic analysis, AUWSSC is not expected to generate net profits due to the large depreciation requirements.

(b) ***Technical Sustainability:*** The water system design will follow international best practices, taking into account



local capacities and supplies for system maintenance in order to facilitate technical sustainability in the post-construction phase.

- (c) Institutional Sustainability: The long-term maintenance of the water supply systems in Kabul, Herat and Kandahar will depend on strong, capable institutions at both the operational and strategic levels. The project will invest in sector reform (to improve regulation and strategic direction at national level) and institutional strengthening (to improve financial and technical capacity of AUWSSC staff in particular) under Component 2. Moreover, these capacity-building interventions will be closely tied to a larger AUWSSC technical assistance plan coordinated with the ADC group as outlined above. A roadmap for a five-year performance improvement program of AUWSSC is under preparation with the support of donor partners.
- (d) Social Sustainability: The project will ensure social sustainability through the engagement of all stakeholders in project preparation and implementation, intensive community mobilization, behavior change campaigns, and the development of stronger accountability measures between the SBUs and customers, notably through a modern grievance redress system (see below). The considerable benefits and convenience of universal piped water access are likely to create a baseline of support and goodwill, but active engagement, public participation and clear communications will remain a priority throughout the project to manage expectations and address possible grievances.
- (e) Environmental sustainability: The project investments will result in environmental benefits in addition to impacts that are expected to be manageable. In particular, expanded access to drinking water from Dahlia Dam in Kandahar is expected to protect groundwater resources which presently are the primary source of water supply for the city. Furthermore, the project will support a public awareness campaign to reduce dependence on groundwater to prevent overdraft and allow for sustainable recharge of the aquifer over the duration as well as after the completion of the project, thereby making the residents more resilient to the growing water shortages which have been compounded by climate change and the deteriorating water quality. The anticipated adverse environmental impacts resulting from project activities are mainly construction-related and are assessed to be substantial in nature, however the risks can be mitigated through the assessment of risks and implementation of measures that will seek to eliminate reduce or manage the residual impacts as outlined in the environment and social section of this appraisal document. The project area is within a built environment hence impacts on biodiversity and surrounding ecosystem are not expected to be significant .

66. **The net greenhouse gas (GHG) emissions of the project are estimated at + 19,331 tCO2-eq over the economic life of the project (assumed to be 25 years), while the gross emissions are estimated to be + 53,634 tCO2-eq.** The expected gross emissions are primarily due to the major expansion of water supply to the city of Kandahar which will require energy use in the new water treatment plant (increase of 1,398 tCO2-eq annually) and pumping required to supply an elevated zone of Kandahar from the treatment plant (increase of 382 tCO2 annually). These gross emissions are partly offset by the GHG reductions the project is expected to realize. Substantial savings will be achieved through the replacement of trucked water, which presently supplies nearly 13 percent of Kandahar's population, with piped water. The bulk transmission pipeline to the WTP and most of the distribution system (excluding the elevated zone of Kandahar) are expected to use zero-emissions gravity-based systems, which will limit the project's GHG emissions. The associated reduction in fuel use and corresponding groundwater pumping to supply the tanker trucks with water will save an estimated -1,006 tCO2-eq annually. The overall annual net CO2 emissions are estimated at +774 tCO2. These estimates are conservative as several factors likely to contribute to GHG savings – notably leak reduction – have not been quantified in the GHG analysis due to a lack of precise baseline data.



IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical

67. **The technical design of the A-WASH project is informed by the approved ERRPs for the three cities as well as the feasibility study for the planned infrastructure investments in Kandahar.** The ERRPs detailing the project's emergency relief interventions were developed and approved by AUWSSC as part of the preparation for the COVID-19 Response Development Policy Grant (P174234). The plans aim at improving operational efficiency and resilience, including selective, targeted infrastructure measures to rehabilitate and replace priority facilities (e.g. pumps, wells, chlorine dosing equipment etc.) and to provide rapid emergency water connections to high risk areas and key health facilities. Detailed engineering designs and bidding documents for emergency investments and goods are under preparation by AUWSSC and will be reviewed by engineering consulting firm(s). The documents are expected to be completed shortly after project effectiveness to ensure readiness for implementation. The terms of reference for key consulting services (pre-contract services and supervision of construction, and public awareness and hygiene campaign) have been initiated in advance and procurement processes will be launched early, to ensure the immediate start-up of relief activities as soon as the project becomes effective.

68. **The technical approach of the significant infrastructure interventions in Kandahar under Component 3 will follow the ADB-financed feasibility study completed in August 2019.** It consists of a combination of surface water from the Dahlia Dam and the existing well system. The surface water from the existing Dahlia Dam will be developed to provide additional drinking water to Kandahar, including for commercial, institutional and industrial demand. The preliminary engineering design for the proposed infrastructure. This will be achieved by realizing the following activities:

- Rehabilitation and replacement of the existing network and wells systems;
- Gravity transmission main of approximately 30 km to convey raw water from the dam to Kandahar;
- A water treatment plant just north of Kandahar; Phase 1 financed by the project will have a capacity that will meet projected demand for water for the entire population of the city up to the year of 2040.
- Service reservoirs, and booster pumping stations to pump water from the WTP site to service reservoir;
- A distribution system based on a combination of house connections and public standpipes, A about 80,000 private connections and up to 1,000 standpipes will be provided under the project;
- The project will finance the provision of tools and equipment for O&M of facilities. It will also provide the utility with other facilities such as warehouses for storage, workshops, and office buildings as needed.

69. No significant technical obstacles are expected during implementation of the proposed project. The capacity of the existing Dahlia water reservoir is sufficient to provide the water supply required for the project. The intervention will also improve utilization of the limited pre-existing systems, facilitated by activities to raise operational efficiency such as metering, use of gravity, reduction of non-revenue water, and energy efficiency savings.

70. The detailed engineering designs are being prepared by an international firm and will emphasize use of technologies which are well adapted to the needs and capacities of AUWSSC and SBUs, taking into consideration infrastructure sustainability, climate risks, population and economic growth. The engineering design and bidding documents for at least 30 percent of the project amount will be completed prior to project effectiveness.

71. The project will also support the development of technical manuals for the construction and rehabilitation of water and sanitation facilities, with special consideration given to water source and environmental protection, water quality standards, gender and disability inclusiveness, climate adaptation strategies, and renewable energy sources.



72. The proposed implementation duration of the project is five years. A general implementation plan can be found in Annex 2.

Economic and Financial Analysis

73. **Economic Analysis:** The A-WASH project is expected to generate an economic internal rate of return (EIRR) of 16 percent and has an economic net present value (NPV) of US\$ 191 million, assuming low carbon prices and a discount rate of 6 percent. Net positive benefits are expected not only for consumers and AUWSSC, but also for society as a whole as a transition to the Dahlia Dam source will preserve currently overexploited groundwater resources.

74. The estimates of the EIRR and economic NPV are based on a cost-benefit analysis of the core capital investments in Kandahar which compares the project to a “without project” scenario in which the vast majority of Kandahar City’s inhabitants will continue to rely on private tube wells and tanker trucks while the utility’s performance deteriorates further. In the “without project” scenario, the only option for water supply to the expanding population is the drilling of additional wells. As the aquifer is already overexploited, the costs of drilling new and replacement wells are likely to increase as the groundwater table keeps falling, and could eventually result in irreversible damage to the aquifer.

75. By contrast, in the “with project” scenario, the proposed investments will improve access to piped water as well as the quality and quantity of water available. The project will greatly increase water supply and improvements to the network are expected to significantly reduce technical water losses. The resulting economic benefits that have been included in the analysis are (i) an increase in collected revenues, meter rent and connection charges due to increased consumption, assuming an average 80 liters per capita per day (lpcd) for piped water consumers and higher levels of collection efficiency, (ii) consumer surplus as the difference between what people are currently willing to pay and what they will pay once the piped network service becomes available to large groups of potential consumers; (iii) energy savings from the reduction of groundwater use by non-utility users; and (iv) major savings in the cost of incremental investments in groundwater to add wells to service the growing population and to replace existing wells once their lifetime expires; (v) and other benefits, notably groundwater opportunity costs as groundwater provides buffer capacity and makes the city more resilient when droughts occur.

76. Public health benefits have not been quantified due to a lack of reliable information, and because they are partially included in the consumer surplus. However, as the mortality rate and burden of disease from inadequate water supplies is high in Afghanistan, it is likely that these benefits will also be substantial in size (as discussed in Annex 4). Expected benefits have been compared to projects costs, including capital investments and O&M expenditures (see Annex 4 for details).

Table 3: Results of the Cost-Benefit Analysis

Project	NPV (US\$, millions) Discount Rate of 6%	EIRR (%)
Economic net benefits under low carbon price scenario	190.9	15.83%
Economic net benefits under high carbon price scenario*	192.7	15.89%

* The impact of carbon prices on economic benefits is constrained by the limited, partially offset change in GHG emissions expected (Paragraph 48)

77. **The analysis is robust to changes in key variables.** The benefits of the project are highly diverse, while the “without project” situation requires very significant (private) investments in groundwater to ensure people will maintain access to water. The primary risks are associated with lower connection rates: when only approximately 30,000 connections are realized instead of the projected 82,000 during the life of the project, the project’s EIRR will drop below 6 percent. Even when we assume that from 2020, no additional wells will be added and/or replaced, the project’s EIRR remains above 6 percent. Increases in the tariff or changes in the collection efficiency are estimated to have only limited effects on economic viability as benefits from increased revenue would be offset by a change in the consumer surplus.



78. **Financial Analysis:** The review of Kandahar City SSBU's unaudited financial statements for the past three years indicate that in the year ending in 2018, the SSBU incurred a net loss of approximately AFN 16 million (USD 214,000) and a total accumulated loss of AFN 81 million (around USD 1.1 million) against a total revenue base of AFN 17.5 million (USD 243,000) in that same year. The analysis revealed that these financial losses are mainly due to (i) an extremely small customer base that does not generate significant revenues; (ii) sub-optimal operating efficiencies (low billing and collection efficiencies, high water losses); (iii) lack of maintenance; and (iv) poor financial administration (e.g. low revenue collection etc.). Addressing these weaknesses will be crucial to achieving the projected economic and financial outcomes.

79. The analysis assumes that the investments will be provided as a government subsidy in view of the critical nature of water supply services, the large externalities associated with the current mismanagement of the aquifer under Kandahar City, and the poor conditions in which the utility currently operates (the process to address these issues will require time). The subsidies are assumed to come in the form of a full grant that will fund the proposed investments and without incurring any debt service obligations over the life of the project.

80. **The Financial Internal Rate of Return (FIRR) is expected to be negative at -2.89 percent and the financial NPV is negative at -USD 59 million, assuming a discount rate of 6 percent.** While utility earnings are projected to be insufficient for full replacement of the depreciated infrastructure after its economic lifetime, KnSBU is expected to generate sufficient revenue to cover operating costs in Kandahar City. The expected operating cost coverage, which measures the ratio of revenues to operating costs, is well above the benchmark of 1. KnSBU is projected to generate a positive net cash flow in every year of the analysis after 2021 (see Annex 4 for details). However, to achieve this, ensuring the efficient collection of revenues will be critical, as is keeping an adjustment of tariffs indexed to inflation, while additional tariff increases are needed to bring the tariffs in line with the long-term average incremental costs.

81. **Affordability of water supply for the entire population is a key concern of the project which needs to be balanced against the objective of making services financially sustainable in the long term.** In principle, most customers will be better off with the project as laid out in the cost-benefit analysis (see Annex 4 for details). For consumers, the project's benefits are linked to lower prices and a higher available quantity of safe drinking water. Annex 4 provides an affordability analysis for the different consumer groups demonstrating that under standard project assumptions most consumers will be paying the same or less than what they pay now. Yet, the poorest households that now depend on tap water only, or public handpumps and neighbors, will pay (under the current assumptions of higher water rates under the current water tariff structure) more to fully access the higher and better services. OECD guidance indicates households should not pay more than 5 percent of monthly household income for water services. Yet, the poorest user group will exceed that threshold. The tariff study to be undertaken by the project will explore the affordability challenge in detail and define appropriate coping mechanisms that can then be implemented as part of project implementation.

B. Fiduciary

82. The Enhanced Fiduciary Measures including monitoring by TPMA are applicable to the project. Details of measures to mitigate fiduciary risk and the methodologies that would be used to ensure transparent, fair and inclusive project performance and cooperation between AUWSSC, MoF and NPA will be included in the POM.

(i) Financial Management

83. **The financial management responsibility for the project will be shared between the AUWSSC's Finance and Administration Directorate, the PIUs in the SBUs and the Ministry of Finance (MoF).** The project will hire two FM Specialists to be based in Kabul and Kandahar to augment the existing financial management team. The project will use the FM Manual notified by MoF for use by all IDA- and ARTF-financed projects in Afghanistan, which provides an



internal control framework. The project's budget will be a part of the government's annual budget. MoF will be responsible for book-keeping and financial reporting at the central level as well as for the operation of the Designated Account. The FM Directorate of AUWSSC and PIUs in the SBUs will be responsible to maintain detailed books of accounts for project expenditures. The project's financial statements will be prepared in accordance with the Cash Basis IPSAS and will be audited by the Supreme Audit Office in accordance with INTOSAI auditing standards. The audited financial statements will be submitted to the Bank within six months of the close of the financial year.

84. **Disbursement will be based on Statements of Expenditure (SOE).** A designated account (DA) in US Dollars will be set up in Da Afghanistan Bank (DAB), the central bank (DAB), to receive funds from the Bank. The ceiling of advance to the DA will be US\$ 5 million, and the Bank will replenish the DA based on SOE that will be verified by the ARTF's TPMA to confirm eligibility of the expenditure reported. The Mandatory Direct Payments Pilot will apply to the project, and for all goods and services procured internationally, payment will be made using direct payment method only.

85. The Bank has taken a holistic and collaborative approach to strengthening AUWSSC's financial management. The AUWSSC management has implemented some specific measures to address the fiduciary issues reported in previous audits. A USAID and KfW are providing technical assistance to improve assets and inventory management, revenue and collection, information systems, and staff capacity. AUWSSC has also started the process to hire the auditors and complete the overdue audits of fiscal years 2014-19, by September 2021. The Bank is taking the lead to develop and support the implementation of a roadmap to build AUWSSC's institutional capacity, of which financial management is the critical element. The grant financing would be made available to develop and implement the roadmap.

(ii) Procurement

86. Procurement under the A-WASH project will be carried out in accordance with the World Bank's Procurement Regulations for Borrowers for Goods, Works, Non-Consulting, and Consulting Services and applicable to IPF hereinafter referred to as the 'Regulations' dated July 2016, revised November 2017 and August 2018, and the provisions stipulated in the Financing Agreement (FA). The project will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, revised in January 2011, and as of July 1, 2016. Procurement under the project will be carried out by the Procurement Directorate of AUWSSC and SBUs.

87. For open international procurement World Bank's Standard Procurement Documents are should be used and for national open competition the agreed Model Procurement Document shall be used along with the six NPP conditions. The procurement under the project will be handle in line with PPSD developed for the project. Details are given in Annex 2.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

88. **Projects on International Waterways (OP 7.50).** OP 7.50 is applicable to the proposed project as some of the proposed interventions use water resources of the Arghandab River which is a tributary to the Helmand River shared by Afghanistan and the Islamic Republic of Iran, the Harirud River, which is shared by Afghanistan, the Islamic Republic of Iran and Turkmenistan, and the Kabul River which is a tributary of the Indus River shared by Afghanistan, China, India and Pakistan. These rivers are international waterways according to Paragraph 1 of the Policy.



89. The Bank, on behalf of the Government of Afghanistan, notified Iran on March 16, 2020, about the proposed intervention's use of water resources of the Dahlia Dam reservoir fed by the Arghandab River, requesting any comments by April 20, 2020. As of October 1, 2020, no response has been received from Iran and the notification process has been completed. Also, an exception to the notification requirement under paragraphs 7(a) and 7(b) of the Policy has been confirmed and approved for other project activities to which OP 7.50 applies (for feasibility studies, and emergency relief activities) on October 4, 2020.

D. Environmental and Social

90. **The overall environmental impact of the project investments will be largely positive, providing improvements in health and sanitary conditions as well as protecting groundwater from over-exploitation.** Adverse environmental impacts associated with the project activities are mainly construction related and are substantial in nature and will require assessment and implementation of mitigation measures to address any residual impacts. The main adverse environmental impacts related to project operations include (i) generation of dust, noise, debris, waste products and vibrations due to excavation, piling works, and movement of heavy machinery at different project sites; (ii) potential water pollution from vehicle and equipment working close to water bodies, or due to pipeline leakages (iii) increased sludge generation from the water treatment plant will have negative impacts if not properly disposed of during project operation; (iv) soil erosion, possible vegetation loss, sedimentation in case of improper site restoration after completion of civil works; (v) occupational health and safety issues of workers and communities which may include exposure to hazardous chemicals and working conditions, (vii) the project will also increase the generation of household wastewater; the lack of wastewater collection systems, and the discharge of municipal wastewater into rivers and seepage into groundwater will likely constitute a significant source of water quality problems. This will require attention and regulation for safe recycling or proper disposal at an appropriate site. Use of construction materials that are hazardous to human health, for example asbestos and asbestos-containing materials (ACM), will not be permitted. Any pre-existing ACM waste will be collected, transported, and finally disposed of by applying special protective measures in accordance with hazardous waste handling standards and using procedures given in the World Bank Group Environmental, Health and Safety Guidelines. Furthermore, health and safety hazards to workers from the management of chlorine used for disinfection and other contaminants will be mitigated through training to workers on how to handle hazardous materials. Potential risks associated with the disposal of sediments and sludge generated by water treatment operations are to be managed through regulated disposal at a permitted site.

91. The following standards apply to the project: Assessment and Management of Environmental and Social Risk and Impacts (ESS1), Labor and Working Conditions (ESS2), Resource Efficiency and Pollution Prevention and Management (ESS3), Community Health and Safety (ESS4), Land Acquisition, Restrictions and Land Use and Involuntary Resettlement (ESS5), (Biodiversity Conservation and sustainable of Living Natural Resources (ESS6) Cultural Heritage (ESS8) and Stakeholders Management and Information disclosure (ESS10). The details of all ten Standards are summarized in the appraisal ESRS.

92. The key environmental and social risks in a COVID-19 setting have direct relation with the scope of the project operations. Particularly the project components with major construction activities and those involve dealing with large number of labors. These risks will revolve around improper social distancing, poor labor camp management, transporting and disposing of wastes generated by the labor/camps. In addition, there will be a risk of exposure to a wide range of potentially affected communities and individuals, starting with those unidentified infected workers, and extending from there to a wide band of the professional, skilled labor and civic communities. The project will adhere to the WHO guidelines in order to minimize and mitigate the risks associated with COVID-19 especially potential to spread amongst project workers. In addition, the Interim Guidance Note on Covid-19 that was issued by the World Bank disclosed on April 07, 2020, will provide additional guidance associated with minimizing COVID-



19 risks specifically during the construction phase. This will provide guidance to borrower on how to support addressing key issues associated with COVID-19 and consolidates the advice that has already been provided in April 2020.

93. AUWSSC has prepared an Environmental and Social Management Framework (ESMF) materially consistent with the aforementioned environmental and social standards. The ESMF provides guidance for further E&S studies including an Environmental and Social Impact Assessment (ESIA) of each component and other due diligence when the specific locations of activities are identified during project implementation. It also provides a generic assessment of any foreseeable negative environmental and social risks and impacts and proposes a set of mitigation measures and check lists for the risks related to the project operations.

94. The potential risks associated with project 1 of this SOPs have been articulated in an ESMF which has been prepared. The detailed ESAs of individual investment subprojects, under this SOP 1, and subsequently, the preparation of site-specific Environmental and Social Management Plans (ESMPs) for individual subprojects will effectively mitigate, minimize and offset potential negative impacts. When future activities are identified in subsequent SOPs the relevant ESF documents required for the Bank and borrower will be prepared

95. The proposed project is expected to have beneficial social impacts. The expected long -term and cumulative social impacts of the proposed activities are mostly positive and include improved water infrastructure as well as improved health and livelihoods of the people of Kandahar. The resulting benefits include access to basic services and improvement in environmental conditions, citizen security, and economic opportunity. The project will support AUWSSC to prevent service shutdowns in Afghanistan's three largest cities (Kandahar, Kabul and Herat) due to COVID-19 related revenue shortfalls and disruptions to its field operations caused by the pandemic. Water supply and hygiene services are an essential part of preventing transmission and protecting human health during infectious disease outbreaks, including the current COVID-19 pandemic. Protecting staff and assets and safeguarding AUWSSC's existing operations is thus of critical importance.

96. If managed poorly, some proposed interventions may cause substantial social risks and impacts. The World Bank financed interventions, including the transmission, water treatment, distribution network, rehabilitation and replacement of priority water supply facilities, including water wells, pipes and pumps will have some social risks and impacts which are expected to be less severe and mostly temporary, predictable and reversible. Works associated with the construction and upgrading of the water network may cause land acquisition and resettlement impacts such as (i) impact on people's assets including crops, buildings, and structures which were built close to the water pipelines and thus restrict access to the network; (ii) the risk of the virus transmission among the workers and labor influx risk as some of the supported activities may rely on hiring labors from outside the project' area of influence; (iii) the project is screened in terms of Gender Based Violence (GBV) and is rated as having moderate risks; (iv) the issues of child labor and forced labor will be further assessed in the ESIA and specific provisions will be included in Contractors' ESMPs in compliance with national laws. The project will also have to balance concerns about the financial sustainability of the utility with affordability of services to the poor. The limited capacity of the implementing agency to handle social issues is a major concern that contributes to the substantial social risk rating.

97. The specific routing and designs of the water supply networks in urban Kandahar, Kabul and Herat are not yet known. In addition to the ESMF, the client has prepared a Resettlement Framework (RF) in compliance with ESS5, a standalone Stakeholder Engagement Plan (SEP), a capacity building plan and Labor Management Procedures (LMP) to address environmental and social due diligence of all project components. A "chance find" procedure is included as part of the ESMF. This will provide guidance for the proper handling of any items of cultural significance found during project implementation. A detailed description of the potential environmental impacts, likelihood of occurrence and mitigation measures are provided in Annex 3. As additional details are identified, the ESMF will guide the screening of sub-projects and relevant due diligence, including the preparation of ESAs and associated



Environmental and Social Management Plans (ESMPs). The Borrower has prepared an Environmental and Social Commitment Plan (ESCP) to specify the material measures and actions required for the project to meet the ESSs over the project timeframe. The draft ESMF was disclosed on AUWSSC external website on January 29, 2020. Part of the PCT team, AUWSSC has also recruited qualified environmental and social development specialists.

98. **Citizen Engagement:** The project includes measures to strengthen AUWSSC's social accountability, citizen engagement and customer responsiveness. These will include: (i) effective consultations, that is, a substantive interaction between beneficiaries and the government on issues of project design and choice of options; (ii) establishing a functional Grievance Redress Mechanism (GRM); and (iii) beneficiary surveys to evaluate satisfaction with project implementation and outcomes using phone surveys, workshops, and community score cards. Citizen Engagement indicators have been included in project results framework. The GRM is outlined under the ESMF and RF. The GRM includes procedures for establishment of grievance redress committees (GRCs). AUWSSC will establish a functional GRM system by project effectiveness and it will be implemented over the project life cycle.

99. **Social inclusion.** The project will use an intensive communication and social inclusion campaign, engaging community leaders, local women's groups, traditional and religious leaders and youth using various channels (interpersonal communications, community meetings, and mass and social media). The project will take measures to ensure connections costs will not pose unsurmountable barriers for poor people. Present water tariffs are well within the general affordability level (Afghani 25 per cubic meter for metered residential connections; Afghani 240 per month for non-metered standard residential connections). Affordability will remain a key concern when determining tariffs that will allow for a higher level of cost recovery while minimizing negative social impacts.

100. **Gender.** As part of the project preparation, a gender assessment was carried out for the sector with a focus on AUWSSC. The findings of the assessment confirmed a significant gender gap in the water sector at both institutional and community levels. At the community level, women are the primary users, managers of water and guardians of households' hygiene and water supply, but have inequitable access to information and training, limiting their knowledge on water quality, pollution etc. At the institutional level, women are under-represented in leadership and technical positions at AUWSSC, and there are gender gaps in terms of career advancement, salaries and access to specialized trainings. This is mostly due to the lack of targeted recruitment of female students from universities as well as the lack of access to technical and leadership training and professional exposure for existing female staff that would enable them to advance their careers. Poor sanitation facilities and the lack of other enabling work environment factors (such as availability of daycare, safe and harassment free work environment, equal value for work etc.) are also barriers for women in the workplace (see Annex 3 for details).

101. To address these gaps, the project will support measures to improve women's inclusion and participation. The project will engage with female beneficiaries to raise their awareness about project activities and safe water usage, consult with them at all stages and reflect their views in the design and implementation of the project. More specifically the project will ensure that female staff participate in all trainings for AUWSSC staff, increase the number of women in leadership and technical positions as well as provide opportunities for women to enter technical positions by offering internships, and improving the working environment and conditions for female staff as an enabling factor to attract more women to the institution. Furthermore, the project will support the development of a gender policy for increasing women's participation in the sector, and implementation of anti-harassment policy of the government to ensure safe and secure work environment for all staff. Based on the GBV risk assessment, the project has been rated moderate and to prevent/mitigate these risks a GBV action plan will be developed. For details see Annex 2.



V. GRIEVANCE REDRESS SERVICES

102. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB'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 WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

103. **The A-WASH project's overall risk is High.** The most pronounced areas of risk (High and Substantial) are discussed below, specifically: (i) political and governance; (ii) macroeconomic; (iii) institutional capacity for implementation and sustainability; (iv) sector strategies and policies; (v) fiduciary; (vi) security; (vii) environmental and social; and (viii) stakeholder risks.

- ***Political and Governance Risk – High:*** Afghanistan's overall political and governance situation remains fragile and unstable. Active conflict continues despite a recent peace agreement with the Taliban, and while a power sharing agreement has been reached between the two major parties that contested the 2019 presidential election, its implementation carries the risk of further instability. AUWSSC is vulnerable to political capture, insecurity and instability in this fraught environment. Factors such as changing political leadership and policy direction, high turnover of management and staff, difficulties in accessing field sites, or complex political resistance to proposed activities such as tariff reform, may negatively impact project performance. The project aims to mitigate these risks through two general approaches: firstly, by maintaining frequent and high-level dialogue with the GoIRA and key donor partners in the sector; and secondly, through an emphasis on basing implementing agency staff locally, backed up by AUWSSC and World Bank staff in Kabul, including two water specialists. Intense dialogue and local presence will enable an early detection of political and governance challenges and an appropriate reaction.
- ***Macroeconomic Risk – Substantial:*** Afghanistan's macroeconomic outlook is subject to substantial risks given the low economic growth, the uncertain and limited nature of domestic and external fiscal resources, and likely continued high levels of security expenditures. More severe and protracted economic impacts of the global COVID-19 crisis would have serious implications for growth, revenues, and – potentially – international grant support. As the project includes critical expenditures that form part of Afghanistan's ongoing COVID-19 response, it is expected that these will be prioritized even if macroeconomic downside risks materialize. Nevertheless, close and continuous dialogue will be needed to ensure continued prioritization of the project.
- ***Institutional Capacity for Implementation and Sustainability – Substantial:*** Institutional capacity weaknesses are a substantial concern in the sector in general, and in AUWSSC and NWARA in particular, given their limited recent experience with World Bank investment projects. The risk of weak implementation capacity will be managed by the establishment of capable PIUs, a PCT as well as the PCC to ensure support and project coordination across key agencies involved (NWARA, MRRD and AUWSSC, MoF, MoAIL, MoUDH, NEPA and the related municipalities), and close supervision by the TTL and task team based in Kabul. In coordination with other external partners, the project will also provide a robust technical assistance and direct training and capacity



building support to AUWSSC and SBUs staff to manage implementation risks and improve the sustainability of project outcomes.

- **Fiduciary Risk – High:** Financial transparency and accountability are weak, which can adversely affect the delivery of public services. The initial assessment identified weak systems and capacity of the implementing entities for accounting, financial reporting and asset management. This requires close monitoring and continued capacity strengthening of the procurement and financial management functions of AUWSSC. Risk mitigation measures are detailed in the procurement and financial management sections and in Annex 2.
- **Sector Strategies and Policies – Substantial:** This risk is substantial due to the overlapping responsibilities in the sector that have led to inadequate sector strategies and policies. Strategies or policies in the sector relevant to the operation are inadequate or not operationalized. Sector governance is inadequate and sector strategies are unfunded or financially unrealistic. Key sector policies (including on utility tariffs) have not been designed from a standpoint of financial sustainability and other funding for the sector is unpredictable and potentially highly variable from year to year. The project will, however, mitigate this risk through direct technical assistance to the involved stakeholders, in particular on key issues such as utility governance, strategy and tariff setting.
- **Security Risk – High:** The lack of security across the country poses significant challenges to project implementation and sustainability. Bank teams are presently not able to conduct site visits. While the earlier rehabilitation of the dam inlet works in 2014-15 were completed without security incidents, a deterioration in the security situation could divert government capacity and attention from project implementation, cause delay, or halt implementation of the project's physical works. Similarly, security concerns could impede the provision of local technical assistance and undermine the expected impact of supported reforms for improving the operational efficiency of AUWSSC. It will be critical to develop a security risk management system, including building consensus and support with local communities and political stakeholders through participatory planning and job-creation and planning for a response and contingencies in case of conflict-related disruptions.
- **Environment and Social – Substantial:** Environmental and Social Risks are rated as Substantial. As outlined above and in Annex 3, while environmental and social risks as such are predominantly construction related, moderate and mostly reversible in nature and scale, substantial risks stem from the low capacity of AUWSSC to set up, manage, monitor and enforce the E&S standards required under Bank financing, a risk aggravated by the challenging security situation in Afghanistan generally, and Kandahar in particular. A specific risk warranting attention is the lack of effective wastewater collection and disposal systems in Kandahar. To mitigate this problem, USAID, which is currently funding a major technical assistance program to AUWSSC, will support a Master Plan for inclusive sanitation in Kandahar. Until a citywide solution can be implemented, a short-term wastewater solution is expected to include regulated disposal at permitted sites to reduce uncontrolled pollution. The environmental and social risks related to COVID-19 revolve around OHS for workers and CHS for communities the sub-projects will be implemented in, including improper social distancing, poor labor camp management, transporting and disposing of wastes generated by the labor/camps. In addition, there will be a risk of exposure to a wide range of potentially affected communities and individuals, starting with those unidentified infected workers, and extending from there to a wide band of the professional, skilled/migrant labor and communities.
- **Stakeholder Risks – Substantial:** The project will require significant coordination with the NWARA PIU for the Dahla Dam project. However, any delay that might occur in the completion of the Dahla Dam expansion will not have a substantial impact on the availability of water and the investment plan supported by the project. The water from the existing reservoir is sufficient and will be used as the source for water supply. As the project is closely coordinating its capacity building interventions with other stakeholders, there is a risk of disruption should security- or other concerns lead to a withdrawal of partners. To mitigate this risk, the Bank team will remain in close dialogue with stakeholders through the ADC Group as well as the PCC to be established as part of project implementation.

**VII. RESULTS FRAMEWORK AND MONITORING****Results Framework****COUNTRY: Afghanistan****Afghanistan Water, Sanitation, Hygiene and Institutional Support Project****Project Development Objectives(s)**

The Project Development Objective (PDO) is to improve access to and quality of water supply in selected cities and to strengthen the capacity of AUWSSC to deliver sustainable services in order to contribute to national efforts to manage COVID-19 and other disasters.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Support a resilient recovery by improving access and quality of water supply in selected cities			
People provided with access to improved water sources (CRI, Number)		0.00	880,000.00
People provided with access to improved water sources - Female (RMS requirement) (CRI, Number)		0.00	440,000.00
People provided with access to improved water sources - urban (CRI, Number)		0.00	880,000.00
Water distributed complies with WHO standards for biological and physical quality (Percentage)		0.00	95.00
Strengthening the performance of AUWSSC			
Improved Collection Efficiency of Kandahar, Herat and Kabul Strategic Business Units (Percentage)		35.00	80.00
Increased metering coverage (Percentage)		10.00	80.00



Indicator Name	PBC	Baseline	End Target
Strategic Business Continuity Plan for three major cities adopted by AUWSSC (Number)	0.00		3.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Component 1: COVID-19 Emergency Relief and Recovery			
Chlorine Dosing pumps rehabilitated (Number)	0.00		40.00
Provision of personal protection equipment and safety measures (Number)	0.00		250.00
Laboratories rehabilitated and equipped with testing Kits (Number)	0.00		3.00
Household connections added in vulnerably areas (Number)	0.00		2,000.00
Wells repaired or drilled (Number)	0.00		70.00
Distribution water pipes replaced (Meter(m))	0.00		140,000.00
Component 2: Sector Reform, Institutional Strengthening, and Capacity Building			
Operational and financial systems installed and used (Yes/No)	No		Yes
Technical manuals and standard designs developed (Yes/No)	No		Yes
Feasibility studies for the proposed second project completed (Yes/No)	No		Yes
Customer satisfaction with service and hygiene practices improvements resulting from the project activities (Percentage)	0.00		75.00
Percentage of project-related grievances responded to in the stipulated time (Percentage)	0.00		75.00



Indicator Name	PBC	Baseline	End Target
Monitoring and benchmarking systems established and used (Yes/No)	No		Yes
Gender Strategy and Policy Developed and Adopted by AUWSSC (Yes/No)	No		Yes
AUWSSC Five Year Business Plan Prepared (Yes/No)	No		Yes
Communication and public awareness strategy developed and approved (Yes/No)	No		Yes
Component 3: Water Supply Infrastructure and Efficiency Improvements			
Water supply network constructed under the project (Kilometers)	0.00		400.00
Water supply network rehabilitated under the project (Kilometers)	0.00		100.00
Water treatment plant constructed and operational (Yes/No)	No		Yes
Water Storage Capacity Increased (Cubic Meter(m3))	0.00		45,000.00
Water meters installed (Number)	4,350.00		85,000.00
Workshop for operation and maintenance established (Yes/No)	No		Yes
Component 4: Project Management and Monitoring			
Number of AUWSSC Headquarters and SBU staff benefitting from trainings (Number)	0.00		300.00
of which female (Number)	0.00		100.00
Number of junior professionals hired as interns (Number)	0.00		50.00
of which female (Number)	0.00		25.00
of which female recruited as staff by AUWSSC (Number)	0.00		5.00



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
People provided with access to improved water sources	This indicator measures the cumulative number of people who benefited from improved water supply services that have been constructed through operations supported by the World Bank.	Annual review of progress towards cumulative end-target of 880,000.	AUWSSC PIU Project Monitoring / Reports of Supervisory Engineers. A UWSSC customers satisfaction and baseline surveys.	Documentation of active household connections and standpipes established under the project, multiplied by average household size in Kandahar (9) and average assumed users of standpipes (70), respectively.	AUWSSC PIUs / Supervisory Engineers
People provided with access to improved water sources - Female (RMS requirement)	This indicator measures the cumulative number of people who benefited from improved water supply services that have been constructed through operations supported by the World Bank.	Annual review of progress towards cumulative end-target of 440,000	AUWSSC PIUs Project Monitoring / Reports of Supervisory Engineers	Documentation of active household connections and standpipes established under the project, multiplied by average number of women per household in Kandahar and average assumed female users of standpipes, respectively.	AUWSSC PIUs / Supervisory Engineers



People provided with access to improved water sources - urban		Annual review of progress towards cumulative end-target of 880,000	AUWSSC PIUs Project Monitoring / Reports of Supervisory Engineers	Documentation of active household connections and standpipes established under the project, multiplied by average household size in Kandahar (9) and average assumed users of standpipes (70), respectively.	AUWSSC PIUs / Supervisory Engineers
Water distributed complies with WHO standards for biological and physical quality	Monthly samples of distributed water complying with WHO guidelines.	Annual	Samples from Kandahar City Distribution Network tested in KnSBU Laboratory	Samples from Kandahar City Distribution Network tested in KnSBU Laboratory	AUWSSC KnSBU Technicians / PIU
Improved Collection Efficiency of Kandahar, Herat and Kabul Strategic Business Units	Total annual collected revenue of SBUs divided by SBUs annual bills issued	Annual monitoring of progress towards end-target	Audited Financial Statement for AUWSSC / SBUs	Data will be obtained from AUWSSC Financial Department Reports. Collections from sale of SBU services and associated annual bills issued.	AUWSSC SBUs PIU / Auditor



Increased metering coverage	This indicator is defined as ratio of (Active connections subject to volumetric metering in Kandahar project area) / (Total connections in Kandahar project area). Active Connections are "subject to volumetric metering" when a meter is installed and the customer is billed on the basis of volumetric (cubic meters) water use.	Annual	AUWSSC KnSBU PIU Quarterly Progress Reports / Supervision Reports	Data to be obtained from KnSBU commercial department, and Supervision Reports. Active connections is the number of connections installed, supplied and billed regularly within Kandahar project area.	AUWSSC KnSBU PIU Project Monitoring / Supervisory Engineers
Strategic Business Continuity Plan for three major cities adopted by AUWSSC	Strategic Business Continuity Plan adopted by AUWSSC	Annual	AUWSSC Reporting		PIU

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Chlorine Dosing pumps rehabilitated	Chlorine Dosing pumps rehabilitated	Annual	AUWSSC PIU / Reports of Supervisory Engineers		AUWSSC PIUs
Provision of personal protection equipment and safety measures		Annual	AUWSSC PIU / Reports of Supervisory Engineers	AUWSSC PIU / Reports of Supervisory Engineers	AUWSSC / PIUs



Laboratories rehabilitated and equipped with testing Kits		Annual	AUWSSC PIU / Reports of Supervisory Engineers	AUWSSC PIU / Reports of Supervisory Engineers	AUWSSC / PIUs
Household connections added in vulnerably areas					
Wells repaired or drilled		Annual	AUWSSC PIU / Reports of Supervisory Engineers	AUWSSC PIU / Reports of Supervisory Engineers	AUWSSC / PIUs
Distribution water pipes replaced	Replacement of leaking water pipes in the three cities	Semi-annual	Supervision and monitoring Report		AUWSSC / PIUs
Operational and financial systems installed and used	The indicator measures the installation of systems and the number of AUWSSC and SBU staff who receives training on operation(e.g. installation and maintenance of water equipment), preparation of technical designs and hydraulic system models, financial management (basics IFRs, accounting) monitoring and evaluation. The installation and training will be delivered at AUWSSC	Semiannual	AUWSSC PIUs M&E Reports	Data will be collected from the training attendance sheets and verified through evaluation questionnaires administered by AUWSSC and supervision observation of use of new operational and financial systems.	AUWSSC PIUs



	and SBU premises by trained AUWSSC and others as needed.				
Technical manuals and standard designs developed	Development and adoption of technical manuals for operation and maintenance of (a) bulk water conveyance; (b) treatment plant, (c) pumping stations, (d) reservoirs and (e) distribution network financed under the project, as well as standard designs for household and standpipe water connections.	Annual	AUWSSC PIUs M&E / Review of manuals and designs by the World Bank Implementation Support Team	AUWSSC PIUs M&E / Review of manuals and designs by the World Bank Implementation Support Team	AUWSSC PIUs
Feasibility studies for the proposed second project completed	Feasibility studies for the second of the proposed series of projects (SOP) completed	Once	Completed feasibility studies	Review of completed feasibility studies	AUWSSC PIUs and World Bank Implementation Support Team
Customer satisfaction with service and hygiene practices improvements resulting from the project activities	"Percentage of a representative sample of households benefiting from the project stating they are "Satisfied" or "Very Satisfied" with service improvements relative to their pre-project water access"	Once	Household survey to be implemented with project resources	Household survey with representative sample of beneficiaries	AUWSSC PIUs
Percentage of project-related grievances responded to in the stipulated time	Percentage of project-related grievances received at customer care centers or	Regular review to assess	Grievance Database to be	Analysis of grievance database to be established under the	AUWSSC PIUs



	through online / telephone complaint mechanisms that have been responded to within stipulated time frames.	progress towards end-target of 75 percent	established under the project	project	
Monitoring and benchmarking systems established and used	This indicator will monitor and reflect the progress of AUWSSC in implementing bench marking systems. It will specifically measure AUWSSC performance data to centralized database, and using it for benchmarking and efficiency improvement.	Annual	AUWSSC PIU Project Monitoring	AUWSSC PIU Project Monitoring	AUWSSC PCT
Gender Strategy and Policy Developed and Adopted by AUWSSC	The indicator will measure through adaptation of the Gender Strategy and Policy Developed the improvement of the careers development and working environment of the staff working in AUWSSC. The number of female professionals hired.	Annual	AUWSSC PIU Project Monitoring	AUWSSC PIU Project Monitoring	AUWSSC PIU Project Monitoring
AUWSSC Five Year Business Plan Prepared	AUWSSC has prepared a five year business plan outlining its strategy and performance targets	Annual	Publication of Five Year Business Plan by AUWSSC Management	Review of published Five Year Business Plan	AUWSSC PIU



Communication and public awareness strategy developed and approved			AUWSSC PCT		AUWSSC PCT
Water supply network constructed under the project	Kilometers of water network constructed under the project (including bulk transmission lines)	Annual review of progress towards cumulative end-target of 400km	AUWSSC PIU Project Monitoring / Supervision Reports	AUWSSC PIU Project Monitoring / Supervision Reports	AUWSSC PIU
Water supply network rehabilitated under the project	Existing piped network replaced or rehabilitated under the project	Annual	AUWSSC PIU / Project Supervision Engineers	Supervision Reports / Site Inspections	AUWSSC PIU / Project Supervision Engineers
Water treatment plant constructed and operational	Water Treatment Plant supplying Kandahar City Network constructed and operational (full capacity of 150,000m3/day operational)	Once	AUWSSC KnSBU PIU M&E / Supervision Reports	Supervision Reports	AUWSSC KnSBU PIU
Water Storage Capacity Increased	Volume of service reservoir water storage capacity constructed under the project	Annual	AUWSSC KnSBU PIU M&E / Supervision Reports	Supervision filed Reports	AUWSSC KnSBU PIU / Supervision Reports
Water meters installed	Water meters installed under the project	Regular review of progress towards cumulative	AUWSSC PIU M&E / Supervision Reports	Supervision report / Extract from billing system showing active volumetric billing with account locations	AUWSSC PIU



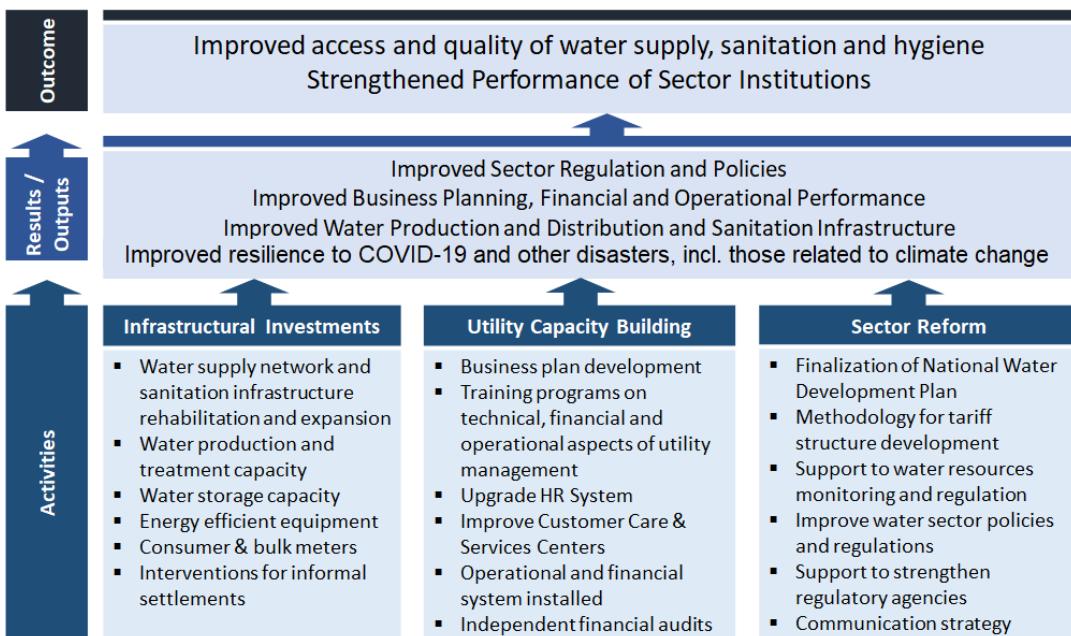
		end-target of 80,000			
Workshop for operation and maintenance established	Workshop for operation and maintenance established in Kandahar city, duly equipped with the required tools and equipment, and adequate annual budget	Annual	AUWSSC PIU M&E / Supervision Reports	AUWSSC PIU M&E / Supervision Site Visits and Verification	AUWSSC PIU
Number of AUWSSC Headquarters and SBU staff benefitting from trainings	The indicator measures the number of AUWSSC staff received training, whether on- the -job or class room training. the training will be evaluated and the participants performance will be monitored and reported on by AUWSSC management.	Annual	AUWSSC PIU Project Monitoring	AUWSSC PIU Project Monitoring	AUWSSC PCT/PIU
of which female					
Number of junior professionals hired as interns	This indicator measures a number of interns formally enrolled in the annual internship of the program. The program content will be reviewed and updated for each participants department of AUWSSC.	Annual	AUWSSC PIU Project Monitoring and Evaluation Reports	AUWSSC PIU Project Monitoring	AUWSSC PIU
of which female					
of which female recruited as staff by	Number of female junior	Annual	AUWSSC HR	Review of AUWSSC HR	PIU / AUWSSC HR



AUWSSC	professionals hired as interns subsequently recruited as staff by AUWSSC		Records	Records	Department
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**ANNEX 1: Detailed Project Description****COUNTRY: Afghanistan**
Afghanistan Water, Sanitation, Hygiene and Institutional Support Project

1. The proposed Project Development Objective (PDO) is to improve access to and quality of water supply in selected cities and to strengthen the capacity of AUWSSC to deliver sustainable services in order to contribute to national efforts to manage COVID-19 and other disasters.
2. The project is the first in a series of projects (SoP) i.e. the proposed Program. To achieve sustainable, positive change in Afghanistan's water supply and sanitation sector, this broader Program will take a comprehensive approach addressing infrastructure gaps, weak institutional capacity as well as sector reform. This reflects a recognition that when institutional reforms do not accompany capital investments, the sustainability of outcomes can be compromised. Likewise, reform measures need to be coupled with incentives, in the form of financial resources for investments that provide a tangible improvement in water and sanitation services. Moreover, the Program recognizes that short-term, one-off interventions – for example as planned under the COVID-19 ERPPs – are not sufficient to realize the policy- and institutional reforms necessary to sustain large-scale infrastructure. The proposed Programmatic approach offers an opportunity to address institutional development challenges in stages by incrementally introducing reform efforts alongside large-scale infrastructure.
3. The Program is thus based on three pillars of activities – infrastructure, utility capacity building and sector reform – implemented over a prolonged period and contributing to intermediate results and ultimate project outcomes as outlined in Figure A.1 below:

**Figure A.1: Outline of Program**

4. **The Program builds on the World Bank's support to the sector over the past decade to implement ambitious water and sanitation infrastructure and reforms.** The need for a national Program that combines major infrastructure investments with long-term policy reform, strategic development planning and capacity building of the national utility and regulatory agencies, was a key lesson from earlier projects in Afghanistan that were more limited in their scope and ambition. The SoP will provide strategic coherence and a long-term financial framework. It will signal commitment



and continuity for the reform process, while staggered projects will incentivize performance to allow the client to access successive financing rounds. The SoP will also provide opportunity for learning and adaptation between projects, an important characteristic for a complex Program in a politically challenging environment.

5. The proposed Program Development Objective is to improve access to safe water and sanitation in selected areas of Afghanistan as well as to strengthen sector capacity. This Program objective will be achieved over a 12-year period through a series of three projects. The focus of the proposed SoP-1 will be on the COVID-19 emergency response in the water sector in Kabul, Herat and Kandahar, as well as strategic infrastructure investments to improve water and sanitation services in the city of Kandahar. The project is in line with the Bank's *COVID-19 Crisis Response Approach Paper* which highlighted water and sanitation services as "emergency public goods" and "preventive and essential health services"; the intervention also reflects the concentration of need in large cities, the Bank's earlier support to the national urban utility, and the GoIRA's desire to improve public services in major urban centers. In Afghanistan's cities, major infrastructure investments are needed as existing water facilities have been damaged by decades of conflict, and the limited existing system have not kept up with the rapid growth in demand. To manage such urban infrastructure sustainably, reform efforts under the SoP will focus on the national utility AUWSSC which continues to struggle with providing affordable, reliable and sustainable water supply and sanitation services, reaching only about a fifth of urban households.

6. The three projects are expected to commence in 2021, 2026 and 2028, respectively. As shown in figure A.2, the anticipated duration of each project is five years with overlaps for project preparation and tendering. SoP completion is thus expected by 2033. The first project will have a financing volume of US\$ 200 million, of which US\$ 50 million from IDA and US\$ 150 million from the ARTF. Subsequent projects are expected to have a total financing volume of US\$300 million each.

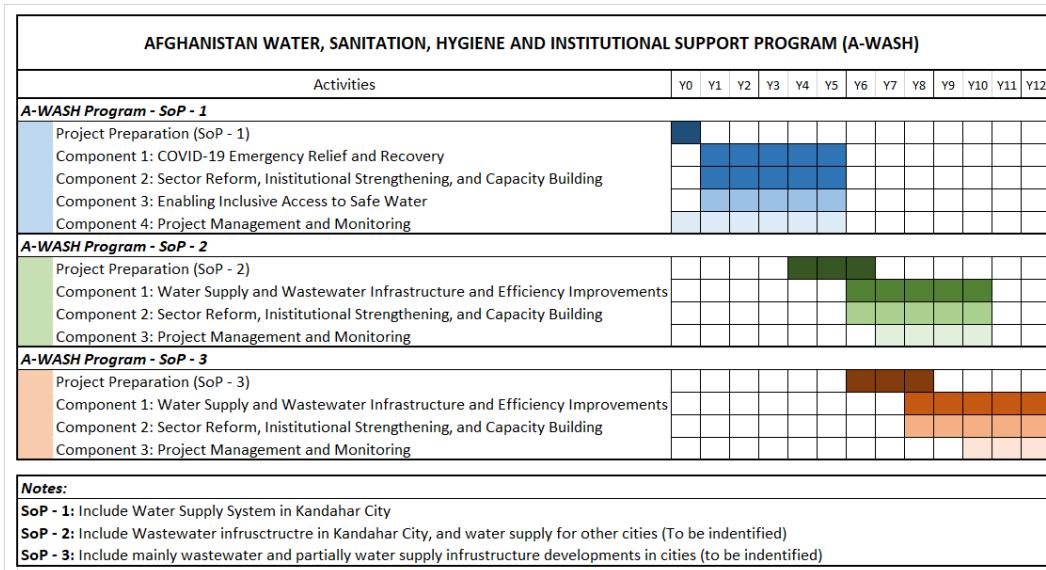


Figure A.2: Proposed Sequence of Projects in SoP

Existing Water Supply System

7. Kabul, Kandahar, and Herat are three largest cities of Afghanistan. Access and quality of existing drinking water services in these cities are not sufficient to ensure public health and a dignified, productive life. The cities cumulatively account for more than 70 percent of Afghanistan's urban population. The existing network of AUWSSC supplies less than 30 percent of the total population across the three cities and for approximately 7 hours per day. Residents who are not connected to the AUWSSC network are using private wells, water tankers, and/or public



standpipes. Extraction of groundwater by households is expensive and not feasible for all, as well as a negative externality as groundwater is increasingly depleted and contaminated in all three cities. Preliminary information provided by AUWSSC on their assets indicates that in addition to several kilometers of pipelines which require replacement, a number of existing pumping stations and power generators would also require either urgent rehabilitation or replacement. The total number of metered and unmetered connections in Kandahar SBU are 13,680 and 3,591 respectively; however, the total number of metered and unmetered connections in the city of Kandahar (the component 3's focus area) are 4,445 and 2,508 respectively.

8. Only a very limited number of water quality tests are being performed, especially in Kandahar and Herat SBUs. Kabul SBU have a relatively better equipped laboratory, but further investment is still needed there too in order to enable regular and reliable testing of water quality standards. The water quality monitoring procedure need to be further elaborated and enhanced. An elaborated water quality monitoring plan, a better laboratory environment / rehabilitation of space, and provision of necessary laboratory equipment and laboratory testing kits are highly required for these AUWSSC SBUs.

9. Public Hygiene has an essential role in controlling the spread of the COVID-19 virus and its health impacts. The COVID-19 pandemic in Afghanistan highlights the importance of community and social outreach programs for awareness generation and sensitization of handwashing and hygiene etiquettes (mask wearing; safe water storage and treatment; food hygiene, environmental hygiene). Furthermore, raising awareness about the importance of water and its myriad benefits to society, highlighting the importance of a well-maintained water supply as well as improving people's commitment to pay their bills on time to strengthen AUWSSC's financial sustainability.

10. The existing distribution systems are old, reach a limited percentage of the population and are in a compromised condition. Irregular maintenance has led to the deterioration of the pipes causing leaks and a high rate of Non-Revenue Water (NRW). For example, there are at least 85 leakage cases per month at Herat SBU. The intervention financed by this project will carry out a more detailed assessment of the network condition, identifying the most critical repairs and rehabilitating key sections of the network. Future water demand and proposed network extensions will be considered in this exercise.

11. Existing Water Supply System of Kabul. The piped water supply in Kabul City relies exclusively on groundwater resources. Three major well fields in Kabul are Logar, Allaudin and Afshar. These well fields are located close to the Logar, Kabul and Pagman rivers, respectively. AUWSSC also has smaller supply sources and systems for specific areas. Over 50 wells are operated by AUWSSC. The depth of wells is generally 40-50m, although some wells are deeper in 80-120m. The groundwater is pumped up by submersible pumps and transmitted to reservoirs. All the reservoirs are ground tanks of varying size. Disinfection with chlorine is normally done at water reservoirs, from the reservoirs, the water is distributed to customers through pipelines by gravity. The water reservoirs are located on hillsides to ensure sufficient water heads. The largest reservoirs are A, F and O, The Logar, Allaudin and Afshar systems have booster pump stations for transmission of the water.

12. Existing Water Supply System of Herat. The water supply system in Herat was also initially built during 1970s and has been partially rehabilitated in 2008-2009 with the support of German Development Bank (KfW). Currently drinking water is being extracted from 29 wells in Herat City. 10 wells are in Nawin Village (Injil District), and 19 others are located in different districts within the city. The city is only reliant on Groundwater. About 40-45 percent of required drinking water of Herat City is produced from NAWIN (SARWER KAAE-NAT) WELLS, and the rest are being produced from other different wells inside the city. The average water production in winter is about 33000 m³/day and in summer is 50000 m³/day.

13. Existing water supply system of Kandahar: Kandahar is the second biggest city of Afghanistan. The population of the city is estimated at 1.0 to 1.5 million people, though reliable data is sparse. The city is divided into 15 districts. Ten of the city districts have partial access to the existing water network. The current source for drinking water supply is



predominantly groundwater. The existing network is supplied by 10 functional water wells operated and managed by the AUWSSC. The depth of the water wells is between 60 to 200 m.

14. The existing distribution system only covers 10-20 percent of the city population. The system was constructed in the 1970s and since then partially rehabilitated and expanded with funding from the World Bank, UNHABITAT and the International Committee of the Red Cross (ICRC). Around 70-80 percent of the population still relies on private shallow wells tapping into the unconfined shallow aquifer. The shallow aquifer is recharged by the Arghandab, Tarnak, and Afghanistan rivers as well as by local irrigation canals and subject to contamination from surface drainage and untreated wastewater seeping into the aquifer. Wastewater collection is non-existent. Onsite (households) facilities such as septic tanks and manual collection are used to collect and dispose sewage.

15. By end of 2017, about 64,000 residents of Kandahar were connected to piped water supply system through 7,011 domestic and commercial connections. The network is in a bad state of repair and non-revenue water is around 50-60 percent as reported by the KnSBU. The existing Kandahar water supply system shown in Figure A.3 comprises of the following:

- 19 production wells of which 10 are operational with a total capacity of approximately 5,100 m³/day;
- A distribution network with total length of around 287 km, and approximately 70 km consists of asbestos-cement pipes.
- Four ground reservoirs with 5,900 m³ storage in total, and two smaller elevated reservoirs.

16. The existing system in all SBUs is marked by a number of major challenges, which may be briefly summarized as:

- High leakage and NRW;
- Limited network reach with low access for the population of Kandahar (less than 10 percent);
- Illegal and non-metered connections, as well as low tariffs contributing to weak cost recovery;
- Lack of bulk metering and distribution zoning;
- Lack of proper water quality sampling and analysis (equipment and expertise);
- Lack of Proper Wastewater Management System;
- Unreliable and expensive power supply;
- Significant depletion of groundwater;
- Weak management and technical capacities;
- Lack of proper strategies and sector policy reforms;
- Nonexistence of a proper Asset Management System;
- Nonexistence Water Conservation and Efficiency Plan;
- Lack of reliable data and statistics;
- Lack of Stable Security Situation;
- Weak public relations and communication with customers and communities.

17. Water Tariff and Operational Cost: The current water tariff in all AUWSSC SBUs is AFN 25/m³ (0.33 US\$). For those residents without meter the domestic charge is AFN 240/month. Government institutions and commercial premises pay AFN 35/m³. Collection efficiency (i.e. percentage of bills collected) is about 35 percent according to AUWSSC. The connection charge currently stands at AF 2,000, which is in addition to the pipeline from the meter to the house, which can cost between AFN 3,500 and 4,000 per connection. Current production costs are around AFN 19/m³ (US\$ 0.23) of which approximately AFN 10/m³ (US\$ 0.12) for power supply ¹⁰.

18. AUWSSC has been severely impacted by the COVID-19 pandemic. The operations of Herat, Kandahar and Kabul

¹⁰ Updated costs provided by AUWSSC Management in November 2019.



SBUs – the largest SBUs that account for up to 71 percent of AUWSSC's revenue and are thus critical to cover the corporation's expenses – have been negatively affected by the lockdown and financial crisis in these three cities due to the COVID-19 pandemic. Many customers have been unable to pay their water bills which has strained the water supply operations.

19. AUWSSC is unlikely to be able to continue to provide regular water supply services to citizens without external support. The electricity bill and employees' salaries of the organization are vital for the continuation of corporation's activities across the country, but the low revenue collection rate have undermined the ability of AUWSSC to meet these obligations. Figure A.6 below shows the change and variation in revenue collection just after the outbreak commenced in Afghanistan (i.e. March – April 2020). Overall, the revenue collection has dropped to approximately 50 percent of the prior year.

The proposed SoP-1 (the project)

20. The project provides financing for (i) Emergency relief measures in the three largest cities of Afghanistan - Kabul, Kandahar and Herat, implementing the COVID-19 ERRPs; Emergency Water Supply Interventions for enhancing resilience recovery of AUWSSC in response to COVID-19 (ii) finance Sector Reform, Institutional Strengthening, and Capacity Building to reform and improve the urban water sector utility's operational and financial performance; (iii) fund technically robust, more sustainable infrastructure, including climate resilience measures, with a strategic focus on Kandahar; and (iv) project Management and Monitoring. The project is intended to leverage the investments in infrastructure to strengthen the AUWSSC and its implementation capacity and other concerned institutions responsible for delivering all aspects of water and wastewater services.

Component 1: COVID-19 Emergency Relief and Recovery (US\$ 37 million):

21. **Under Component 1, the project will finance critical, rapid interventions to maintain basic water services in key cities, implementing AUWSSC's Emergency Response and Recovery Plans (ERRPs).** The activities will aim to improve the water services provision in selected areas and to strengthen the capacity of water service providers and the public to respond effectively to the ongoing COVID-19 pandemic and future disaster situations. The focus of this component will be on supporting the national utility, the AUWSSC, and specifically its three largest Strategic Business Units (SBUs) which are Kabul SBU, Kandahar SBU and Herat SBU.

22. **Safe provision of water services and hygiene is critical for containing the virus and lowering its negative impacts.** Impacts of the ongoing pandemic on the sector include disruptions to supply chains, inability to pay bills and an associated reduction in utility revenues that make it difficult for AUWSSC to pay for key inputs such as energy, water treatment chemicals and staff costs and therefore threaten supply disruptions. This, in turn, would undermine the ability of affected households to access water supply services and products (for instance, soap, point of use water treatment or menstrual hygiene products) and the ability of schools, workplaces and other public spaces to maintain effective hygiene protocols when they re-open. If not managed pro-actively, secondary impacts can increase the risk of further spread of water borne diseases, including potential disease outbreaks such as cholera, particularly where the disease is endemic.

23. This component will support AUWSSC and associate government bodies to maintain and improve water services delivery and resilience during the COVID-19 outbreak and other disaster situations, notably climate-change related ones such as droughts, floods or extreme temperatures. In particular, the component will:

- a. Finance critical operational inputs such as treatment chemicals which are at risk of depletion due to revenue declines and supply chain disruptions;
- b. Rehabilitation and replacement of priority water supply facilities, including water wells, pipes and pumps, power generators and chlorine dosing equipment to maintain services during the pandemic. These include a total of 140 km of old water pipes will be replaced, house connections, 40 pumping stations to be rehabilitated including



replacement of mechanical and electrical equipment, 40 chlorine dosing pumps to be replaced and 35 power generators to be provided, rehabilitation of four ground water tanks with 5,900 m³ storage in total, and two smaller elevated tanks as shown in Table 3 below, the locations, technical data to be reviewed and confirmed.

- c. Provision of rapid emergency water connections for high-risk areas and key health facilities, as well as support to secure high priority water services by trucks where piped water is not feasible in the short-term;
- 24. These interventions are based on the Emergency Response and Recovery Plans (ERRPs) which were prepared by AUWSSC for the Afghanistan COVID-19 Response Development Policy Grant (P174234) as a prior action to support recovery and resilience of the water sector. The component will be implemented in close coordination and cooperation with other donors such as USAID, KFW GIZ.
- 25. The component will be complemented by a Bank-executed trust fund provided by the Government of Japan through the Global Facility for Disaster Reduction and Recovery (GFDRR) to assist AUWSSC to better manage scarce water resources in a time of crisis and to design new infrastructure in a disaster-resilient manner, as well as to engage the public to increase knowledge of water conservation and hygiene measures.
- 26. An implementation schedule for the activities under component 1 over the period of 24 months is presented in Figure A.3 below.

Component / Subcomponents	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Emergency Water Supply Interventions for enhancing resilience recovery of AUWSSC during the COVID-19 outbreak								
Rehabilitation/ replacement and extension of water network pipes and house connections	■							
Supply and install of pumps and generators		■■■■						
Supply and install of Chlorine dosing equipment		■■■■						
Development of existing well and drilling of new wells	■	■■■■						
Supply personal protection equipment and safety measures		■			■			
Consultancy services for preparation of Bidding documents and supervision of implementation	■	■			■■■■			
Consultancy Services for Preparation of action plans for involving private sector for water service provision	■	■	■■■■					
Selection of Consultancy services & contract award / Preparation Phase / hiring process								
Implementation Phase								
DNP								

Figure A.3: Project Scheduling for Component 1 of the project

Component 2: Sector Reform, Institutional Strengthening, and Capacity Building (US\$ 5 million).

- 27. The activities of this component aim to provide technical assistance to AUWSSC and its SBUs for corporate development, operations, and FM improvements. The Bank has worked with USAID to conduct an initial assessment of the performance of AUWSSC and the SBUs, focusing on staffing, infrastructure and assets, services delivered, and competencies. This intervention will target key stakeholders at the national level, including the Ministry of Finance (MoF) and NWARA, and will include capacity building, knowledge, and skills development activities
- 28. This component will finance the implementation of a number of key recommendations to AUWSSC and its SBUs to improve their capacity to deliver safe drinking water to the population in a financially sustainable manner. The component will also operationalize strategic priorities at the national level in close cooperation with USAID, KfW, GIZ, ADB and JICA, currently working with AUWSSC. Identified focus areas include: (i) metering and demand management; (ii) medium-term planning, budgeting and tariff applications; (iii) sector monitoring and reporting, including benchmarking; (iv) strengthening utility creditworthiness and performance-based financing frameworks; and (v) communications and public awareness. Activities will be grouped into the following sub-components:

- a. **Sub-Component 2.1 - Sector Reform and Strategic Planning:** This sub-component will support AUWSSC to accelerate the implementation of sector reforms. The project will provide finance for updating the existing AUWSSC strategy, which should explain AUWSSC objectives and serve as a basis for the official development activities in urban water and ensure the long-term sustainable provision of water. Opportunities for water use



efficiency will be identified and implemented to increase resilience against extreme events such as droughts, as well as policies and regulations such as a regulatory framework for private sector participation in service delivery. The updated strategy will also provide a basis for country strategies and political dialog with other partners and donors. The water strategy should clearly make the links to cross-sectoral activities (health, education, nutrition, agriculture, economic developments, environment and climate change etc.) in order to achieve sustainable development goals. The strategy should be able to respond to the increasing demand for water and sewerage services. The urban population is around 8 million of which less than 3 million are provided with water connections currently. An expected strategic goal of the strategy will be to increase access to safely managed water and sanitation to 50 percent of the urban population. In addition, the strategy should enable a regulatory framework for private sector participation in service delivery. The project will support the revisions of the gender policy of the AUWSSC to enhance women's participation in water sector to ensure equal capacity building opportunities and institutional commitment to promote gender-sensitive working conditions for all.

- b. **Sub-component 2.2 – Improving the financial and technical performance of AUWSSC:** This sub-component will support financial and operational performance improvements of AUWSSC and its SBUs. This will include provision of advice and equipment required to carry out the following tasks: (i) in-depth review of the current AUWSSC structure, asset, and staffing to propose revisions, improvements and a training plan of the staff; (ii) a tariff methodology balancing cost-recovery objectives with affordability goals; (iii) training on modern asset management tools and procedures; (iv) training on use of GIS and hydraulic modeling to support asset management, monitoring; (v) procurement of laboratory equipment and training of staff in water quality analysis; (vi) institute modern approaches to human resource management as well as technical assistance to improve staff capacity including increase of the number of female staff and building their capacity; (vii) improve accounting systems and records and assist in the preparation of annual financial statements, financial reporting and auditing; (viii) design of proper revenues management systems to ensure completeness of amounts receivable; and (ix) preparation of NRW reduction strategy, creating a unit with specialized staff and procurement of water loss reduction equipment. Other trainings will focus on preparing engineering designs and tender documents, and construction supervision and management. Other training will be conducted on need-based that will include a technical and managerial trainings to existing female employees of AWUSSC help their career growth. Furthermore, to facilitate and encourage women's entry, the project will support and monitor closely paid internship program in coordination with universities to attract qualified candidates with a focus on female interns to absorb at least 25% of them as staff in the institution.
- c. **Sub-Component 2.3 - Improve Social Accountability of AUWSSC:** The project will finance measures to strengthen AUWSSC's communication, social accountability, citizen engagement, women participation, and customer responsiveness. This will include: (i) an information campaign to raise public understanding of the water supply process, to encourage water conservation practices and demand management during climate change related events such as droughts, and heat waves; to raise awareness of the importance of hygiene and handwashing, and to strengthen recognition of the importance of bill payments to safeguard services; (ii) enhancing the role of women in the water sector as staff and beneficiaries; this will include measures to provide training, improved facilities and career opportunities to female employees of AUWSSC; (iii) establishing a functional grievance redress mechanism (GRM); and (iv) substantive community consultations on issues of project design and implementation. During the implementation stage, it is envisioned that the client will carry out beneficiary satisfaction surveys in the selected sites to evaluate public satisfaction through phone surveys, workshops, and community score cards. This sub-component will develop measures to raise consumer awareness of water conservation and mainstream plans for demand management during draught periods. An inclusive approach has been incorporated in the project design to mitigate the security risk.
- d. **Sub-Component 2.4 – Preparation of feasibility studies for the second project:** This sub-component will finance preparation of feasibility studies for the second project in the proposed Program. It is envisaged that



second project of the SoP will include investment for sewerage system in Kandahar and further extend sector-wide institutional development and reform activities. This sub-component will also support consultancy services to review the use of water resources, groundwater availability, quality and abstraction with the key objectives of preparing a clear strategy for water resources management and climate resilience in the project area. This sub-component will finance updating/development of a water balance and monitoring of the use of water taking into account the impact of climate change. The activity will also support the development of other sector investment plans, as needed.

29. An implementation schedule for the institutional strengthening and capacity-building financed activities under Components 2 is presented in **Figure A.4**. Proposed activities will be coordinated with and complemented by activities of other donors, in particular:

- *USAID through the Afghan Urban Water and Sanitation Project with a budget of US\$ 45 million.* The objective of the project is to strengthen the capacity of AUWSSC and its six SBUs in coordination with the Ministry of Urban Development and Land through an integrated of assessment, planning, capacity building and infrastructure and equipment support.
- GIZ is providing support for the water supply systems in two selected districts;
- KfW and the Islamic Development Bank have discussed financing of wastewater systems in Kabul city.

30. To ensure the capacity building measures for these projects are harmonized with the proposed project, a roadmap has been prepared with inputs from all key donors. AUWSSC will monitor the implementation of this roadmap closely. A quarterly meeting will be conducted to discuss the progress and status of the activities.

Component / Subcomponents	Year 1		Year 2		Year 3		Year 4		Year 5			
	[Q1]	[Q2]	[Q3]	[Q4]	[Q1]	[Q2]	[Q3]	[Q4]	[Q1]	[Q2]	[Q3]	[Q4]
Component 2: Sector Reform, Institutional Strengthening, and Capacity Building *												
Component 2.1 – Sector Reform and Strategic Planning												
Policy Reform and Sector Coordination												
Review and Modifying the AUWSSC's Strategy												
Updating the AUWSSC's Strategic Business Plan												
Implementation of Sector Reform and Strategy												
Component 2.2 – Improve Financial and Technical Performance of AUWSSC												
Review and Assessment (Assets, Structures, Staff, and Procedures)												
Improving the existing Tariff Structure												
Performance Enhancement Measures and Interventions												
Operational Trainings												
Technical and Design Trainings												
Administrative and Financial Trainings												
Procurement and Project Supervision Trainings												
Component 2.3 – Improve Social Accountability of AUWSSC												
Public Awareness Campaign												
Establishing a functional grievance system (GRM)												
Establishing a substantive interaction between beneficiaries and Gov.												
Component 2.4 – Preparation of feasibility Studies for the Second Project												
F5 for Identifying priority water supply and sewerage infrastructures												
Preparing strategy for GWIRM and CC resilience in the project area												
* Note: All the proposed activities under component II are to be accomplished with close coordination with other International Financing Institutions (IFIs) and partners currently working with AUWSSC. An elaborated Roadmap for this donors coordination is to be finalized and agreed for optimized management of funding and resources as well as for repeating prevention.												
Selection of Consultancy services & contract award												
Consultancy Services												
Implementation of Recommendations												

Figure A.4: Sector Reform, Institutional Strengthening, and Capacity Building

Component 3: Enabling Inclusive Access to Safe Water (US\$ 153 million):

31. This component will finance the water supply system for city population and comprise of a combination of surface water from the Dahlia Dam Reservoir and groundwater from the existing well system. This component will finance the construction of **Phase 1 water supply** scheme and includes the following facilities:

- (i) Gravity raw water transmission main from water intake to WTP with a total length of about 30 km. A 1,500 mm diameter to convey raw water from the dam to the City, southwest of Dahlia Dam;
- (ii) A water treatment plant just north of Kandahar near a Bach-e-Sarkari Village; Phase 1 will have a capacity of **125,000 m³/day**. The feasibility level design allows for conventional processes including clarification, rapid sand



filtration and disinfection. The extent of the seasonal variability of the turbidity in the reservoir is unclear due to the limited available water quality data, and additional pre-sedimentation maybe required, the treatment of the water for drinking purposes will be in accordance with the Afghanistan water quality standards of 2013;

- (iii) Two service reservoirs: one 14,000 m³ capacity tank for Pressure Zone 1 and a 32,000 m³ tank supplying Pressure Zone 2;
- (iv) A booster pumping station with a capacity of 45,000 m³/day to pump water from the WTP site to service reservoir at Pressure Zone 1;
- (v) A distribution system based on a combination of house connections and public standpipe concept, 70 percent gravity-fed and 30 percent pressurized via the booster pump station. A total of about 80,000 connections and possibility of 1,000 standpipes are allowed for.

32. Sub-Component 3.1 – Bulk Transmission and Treatment: This sub-component will finance the construction of the Bulk Water Transmission Pipeline of approximately 30 kilometers length and 1500 mm diameter¹¹, to convey water from the Dahla Dam to the new WTP. The project will also finance the construction of Phase 1 WTP with a capacity of 125,000 cubic meters per day (the final design capacity is 250,000 m³/day). It will also include the construction of services reservoir, pumping facilities. The infrastructure capacity will be revised once the detailed design is completed. The budget for this component will also provide for the supervision service for the construction alongside the preparation and implementation of environmental and social impact assessment and its recommendation.

33. Sub-Component 3.2 – Distribution Water Supply System in Kandahar: The project will finance the rehabilitation and expansion of the piped water network in urban Kandahar, making up to 80,000 new connections and up to 1,000 standpipes, as needed, to further improve supply and bolster the population's resilience to increasing water shortages.

34. Installation of household water meters (demand management). Installation and management of water meters for NRW reduction is another important area of assistance envisaged under the project, including support to the KnSBU in expansion of its metering program to achieve 100 percent coverage be the end of the project. Currently, only 4400 meters are installed in Kandahar. The project will equip currently unmetered connections with meters, and provide meters for upto 80,000 planned new connections with expected costs of approximately US\$ 3.5 million. The metering program will be accompanied by a communication and citizens engagement program.

35. The expected implementation period including procurement is about 60 months as shown in A.5 below.

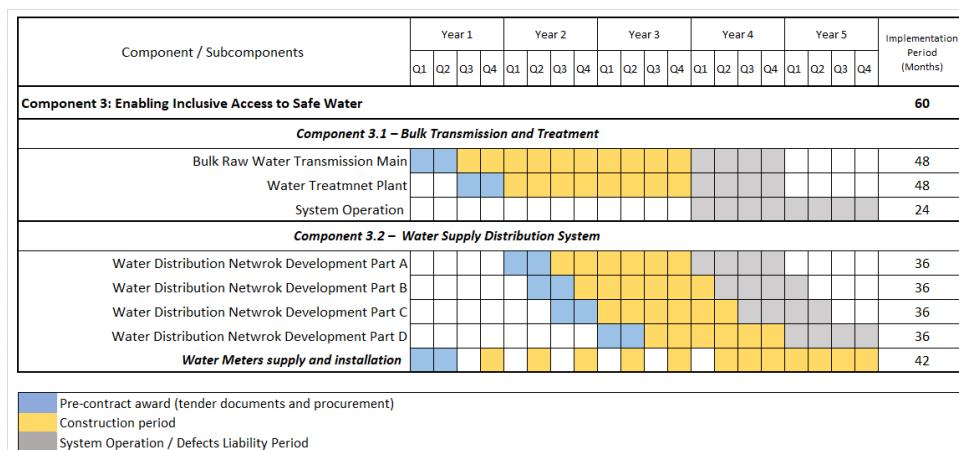


Figure A.5: Water Supply Infrastructure and Efficiency Improvements – Implementation Schedule

¹¹ The size of the pipe and capacity of the WTP will be confirmed by the Detailed engineering design.

**Component 4: Project Management and Monitoring (US\$ 5.0 million)**

36. This component will support the Project Coordination Team (PCT) hosted within AUWSSC headquarters and the Project Implementation Units (PIU) in the Kabul, Kandahar and Herat SBUs that will coordinate, implement, monitor and report on the project. An effort will be made to identify competent internal candidates who are likely to remain with the AUWSSC and SBUs after the end of the project. To facilitate project implementation and mitigate institutional capacity risks in SoP-1, the project will support selected, competitively recruited specialists to reinforce the PIU. The aim of the project, however, will be to minimize the use of external specialists and to build AUWSSC's capacity to administer future projects. Within this general objective, the project will also enhance the career prospects of female staff, for example by improving facilities (e.g. daycare, separate restrooms etc.), and by direct outreach to local universities to identify female engineers and a paid internship program to facilitate their entry into the utility (see Component 2). The project will promote gender balanced staffing and increase the number of females involved with project implementation

37. The component will also finance the operating budget for the project preparation before the date of signing the Financing Agreement. The retroactive amount would be pre-financed by AUWSSC. Once the project is declared effective, eligible expenditures approved by the World Bank will be reimbursed to AUWSSC out of the Grant proceeds.

38. The component will support the PCT and PIUs to ensure an effective implementation, including office equipment and consultancy services. Moreover, this component will fund financial management (FM), procurement and environment and social safeguard activities and staffing needs and monitoring and evaluation (M&E) of project activities, project audits, and operating costs. It will also establish and equip a Project Coordination Committee (PCC). While the PCT will be an AUWSSC internal body in Kabul to support the local PIUs in the three cities, the PCC will coordinate external stakeholders.

Component 5 - Contingent Emergency Response Component (CERC) (USD 0.0 million)

39. This component will improve the GoIRA's ability to respond effectively in the event of an emergency in line with World Bank procedures on disaster prevention and preparedness. Following an eligible crisis or emergency, the Recipient may request the Bank to re-allocate project funds to support emergency response and reconstruction. This component would draw from other project components to cover emergency response.



ANNEX 2: Implementation Arrangements and Support Plan

COUNTRY: Afghanistan

Afghanistan Water Supply and Sanitation Services and Institutional Support Project

Project Implementation Arrangements

1. **The recipient of the grants will be the MoF, and the AUWSSC will act as the implementing agency for the project with responsibility for the overall management of the project.** The project's day-to-day implementation will be carried out by the PIUs hosted at the KSBU, HSBU and KnSBU. The core PIUs staff will be drawn from AUWSSC's current employees and have been involved in the project preparation. The PCT of AUWSSC will provide technical advice to the PIUs. The PCT staff will review the quality of the subprojects and ensure their compliance with Afghan and World Bank standards. The PCT will be responsible for financial management, procurement, overall contract management and will also be ultimately responsible for the administration of activities and investment subprojects.
2. **The capacity of AUWSSC was assessed, and further strengthening of the PIU is required in light of the large size of the project and the Bank's requirements.** The following additional staff are expected to be recruited to reinforce existing staff: environmental, social aspects and gender specialists; engineers, a GIS specialist; hydraulic modelling specialist; monitoring, evaluation, and reporting specialist; institutional development consultant. The PIUs will maintain the core team and support staff as needed during the project period. Pre-contract services and construction supervision responsibilities will be carried out by specialized engineering firms. The project implementation arrangements chart is presented in Figure A.6 below.

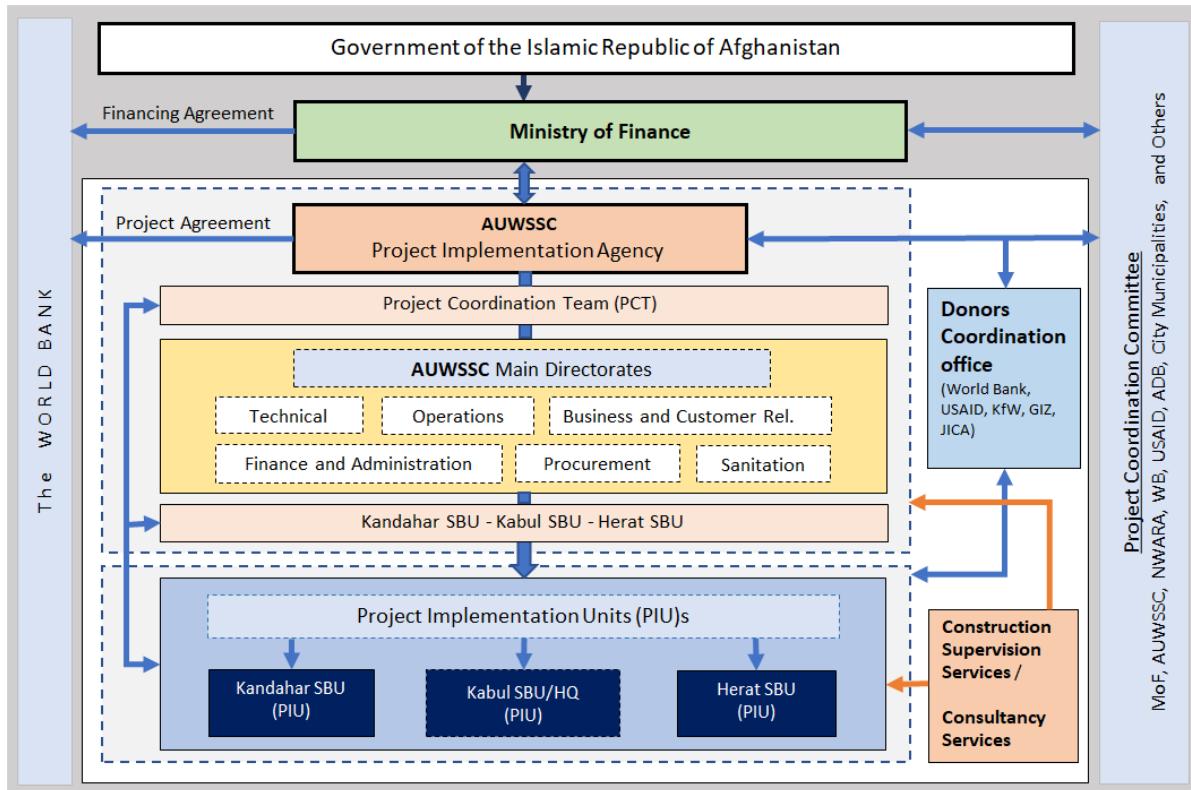


Figure A.6: Project Implementation Arrangements



3. Local NGOs or firms will be contracted to support the implementation of the baseline survey, midterm survey, impact evaluation survey, and Public Awareness Campaigns. International experts will support a training and capacity-building program for AUWSSC.

4. **AUWSSC-Donor Coordination (ADC).** Multiple international donors are currently working with AUWSSC, including on institutional strengthening and capacity-building programs. To avoid duplications, a formal AWUSSC Donor Coordinating group (ADC) was established and chaired by the Director General of AUWSSC. The ADC will include the PIUs for donor-funded projects and representatives from projects' Task Teams. The AUWSSC will be responsible for coordination between the donor- and World Bank-financed projects. The AUWSSC will lead the effort and ensure that the training and capacity-building program is prepared and delivered in a coordinated manner.

5. **A Project Coordination Committee** will be formed and will be responsible for overall project coordination, project progress reporting (including results monitoring) and coordination with other stakeholders and the complementary ADB-financed project. The PCC will carry out meetings on bi-monthly basis and as necessary. It is envisaged that PCC will comprise of decision-making representatives of relevant governmental agencies (including AUWSSC, NWARA, Kandahar Municipality, MUDL, MAIL, and the MRRD, and etc.), and will be placed under the MoF.. This organizational structure aims to assure sufficient implementation capacity for the project.

Financial Management, Disbursements, and Procurement

Financial Management (FM)

6. **AUWSSC FM Assessment.** The financial management assessment of AUWSSC identified weak systems and limited capacity to enforce financial controls and present reliable financial reports. AUWSSC inherited most of the issues from its predecessor, the Central Authority of Water Supply & Sewerage (CAWSS). The basis of valuation and a detailed listing of CAWSS assets and liabilities taken over by AUWSSC is not available. The processes of meter reading, billing, and collection are performed manually with no segregation of duties. AUWSSC is not maintaining a customer-wise breakup of receivables and liabilities details by individual creditors. Accounting software used has minimal functionalities that did not cater to the organization's requirements. The internal audit provides limited assurance due to limited capacity, weak governance, and partial compliance with standards. Some of the mentioned issues resulted in an audit disclaimer on the AUWSSC financial statements for 2009-2013. Lack of competent staff is the key reason for weak financial performance as AUWSSC had to absorb most of the accounting staff at SBUs of its predecessor, who do not have the relevant qualification.

7. **AUWSSC management is cognizant of these issues and has taken some measures to address the shortcomings.** On audit recommendation, the management has developed and notified finance, customer service, and HR manuals. Finance units have been established at SBUs to collect, compile, and report financial information. The new FM staff hiring as per the HR manual is based on relevant qualifications and experience. AUWSSC is working with the liquidation and reevaluation committee, assigned by the President of Afghanistan, to reevaluate and re-liquidate the assets and liabilities it took over from CAWSS. However, the management has not appointed the auditors for 2014 onwards, as it wanted first to address the critical causes of the audit disclaimer. The Bank requested AUWSSC to address delayed audits as the full resolution of the issues would need significant time and investment. The management agreed to appoint a reputable and independent audit firm by December 2020 to audit the financial years 2014-2020.

8. **USAID and GIZ are providing technical assistance to AUWSSC to strengthen its financial management system.** Work has started to conduct physical verification and prepare the assets and inventories registers of AUWSSC. The field survey to verify and record generators, submersibles, and pumps are underway. A study on billing and collection, including system documentation, gap analysis, and financial analysis to develop a roadmap



to address the shortcomings, is starting in the last quarter of 2020. Initial work to develop the functional and technical specifications for an enterprise information system has also started. Providing targeted financial management training to AUWSSC staff is also being planned.

9. ***Strengthening financial management systems for financial sustainability*** is a critical element of the project's institutional strengthening and capacity building component. AUWSSC will be supported to appoint auditors and complete audits of the financial years 2014-20 within nine months of the project's effectiveness (by September 2021). For the financial years 2021 onwards, AUWSSC will furnish its annual audited financial statements to the Bank within nine months of the fiscal year's closure. The Bank would work with AUWSSC to develop a roadmap to strengthen the entity's financial management, the implementation of which will be financed by the project. The services of a consulting firm will be procured to support AUWSSC developing and implementing the roadmap. A competency framework for the FM function and staff and a proposed training plan based on a training needs assessment would be developed and implemented.

10. ***The World Bank is working to develop a Commitment of Cooperation (CoC) between AUWSSC, USAID, KfW, MoF, and the World Bank as part of the ADC group.*** The CoC would outline a reform roadmap aligned with the donor programs' objectives to improve service delivery, institutional capacity, and financial viability of AUWSSC. The CoC together with MoF will develop and oversee the implementation. ADC main goal is to facilitate cooperation among stakeholders to agree on the reforms roadmap, strategically align their resources to implement reforms, avoid duplications, and jointly monitor the implementation progress and results.

Key Project Fiduciary Risks and Enhanced Fiduciary and Mitigation Measures

11. One of the significant audit issues was the non-availability of itemized inventory records and no physical verification. The project would finance critical operational inputs for which AUWSSC would maintain separate records as prescribed by the Financial Management Manual of IDA-ARTF financed projects (FMM). Quarterly SOEs would include an inventory report providing itemized details of inventory available at different locations. AUWSSC would conduct semi-annual physical verification of the inventory and share the report with the Bank.

12. The project will involve some big contracts of civil works, goods, and consultancy, while the entity does not have much experience in dealing with such contracts. The AUWSSC and PIUs in Kandahar and Kabul will jointly manage the contracts. The PIUs will be responsible for field verification and deliverables approval, while AUWSSC through MoF would process payments. In addition, qualified engineering firm(s) will be hired for construction supervision. Municipal authorities and other stakeholders will participate during the implementation of relevant project activities.

13. AUWSSC does not have recent experience of implementing a Bank-financed project, which creates the risk of making payments for some ineligible expenditure. The FMM prescribes a detailed control framework for IDA-ARTF financed projects and will be applicable to the project. The operating cost, including payroll, would be eligible for financing to the extent approved by the Bank as part of the staffing and operating cost plan. The staffing plan will detail staff positions, recruitment methods, contract duration, proposed salary, and position justification.

14. Other relevant fiduciary risks include the use of grant proceeds to procure assets and pay for expenses not relevant to the project purposes, excessive cash payments for procurements and operating expenses bypassing the review by MoF Treasury, and financial reports not compliant with the prescribed standards and submitted with delays. AUWSSC will hire two experienced FM Specialists to maintain the project FM arrangements per the requirements of legal agreements and FMM. The detailed controls, responsibilities, service standards, and documentation requirements prescribed in the FMM will be applied to mitigate the fiduciary risks.

15. Financial Management Framework. The Financial Management Manual (FMM) for IDA and ARTF projects in Afghanistan, notified by the MOF (Notification 109 dated 16/10/1398), will be used for all FM aspects of the project.



The manual includes details on the FM arrangements, internal controls, disbursement procedures, reporting lines, allotment and payment processes, documents retention control mechanism at various levels, and service standards

16. The project's inherent fiduciary risk is assessed "high" and the residual fiduciary risk after implementation of the mitigation measures is assessed "substantial".

17. The Bank FM supervisions, and external auditors would review and monitor compliance with the project's control framework (operations and FM manuals, and the Bank Procurement Regulations) as well as delivery of goods, works, and services as per contracts. The TPMA will verify the expenditures under SOEs before documenting with the Bank, including cost verification, physical inspections, and reconciliation of the accounting records. Also, the Bank would task TPMA to carry out physical verification of civil works at some sites.

18. Internal Audit Department of AUWSSC will conduct semi-annual internal audits of the project covering one fiscal semester and submit audit reports to the Bank within two months of each fiscal semester's closure. The project will provide technical assistance to AUWSSC's internal audit department by initially financing an individual consultant and subsequently through the firm hired to redesign the financial and revenue management systems.

19. External Audit. The Supreme Audit Office (SAO) will conduct annual project audits per INTOSAI auditing standards. The project audit will include field visits to project sites for physical verification of assets created or the work financed from the grant. For each financial year closing on December 21, acceptable audited financial statements will be submitted to the Bank within nine months of the close of the financial year.

Audit Report Type	Due Date
Project Audited Financial Statements for Financial Year ended December 21 each year	September 21 each year

Funds Flow and Disbursement Arrangements

One Designated Account	Pooled (IDA+ARTF)
DA Ceiling	US\$5 Million
Currency of DA and Expenditure	United States Dollar
Bank where DA will be opened	Da Afghanistan Bank
Basis of expenditure documentation	SOE verified by TPMA
Frequency of SOE	Quarterly

20. The project will be jointly financed by IDA and ARTF grants, and disbursement will be report-based. Financing of this project by IDA and ARTF will be on a pro-rata basis, i.e., 25% by IDA and 75% by ARTF. A separate pooled designated account in US Dollars will be established at the Da Afghanistan Bank (DAB). Disbursements will be made according to the transaction-based disbursement procedures that include the use of Statement of Expenditure (SOE). The ceiling for the advance to DA will be US\$ 5 million with quarterly replenishment. AUWSCC will prepare SOE to report the expenditure and replenishment of the DA that will be reviewed and validated by the ARTF's Third-Party Monitoring Agent (TPMA), who will issue a certificate confirming the amount of eligible expenditure to be documented by the Bank. MoF will process the Withdrawal Application for expenditure documentation and DA replenishment, attaching the SOE and certificate of TPMA. The Bank will document the expenditure up to the amount of expenditure confirmed as eligible by the TPMA and will replenish the DA.



Table A.2: Project's Disbursement Categories

Disbursement Categories	Amount of IDA Grant	Amount of ARTF Grant	Percentage of Expenditure to Be Financed	
	US\$	US\$	IDA	ARTF
(1) Goods, works, non-consulting services, consulting services, Incremental Operating Costs, and Training for the Project.	50,000,000	150,000,000	25	75
2) Contingent Emergency Expenditures under Part 4 of the Project	-	-	100	0
TOTAL	50,000,000	150,000,000		

21. Mandatory Direct Payments: Pilot is applicable as the project is financed by IDA 19 and triggers paragraph 12 of Section III of the IPF Policy. Therefore, disbursements under contracts for goods, works, non-consulting services and consulting services procured or selected through international open or limited competition or direct selection, as set out in the procurement plan, must be made only through Direct Payment and/or Special Commitment disbursement methods.

Procurement

22. Procurement under the project will be carried out by the Procurement Directorate of AUWSSC and the procurement staff in the PIUs.

26. Standard Procurement Documents. The World Bank's Standard Procurement Documents, Requests for Proposals, and Forms for Consultant Contracts shall be used for Open International Competition. In case of conflict/contradiction between the World Bank's procurement procedures and any national rules and regulations, the World Bank's procurement procedures will take precedence according to Article 4(2) of the Procurement Law of the Islamic Republic of Afghanistan dated 27/06/1396 (September 17, 2016) published in the Official Gazette No.1223.

27. Project Procurement Strategy for Development (PPSD). According to the requirement of the Regulations, the AUWSSC has finalized a PPSD to decide procurement methods and approaches for procurement. Procurement training by the World Bank is being arranged for AUWSSC prior to commencing with project implementation and at various junctures during implementation to ensure compliance with the PPSD.

28. Systematic Tracking of Exchanges in Procurement (STEP). The project will implement STEP, a World Bank planning and tracking system, which would provide data on procurement activities and establish benchmarks. The details of the procurement activities, presently prepared in the Procurement Plan, would be transferred into STEP. Initial training on the operation of STEP has been provided to the procurement officers of AUWSSC.

29. Procurement methods. All methods and approaches contained in the Procurement Regulations and as agreed in the PPs may be used under the project.

30. Procurement of works. Works to be procured under the project will include the construction of a water supply system (treatment, raw water transmission pipeline, construction of new water supply distribution system and rehabilitation of existing reservoirs and pumping stations, rehabilitation and upgrade of the laboratories, construction of customers offices (5-6) in Kandahar.

31. Procurement of goods. Goods to be procured under the project include special equipment for Kandahar SBU (e.g. water carriers and sewage trucks), mobile laboratory machines technical machines, supply and installation of water meters, supply and installation of billing and collection systems, and other systems as needed in AUWSSC.



32. **Selection of Consultants.** Selection of consultants under the project will include: Consultancy services for supervision of construction, Consultancy services for the Development of the Sector Strategy and Investment Program, Implementation of the recommendations of the Assessment study including Technical, operation/ financial training and support to improving billing and collection, Consultancy services for the preparation of "Feasibility Study, for Kandahar Wastewater Collection, Treatment, and Reuse/ Disposal system, Consultancy services for Baseline, end line- and customer satisfaction surveys, Consultancy services for "Assessment of Financial and Technical Performance of AUWSSC"

33. **Procurement of non-consulting services.** Purchase of digital accounting, financial management, billing and customer management system for AUWSSC and its SBUs.

34. **National Procurement Arrangements:** In accordance with paragraph 5.3 of the Procurement Regulations, when approaching the national market (as specified in the Procurement Plan tables in STEP), [the Model Procurement Documents agreed by the bank shall be used.](#) When the Borrower uses its own national open competitive procurement arrangements as set forth in the Procurement Law of the Islamic Republic of Afghanistan dated 27/06/13965 (September 17, 2016) published in the Official Gazette No.1223, such arrangements shall be subject to paragraph 5.4 of the Procurement Regulations and the following NPP Conditions for Afghanistan:

- 1) The eligibility of bidders shall be as defined under Section III of the World Bank Procurement Regulations for IPF Borrowers (Procurement Regulations). Accordingly, no bidder or potential bidder shall be declared ineligible for contracts financed by the Bank for reasons other than those provided in Section III of the Procurement Regulations (PR).
- 2) Only the model bidding documents acceptable to the World Bank shall be used for all national open competitive procurement.
- 3) The bidding documents shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the Bank's Anti-Corruption Guidelines, including without limitation the Bank's right to sanction and the Bank's inspection and audit rights.
- 4) Procurement Documents include provisions, as agreed with the Bank, intended to adequately mitigate against environmental, social (including sexual exploitation and abuse and gender-based violence), health and safety ("ESHS") risks and impacts
- 5) There shall be no negotiations of contract price at post contract stage or termination of the contract - on grounds of operation of Price Adjustment stipulated in a signed contract exceeding a specified percentage.
- 6) No preference of any kind shall be given to national bidders in the bidding process.

When national procurement arrangements other than national open competitive procurement arrangements are applied by the Borrower, such arrangements shall be subject to paragraph 5.5 of the Procurement Regulations.

35. **Procurement information and documentation.** The following procurement information will be prepared and reported by the PCT/PIU: (a) complete procurement documentation for each contract including, invitation to bid, bidding documents, advertisements, bids received, bid evaluations, letters of acceptance, contract agreements, securities, complaints (if any) and their resolution, and related correspondence will be maintained in order by the implementing agency, readily available for audit; (b) contract award information will be promptly recorded, and contract rosters as agreed will be maintained; (c) the PCT/PIU will submit semiannual reports with (i) revised cost estimates, where applicable, for each contract; (ii) status of ongoing procurements, including a comparison of originally planned and actual dates of the procurement actions, preparation of bidding documents, advertising, bidding, evaluation, contract award, and completion time for each contract; and (iii) updated PPs, including any revisions in dates or cost estimates, for procurement actions.



36. **AUWSSC Procurement Risk Assessment.** The procurement assessment of AUWSSC identified weak systems and limited experiences in WB projects implementation, the project will support hiring of required procurement consultants and conduct training seminars and capacity building for existing AUWSSC procurement directorate. Lengthy procurement processes due to multiple layers of approval and lack of staff to carry out procurement process, AUWSSC will develop service standard for each unit/individual involved and assign panel member prior to bids/proposals opening and make sure all the panel member present during the evaluation period. NPA will provide capacity building training to procurement staff of the AUWSSC. In addition, AUWSSC in coordination with NPA will organize training sessions to enhance their knowledge and update procurement/ evaluation teams on various bidding documents requirements to ensure efficiency and timely approvals by World Bank.

37. **Procurement thresholds.** Table A.3 - A.5 indicate the procurement thresholds that will be used for determining the procurement method and the prior-review requirements

Table A.3: Procurement Prior Review Threshold [US\$ Million]

Type of Procurement	High Million US\$
Works (including turnkey, supply and installation of plant and equipment, and public-private partnership)	5
Goods, Information Technology (IT), and non-consulting services	1.5
Consultants: firms	0.5
Consultants: individuals	0.2

Methods Threshold [US\$ Million]

Table A.4: Goods, Works and Non-Consulting Services

Procurement Method	Threshold for Methods (US\$)	Comment
Open International (Goods)	200,000	Equivalent or more
Open National (Goods)	200,000	Equivalent or less
Open International (Works)	5,000,000	Equivalent or more
Open National (Works)	5,000,000	Equivalent or less
Open International (Non-Consulting Services)	200,000	Equivalent or more
Open National (Non-Consulting Services)	200,000	Equivalent or less
RFQ (Goods)	50,000	Equivalent or less
RFQ (Works)	100,000	Equivalent or less

Table A.5: Consulting Services: Selection Methods and Thresholds

Selection Method	Threshold	Comments
CQS for Firms	US\$ 300,000	equivalent or less
QCBS, QBS, FBS, LCS	Depending on the nature and complexity of assignment	

38. **Procurement Plan.** Procurement Plan For goods, works, non-consulting and consulting services financed by the Bank, the Procurement Plan for project implementation was prepared and simplified copy is enclosed in Table A.6 below. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

39. The PCT and PIU offices will maintain and update a Procurement Plan (PP) in STEP. The PP will provide the basis for the procurement methods and prior-review requirements. The PP will be updated in agreement with the World Bank before the implementation support mission or as required to reflect actual project needs and improvements in institutional capacity. The project will only finance those procurements that are included in the PP and agreed with the World Bank in a manner as stated in the applicable Procurement Regulations. Attached in the table below is a simplified procurement plan.

**Strategy and Approach for Implementation Support**

40. The strategy for implementation support has been developed based on the experience working with AUWSSC over the past years, the project design, and its risk profile. It aims at providing sufficient technical support to the AUWSSC and its SBUs to successfully implement the project in compliance with all World Bank guidelines and policies. Specifically, the strategic approach for implementation support considers the following:

- (a) AUWSSC has made very limited progress in the operational and financial systems and the need for further support to ensure the sustainability of achieved gains.
- (b) AUWSSC has technical skills and experience of working with international donors but has limited capacity to respond to project requests on time. With the projects funded by USAID, KfW, GIZ and the World Bank running at the same time and the need to coordinate and work with existing institutional capacity, the risks are escalated.
- (c) AUWSSC understands and agrees on the necessity of cost recovery to ensure financial sustainability of the services. The AUWSSC's efforts toward cost recovery will require support from the MoF and a comprehensive reform and changes in the operating system.

41. Based on these factors and the AUWSSC's capacity with implementation of the SRISCB component, the project will require substantial support from the World Bank's task team in the early years of implementation. Implementation support will be provided by the World Bank team, consisting of staff with relevant competencies in utility management, financial systems, technical, operations, and environmental and social. The World Bank team will undertake periodic field missions throughout the project's implementation as required but will provide intensive supervision during the first 18 months of project implementation to ensure adequate support and smooth start of the project, including activities where coordination with the ADB-financed project is essential. The Implementation Support Plan will focus on the following:

- (a) **Support to timely and high-quality implementation.** The World Bank team will provide support and conduct required training on the World Bank's Guidelines in Procurement, Financial Management, and Environmental and Social aspects. In addition, the World Bank will support the PIU in the preparation of bidding documents for the first 18 months packages. The immediate priority is to support the PIU to ensure high technical quality of the designs and outputs, finalization of the bidding process, and award of contracts for a total value of at least 30 percent of the grant amount. The World Bank will focus, through training workshops, on improving the capacity of the AUWSSC to ensure quality of project implementation and compliance with the World Bank's procurement, FM, and ESF standards.
- (b) **Coordination.** The World Bank will work with the AUWSSC and the PIU to ensure that effective coordination is established between the two financed projects, specifically activities in the SRISCB component.
- (c) **M&E.** The World Bank team will work with the AUWSSC and PIU and agree on the format of the 'Quarterly Progress Report' and M&E systems. Quarterly reports will include information updates on technical and financial progress as well as an update of the monitoring indicators. In addition, the World Bank team will advise the PIU on environmental due diligence to ensure that the ESMP is adhered to during construction phases. The World Bank will work with the AUWSSC to assist in improving its transparency and information sharing, as well as regular communication with the people of Kandahar.
- (d) **Sustainability.** The World Bank will continue high-level sector reform dialogue, including update of national policies and strategies, , to move forward water tariff and sector reforms.



42. The POM will be prepared by the PCT and PIU and adopted by the AUWSSC before the project becomes effective. The POM will provide overall guidance on project implementation by describing the roles and responsibilities related to management of the project by the various departments/agencies involved in project execution, including the implementation arrangements; the fiduciary, social, environmental, and M&E requirements; and key actions to meet project objectives.

43. In addition, the World Bank task team will work closely with AUWSSC and involve a group of professional experts with appropriate skills to support various project activities. It is planned that a significant part of this expertise can be mobilized locally in the country office. Currently, all leading members of the task team are based in Kabul, which will enhance implementation support. Fiduciary support is also provided at the country office. The project design places a strong emphasis on AUWSSC operational and financial improvements and reporting on these improvements.

Table A.7 - Implementation Support Plan and Resource Requirements

Time	Focus	Skills Needed
First 18 months	<ul style="list-style-type: none"> Procurement of works and contracts award Finalizing of detailed design processes of subprojects (including environmental and social assessments) Establishing M&E and reporting systems FM, procurement, and E&S 	A variety of technical skills, such as engineering, utility management, utility regulation, environment, project management, fiduciary, and M&E
18–60 months	<ul style="list-style-type: none"> Construction works and supervision Implementation of systematic training programs FM, procurement, and environmental and social M&E project and contracts closing 	A variety of technical skills, such as engineering, utility management, environment, project management, fiduciary, and M&E

Table A.8. Skills Mix Required for the Duration of Project Implementation

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task team leaders	80	12	Field-based staff/HQ
Civil engineer	80	—	Engineer consultant
Institutional specialist	10	6	International consultant
Environmental specialist	24	--	Field-based staff
Social specialist	24	—	Field-based staff
Utility expert	10	4	Consultant
FM specialist	24	—	Field-based staff
Financial analysis specialist	10	—	Field-based consultant
Procurement specialist	36	—	Field-based staff
Communication specialist	12	—	Field-based staff
	310	20	

Note: HQ = Headquarters.

Monitoring and Evaluation (M&E)

44. The AUWSSC PCT and SBU PIUs will be responsible for continuous monitoring and evaluation of project outcomes. A dedicated M&E Specialist at the PCT will track progress towards achievement of project objectives and progress by components and provide semi-annual reports to the Bank with copies to the MoF. The



construction supervision services will provide monthly progress report for all congoing contract. In addition, the PIU M&E specialist will perform M&E functions and will provide monthly progress reports to the PCT. The PCT will carry out annual self-evaluation to assess effectiveness, efficiency, impact and sustainability of the project and suggest improvements and incorporate lessons learnt to the activities to the extent possible.

FCV related considerations

45. Conflicts between Project implementers and catchment communities may arise during the project implementation as a result of misunderstanding of the project objectives and recruitment processes of labour as well as a lack of appreciation of local customers and religious beliefs on the part of the project implementers. Another source of conflict can be unprofessional conduct of private security personnel employed by the contractor during the execution of their duties. These unresolved conflicts can lead vandalism of the contractors' equipment, materials and property. Such conflicts also have to potential escalate to clashes leading fatalities and injuries creating delays in the project implementation. Activities of External Saboteurs. As the project region is unstable, there is an existential threat of saboteurs, targeting project infrastructure as well as direct workers, third party suppliers and sub-contractors through terror attacks. Through its locally based PIU, the project will engage closely with local governments, community leaders and other stakeholders to clearly communicate project objectives and to gather and take into account feedback. The project will put in place a well-functioning Grievance Redress Mechanism to ensure that any complaints related to unprofessional conduct or practices not in compliance with Bank policies can be quickly identified and addressed.

Client Capacity for Environmental and Social Assessment

46. AUWSSC, as the water utility and implementing agency of the project, has no experience with the ESF implementation. To mitigate this, the utility has hired dedicated environmental and social specialists in the HQ and has announced two more positions in Kandahar bringing the number of specialists to with 4 qualified and experienced environmental and social specialists; two environmental and two social specialists to be based in Kandahar, and Kabul offices. Detailed Institutional arrangements for managing E&S capacity and implementation arrangements are provided in the ESRS and Annex 3. The key project staff have been oriented on the ESF, however, the application of the new Bank framework requires significant environmental and social responsibility, therefore the project ESMF covers robust training plans and allocates the required resources. An institutional capacity assessment will be conducted during early project implementation stage and stipulate necessary capacity strengthening recommendations for the Utility. The ESMF foresees a comprehensive capacity building plan, and capacity strengthening has also been captured in the project ESCP. This will establish a clear path towards improving capacity and thus enabling AUWSSC to implement the ESF as well as other management plans and instruments to mitigate project environmental, social, health and safety risks. Particularly important to address risks related to the project operations will be building the ability for continuous stakeholder engagement as well as to oversee implementation of plans to manage labor, community health and safety, land acquisition (if needed) and cultural heritage issues.

**ANNEX 3: Environmental and Social****COUNTRY: Afghanistan****Afghanistan Water Supply and Sanitation Services and Institutional Support Project*****Environmental Risk Classification***

1. **The environmental risk rating for Afghanistan Water Supply and Sanitation Services and Institutional Support Program is rated as “Substantial”.** The proposed project will finance new construction of water supply system from Dahlia Dam through a gravity system to convey raw water to WTP and down to the city, approximately 30 km southwest of the Dam. The concept design envisages two 1,500 mm diameter pipes fed by the water transmission facility (dam intake). The project is described in greater detail above. Further assessments are sought to finalize the location and the type of the water treatment plant during project implementation stage.
2. The overall environmental impact of the project investments will be largely positive. Benefits include improved access to clean water, reduced waterborne diseases in urban communities, and an overall improvement in health and sanitary conditions. The project will also help protect groundwater from overexploitation, and significantly improve the energy efficiency of water production in Kandahar, thus helping to reduce emissions currently associated with water trucking and groundwater pumping. By contrast, adverse environmental impacts associated with the project activities are mainly during construction phase and are moderate and mostly reversible in nature and scale.
3. The main adverse environmental impacts related to project activities are (i) temporary damage to the natural landscape, generation of dust, noise, debris, waste products and vibrations due to excavation, piling works, and movement of heavy machinery at different project sites and mobile emissions; (ii) this will also exacerbate the level of pollutions in areas with dense population; (iii) the sludge generation from the water treatment plant and sludge disposal will have negative impacts if not properly managed during project operation phase; (iv) risks related to accelerated erosion and flood generation if the sites are improperly restored after completion of civil works; (v) civil works, specifically the rehabilitation of existing networks, may pose risks related to the health and safety of dwellers, traffic disruption and OHS and personal safety issues at the worksite (vi) the civil works would also pose risk on the functionality of the existing pipe system within Kandahar and (vii) use of construction materials that are hazardous to human health. Asbestos and asbestos-containing materials (ACM) will not be permitted. Any pre-existing ACM waste will be collected, transported, and finally disposed of by applying special protective measures in accordance with hazardous waste handling standards and using procedures given in the World Bank Group Environmental, Health and Safety Guidelines.
4. The key environmental and social risks in a Covid-19 setting have direct relation with the scope of the project operations. Particularly the project components with major construction activities and those involve dealing with large number of labors. These risks will revolve around improper social distancing, poor labor camp management, transporting and disposing of wastes generated by the labor/camps. In addition, there will be a risk of exposure to a wide range of potentially affected communities and individuals, starting with those unidentified infected workers, and extending from there to a wide band of the professional, skilled labor and civic communities. The nature of the measures taken to address these environmental risks will benefit from Interim Guidance on Covid-19 has been disclosed on April 07, 2020.
5. These adverse potential risks can be effectively prevented, mitigated, or minimized on-site in a predictable manner through good engineering design, effective implementation of ESMPs and application of SOPs (Standard Operation Procedures) specified in the CESMP (Contractor ESMP). Considering the mentioned foreseeable risks, the environmental risk is rated Substantial at this stage. It is important to mention that at the concept stage the



environmental and social risk of the project was rated as high risk, as adequate information regarding the project scale, scope and other residual impacts was not yet available at the time.

Social

6. The World Bank financed interventions including transmission, treatment, distribution network rehabilitation and replacement of priority water supply facilities, including water wells, pipes and pumps will have some social risks and impacts which is expected to be less severe and mostly temporary, predictable and reversible. Works associated with the construction and upgrading of the water network will cause land acquisition and resettlement impacts such as (i) impact on people's assets such as crops, buildings, and structures which were built close to the water pipelines and as such restrict access to the network; (ii) labor influx risk as some of the supported activities may rely on hiring labors from outside the project' area of influence; (iii) the project is screened in terms of Gender Based Violence (GBV) and it is rated as moderate risks; (iv); the issue of child labor and forced labor will be assessed during ESIA and the provisions will be included in Contractors' ESMP. With the outbreak and spread of COVID-19, there is the risk of the virus transmission among the workers, particularly, the workers and labors who will be involved in social gathering, stakeholder engagement, consultations and meetings. In addition, improper disposal of PPEs especially used face masks and gloves by both AUWSSC staff and workers. Therefore, the restrictive measures have been adopted including some imposing strict restrictions on public gatherings, meetings and people's movement, and others advising against public group events. The measures and guidelines for social distances and stakeholder consultations amidst COVID-19 outbreak are included in relevant E&S instruments. The poor capacity of the implementing agency to handle social issues is a major concern that contributes to substantial social risk rating.

7. Citizen Engagement (CE)- The CE will form an integral part of project implementation to enable an effective two-way interaction between citizen and government. Citizen Engagement under the project will include: (i) effective consultations, (ii) establishing a functional grievance redress mechanism (GRM) and (iii) establishing mechanisms in the selected sites to evaluate beneficiary satisfaction with project outcomes and citizen engagement measures. CE indicators have been included in project result framework. The implementing agency will be supported to carry out the following Citizen Engagement throughout the project cycle:

8. Grievance Redress Mechanism (GRM): To ensure that project related grievances are addressed effectively, setting up of an effective grievance redressal mechanism is a requisite. To facilitate this process, a two-tier system is proposed for resolution of such grievances. AUWSSC will establish an effective GRM system which will include multiple channels for soliciting complaints; registering complaints in a log; an MIS based GRM database, publishing timely and service standards for acknowledgement, response, and resolution; and ensuring transparency about the grievance procedure as well as options for mediation and appeal. The capacity of AUWSSC staff to address grievances also needs to be assessed and designated grievance handling specialist will be recruited. AUWSSC will also conduct (a) Training and awareness programs for staff and project beneficiaries on how to use GRM services, (b) establishment of Grievance Redressal Committee and maintenance of GRM systems at project sites, and (c) proper registration system for grievances to enable tracking and review.

9. Citizen Satisfaction Surveys: These tools provide a quantitative assessment of government performance and service delivery based on citizens' experience. The current system for customer satisfaction surveys and system will be assessed and accordingly an operational toolkit will be developed to help the team to implement these tools more effectively. During the implementation stage, the performance of the AUWSSC and its SBUs will be assessed through annual beneficiary feedback surveys. It will solicit user perceptions on quality and satisfaction of services and satisfaction of their involvement in project activities. It can also reveal knowledge gaps on the side of customers. The survey findings will be publicized through the AUWSSC website and will be discussed at the biannual meetings of the AUWSSC's and its SBU staff and community members.



Gender Analysis

10. At the Community level women and girls tend to bear a higher burden when it comes to water collection, purification and household water management. Access to information on water-borne diseases, responsible use of water, and water quality and pollution issues is a major barrier for women as they have smaller networks, are underrepresented in water users' associations and other community platforms. Women's access to water may be impeded for three primary reasons: they may lack influence within existing governance institutions (making them undervalued constituents); they may lack purchasing power and have limited access to financing (making them undervalued consumers); and their activities related to water use are perceived as less essential to family livelihoods (making them undervalued users). Though women are primarily responsible for managing domestic water supply and promoting home- and community-based sanitation activities, they are often overlooked in the planning and implementation of infrastructure projects. Given women's role in water use and management, their involvement in water service interventions, infrastructure delivery plans and information dissemination and public awareness raising is critical.

11. At the institutional level: In AWUSSC, women are underrepresented in the leadership (only 3 percent) and technical and non-technical positions (less than 10 percent) and there are also gender gaps in career advancements and access to specialized training. This is mostly due to lack of opportunities for women to advance their careers and lack of targeted recruitment from universities, capacity building and training and professional exposure for women. The Kandahar SBU has only one female employee in an auxiliary position and has no female staff at any other level. Social attitudes and gender stereotypes also influence the scope for women's participation and leadership. Furthermore, due to lack of opportunities and family responsibilities, they lack advanced technical trainings and exposure. Hence, they often find it challenging to assume technical and management roles in water and sanitation projects. Poor sanitation facilities and lack of other enabling work environment (daycare, flex working hours, equal career growth opportunities) also are barrier for women in the workplace as well and this has a negative impact on women's productivity.

12. Given the involvement of civil work and labor influx, this project has a higher gender-based violence rate and to mitigate it, the project will prepare a GBV action plan.

Gender Actions:

13. At the Community level, the project will ensure that women as primary water users are engaged in project activities and that their views and concerns are captured. Under Component 1 and 3 the project will ensure inclusion of women in community consultations including on the water supply system, water treatment. The project will develop a Gender action plan (GAP) with provisions for each component to facilitate women participation and to ensure that activities respond to their needs. The GAP should require all project-related training to include a module on gender awareness aimed at creating a supportive environment for the participation of women. As the project has been rated moderate based on the corporate and country risk assessment tool for GBV, a GBV action plan will be developed to address and mitigate the risk of gender-based violence and a Gender Specialist will be hired under the project at the field to help in implementation and monitoring of the plan alongside other gender related interventions and work.

14. Outreach to women could be facilitated in collaboration with the Citizens' Charter project under which Community Development Councils (CDC) composed of both male and female community members are established. Moreover, to address the awareness gap among the female beneficiaries, the project will develop an easy to read, pictorial manual on safe usage of water for female beneficiaries and will organize information campaigns for women in project areas identified through the CDCs and women's groups. Finally, the project will ensure inclusion of women's needs in emergency situations in the disaster management plans.



15. At the institutional level, the project will work closely with the gender unit of the AWUSSC, contributing to its capacity building and providing technical support for developing a gender strategy for the institution. More specifically, under Component 2 the project will identify and prioritize female staff's capacity needs and will support targeted technical and managerial trainings to female employees of AWUSSC. The project will ensure the trainings are selected and developed based on the needs, availability, and requirements of the female staff, based on the consultations that took place at the preparation stage as well as future consultations. Furthermore, the project will promote equitable human resource practices, including recruitment of women engineers by establishing links with universities. A paid internship program will be developed under the project to attract both male and female engineering and technical graduates on an equal basis. This is particularly important for female graduates who often view the sector as male dominated and tend to pursue non-technical career paths. The project will contact universities to attract qualified candidates and ensure the internship is a professional and technical growth period for the participants. The project will also support revision of the gender policy of the AUWSSC to set a quota (at least 10 percent in managerial and technical positions from the current 3 percent in leadership and less than 10 percent in both technical and non-technical) for women. Similarly, the project will support AUWSSC to ensure institutional commitment to promote gender-sensitive working conditions for all (e.g. gender segregated and functional sanitation facilities, prayer area, proper office space, functional daycare, equal value for work, equal opportunities, and safe and harassment free work environment)



Table A.9: Potential Impacts/Risks Likelihood of Occurrence and Potential Mitigation Measures

Significant Impacts	Summary Description	Likelihood of Occurrence	Conclusion	Possible Mitigation Measures
Accidents involving Direct project Workers as well as Sub Contractors and Third-Party Suppliers	<ul style="list-style-type: none"> During the pre-construction phase accidents such as hits and falls may occur as workers load and offload equipment and materials on site. Work related accidents including slips, falls, crashes and cuts which can at any time during the construction phase 	Very Likely	<ul style="list-style-type: none"> Accidents involving project workers and sub-contractors are rampant on projects of this nature, especially when workers are negligent and not in PPEs. Such accidents may also occur as a result of poor housekeeping and signage on and equipment failure. 	<ul style="list-style-type: none"> Lining work zones across roads and pipe routes with caution tape Levelling the sides of the trenches to prevent accidents Supply of Personal Protective Equipment (PPE) to all workers Reward and sanction regimes for workers who use and do not use appropriate PPE respectively should be instituted by the Contractor(s) covering all project workers including employees of sub-contractors and third-party suppliers Provide potable water for site workers Prohibitive, warning and directional signs will be provided on site; All workers will undergo medical screening before they are employed on site
Water Pollution	<ul style="list-style-type: none"> Water pollution may occur as a result of cleansing equipment and vehicles close to waterbodies or wells Water in the distribution and transmission lines contaminated through leakages, rusty bolts and nuts used to join pipes during the operational phase 	Likely	<ul style="list-style-type: none"> In the absence of strong regulatory frameworks and institutions, Contractors are likely to use local waterbodies to cleanse their equipment and vehicles with local waterbodies because it is a cheap option Rust and leaks may occur as a result of poor maintenance and exposed pipelines due to erosion over time. 	<ul style="list-style-type: none"> Contractor(s) should not be allowed to cleanse their equipment and vehicles within 200 meters of any waterbody HDPE pipes should be used for the works to minimise the likelihood of rusts and leaks. Using of epoxy paints to minimise rust Suspend the pipelines across water bodies Master Plan for inclusive sanitation in Kandahar (to be financed by USAID)
Exposure Hazardous Chemicals	<ul style="list-style-type: none"> Treatment of wood with pesticides and the use of paints and thinners containing heavy metals such as lead expose site workers to the adverse health risks associated with the handling and use of these hazardous chemicals Workers may inhale cement dust during debagging as part of the construction / rehabilitation of the treatment plants and booster station respectively During the operational phase, technical workers and engineers at the treatment plants may be exposed to chlorine, coagulants and other chemicals used to treat the raw water 	Very Likely	<ul style="list-style-type: none"> Workers tend to downplay the usefulness of wearing PPEs while handling and working with chemicals and cement 	<ul style="list-style-type: none"> Material Safety Data Sheets (MSDS) for each material in stock should be kept within the storage area where substances are stored and at the site office Supply of Personal Protective Equipment (PPE) to all workers Any pre-existing ACM waste will be collected, transported, and finally disposed of by applying special protective measures in accordance with hazardous waste handling standards and using procedures given in the World Bank Group Environmental, Health and Safety Guidelines



	<ul style="list-style-type: none">During the construction phase workers may come into contact with asbestos containing materials from old pipe works			
Material Spills and Drips	<ul style="list-style-type: none">Accidents involving haulage trucks carrying pipes, lubricants, fuel and other construction materials and waste to and from the construction zones can cause spills which can disrupt traffic and human movement.Spills may also occur during loading and off-loading of materials such as cement on site as well as during repair and routine maintenance of equipment and vehicles when fuel, oil and lubricants drip from equipment and vehicles degrading the soil and contaminating ground and surface water resources	Likely	<p>Minor spills involving fuel and lubricants as well as other construction materials and dripping of oils and lubricants during repairs and routine maintenance of equipment and vehicles are associated with such civil works</p>	<ul style="list-style-type: none">Ensure that all hazardous substances and materials are stored at least 500 metres from the nearest waterbodiesPlace drip pans under equipment and vehicles during servicing and routine maintenance to collect waste oils/fuel and lubricant for re-use or sell to other entities, e.g. chain saw and/or machine operatorsPortable spill containment and clean-up equipment are provided at appropriate locations on site and training in the use of the equipmentInstall oil/grease traps or interceptors on drains from material storage areas and work zones where activities that can cause potential oil spillage will be occurringDevelop a procedure for managing the discovery of contamination such as daily inspection of oil/fuel and lubricant storage areas and equipment;Where there is evidence of spillage and leakage assess the activities carried out on site and review the operational procedures in place. Modify these, where appropriateWorkers at the various treatment plants should be trained on how to apply and handle chemicalsA policy of No PPE-No Site Entry should be enforced by the project contractor(s)PPEs should be worn by engineers and technicians on duty at the treatment plant at all times
Increase in the Incidence of Water Related Diseases	<ul style="list-style-type: none">Littering and poor management of human waste and refuse within the work zones can trigger and/or facilitate the outbreak and spread of sanitary related diseases such as cholera and malaria.	Very Likely	<ul style="list-style-type: none">The project zone has a history of diarrhoeal and other water and sanitary related diseasesSewage systems are underdeveloped in the project region	<ul style="list-style-type: none">Using unhazardous excavated soils as fill materials during back filling of the trenches and filling gullies and potholes in the communities with sameSome off cuts from pipes will be collected and kept by contractor at his yard for future useProvision of refuse bins to collect refuseRefuse bins to be emptied daily and sent to the approved Final Disposal SiteProvide a canteen and toilet facilities for gangs on site.
Ponding of Adjoining Properties	<ul style="list-style-type: none">Trenches can block natural valleys that act as paths for runoff creating localized pools of water when it rainsExcavated material heaped along the pipe routes can be deposited in existing drains decreasing their carrying capacity and increasing their potential to cause localised floods	Possible but not likely	<p>Localised flooding is associated with trenching especially, if the trenches are not backfilled before it rains but rainfall is scanty in the region.</p>	<ul style="list-style-type: none">Backfilling trenches immediately after the pipes have been laidThe Contractor should pump out water that collects in trenches dailyThe Contractor should plan activities taking into account the weather forecast



	<ul style="list-style-type: none">Pipe burst during the operational phase can also cause localised flooding of adjoining properties, if not attended to on time.			
Soil Erosion and Sedimentation of Water Bodies	<ul style="list-style-type: none">Clearing of land for the construction of booster station and community treatment plants as well as the clearing of the Right of Way to lay pipelines will lead to removal of vegetation and expose the top soil to erosion.Eroded top soil is likely to drift into nearby waterbodies increasing the sediment loading and turbidity of the waterbodies	Likely	The region is susceptible to wind erosion	<ul style="list-style-type: none">Portions of the treatment plant sites will be cleared as and when construction is to be undertaken on those sectionsWater the construction site at least two-times daily
Accidents involving Residents of Catchment Communities	<ul style="list-style-type: none">Unprotected work zones including trenches expose the public, especially physically impair persons, the aged and children to falls and slips.Haulage trucks and construction vehicles could also be involved in accidents which may lead to injuries, fatalities and/or loss of property in the project catchment communities.Accidents may also result from poor storage of construction equipment and materials as well as poor management of excavated construction waste. which become a nuisance as residents may slip whilst moving across them in their communities. During the operational phase of the project, pipe burst can causeInjuries and loss property may also occur as a result of pipe burst especially if pipe pressures are high	Very Likely	The multiplicity of sources of accidents make its occurrence highly probable.	<ul style="list-style-type: none">The Stats SL head office will be relocated to a temporary accommodation to be provided by the Ministry of Works and Public Assets during the construction phaseDelivery trucks and construction vehicles will be made to drive below the 20km/hr. speed limit;Wardens will be placed at the security house at the entrance of the premises at all times to prevent unauthorized persons from accessing the working zoneVisitors on the site will be screened and provided with the required will be made to wear with safety gear e.g. reflector vests, hard boots and helmetsWarning, mandatory, prohibitive and directional signs should be provided on site to guide site workers and visitors who will access the project building during the construction phaseIn addition to the formal vehicle registration numbers all construction vehicles, haulage trucks and equipment should be clearly embossed with two-digit identification numbers in front, at the back and sides for easy identificationThe contractor should emboss the company's phone contact boldly on all vehicles and equipment
Loss of Vegetation and Biodiversity	<ul style="list-style-type: none">Clearing land for the construction of a booster station and treatment plant as well as trenching will displace vegetation, which may include trees, herbs and local medicinal and other plants on which local animals and human beings depend on.	Very Likely	Although the routing and design of the pipelines have not yet been undertaken the 30-kilometre transmission line will certainly traverse some farm and undeveloped land with vegetation.	<ul style="list-style-type: none">Obtain approval from the EPA prior to felling of any tree within the RoW of the pipelinesReplace any trees felled as part of the works four-foldNurture the trees for 3 months.Avoid excessive clearing (Only demarcated sites approved by the project consultant and marked trees by the EPA should be cleared)



ANNEX 4: Financial and Economic Analysis

COUNTRY: Afghanistan

Afghanistan Water Supply and Sanitation Services and Institutional Support Project

A. Economic Analysis

1. **Rationale for public sector investment:** There is a strong rationale for public sector financing for the proposed project due to significant positive externalities, in particular the reduction in reliance on overexploited and low-quality groundwater sources and public health benefits. There is a large literature that discusses the economic value of groundwater. In addition, there is also a growing body of evidence that water contributes to economic growth – although paucity of data restricts much of this literature to the impact of water on economic growth in richer countries. The heavy dependence of Kandahar City on groundwater implies a high likelihood that the current aquifer depletion will not only affect the long-term health of the population, but also the economic growth potential of the city.
2. At present, the Kandahar SSBU of AUWSSC provides water to less than 8 percent of the population of Kandahar city while the majority gets its water through private tubewells, tanker trucks and handpumps (Table A10). Available evidence from several sources suggest that the overdraft of groundwater has resulted in significant changes in the water table. Haziq and Panezai (2017)¹² mention that the water table in Kandahar city has dropped from 6.2 to 19.9 meters in the past 30 years. This steady and relentless decline in the water table will increase the cost of groundwater, but also seriously raise the risk of irreversible damage to the aquifers. This will reduce and eventually eliminate the availability of groundwater – with major public health and economic impacts. A key positive externality of improving and extending AUWSSC services will thus be a reduction in the unregulated use of and reliance on groundwater.

Table A10: Source of water in Kandahar City (2012)

Source of water - data from 2012	Percentage of population with access	Average monthly household income	Average per capita water consumption
Tap water	7.80%	211	35.7
Private tubewell	48.50%	466	67.8
Tanker truck and other private sources	12.50%	348	43.8
Public handpump and neighbors	19.20%	268	35.0
Tap water and private tubewell	6.80%	545	116.0
Tap water, public handpump and neighbors	5.20%	417	69.3
TOTAL	100.00%	376	59.0

Source: Haziq and Panezai (2017)

3. Given the high security risks in Afghanistan and AUWSSC's poor financial situation, the financing necessary for the proposed bulk water infrastructure is unlikely to be available through private sources. The World Bank is particularly well placed to assist AUWSSC through the proposed project due to its long experience with supporting the utility and its branches, its global knowledge and strong local presence which will help mitigate risks. Since 2006, the Bank's support to AUWSSC has especially focused on sector reforms and assistance for the set-up, operational management and strategic planning of AUWSSC. The Bank's global experience will enable it to combine financing with technical assistance to improve the long-term sustainability

¹² Haziq, Mohammed Aslam and Sanaullah Panezai, 2017. An Empirical Analysis of Domestic Water Sources, Consumption and Associated Factors in Kandahar City, Afghanistan. Resources and Environment, vol. 7(2), pp. 49 -61 at doi: 10.5923/j.re.20170702.03



of AUWSSC's operations.

4. **Methodology:** The cost-benefit analysis (CBA) compares net benefits expected in a scenario with the project to one in which the project is not realized. Financial cash flows have been translated into economic cash flows by using standard conversion factors and relevant externalities were also included. The flow of costs and benefits was estimated for the lifetime of the project investments, estimated at 25 years. Costs and benefits were expressed in constant prices as of 2019. As per World Bank guidelines a discount rate of 6 percent has been used to determine the project's viability.

5. In the 'without-project' scenario the services that are provided to consumers in Kandahar City will continue to deteriorate. AUWSSC customers will need more water than the utility can provide for and will increasingly turn to groundwater-based sources to supplement or replace their tap water. Those currently without access to AUWSSC will also continue to use groundwater. The without project scenario thus includes large investments by households and private firms in drilling wells and tanker trucks. It is assumed that shallow tube-wells need to be replaced every four years and that customers using tanker trucks and handpumps depend on deep tube-wells, that are more expensive to drill but have a longer lifetime (15 years). The groundwater use also generates O&M costs in the form of energy costs for deep tube-wells.

6. Under the 'with-project' scenario, AUWSSC will undertake the investments described in the project description, notably (a) the construction of a bulk transmission pipeline to transport water from the Dahlia dam to the water treatment plant, (b) construction of a water treatment plant, (c) expansion and rehabilitation of the water distribution network, (d) construction of reservoirs, and (e) a set of measures to improve the capacity of the utility to better manage its services, while assisting in the COVID-19 response.

7. **Summary of Benefits considered in the analysis:** The benefits will include (a) an estimate of the households' willingness to pay for water services as revealed by water users (based on the household survey carried out by Haziq and Panzai), (b) additional revenues from non-household users (industry and commerce); (c) energy savings from reduced groundwater use; and (d) other externalities (carbon emissions, groundwater opportunity costs). Access will improve, but so will the quality and quantity of the water services provided. The base case analysis assumed that water consumption would increase to 80 lpcd. This constitutes a significant increase in average water consumption levels in Kandahar, that currently are estimated at 59 lpcd. It is assumed that per capita use for applications such as showering, washing, drinking and cooking will increase once regular, high-quality, on-premises supply becomes available to the population. Currently, tap water consumption is highly limited due to a lack of production capacity and high technical losses in the distribution network. The project will address both issues – by providing more capacity and a reduction of technical water losses. The project will also produce environmental benefits in Kandahar city, in the form of a reduction of groundwater consumption, thus reducing overexploitation and promoting a recharge of groundwater.

8. There are significant health benefits related to improved water supply. However, data scarcity makes quantifying these benefits difficult for this project and hence has not been attempted by the appraisal team. However, it is important to note the dimension of the potential public health benefits involved. The WHO estimated the number of diarrhea deaths in Afghanistan associated with inadequate water supply at 75 per 100,000 inhabitants in 2016. The vast majority of these deaths were made up by children under the age of 5. The burden of disease related to diarrhea because of inadequate water supplies was estimated at 278,230 disability adjusted life years (DALYs). Inadequate water supplies not only translate in more diarrhea but also other water-borne diseases (such as typhoid, dysentery, giardiasis, cholera, etc.). In Table A11, we show the numbers of deaths and the burden of disease in 2016 in Afghanistan. For reference, Kandahar City makes up about 2.6 percent of the total population of Afghanistan.



Table A11: Public Health Effects of Inadequate Water Supplies in Afghanistan

Indicator	Afghanistan, 2016
Number of diarrhea deaths from inadequate water supplies	
- total population	2,874
- population under 5 years old	2,686
Number of diarrhea DALYs from inadequate water supplies	
- total population	278,320
- population under 5 years old	255,480

Source: <https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/burden-of-disease-from-inadequate-water-in-low-and-middle-income-countries>

9. **Detailed Benefits - Willingness to pay for water from households:** There are no direct willingness to pay surveys available, so the analysis has proxied the willingness to pay by estimating the consumer surplus, that is, the difference between what people are willing to pay right now to get water and what they would pay when getting piped water from the utility, and added these to the payments made by households to Kandahar SSBU. In the ‘with project’ scenario, Kandahar SSBU will significantly increase revenues from (i) existing customers benefiting from higher consumption levels (estimated at 80 lpcd compared to the current levels of about 36 lcd) than the current system can provide; (ii) new customers (whose consumption levels are also estimated at 80 lpcd); (iii) an increase in water tariffs which will be adjusted in 2023 and from there onward be increased to at least the rate of inflation¹³ (unlike in the ‘without project’ scenario where the poor quality of the service is assumed to be accompanied by a steady decline in real tariffs); (iv) higher collection efficiency that will reach 80 percent at the end of the project compared to 35 percent in 2019 as a result of the capacity building program. By contrast, the ‘without project’ revenues will be hampered by production capacity constraints, significant distribution network losses and low collection efficiency (due to poor quality of service delivered).

10. The consumer surplus is calculated for each of the different sources of water. For private tubewells, the analysis is based on the annualized cost of a shallow tubewell – assuming a total cost of US\$ 500 in 2019 with an average lifetime of four years. For tanker trucks, the analysis uses the actual price customers have to pay for trucked water, estimated at US\$ 2.71 per cubic meter. For both private tubewell and tanker truck users, the consumer surplus was offset by anticipated losses from tanker truck operators and tube-well installers. For those depending on handpumps and neighbors, the consumer surplus was estimated through expected time savings from household connections replacing current sources.

11. It is assumed that once the water treatment plant is operational, the utility will increase real tariff increases up to 2026 to bring the tariff in line with the long-term average incremental costs. Current tariffs are about 40 percent below that of the long-run average incremental costs. After 2026, the tariff will be annually adjusted for inflation.

12. **Detailed Benefits - Revenues from commercial and industrial users:** In the absence of data on non-residential water consumption, it is assumed that revenues from non-residential users will make up 20 percent of household consumption. Currently non-residential consumers make up about 7 percent of the connections

¹³ It is quite likely that more tariff increases are needed as the long run average incremental cost of water is about 40 percent above current average residential water rates. A tariff study is on-going, and hence the results could not be included in this study. .



in Kandahar. Yet, non-residential users tend to consume significantly more than households. The tariff increase that is proposed for residential consumers will also be applied to non-residential water consumers.

13. **Detailed Benefits - Energy cost savings from reduced groundwater use:** These benefits were calculated as the savings in the volume of energy used by tanker truckers. It is assumed that in the ‘with-project’ scenario this type of private groundwater pumping can be significantly reduced. In the ‘without-project’ scenario it is assumed that groundwater will continue to be abstracted at the current efficiency levels with a high reliance on non-piped water sources. Currently about 40 percent of private tubewell users spend on average between USD10 – 27 per month on electricity to pump water from their tubewells. It is assumed that the current decline in groundwater will accelerate, and due to the continuous decline in the water table that the city has experienced over time and that will continue under this scenario, significantly more energy will be needed in the without project situation to sustain the current low levels of water consumption.

14. **Detailed Benefits - Groundwater opportunity costs:** Reductions in groundwater use will be achieved through replacement by surface water from Dahlia dam. Based on the ADB Feasibility Study of 2019, the marginal cost of providing irrigation water – using the proposed cropping patterns, irrigation efficiency assumptions and associated water consumption would be US\$ 0.054 per cubic meter of irrigation water required, which the analysis takes as the minimum value for the foregone cost of groundwater.

15. **Summary of Costs considered in the analysis:** The analysis considers both investment and operations and maintenance (O&M) costs.

16. **Detailed Costs – Capital Investments:** The investment costs for each subproject were estimated. Financial investment costs include (a) the costs of the investment program (including the COVID-19 response program); (b) replacement costs of equipment such as electromechanical parts; (c) a positive rest value at the end of the project as most of the infrastructure consists of pipes and civil works that have an economic lifetime that exceeds the project lifetime; (d) engineering costs; and (e) contingencies. Note that the investment costs also include the cost of technical assistance that are directly related to AUWSSC and project management.

17. The economic investment costs have been adjusted with the standard conversion factor of 0.95 for imported goods and equipment. It should also be noted that due to the security challenges in Afghanistan project contingencies are included. It is assumed that 60 percent of these contingencies are price contingencies, and hence in the calculation of the economic costs, these contingencies have been excluded as they are already included implicitly as the cost-benefit analysis is undertaken in real prices.

18. **Detailed Costs – Operations and Maintenance (O&M):** The incremental O&M costs include incremental costs of electricity and maintenance. It is assumed that the “with-project” scenario would benefit from significant efficiency improvements over time as a result of the capacity building program. While AUWSSC will save on O&M costs per cubic meter of water consumed due to better energy efficiency of (primarily) gravity provided water from Dahlia dam, this effect is not significant relative to total costs as current groundwater supplies are so limited compared to the planned expansion of supply.

19. The economic analysis uses a conversion factor for imported goods of 0.95, whereas the electricity price is currently underpriced. It is estimated that the economic cost of electricity is US\$0.10 (compared to the current tariff of around US\$0.06 per kWh for residential water pumping and US\$0.17 per kWh for water pumping for commercial users (AUWSSC and tanker truckers). The exchange rate is set at AFN 75.48 per US dollar.

20. In the “without project” scenario, the only option for water supply to the population is the drilling of additional shallow and increasingly deeper wells. As the aquifer is already overexploited, the costs of drilling new and replacement wells are high (and these costs have been assumed to increase in the next 25 years as



the groundwater table continues to drop) while continued pumping may at some point in time also result in irreversible damage to the aquifer. This will require significant investments over the next 25 years as population growth will require additional wells, while existing wells need to be replaced over time.

21. **Results:** Table A12 shows that the project is expected to generate an EIRR of 6 percent, and a Net Present Value of about US\$ 191 million. The impact of using different carbon price scenarios is small as these benefits are dwarfed by other benefits.

Table A12: Results of the Cost-Benefit Analysis

Project	Results	
	NPV (US\$, millions) at discount rate of 6%	EIRR (%)
CBA - Economic benefits under low carbon price scenario	190.9	15.83%
CBA - Economic benefits under high carbon price scenario	192.7	15.89%

22. **Sensitivity analysis:** The economic-financial estimations are robust to changes in key variables. This is mainly because the benefits of the project are highly diverse, while the “without project” situation requires very significant (private) investments in groundwater to ensure people will maintain access to water. The primary risks are associated with the investment cost overruns and associated operation and maintenance costs. Increases in the tariff or changes in the collection efficiency are estimated to have limited effects on economic viability as benefits from increased revenue would be offset by a change in the consumer surplus. Lower connection rates will be a risk when only about 30,200 connections are realized instead of the projected 82,000 during the life of the project, the project’s EIRR will drop below 6 percent. Even when we assume that from 2020, no additional well will be added and/or replaced, the project’s EIRR remains above 6 percent.

23. **Distribution of net benefits.** The analysis shows that different stakeholders will capture different benefits from the project. For AUWSSC, the benefits come in the form of a much larger flow of revenues and more efficiencies in the management of the water supply system. For consumers, the benefits are mostly linked to lower prices, more water consumption and better water quality. With an increasing population connected to the network, commercial users will also be able to access the water network which may affect economic activity in the city. However, due to uncertainty about this effect, it has not been included in the analysis. The benefits related to more efficient groundwater use are also expected to benefit the population in general.

24. It should be noted that the project is likely to also generate losses for some stakeholders. If households move away from tanker trucks and private tubewells, it may affect the private sector supporting these activities. The analysis shows that this will be outweighed by the benefits to the consumers. However, as this transition may result in loss of employment for those now engaged in the provision of groundwater drilling and supplies and tanker truckers, this challenge will have to be addressed through social outreach measures financed under Component 2 of the project.

25. The proposed tariff increases will also raise affordability concerns for the very poorest. An on-going tariff study will investigate these affordability concerns so that more targeted policies can be implemented as part of the project.

B. Financial Analysis

24. The proposed project will be fully funded by grants. The financial analysis is performed at the Kandahar City SSBU level to assess the project’s financial sustainability and analyze its ability and resources to operate and maintain the newly developed infrastructure while improving the efficiency and quality of services. Even though the revenues of the SSBU are not ringfenced within AUWSSC, the analysis is carried out at the level of



Kandahar to understand if the project will generate a net benefit for the utility in general.

25. **Current financial situation of Kandahar City.** The review of Kandahar City SSBU's unaudited financial statements indicates that in the fiscal year 2018 the company incurred a net loss of about AFN 16 million (around US\$ 214,000) and over the past three years a total accumulated loss of AFN 81 million (around US\$ 1.1 million). These financial losses are mainly due to:

- Very low revenues – in the three years prior to 2018, sales revenues dropped by more than half to only AFN 9.2 million (less than US\$ 130,000)¹⁴. Total revenues were only US\$ 243,000. A water demand study undertaken in 2012¹⁵ shows that tap water as provided by Kandahar City SSBU tends to serve the poorer population of the city. In 2012, the average household income for customers fully dependent on tap water was only \$211 (compared to \$376 for the city average). With the sharp increase in urban poverty rates since 2012, as mentioned in the Country Context, inability to pay among the poor may be one reason for the rapid implosion of the revenue base;
- Sub-optimal operating efficiencies as reflected in high accounts payable, high water losses and high electricity costs. The accounts payable mainly related to energy were the equivalent to 1.5 years of operating expenses;
- Lack of maintenance – with expenditure for this category being highly volatile reflecting major cash flow deficits; and
- Very high accounts receivables that amounted to the equivalent of almost seven years of annual 2018 sales revenues (and the subsequent risk of not collecting older receivables leading to write-offs);

26. The financial analysis explores the effects of the proposed investments on the financial situation of the utility. The analysis assumes that government subsidies will continue in view of the critical nature of water supply services, the large externalities associated with the current mismanagement of the aquifer in Kandahar City, and the poor operations of the utility which will take time to turn around. This grant will not result in any debt service obligations for Kandahar City SSBU. The analysis takes into account not only the proposed investments but also all business as usual (e.g. O&M of existing infrastructure) to provide consumers with water.

27. The financial analysis is using historical performance data from unaudited financial statements of the SSBU for the past three years where possible, making assumptions to project future performance. The financial situation Kandahar SSBU is extremely difficult. This is mainly as a result of low revenues (see above), which in turn stem from its limited production capacity and customer base, aggravated by intermittent, unreliable supply. All water users that can move to alternatives (private tubewells, tanker trucks) have likely done so. The poor, small customer base and low service quality is a major reason for the low collection efficiency (65 percent of billed revenues did not get collected in 2018), which makes it difficult for the utility to pay its operating costs and keep the service operating. To escape this vicious circle, major change – as proposed by the project – is needed.

28. **Methodology:** The financial analysis considers no other capital investments than those that this particular project will finance. As the data from the financial statements are not very reliable and highly volatile

¹⁴ This may be the result of inaccurate accounting as in that same year the statements included AFN 2.5 million in connection fees, and AFN 5.7 million in other revenues.

¹⁵ Haziq, Mohammed Aslam and Sanaullah Panzai, 2017. An Empirical Analysis of Domestic Water Sources, Consumption and Associated Factors in Kandahar City, Afghanistan. Resources and Environment, vol. 7(2), pp. 49 -61 at doi: 10.5923/j.re.20170702.03



from year to year, a simplified model shown at the end of this Annex was prepared. The model is given in nominal prices and presents data up to 2035. It uses the same assumptions as those used in the cost-benefit analysis. It should be noted that one of the most critical assumptions is that the tariff will remain constant in real prices. With a forecasted inflation rate of 5 percent, that means that water tariffs are expected to increase by 5 percent per year; and added to that are real tariff increases to bring the water rates in line with the average incremental costs of water to about USD 0.45 per cubic meter (from the current USD 0.32).

29. **Financial Results.** The estimated FIRR of the project is negative, and the financial NPV is negative at - US\$ 59 million, assuming a discount rate of 6 percent. This, however, should not discourage project investments given the positive economic rate of return and NPV. While utility earnings are projected to be insufficient for full replacement of the depreciated infrastructure after its economic lifetime has expired, the SSBU is expected to generate sufficient revenue to cover operating costs. The expected operating cost coverage ratio, which measures the ratio of revenues to operating costs, is well above the benchmark of 1. The Kandahar city SSBU is projected to generate a positive net cash flow in every year of the analysis after 2020. However, ensuring the efficient collection of revenues will be critical, as is keeping tariffs indexed to inflation. If the tariffs are not keeping pace with inflation, the SSBU will start generating negative cash flows by 2029. The negative FIRR and financial NPV reflect the reality of a challenging turn-around path for Kandahar City SSBU. In light of the ongoing overexploitation of Kandahar's groundwater, and the serious short- and long-term economic and public health risks, failure to invest in and reform the utility is likely to have severely adverse consequences for the population.

Figure A.13: Kandahar City SSBU change in cash flow profile

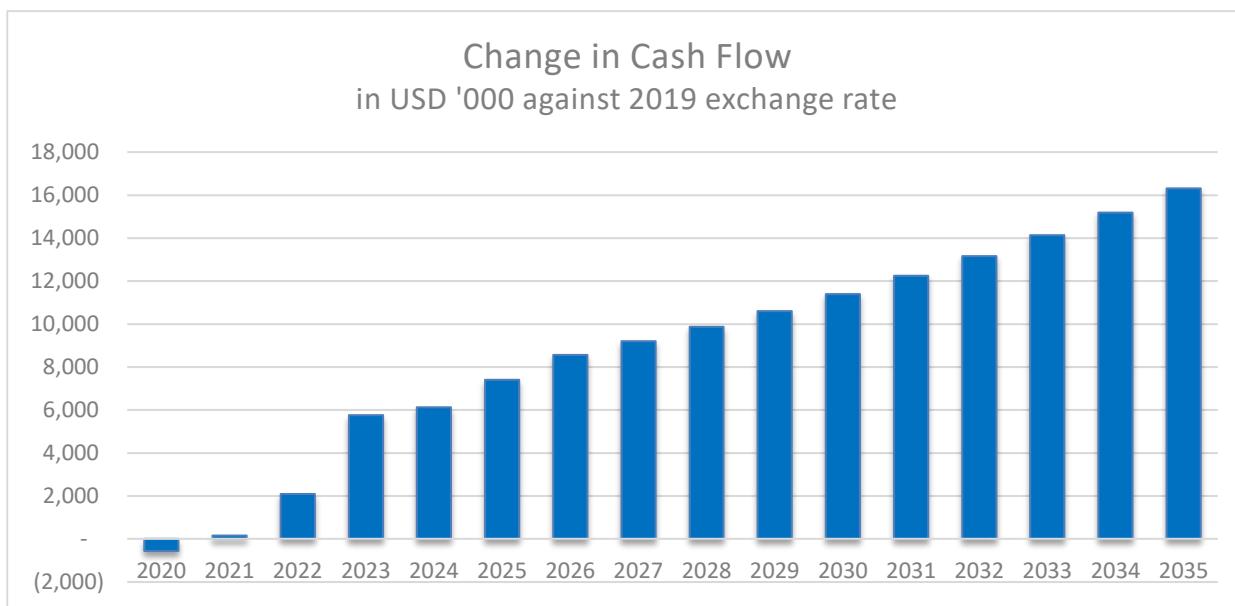
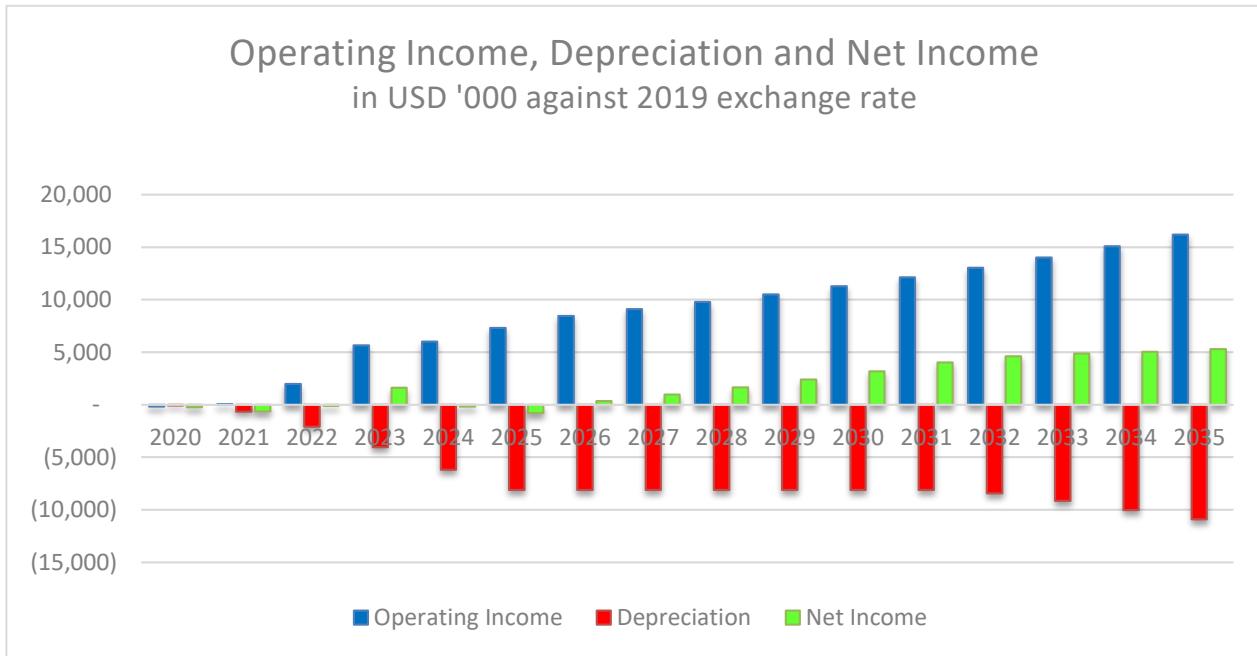




Figure A.14: Kandahar City SSBU income profile



30. **Financial Risks.** There are several risks associated with the project. The three most important are how to deal with the very high depreciation requirements, and the two connected issues of how to ensure appropriate tariffs and inflation indexation to achieve service sustainability, while also ensuring affordability of services to the entire population.

31. The very high depreciation requirements – linked to the very large investments that will be made in the utility estimated at \$230 million – is a first challenge and will require careful management. The core issue will be to generate and manage resources responsibly to be prepared once replacements come due. This issue will need to be addressed in the capacity building program that is part of the project.

32. The second challenge is to ensure financial sustainability of services with an appropriate tariff structure. To prevent the erosion of real tariffs, the project is expecting to establish a new tariff structure and an inflation indexation mechanism once the water treatment plant is operating and service is improving at the end of 2023. This will avoid that tariffs erode over time. If an indexation mechanism is not established in 2023, then by 2029, the cash flow would start to turn negative. A tariff study will be undertaken by the project to design a tariff structure that will balance the key objective of indexation and financial sustainability with the important aim of ensuring affordability of appropriate piped water services to all customers, including the poor.

33. **Affordability:** A key issue is the affordability of the water supply service. In principle, most customers will be better off with the project as laid out earlier in the cost-benefit analysis. For consumers, the project's benefits are mostly linked to lower prices, and a higher available quantity of drinking water. Table A15 provides an affordability analysis for the different consumer groups in terms of their average incomes and cash costs. It assumes the payments in 2026, a subdued increase in household income between 2019 and 2026 (as per World Bank Country estimates), and the inclusion of the current connection fee policy (for those not yet connected). Under that scenario, most consumers will be paying the same or less for the improved services than what they pay now. Yet, the poorest households that now depend on tap water only, and those that dependent on public



handpumps and neighbors, may pay more to fully access the higher-quality services. The latter group will still remain within the OECD guidance which indicates households should not pay more than 5 percent of monthly household income for water services, but the poorest households will end up paying more than 5 percent of their household income on drinking water.

34. This indicates that for poor customers moving to improved piped water supplies may be harder to manage financially. The tariff study to be undertaken by the project will explore the affordability challenge in detail and define appropriate coping mechanisms (e.g. to avoid cashflow issues for poor consumers).

Table A.15 Affordability of Water Services in Kandahar

Type of consumer	Current consumption in lpcd (2012)	Monthly Household Income, 2019 ^a	Current Monthly Payments. 2019	Future consumption in lpcd, 2026	Future Monthly Payments without connection fee, 2026	Future Monthly Payments with connection fee, 2026
Tap water	35.7	176	2.11%	80	5.52%	5.52%
Private Tubewells	67.8	389	2.67%	80	2.08%	2.33%
Tanker trucks	43.8	291	11.18%	80	2.79%	3.12%
Public Handpumps and Neighbors	35.0	224	0.00% (1.50%) ^c	80	3.62%	4.06%
Tap and private tubewell	116.0	455	3.00%	116	2.58%	2.80%
Tap, public handpumps and neighbors	69.3	348	0.93% (2.34%) ^c	80	2.33%	2.61%
Weighted Average	59.0	313	2.62% (2.98%) ^c		2.78%	3.06%

^a The team noted a sharp decline in household income since 2012. The household income of 2019 hence is significantly lower than 2012 household incomes.

^b Future payments are calculated for 2026, when the tariff has been adjusted to be at the level of the long-term average incremental costs.

^c This is “total economic payments” included with time savings monetized compared to financial payments.



ANNEX 5. Team List

COUNTRY: Afghanistan
Afghanistan Water, Sanitation, Hygiene and Institutional Support Project

Name	Role	Specialization	Unit
Sana Kh.H. Agha Al Nimer	Team Leader(ADM Responsible)	Senior Water Supply & Sanitation Specialist	SSAW1
Maximilian Leo Hirn	Team Leader	Senior Water Economist	SSAW1
Rahimullah Wardak	Procurement Specialist (ADM Responsible)	Procurement	GGOPZ
Zakir Hussain Gulzari	Financial Management Specialist (ADM responsible)	Financial Management	ESAG1
Obaidullah Hidayat	Senior Environmental (ADM Responsible)	Environment	SSAEN
Qais Agah	Social Specialist (ADM responsible)	Social Specialist	SSAS1
Syed Waseem Kazmi	Team Member	Financial Management	ESAG1
Zhuo Yu	Senior Finance Officer	Disbursement	WFACS
Ria Nuri Dharmawan	Council	Counsel	LEGES
Caroline van den Berg	Lead Water Economist	Water Economist	GWA04
Najla Sabri	Team Member	Gender Specialist	SSAS1
Abdul Naser Majidi	Team Member	Engineer - Consultant	SSAW1
Christina Leb	Senior Council	Legal	LEGEN
Walker Kosmidou-Bradley	Team member	Geographer	ESAPV
Anita Takura	Team Member	Senior Environmental	SSAEN
Matiullah Kazmi	Team Member	Social Specialist -Consultant	SSAS1
Hiromi Yamaguchi	Team Member	Water Resources	SSAW1
Raihana Tareen	Team Member	Team Assistance	SACKB
Mir Ahmad Ahmad	Team Member	Water Resources	SSAW1
Lucson Pierre-Charles	Team Member	Team Assistance	SSAW1
Satoru Ueda	Team Member	Lead Dam Engineer	GWAGS
Janardhanan Ramanujam	Team member	Finance analyst	WFACS
Andreas Rohde	Peer Reviewer	Senior Water Supply & Sanitation Specialist	SSAW1
Gerhard Soppe	Peer Reviewer	Senior Water Supply & Sanitation Specialist	GWA08
Yousif Mubarak ElFadil	Peer Reviewer	Senior Public Sector Specialist	ESAG1
Hyoung Gun Wang	Peer Reviewer	Senior Economist	GSU12

ANNEX 6: Map

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