AFRICAN DEVELOPMENT BANK GROUP

PROJECT: STRATEGIC WATER SUPPLY AND SANITATION IMPROVEMENT PROJECT (SWSSIP)

COUNTRY: REPUBLIC OF SOUTH SUDAN

PROJECT APPRAISAL REPORT

April 2019

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Currency Equivalents

As of March 2019

1UA	=	1.39798 USD
1UA	=	1.22458 EUR
1UA	=	216.615 SSP
1EUR	=	1.1416 USD
1EUR	=	176.88922 SSP
1USD	=	154.94857 SSP

Fiscal Year
1st July- 30th June

Weights and Measures

1 metric tonne	=	2204 pounds (lbs).
1 kilogram (kg)	=	2.200 lbs.
1 meter (m)	=	3.28 feet (ft)
1 millimeter (mm)	=	0.3937 inch (“)
1 kilometre (km)	=	0.62 mile
1 square kilometre (km^2)	=	0.386 square mile
1 hectare (ha) = 0.01 km^2	=	2.471 acres

ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
ADF	African Development Fund
CPIA	Country Policy and Institutional Assessment
CSI	Core Sector Indicator
DFID	Department for International Development
DPs	Development Partners
DRWSS	Directorate of Rural Water Supply and Sanitation
EA	Executing Agency
ESMP	Environmental and Social Management Plan
FM	Financial Management
GIZ	Gesellschaft fur Internationale Zusammenarbeit
GNI	Gross National Income
GRSS	Government of the Republic of South Sudan
IA	Implementing Agency
IWRM	Integrated Water Resources Management
ICSP	Interim Country Strategy Paper
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt fur Wiederraufbau
M&E	Monitoring & Evaluation
MOFEP	Ministry of Finance and Economic Planning
MWRI	Ministry of Water Resources and Irrigation
MOH	Ministry of Health
MHPP	Ministry of Housing and Physical Planning
MOGC&SW	Ministry of Gender, Child and Social Welfare
NGOs	Non-Governmental Organizations
NRW	Non-Revenue Water
O&M	Operation & Maintenance
PAR	Project Appraisal Report
PBA	Performance Based Allocation
PCR	Project Completion Report
PI	performance indicators
PIT	Project Implementation Team
PFAID	Public Finance Management and Aid Coordination
PSC	Project Steering Committee
PSP	Public Stand Posts
QPR	Quarterly Progress Report
RSS	Republic of South Sudan
RWSSI	Rural Water Supply and Sanitation Initiative
SSUWC	South Sudan Urban Water Corporation
SWAP	Sector Wide Approach to Planning
TFS	Tanker Filling Station
TSF	Transition Support Facility
ToT	Training of Trainers
UA	Units of Account
USD	United States Dollar
UWSS	Urban water supply and sanitation
WASH	Water Sanitation and Hygiene
WB	World Bank

Grant Information

Client's information

RECIPIENT:	Republic of South Sudan
EXECUTING AGENCY:	Ministry of Water Resources and Irrigation
IMPLEMENTING AGENCY	South Sudan Urban Water Corporation

Financing plan

Source	**Amount (UA'm)**	**Instrument**
ADF/TSF Pillar 1	8.000	Grant
ADF/PBA	8.000	Grant
RWSSI Trust Fund	1.659 (EUR 2.000)	Grant
Government of the Republic of South Sudan (GRSS)	1.962	
TOTAL COST	**19.621**	

Key financing information

Grant	UA
Interest type*	N/A
Interest rate spread*	N/A
Service Charge	N/A
Commitment Fee	N/A
Tenor	N/A
Grace period	N/A
EIRR , ENPV(base case)	23.85%, SSP 3.16bn

Timeframe - Main Milestones (expected)

Concept Note approval	Jan 2019
Project approval	Jun 2019
Effectiveness	August 2019
First Disbursement	Aug 2019
Completion	Dec 2023
Closing Date	Mar 2024
Last repayment	N/A

Project summary

1. ***Project Overview:*** The objective of the Strategic Water Supply and Sanitation Improvement Project (SWSSIP) is to improve the quality and delivery of urban water supply services in Juba City, in Jubek State, within the Equatoria region and rural water supply and sanitation services to rural communities in Jubek State. The project cost is estimated at UA19.621million, of which UA8 million will be resources from Transition Support Facility (TSF) Pillar I window, UA8 million is from ADF PBA and UA 1.659 million (Euro 2 million) will be from the RWSSI Trust Fund, while UA 1.962 million will be in kind contribution from the Government of South Sudan. The project will be implemented within a period of 48 months, from July 2019 until December 2023.

2. The project's main outcomes are improved equitable access to sustainable water supply in the project area, improved water system functionality, and improved rural hygiene and sanitation. When completed, the project will directly benefit 300,000 people in Juba and the surrounding rural Jubek state. With regard to the sanitation interventions, schools and communities in 8 targeted rural areas of Jubek state will benefit from the 40 public/institutional latrines blocks and hygiene education to be constructed, thus eliminating health hazards. The beneficiaries in the project area were engaged extensively during project design and will be involved in implementation to enhance social accountability and partnership.

3. ***Needs Assessment***: Juba, like many urban centres in South Sudan, has been affected by many years of armed conflict and under-investment in the development and maintenance of its water infrastructure. The armed insurgencies have led to increased numbers of displaced people and rapid urbanization in the city and surrounding Jubek Sate. This scenario has placed considerable strain on existing urban water supply infrastructure, which is currently serving 200,000 people through existing connections. There is only one functioning water tanker filling station and hardly any PSPs. To address the water shortage, illegal supply of raw water drawn from river Nile by businesspersons operating water tankers is a common phenomenon in the city and suburbs. The current plant utilization capacity is 63%, coupled with high leakages from the old pipes resulting in 43% non-revenue water (NRW). The intervention will address these challenges through rehabilitation of the infrastructure and increasing on the tanker filling stations and Public Stand Pipes (PSPs) to address short and medium term needs. The project will impact on social services and the lives of people (mainly women and children). This will promote improved enrollment and retention of girls in school and free up time for women to engage in meaningful income generating activities like small business.

4. ***Bank's Added value:*** The 2018 fragility assessment conducted by the Bank highlighted key drivers of fragility, which informed the proposed CSP extension (2019-21) on the need to increase access to energy, water and social services, and enhance agricultural production capacities to ensure resilience and address the main pressures facing the country. The SWSSIP is part of the Bank's continuous engagement with transition states and countries in fragile situations. It builds on the works of the ongoing Resilient Water Project for Improved Livelihood, which due to limited funding is only helping to develop parts of the Juba water supply system. The country is also not yet in a position to have ready designs prior to approval of new water intervention, which is crucial for better quality–at-entry. The SWSSIP, therefore, has incorporated feasibility studies and designs for two other towns to improve quality-at-entry for the follow-up projects in the next ADF 15 cycle. The Bank has also incorporated the rural water and sanitation sector in areas that are relatively safe to reach, so as to pick lessons relating to the management and technical approaches which will be documented to guide future implementation. Poor sanitation and water supply impact on health, and livelihoods, generating a sense of social exclusion for the affected groups. The need for restoring social services and improving basic water supply and sanitation services is, therefore, a critical pillar for building the resilience of society and reducing the impact of fragility. The project is consistent with the Bank's Ten-Year Strategy covering the period 2013-2022. To this end, the project focuses on the infrastructure pillar, and it embraces inclusive growth and green growth agendas by responding to the needs of marginalized and vulnerable groups and harnessing use of renewable solar energy.

5. ***Knowledge Management:*** Lessons and knowledge will continuously be captured and documented throughout the project life as part of the regular monitoring and reporting mechanism. The knowledge acquired through execution of the various project activities, trainings and studies will enable the SSUWC to carry on improvements in the sector, and also, guide future Bank interventions.

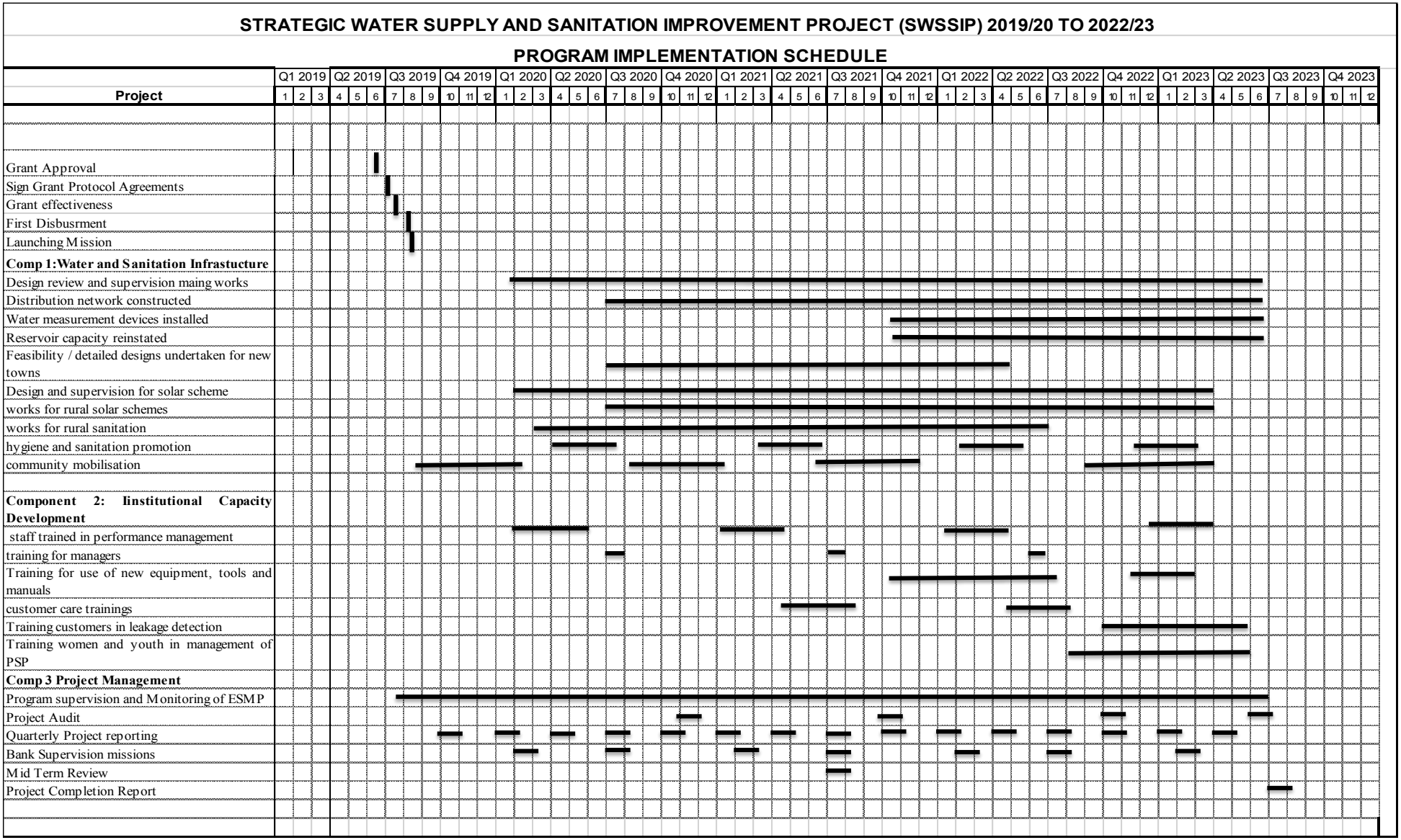
Result-based Logical Framework

Country and project name: STRATEGIC WATER SUPPLY AND SANITATION IMPROVEMENT PROJECT (SWSSIP)
Purpose of the project: To improve the quality of life and productivity in Juba City and the surrounding rural communities of Jubek State through safe, adequate and affordable water supply and sanitation services

	RESULTS CHAIN	PERFORMANCE INDICATORS Indicator (CSI)	Baseline 2018	Target 2023	MEANS OF VERIFICATION	RISKS/MITIGATION MEASURES
IMPACT	1 Improved health and productivity of the population	1.1 Reduced water borne disease incidences recorded in Juba & Jubek 1.2 Reduced Under five mortality rate in Juba 1.3 Improved Primary school enrolment rate in Juba 1.4 women and youth economically empowered	838/100,000 108/1000 89.8% 0	500/100,000 100/1000 93% 60	Min of Health and Education annual report	**Risk 1**: Start up delays affecting first disbursement **Mitigation:** initiate start up activities upfront, focus on Conditions critical for the project implementation and expedite fulfilment of conditions precedent to first disbursement.
OUTCOMES	1. Improved equitable access to sustainable water supply in the project area. 2. Improved water system functionality 3. Improved Rural Hygiene and sanitation	1.1 % of residents accessing water supply service 2.1 Reduced Proportion of NRW in Juba town 2.2 Improved billing efficiencies 3.1 Number of people sensitized in hygiene/sanitation campaigns (% women)	Urban25% Rural 58.8% 43% 22% 0	35%(16% women) 60% 35% 70% 15,000 (40	SSUWC reports MWRI-DRWSS reports for rural	**Risk 2:** Security concerns and conflicts **Mitigation:** Bank to closely monitor and track security to guide bank and project staff movements. Restrict project activities to Juba and its environs and the implementation staff are predominantly nationals resident in Juba. **Risk 3:** Unwillingness and inability of the consumers to pay tariffs for water and sanitation services **Mitigation:** Detailed and progressive tariff policy and structure supported by skills development, sensitization campaigns and customer care. **Risk 4:** Local political interference in project activities **Mitigation:** conduct effective project advocacy, transparency, inculcating trust and involvement of local leadership in project planning and monitoring. **Risk 5:** Lack of implementation capacity including procurement, financial management and quality control for the outputs. **Mitigation**: Engage International TAs for the posts of Coordinator, Procurement specialist and Financial management specialist, who will
OUTPUTS	Component 1: Water and Sanitation Infrastructure					
	1.1 Juba water supply system rehabilitated 1.2 Feasibility studies and detailed designs undertaken for new towns water supply infrastructure 1.3 Rural solar powered water system constructed 1.4 Sanitation facilities constructed 1.5 Hygiene and sanitation campaigns undertaken	1.1.1- Km of new/rehabilitated pipelines 1.1.2 Number of customer Meters installed 1.1.3 Tanker Filling Stations (TFS) constructed 1.1.4 Total Number and volume of Reservoir Capacity (m^3) 1.15 Number of public stand posts established in Juba 1.2.1 Towns with ready Technical Studies & Investment Plans 1.3.1 Solar powered water units installed 1.3.2 Number of public stand posts established 1.3.3 Number of tanker filling stations established 1.41 Number of public/institutional sanitation facilities constructed 1.5.1 Number of hygiene/sanitation campaigns conducted	30 915 04 1,500 0 0 0 0 0 0 0	80 4,000 16 3,000 50 02 08 16 04 40 10	SSUWC reports QPR	
	Component 2: Iinstitutional Capacity Development					
	2.1 Strengthened utility operation 2.2 Improved financial sustainability and commercial operations 2.3 Improved Technical and environmental sustainability	2.1.1 SSUWC staff trained in performance management (*water production, distribution, billing, revenue collection, financial management*) (% women) 2.1.2 No of training sessions for managers 2.2.1 Training for use of new equipment, tools and manuals 2.2.2 Number of customer care trainings (5% women) 2.3.1 No of trainings for leakage detection (40 % women) 2.3.2Training of women and youth in management of PSP (50% women)	0 01 0 0 0 17	30(5%) 4 4 3 3 60		
	Component 3: Project Management					

KEY ACTIVITIES	3.1 Project Operational Costs 3.2. Supervision Costs (PSC, PD) 3.3 Management Costs (*TA and Counterpart Allowances*) 3.4 Internal Audit 3.5 Internet / IT / Conferencing / Mini-Training Centre	3.1.1 Office logistics 3.1.2 Vehicle operation and maintenance 3.1.3 Quarterly progress reports with ESMP status prepared 3.2.1 Allowances and TA 3.3.1 Annual audits conducted				be training the seconded local counterpart staff. Intensify the technical launch and conduct a minimum of two supervision missions
	COMPONENTS				**INPUTS UA ' 000**	
	Component 1: Water and Sanitation Infrastructure : *a) rehabilitation of approximately 50km of SSUWC Juba town distribution network; b) related works - metering, public water collections outlets etc.; c) consultancy study to carry out "Feasibilities and Engineering Design on 2 other SSUWC towns d) Develop Solar Powered Small Water Distributions Systems with elevated reservoirs; •distribution network 100 meters' radius with tap stands and spout stations with an option for tanker trucks, donkey carts and bicycle vendors to supply high-density rural communities. B)sanitation and hygiene promotion and advocacy* **Component 2**: *Institutional Capacity Development; institutional strengthening and building capacity to ensure sustainability of the key Government institutions (SSUWC, MWRI / and States WSS Departments)* **Component 3**: *Project Management; office logistics, annual audits, vehicle operation, maintenance, TA recruitment, and staff allowances*				Component 1 - UA 16,762 Component 2 - UA 734 Component 3 - UA 1,053 Phy/price cont. - UA 1,071 Project Cost - UA 19,621	
-						

Schedule


STRATEGIC WATER SUPPLY AND SANITATION IMPROVEMENT PROJECT (SWSSIP) 2019/20 TO 2022/23
PROGRAM IMPLEMENTATION SCHEDULE
Project
Q1 2019
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Q2 2021
Q3 2021
Q4 2021
Q1 2022
Q2 2022
Q3 2022
Q4 2022
Q1 2023
Q2 2023
Q3 2023
Q4 2023
Grant Approval
Sign Grant Protocol Agreements
Grant effectiveness
First Disbusrment
Launching Mission
Comp 1:Water and Sanitation Infrastucture
Design review and supervision maing works
Distribution network constructed
Water measurement devices installed
Reservoir capacity reinstated
Feasibility / detailed designs undertaken for new towns
Design and supervision for solar scheme
works for rural solar schemes
works for rural sanitation
hygiene and sanitation promotion
community mobilisation
Component 2: linstitutional Capacity Development
staff trained in performance management
training for managers
Training for use of new equipment, tools and manuals
customer care trainings
Training customers in leakage detection
Training women and youth in management of PSP
Comp 3 Project Management
Program supervision and Monitoring of ESMP
Project Audit
Quarterly Project reporting
Bank Supervision missions
Mid Term Review
Project Completion Report

Report and Recommendation of the Bank's Management to the Board of Directors on an African Development Fund Performance Based Allocation (PBA) Grant of UA 8.00 million Transitional Support Facility grant, TSF Pillar I Grant of UA 8.00 million, and a Rural Water Supply and Sanitation Initiative (RWSSI) Trust Fund Grant of Euro 2 million to the Republic of South Sudan for the implementation of the Strategic Water Supply and Sanitation Improvement Project (SWSSIP)

Management submits the following Report and Recommendations for a proposed combined TSF Pillar 1 grant of UA 8.00 million, ADF PBA grant of UA 8.00 million and RWSSI Trust Fund grant of Euro2 million (UA 1.659 million) to finance the SWSSIP. The proposed financing is the Bank's response to a formal request by the Government of the Republic of South Sudan (GRSS) to support its efforts aimed at state building, through capacity building and infrastructure development and the need to rehabilitate and extend existing water and sanitation infrastructure in order to respond to growing urban and peri urban demands.

I – STRATEGIC THRUST & RATIONALE

1.1 Project linkages with country strategy and objectives

1.1.1 South Sudan recently obtained independence in July 2011. Its economy is highly vulnerable to external shocks due to its heavy dependence on crude oil production and exports, international aid for capital expenditure and humanitarian assistance. It is also a transition state with an estimated Gross National Income (GNI) per capita of USD 820 (as at 2015). Since its independence, peace and security have been hindered by structural and systemic factors arising from ethnic tensions and internal divisions resulting in millions of South Sudanese being displaced. These challenges have worsened South Sudan's poverty, human development indicators, governance, institutions, and infrastructure. The country's socio-economic infrastructure has been dilapidated by the conflict, thus posing serious obstacles to growth and development. The bank is therefore committed to supporting the development agenda through infrastructure development, targeting water, energy and roads. The Strategic Water Supply and Sanitation Improvement project is consistent with the implementation of the South Sudan National Development Strategy 2018-2021 whose main aim is to Consolidate Peace and Stabilize the Economy in the country. The project is also consistent with the Southern Sudan Water Policy (SSWP, 2007), which outlines key priorities for Water Resources Management (WRM), Rural Water Supply and Sanitation (RWSS), and Urban Water Supply and Sanitation (UWSS) and establishes guiding principles and objectives in relation to each. It responds to the rapid urbanization in recent years, which has placed considerable strain on existing urban water supply and sanitation infrastructure. The policy further emphasizes the need to rehabilitate and extend existing water and sanitation infrastructure in order to respond to growing demands.

1.1.2 The SSWP guidelines for RWSS emphasize that sanitation and hygiene education must be actively promoted in order to maximize the social and economic benefits of rural water supply development. It further advocates for investment in RWSS to be targeted firstly to those areas that are currently unserved and/or experiencing acute water shortage with selection of technologies appropriate for the delivery of RWSS services and guided by criteria based on social equity, economic efficiency, system reliability and environmental sustainability.

1.1.3 The draft Interim Strategy Paper (I-CSP) extension covering the period 2019-21 emphasizes the need to increase access to energy, water and social services, and enhancing agricultural production capacities to ensure resilience and address the main pressures facing the country. The proposed project is anchored to the draft I-CSP extension, which focuses on a single pillar of State Building through Capacity Building and Infrastructure Development.

1.1.4 The project is in line with the Bank's Ten-Year strategy (TYS) for the period 2013-2022. It enhances inclusive growth by providing employment during and after implementation. It is also aligned to the Banks H5 with particular focus on improving the quality of life for the people of

South Sudan with better access to potable water; it further aligns to the Bank's Integrated Water Resources Management Policy (IWRM), the Gender Strategy with affirmative action for women groups to manage public stand posts (PSPs). Moreover, the project is consistent with the Bank's second Climate Change Action Plan (2016-2020) as it ensures that the investments are sensitive to future climate-change impacts and will be able to withstand them. Moreover, component 1 of the project involves construction of solar powered rural water system, which ultimately contributes to use of renewable energy in rural water supply, thus contributing to Bank's green growth agenda. Additionally, by building institutional capacity of SSUWC and MWRI to deliver services equitably, the project strategically aligns with the Bank's strategy for addressing fragility and building resilience in Africa (2014-2019). Since the water sector has an impact in so many different institutions of the government, like health, agriculture and industry, it is also an important entry point for state and peace building and contributing to strengthening the institutional development process.

1.2 Rationale for Bank's involvement

1.2.1 The SWSSIP is part of the Bank's continued engagement with transition states and countries in fragile situations. It builds on the work of the ongoing Resilient Water Project for Improved Livelihood, which due to limited funding is only addressing development of parts of the Juba Water Supply interventions. The existing urban water systems are supplying only 25% of the population and unable to cope with current demand. 43% of the pumped water is lost through leakage. This has negatively impacted service delivery, in terms of quantity and quality of water supplied, which makes it difficult to collect revenues required for reinvestment in the water systems. This has, in turn, affected the financial sustainability of the South Sudan Urban Water Corporation (SSUWC) and its ability to operate and maintain the system. SSUWC is supposed to be a semi-autonomous entity, but that autonomy is not sustainable as long as the entity is not financially independent. The SSWP makes provision for the participation of the private sector in aspects of planning, service delivery, as well as operation and management of UWSS infrastructure on behalf of the government. It, however, acknowledges the limited skilled staff for both technical and administration to effectively perform its functions. There is also high staff turnover resulting on loss of the few experience staff. There is need for a comprehensive training needs assessment and developing the capacity development interventions. The capacity building interventions are also critical for effective partnerships with non-state partners, as the government focuses on regulation and supervision.

1.2.2 Ready designs prior to approval of new water interventions are crucial for better quality-at-entry. The SWSSIP therefore has incorporated feasibility studies and designs for two other towns to improve quality-at-entry for the follow-up projects in the ADF 15 cycle. For the rural water and sanitation sector, the management and technical approaches used in Jubek State will be documented for further implementation in rural areas under the ADF 15 cycle. It is also evident from the ongoing water intervention that there is need for additional capacity building and training as a whole for other towns under the urban water corporation. This aspect too is to be targeted by the SWSSIP.

1.2.3 As outlined in the I-CSP, the Bank is committed to supporting the government and people of South Sudan move out of fragility and build resilience. If left unaddressed, the infrastructure and weak institutional capacity challenges could exacerbate problems of marginalization, and inequality in the future. Based on its demonstrated track record, the Bank has a recognized comparative advantage in these two areas and should continue to support the people of South Sudan to address their infrastructure challenges and build stronger institutions.

1.2.4 The outbreak of waterborne epidemics in Juba and the rural areas of Jubek State peak in the rainy season largely due to contamination of unprotected water sources, which a large part of the population is obliged to use. These outbreaks are expected to be more pronounced as a result of changes in weather and rainfall patterns occasioned by climate change. The proposed intervention

by the Bank will contribute in mitigating these annual outbreaks and climate change impacts through improving access to safe drinking water. Investments in improving access to safe drinking water, improved public sanitation facilities, and proper personal and food hygiene would eliminate up to 70% of morbidity and mortality due to acute water-borne diarrhea.

1.2.5 The GRSS has, therefore, requested the Bank's support to implement the SWSSIP, with particular focus on the Juba water supply system and the surrounding rural Jubek state. The project will also prepare designs for two other towns to improve quality at entry for the next lending cycle. It will further strengthen the capacity of the Directorate of Rural Water Supply and Sanitation (DRWSS) to enable it to expand RWSS services beyond the surrounding areas of the capital, once the security situation in these states has improved and the areas become accessible.

1.3 Donors Coordination

	Sector or subsector*	GDP	Size Budget	Labor Force
	MWRI Sector	N/A	0.2%	NA
	MWRI Budget SSP ()			
	99.7m			
	Level of Donor Coordination			
	Existence of Thematic Working Groups			Yes
	Existence of SWAPs or Integrated Sector Approaches			No
	AfDB's Involvement in donors coordination***			Yes

Approved Budget tables for 2017/2018 from Min of Finance and Planning
*** Participation in some monthly meetings

1.3.1 In 2006, the GRSS put in place a number of coordination mechanisms like the GRSS Donor Forum, a platform for sharing information and enhancing dialogue between GRSS and donors. The Inter-Ministerial Appraisal Committee (IMAC) was formed and mandated to appraise and approve all donor-funded interventions. In addition, the Budget Sector Working Groups (BSWG) are the main bodies used for government-wide coordination and planning, and their membership included donors, as well as UN and NGO representatives.

1.3.2 To facilitate coordination, the Government established an Aid Coordination and Management Unit (ACMU) within the MoFP. The Bank provided technical assistance to GRSS to support state building and create capacity for managing and coordinating donors' assistance effectively. The GRSS also designated the Bank to co-chair the Infrastructure Sector Budget and Working Group in order to facilitate and coordinate resource mobilization for South Sudan's Infrastructure Action Plan (SSIAP). A desk officer in the MOFP has been assigned to coordinate AfDB-supported project activities.

1.3.3 Other Development Partners active in the water sector include JICA, who supported the preparation of the Juba Water Supply Master Plan (2009) and are funding the new Juba Water intake plant using a USD 50 million grant. Through the Multi-Donor Trust Fund (MDTF), other Development Partners provided funds for conducing feasibility studies and Water Supply and Sanitation Master Plans for the towns of Bor, Torit, Bentiu, Aweil, Kuajok, Rumbek and Yambio. USAID has supported rehabilitation and capacity building in Wau town while GIZ/KfW is funding the "Development of the Urban Water Supply and Sanitation Sector Project" (currently implemented through UNICEF). The rehabilitation of the aging distribution network in Juba has no other funding partner apart from the Bank. The proposed project will, therefore, help to develop another 40km section of the distribution network. In order to strengthen the capacity of the DRWSS for increased service delivery in rural areas, once the latter have become accessible, the proposed project will further support RWSS interventions in the Jubek State, particularly locations surrounding Juba.

1.3.4 In September 2009, the WASH Forum was established as a coordination mechanism to streamline and optimize the utilization of resources and ensure coherent approaches for the benefit of populations affected by humanitarian crisis. The WASH cluster provides emergency water points with safe drinking water, emergency sanitation facilities, and promotes good hygiene to displaced populations. Furthermore, it ensures provision of safe drinking water and improved sanitation, and promotes good hygiene within crisis-affected communities. At national level, meetings are held once a month with JICA as outgoing chair and Netherlands as incoming.

II – PROJECT DESCRIPTION

The overall objective of the project is to improve the quality of life and productivity in Juba City and the surrounding rural communities of Jubek State through safe, adequate and affordable water supply and sanitation services.

2.1 Project components

Table 2.1: project components

no.	Component name	Est. cost (UA m)	Component description
1	**Component 1: Water and Sanitation Infrastructure**	16.762	➢ This component will address the water and sanitation infrastructure improvement needs in Juba City and Jubek state focusing on the following: **<u>Urban water Supply</u>** ▪ a) Rehabilitation of approximately 50km of SSUWC Juba city distribution network; and b) 3000 house meter connections and 50 public water kiosks and 12 tanker filling stations, etc. ▪ Recruitment of consultancy firms to carry out feasibility studies and engineering designs for two other towns (Bor and Renk) to prepare for future investment projects, to be financed either by the Bank or other development partners. **<u>Rural Water Supply And Sanitation</u>** ▪ Develop eight solar powered water distributions systems in Jubek State. ▪ Address sanitation infrastructure with 40 facilities constructed in selected rural institutions, and strengthen linkages between the rural WASH sector and education, health, hygiene and nutrition sectors through targeted support for the rural institutions' curriculum development
2	**Component 2: Institutional Capacity Development**	0.734	➢ This component will provide institutional strengthening and capacity building of the relevant government institutions/stakeholders (SSUWC, MWRI, DRWSS and States WSS Departments). The training program address use of new equipment, tools and manuals; managers and customer care trainings; leakage detection & management of PSP. The training will be approved by the Bank, and focus on training and learning visits within the African continent. ▪ Advocate and support through Community Led Total Sanitation (CLTS) approaches for, the wider rural communities surrounding these institutions for them to start investing in household sanitation. ▪ To enhance resilience, especially in rural areas, the community mobilisation and awareness campaigns will provide : – Training on simple roof and surface water harvesting technologies. – on-site/ farm-level water conservation technologies – improved / smart agricultural practices
	Component 3: Project Management	1.053	➢ This component will address project management costs of the Project Implementation Team (PIT), audit requirements, office logistics and communication. ➢ Coordination of project activities, organization of stakeholders workshops and preparation of project annual work programs and budgets

2.2 Technical solution retained and other alternatives explored

2.2.1 The technical solutions retained are driven mainly by the prevailing urban challenges and the need to optimise available resources through synergies with other supporting agencies. The Juba water supply system draws water from river Nile, a source with adequate resources to meet the city's water needs. The limited and dilapidated distribution network has resulted in low levels of access to improved water supply and has been the principal cause of water related diseases such as diarrhoea, cholera and guinea worm. The absence of bulk and commercial meters, coupled with high unaccounted for water (UfW), has affected the revenue collection and eventual expansion of the system, rendering parts of the city uncovered and prone to diarrhoea and cholera outbreaks. The project will, therefore, strengthen distribution networks, tanker filling stations, Public Stand Posts (PSPs), bulk and customer meters, and reservoir capacity. The feasibility and designs for the ongoing works under the resilient water project exceed the potion to be addressed by the works. Designs under the need project will then complete the remaining distribution network and its outlets, expediting readiness to start works under the new project. The designs will be verified for conformity to international standards and adherence to environmental requirements. The water kiosks will be designed with provision for a retailer outlet to allow for additional income generation for women and youth managing the kiosks.

2.2.2 The rural areas in Jubek state face challenges of affordable and reliable water and electricity supply and a culture that is not yet accustomed to paying for such services. The design, therefore, will use reliable and affordable solar energy, which will also minimise the carbon footprint of the proposed water supply systems. The project will support solar-powered schemes in schools and other public institutions. Data from the 2017 40th WEDC International Conference, Loughborough, shows that rural sanitation in south Sudan is about 14.6 % and hygiene awareness' is amongst the lowest worldwide. Only 5.5% of the respondents in a study felt that it was important to wash their hands with soap before eating and only 50% of respondents stated that they would wash their hands if a hand washing facility were placed near the toilets. Open defecation in rural areas is estimated at 78% (JMP, 2015). One major challenge is shortage of qualified staff resulting in low sector capacity development to undertake the requisite planning and implementation of policies. The project will engage skilled consultancy firms to address both community awareness, designs and construction. As part of their ToR they are to conduct on the job training of existing rural department staff in all three aspects.

2.2.3 The technical alternatives that were discussed with GRSS and rejected for various reasons are tabulated below

Table 2.2: project alternatives considered and reasons for rejection

Alternative name	Brief description	Reasons for rejection
Production Borehole drilling	Development of production wells and point water sources where the piped water network is not accessible	▪ Very high salinity of existing ground water sources. ▪ Rapid urbanisation and corresponding VIP latrine construction is increasing the rate of contamination of ground water sources.
Urban sanitation facilities and lagoons	Construction of public toilets and improvement of existing lagoons	▪ KfW/GIZ has committed resources to address urban sanitation facilities and lagoons in Juba, and for purposes of synergy, the bilateral discussions agreed to leave sanitation to the KfW/GIZ and focus the Bank's resources on water supply.
New treatment plant	Construction of alternative water treatment plant	▪ JICA has committed resources to address a new water treatment plant excluding rehabilitation of the old distribution network. For synergy, the bilateral discussion recommended that the Bank focuses its resources on revamping the distribution network.

2.3 Project type

2.3.1 SWSSIP is a capacity development project to build resilience in a fragile environment. South Sudan is just coming out of conflict, and is still in the process of building and strengthening its institutions. The country is, therefore, not yet ready for programmatic approaches of a Sector Wide Approach to Planning (SWAp).

2.4 Project cost and financing arrangements

2.4.1 The project is estimated to cost UA 19.621 million net of taxes and customs duties and will be funded from ADF TSF Pillar I Grant of UA 8 million, ADF PBA grant of UA 8 million, RWSSI Trust Fund grant EUR 2 million (UA 1.659 million[1]) and in-kind GRSS/community contributions (UA 1.962 million). Bank funds will be utilized as follows: Component 1 (UA 16.762 million) for Water and Sanitation infrastructure**;** Component 2 (UA 0.734 million) for Institutional Capacity Development; Component 3 (UA 1.053 million) for Project Management.

Table 2.3: Project cost estimates by component [amounts in UA]

Components	**Foreign currency costs**	**Local currency costs**	***Total Costs***	***% foreign***
Comp 1: Water and Sanitation infrastructure	14,657,143	2,104,968	16,762,111	87%
Comp 2: Institutional Capacity Development	282,143	452,000	734,143	38%
Comp 3: Project Management	35,714	1,017,714	1,053,429	3%
Total Base cost	14,975,000	3,574,682	18,549,683	81%
Contingencies	1,071,428		1,071,428	100%
Total project cost	16,046,428	3,574,682	19,621,111	82%

2.4.2 The Bank is using ADF PBA, TSF Pillar I resources and the RWSSI Trust Fund to finance part of the project cost not exceeding UA 17.659 million or 90% of the overall project, while the GRSS is providing 10% of the planned costs, in kind, to provide office space, counterpart staff and exemption from all applicable taxes. The TSF/PBA/RWSSI grant will finance 100% of activities in component 1, 2 and 3. While counter pant funding will be in-kind. The details are outlined in the financial tables of technical annex B2.

Table 2.4: Sources of financing [amounts in UA]

Sources of financing	**Foreign currency costs**	**Local currency costs**	***Total Costs***	***% total***
ADF-TSF Pillar 1 / PBA/RWSSI	16,046,429	1,612,571	17,659,000	90.0%
GRSS	-	1,962,111	1,962,111	10.0%
Total project cost	**16,046,429**	**3,574,682**	**19,621,111**	**100.0%**

Table 2.5: Project cost by category of expenditure [amounts in UA]

Categories of expenditure	**Foreign currency costs**	**Local currency costs**	***Total Costs***	***% foreign***
Works	12,728,571	1,962,111	14,690,683	81%
Services	2,144,857	321,429	2,466,286	87%
Goods	139,286	0	139,286	100%
Operational Cost	0	1,253,429	1,253,429	0%
Total Base Cost	**15,012,714**	**3,536,969**	**18,549,684**	
Contingency	1,071,429	0	1,071,429	
Total project cost	**16,084,143**	**3,536,969**	**19,621,113**	

[1] RWSSI TF contribution of Euro 2 million. Euro is the Trust Fund currency

Table 2.6: Expenditure schedule by component [amounts in UA]

Components	2019/2020	2020/2021	2021/2022	2022/2023	Total
Component 1: Water and Sanitation infrastructure	17,857	1,648,085	7,726,656	7,369,513	16,762,111
Component 2: Institutional Capacity Development	264,357	146,500	200,071	123,214	734,143
Component 3: Project Management	253,857	304,143	304,143	191,286	1,053,429
Total Base Cost	**536,071**	**2,098,728**	**8,230,870**	**7,684,013**	**18,549,683**
Contingencies		357,142	357,143	357,143	1,071,428
Total Project Cost	**536,071**	**2,455,870**	**8,588,013**	**8,041,156**	**19,621,111**

Table 2.7 categories per instrument UA

RWSSI	**Foreign**	**Local**	**Total**
Goods	64,286		64,286
Services	500,000	185,714	685,714
Works	909,000		909,000
Total	**1,473,286(€1,776,113)**	**185,714(€223,887)**	**1,659,000(€2,000,000)**
ADF PBA	**Foreign**	**Local**	**Total**
Goods	75,000		75,000
Services	35,714	266,286	302,000
Works	7,347,571		7,347,571
Operational costs		275,429	275,429
Total	**7,458,285**	**541,715**	**8,000,000**
TSF	**Foreign**	**Local**	**Total**
Services	1,428,571	142,857	1,571,428
Works	4,472,000		4,472,000
Operational costs		885,143	885,143
Contingency	1,071,429		1,071,429
Total	**6,972,000**	**1,028,000**	**8,000,000**

2.4.3 **Co-financing**:

The project will use UA 16 million from TSF Pillar I resources and PBA grant with cofinancing of Euro 2 million from the RWSSI Trust Funds. The Bank's Co-financing and Syndication (FIST.1) Division floated the PCN among agencies with Trust Funds for possible additional co-financing. In addition, the Bank has reached out to the DPs during the South Sudan WASH Development Partners' monthly meeting and to the Head of Development Cooperation at the EU Delegation in South Sudan to explore possible support from the EU's National Indicative Program (NIP) EDF 11 window, but received no positive response yet.

There is however parallel cofinancing to the sector through the South Sudan Urban Water Corporation with parallel cofinancing of USD 50m from JICA towards construction of a second intake and treatment plant. Work however has been held back due to the armed conflict. UNICEF with GIZ resources is also constructing a parallel water supply system for the UNMISS Protection of Civilian Site (POCs) in Juba.

2.5 Project's target area and population

2.5.1 The project focuses on Juba, the capital city of South Sudan and targeted rural areas of Jubek state, within which the capital is located. The distribution of tanker filling stations and public

stand posts in the town targets water stressed areas that are prone to epidemics of water borne diseases, while the rural areas will target schools and the densely populated rural communities. The Ministry of Health has identified areas designated as temporary settlement camps around Juba , namely, Hai Gabat, MTC, Konyo, Kasaba, Lologo, Atlabara, Muniki, Parts of Gudele/Gurei as the worst affected by the epidemics, and therefore, potential areas of intervention. Besides refurbishing the network, the intervention is to provide at least 12 additional tanker filling stations and 50 PSPs in Juba town. The solar systems in rural Jubek state will also add 4 tanker stations and 12 PSPs. The project is contributing to raising the Juba urban water access rate from 25% to 35% and Jubek target from 58% to 60% by 2023 and will provide additional access to 300,000 direct beneficiaries (16% women) and 4000 indirect beneficiaries by 2023. The intervention will install 2,000 consumer meters, which in turn will improve accountability and customer confidence in the service. The project will train about 60 women entrepreneurs to manage the PSPs. Skilled and unskilled employment will be generated during the construction and the operations of the system.

2.5.2 DRWSS has identified 15 potential sites in the rural areas of Jubek state which include Kapuri Village, Jebel Baraka Village, Kulie Village, Brother Augusto Memorial Primary School and college, Tokiman Village, Peyti Village, Jebel Ladu County Head Quarter, Billnyang Village, Gurei Extension (Jebel Dinka), Gorom Village, Lukwilili Village, Moryok Village, Nisito Area, Luri Village and Mogire - Mangala County. Based on a detailed needs analysis DRWSS will prioritise eight localities among the 15, which will be equipped with a solar-powered water system.

2.6 Participatory process for project identification, design and implementation

2.6.1 The **ICSP** extension 2019-21 jointly prepared by the Bank and the GRSS, in consultation with other development agencies, identified urban water development among the key drivers of nation-building and institutional reform. The project preparation processes conducted in October 2018 and the appraisal mission fielded in March 2019 held wide-ranging consultations with senior government officials, including the Ministries of Finance and Planning (MoFP), Gender, Community and Social Welfare (MoGCWS), Environment (MoE) as well as Water Resources and Irrigation (MWRI) which guided in the technology choices and the target areas selected. Extensive technical discussions were held with SSUWC, who are directly responsible for urban water development in Juba City, and the Directorate of Rural Water Supply and Sanitation (DRWSS). The consultations covered areas of policy, legislative constraints, human capacity development needs, as well as the priority interventions and focus areas. Discussions with the Ministry of Environment were on the draft ESMP and the pending approval processes.

2.6.2 The Bank appraisal mission also held consultations with development partners, including UNDP, KfW/GIZ, JICA, and UNICEF and participated in the monthly WaSH development partners meeting. The consultations explored possibilities of cofinancing and establishing contact with other agencies who may be having interventions in the same target area as the proposed project. UNICEF was constructing a small, separate stand-alone water system drawing water from the Nile for a targeted community in Juba. JICA was assessing the security situation with the intention to resume works on the new Juba treatment plant when security permits.

2.6.3 The mission made field visits to the rural Jubek State to engage with beneficiaries and get their views on the proposed designs. Some catholic funded schools were promoting solar powered water schemes on a small scale. Both the schools, local leaders and the surrounding communities welcomed the idea of a solar water supply scheme. It was evident that beneficiaries were not paying for services but were willing to be guided by the project on sustainability arrangements. The project will integrate sustainability interventions including tariff policy, willingness to pay and use of prepaid metering in its awareness campaigns and for the urban system, capacity building of the Utility in commercial management. Engagement with private contractors that constructed existing school solar schemes assured the team that the technology was feasible and most suitable for

communities that are adopting to paying for services. Urban water supply contractors like Saba Engineering plc and Ms. Zhonghao Overseas Construction Engineering, were ready to support the sector as long as payments for works were prompt.

2.7 Bank Group experience, lessons reflected in project design

2.7.1 The design of this project has been enriched by key lessons learnt from other RMC and the completed and ongoing operations in the country financed by the Bank and other development partners. The design lessons include: i) to anticipate risks of significant delays while fulfilling conditions prior to disbursement. ii) the importance of flexibility and simplicity when dealing with weak institutions. iii) The value added of strengthening generally weak project management and supervision capacity particularly noted in the ongoing water project. iv) the need to build capacity for project implementation, especially regarding adherence to the Bank procurement/fiduciary rules and procedures but also to strengthen the local technical capacity through peer-to-peer regional utilities and use of TA, strongly observed in the ongoing South Sudan water project.

2.7.2 The process lessons include i) high levels of rural to urban migration fuelled by continued armed conflicts in rural areas; ii) effective governance requires transparency and mutual accountability between all principal stakeholders, framed by clearly defined roles and responsibilities, and M&E of the performance of the governance systems and individual stakeholders. Detailed project specific lessons are provided in Annex B1.

2.7.3 The above lessons have been instrumental in defining the proposed composition of the Project Implimentation Team (PIT), implementation arrangements, as well as capacity building and training activities. The Project will adopt the approach used by the PFAID project, which recruited TAs for the key positions in the PIT, with ToRs to build the capacity of the local staff. The project has budgeted for visits to neighbouring country water institutions for peer-to-peer learning on areas like M&E frameworks, regulation and water resources management. Conditions president to disbursement too have been limited to special accounts. The project has incorporated rural water facilities to mitigate on the migrations. The project launch will further review all areas of financial, procurement and technical nature to ensure the PIT is well versed with Bank procedures. Transparency and accountability will be emphasised at all levels of implementation, especially procurement. Institutional strengthening and capacity building has been integrated into all project components.

2.8 Project's performance indicators

2.8.1 The Results Based Logical Framework (RBLF) has captured indicators for impacts, outcomes and outputs of the project, which are consistent with the Bank's Core Sector Indicators (CSI) for access and piped water connections. During project implementation, the IA's M&E experts will compile and analyse project data that will feed into the quarterly and annual reports to be submitted to the steering committee and the Bank. Data gathering will be strengthened under the project, including collection of gender-disaggregated data. The Bank's supervision and mid-term review missions will evaluate progress towards attaining the outputs and outcomes of the project.

2.8.2 The impact and outcome indicators include: (i) reduction in incidences of water borne diseases in the project area; (ii) reduction in the under-five mortality rate; (iii) increase in primary school enrolment rate; (iv) increase in water access; (v) reduction in non-revenue water; and (vi) improvement in rural hygiene and sanitation.

2.8.3 The Environment and Social Management Plan (ESMP) developed by the Implementing Agency and approved by the Ministry of Environment will be used to monitor compliance with mainstreaming environment and climate change resilience requirements (Tech. Annex B8).

2.8.4 The Bank's Implementation Progress Report (IPRR) tool will be updated during the supervision missions, based on the indicators captured in the RBLF. The IPR will be shared with

Bank management for assessment of the effectiveness of the project during implementation and after completion.

III – PROJECT FEASIBILITY

3.1 Economic performance

Key economic figures

EIRR, ENPV (base case)	(23.85%, ENPV SSP 3.16bn)

3.1.1 The city of Juba and the surrounding Jubek state, suffer from significantly lower levels of access to water supply services. The tariffs of SSP 125 per m^3 and flat rates currently being charged for water services are not adequate to meet the utility's viability needs, thus affecting sustainability. A tariff increase memo was presented to the council of minister in Feb 2019. The council opted to provide subsidized chemicals and fuel as temporary measures. The economic analysis has taken into account the assumptions contained in the subsequent paragraphs.

3.1.2 The estimated base total population of the beneficiary localities (both rural and urban) as at 2023, when construction of the interventions is projected to be completed, is approximately 300,000 people. Average population growth is estimated at 4.2% per annum, which is inclusive of transient residents of adjacent villages who will benefit from the interventions as day visitors.

3.1.3 Operating costs are estimated to be 2.5% of the capital expenditure per annum. Furthermore, the analysis assumes that there will be need for capital reinvestment, amounting to 10% of the capital expenditure, after 10 years of operation to cater for major refurbishments and efficiency enhancements.

3.1.4 The EIRR considers the incremental benefits arising from reduction in health costs due to reduction in waterborne infections. It also considers the time saving benefit, as women and children spend less time fetching water. This will lead to an increase in the focus on other income generating activities, thus improving the livelihoods of the communities.

3.1.5 Sensitivity analysis was undertaken to assess the impact on the EIRR of increases in the capital costs and benefits reductions as outlined in the summary table below, and the detailed results are provided in Technical Annex B7. The assessment considered increases in capital costs of 5%, 10% and 15%, and a 20% decline in quantified benefits. The EIRR showed minimal sensitivity to the variables tested above, indicating the significant impacts on the wider community of investing in water supply and sanitation.

Sensitivity analysis summary table

	BASE	**20% increase in capital costs**	**20% decline in benefits**
Economic Net Present Value (ENPV) @ 10%	SSP 3.16bn	SSP 2.48bn	SSP 1.85bn
Economic Internal Rate of Return (EIRR)	23.85%	19.23%	18.31%

3.2 Environmental and social impacts

A) Environment

3.2.1 Categorization: In line with the Bank's ESAP procedures, the project was classified as Category 2 on 27th March 2019. The justification for this category is based on the scope of the project, which will refurbish approximately 40km of Juba town's distribution network, as well as

increase private/public water collection outlets and metering. Expected impacts relate to hydrological impacts, air and noise impacts, pollution of soil and water, release of hazardous substances during construction , resources and waste; fragmentation of habitat among others that can be minimized by applying appropriate management and mitigation measures or incorporating internationally recognized design criteria and standards.

3.2.2 *Disclosure and Approvals*: In line with Bank's ESAP procedures, the South Sudan Urban Corporation has prepared an Environmental and Social Management Plan (ESMP). The ESMP summary was disclosed on the Bank's website on 27th March 2019.

3.2.3 Environmental Protection: The mitigation approach proposed for this project takes into account the observations that there are extensive land conversions on account of rural urban migration. Also taken into account is the loss of wildlife habitat and biodiversity and the ecosystem services provided by vegetation cover, such as erosion control, water capture, air and water purification and urban air-cooling. Furthermore, the long-term presence of refugee camps in arid and semi-arid environments pose significant environmental threats to camp residents, their hosts and to ecosystem services, including deforestation, soil erosion, and the depletion and pollution of water resources. Consequently, in addition to costs related to ESMP implementation, the project will undertake community related activities that increase awareness on environmental issues, with the ultimate aim of minimizing the long-term impact of land conversions and mitigation including tree planting in the rural areas and setting up nurseries.

3.2.4 Capacity Building: The SSUWC – the Implementing Agency of this project – will join the construction supervision team to oversee the implementation of the environmental monitoring plan. The implementation of ESMP, monitoring plan and appropriate reporting schedules shall be phased and developed in co-ordination with the project implementation plan. SSUWC will ensure environmental compliance monitoring. With regard to institutional strengthening, the project will support the development of guidelines that will enable mainstreaming of environmental and impact assessment studies and related management plans throughout the utility's operations. Noting that the capacity to monitor and report on ESMP mitigation measures is weak, the project will build the capacity of five staff on environmental sustainability aspects, so as to ensure that the guidelines developed are implemented. At community level, noting the soil degradation levels in Jubek state, the project will undertake tree planting and ecosystem restoration activities, as elaborated in paragraph 3.2.3, in order to minimise the communities' vulnerabilities to the effects of climate change and other extreme weather events. The total budget that has been put aside for these activities is 100,000 USD.

B) Climate change

3.2.5 South Sudan is highly vulnerable to climate change. Historical data trends show that rainfall has decreased by 15–20 percent in western and southern parts of South Sudan. South Sudan is also prone to hydro-meteorological hazards, including floods and droughts. Estimates show that droughts and floods affect about 56% of the South Sudanese population, while another 42% of the population is affected by crop diseases and pests. Based on desk review, the proposed project was screened for climate risks using the Bank's Climate Safeguards System, and evaluated as Category 2. Measures to mitigate against climate risks and promote green growth have been mainstreamed in project activities in two ways. First, the proposed project will improve water supply, which can be used for small-scale household irrigation in the rural areas, thereby enhancing household food production and livelihood resilience. Second, component 1 aims to construct solar powered supply system. This will reduce reliance on diesel-powered water pumping and contribute to green growth aspirations outlined in South Sudan's INDC. (see annex B8 for detailed climate screening)

C) Involuntary resettlement

3.2.6 The project is not expected to trigger the Bank's operation standard 2 (OS2) on Involuntary Resettlement since all facilities to be refurbished are existing and there is no anticipated disruption to the lives and activities of the inhabitants.

D) Gender

3.2.7 This project has been categorised as GEN III as more than one of the outputs is focused on gender equality. South Sudan's population census of 2008 put the population of females at 3.97million, (48%). Women's labour force participation rate stands at 72%, while male counterparts are at 77%. While 51% of the population lives below the national poverty line, female-headed households constitute a larger proportion of the poor with their poverty incidence estimated at 57%. This is 9% higher than the male-headed households' poverty incidences of 48.4%.

3.2.8 Women and girls are normally charged with the responsibility of fetching water, but in the urban business centres, this role is changing due to the entry of tanker truck water vendors and bicycle vendors into the market, which bring water to the doorsteps of customers. However, in the outskirts of Juba and rural areas, women still carry the responsibility of fetching water for households, often from open rivers. The water crisis undermines girls' school enrolment, as fetching water can take on average 4-8 hours per day, making it difficult to sustain regular school attendance. The water shortage in Juba increasingly puts pressure on the already low levels of illiteracy and high gender gaps in the education sector at all levels. Higher and tertiary levels female enrolment at University stands at 18%, compared to 82% for male students.

3.2.9 Overall, adult literacy in South Sudan stands at 40%, of which only 28% of women are literate, compared to 55% for males in the same age category. Other challenges causing high school dropout rates include parents succumbing to diseases HIV/AIDS, leaving many orphans (about 2 million) and child-led families. The low access to safe treated water for domestic use estimated at 25% undermines health. Due to lack of clean water and proper sanitation, there have been several cholera outbreaks in South Sudan. As of July 31, 2015, there were 1,280 cases of cholera, including 41 deaths in Juba County alone in 2015. Other key issues affecting women's access to safe water include the unequal opportunity to distribute safe water. The vending and tanker truck water business is a male-dominated business, leaving the women out of the commercial distribution of water. SWSSIP will adopt a gender sensitive approach to involve women in the management of Public Stand Pipes. To address the gaps, the project will support a 30% targeted participation of women (20%) and youth (10%) in the management of the water schemes. Women and youth will be trained in the management of the PSPs and water kiosks through business management modules.

3.2.10 In relation to the project, the total number of vulnerable women and youth identified was 400 in three locations in Juba. These are communities facing extreme temperatures that affect their livelihoods, health and water supplies. There is a need to establish more PSPs to cover all these group, especially in locations where venerable groups stay. The project is classified 3 under the Gender Marker System. With a total allocated budget of USD 202,800 USD, the gender activities in the project include:

i) Identification, monitoring and supervision of women and youth enterprises to manage the water points, including capacity building training backstopping and monitoring support.
ii) Developing guidelines on mainstreaming of gender for water supply and sanitation utility.
iii) Capacity building for the Gender counterpart on monitoring and supervision of contracts in the implementation of the project.
iv) Developing messaging materials against Gender Based Violence (GBV) to be distributed at water kiosks.

3.2.11 The Gender activities in the rural sub component comprise:

i) Promotion of community health and hygiene practices, with 50% women serving as community focal persons, provided with training in WASH behavior change and operation and maintenance of water supply facilities.
ii) Community management of rehabilitated, upgraded and new water facilities, with a 50% women representation.
iii) Distribution of messaging materials against Gender Based Violence (GBV) to water user committees and at water kiosks.

E) Social

3.2.12 In mid-2017, the population of South Sudan was estimated at about 13 million. The capital, Juba is growing rapidly and counts about 450,000 people, per 2018 estimates. The majority of the population of South Sudan is young and lives in rural areas. About two-thirds of the population is under the age of 30 and more than three quarters, or 81 per cent of people live in rural areas.

3.2.13 In 2015, the average annual population growth was 3.53 per cent. The infant mortality rate is 105 (per 1,000 live births) and the maternal mortality rate is 2,054 (per 100,000 live births). Households are large, with an average of 6.5 people living under one roof. According to the country's 2010 Households Survey, in one out of ten households, there were more than ten members living together.

3.2.14 Poverty is widespread, particularly in the rural areas – which are home to more than 6.9 million people. Approximately 51% of South Sudan's population lives below the national consumption poverty line and are living on the equivalent of less than US$ 1 per day. Over 75% of households are dependent on crop farming or animal husbandry as their primary source of livelihood. South Sudan's Gross Domestic Product (GDP) in 2014 was approximately US$ 13 billion, of which agriculture contributed about 15%. Even when harvests are good, 20% of the population is food insecure and requires emergency assistance and food aid.

3.2.15 More than 50% of South Sudan's youth (21-34 years of age) are estimated to be unemployed, owing to various challenges including inadequate employable skills and skills miss-match, limited access to productive assets, early marriages, etc., forcing the youth into informal practices. The youth constitute 21.6% of the total population and 57% of the labour force. The SWSSIP project will ensure participation of youth including women in the management of the water schemes and engage them in the private sector vendor group skills trainings, especially focussing on entrepreneurship.

IV – IMPLEMENTATION

4.1 Implementation arrangements

4.1.1 The Republic of South Sudan is the grant recipient, through the Ministry of Finance and Planning. The Executing Agency (EA) will be the Ministry of Water Resources and Irrigation, while project implementation responsibility will fall under the South Sudan Urban Water Corporation (SSUWC). A professional team of three Technical Assistants (TAs) will be recruited for the key positions in the project to support the Implementing Agency (IA). The project implementation team (PIT), made up of the TAs and selected staff from SSWUC and the DRWSS, will be responsible for day-to-day project management. The TAs will comprise Project Coordinator/Engineer, Procurement Officer, and Project Accountant/FM Expert, while SSUWC/ DRWSS staff will be seconded into the roles of M&E Officer, Engineering Assistant, Procurement Assistant, Accounts Assistant, Gender and Environment Focal Person. The active participation of

local counterpart staff is crucial for the GRSS to ensure skills transfer for implementation of future projects and for staff retention in the sector institutions. The TA positions will be advertised promptly and evaluated so that the experts assume duty by project effectiveness in July 2019. The PIT will be housed in its own office within the SSUWC complex. Office logistics shall be provided by the project to ensure the PIT functions effectively.

4.1.2 To ensure compliance with government policies and procedures and to effectively coordinate the project with other government activities, the project will have a steering committee (PSC) comprising officials from line ministries, and will provide strategic guidance to project implementation and monitoring. The following ministries will be represented in the PSC: MWRI, MGCSW, MoEnv, MoFP and MD/SSUWC. The Committee will ensure strategic alignment to GRSS national development plans and policies. The PSC will review project implementation to ensure: i) timely achievement of project outputs; ii) optimal use and distribution of resources; iii) stakeholders' continuous engagement and commitment; iv) coordination with other programs/projects; and v) approval of the annual progress report and annual work plan.

4.1.3 Routine reporting and monitoring of the ESMP will be the responsibility of the M&E Officer, who will liaise with the contractors to ensure that the ESMP is implemented in accordance with Ministry of Environment's policies and guidelines. (Details are provided in annex B8).

4.1.4 Preconstruction mobilisation for rural water facilities will offer opportunity for community involvement in decision making on siting of water outlets and selection of local management committees to support during and after construction. Construction works to the extent possible will recruit beneficiary's communities to handle casual and semi-skilled labour in both the urban and rural water facilities. Women and youth will be trained to manage the water kiosks. These will also be designed with provision for a retailer outlet to allow for additional income generation for women and youth groups.

Procurement Arrangements

4.1.5 The existing legal framework for public procurement in South Sudan is the Interim Public Procurement and Disposal Regulations (IPPDR) of 2006. Ministry of Finance and Planning established the Procurement Policy Unit (PPU) as a procurement oversight body to enhance soundness of public procurement management by issuing standards, monitoring public procurement processes, and advising the Government on appropriate actions to be taken in cases of non-compliance, fraud and corruption and how to deal with complaints and appeals. Nevertheless, the PPU does not have adequate levels of independence and authority to exercise its functions and implement the procedures defined in the IPPDR. The IPPDR doesn't support a principal act of the Southern Sudan Legislative Assembly (SSLA) and creates doubts over its legal status. Supporting documents to IPPDR are lacking and processes and procedures are not clearly defined. Due to these and lack of experiences, many public entities failed to apply the regulations of IPPDR in their procurement transactions and instead invariably used direct contracting. Preparation and disclosure of procurement plans are mandatory, but they are not practiced. The South Sudan National Assembly endorsed the newly formulated 'Public Procurement and Asset Disposal Bill' in September 2018 and the Bill is awaiting presidential ascent into law. The preparation of the second generation of documents including the Regulation, Standard Bidding Documents, Manuals, etc. will be initiated following the entry into force of the Bill.

4.1.6 All procurement of goods (including non-consultancy services), works and the acquisition of consulting services, financed by the Bank for the project, will be carried out in accordance with the *"Procurement framework for Bank Group Funded Operations"*, dated October 2015 as may be dated from time to time and following the provisions stated in the Financing Agreement. Procurement would be carried out following **Bank Procurement Methods and Procedures (BPMPs),** using the relevant Bank Standard or Model Solicitation Documents (SDs) and review procedures.

4.1.7 **Waiver of the Rule of Origin.** This RWSSI grant is administered by the African Development Bank and the African Development Fund. Consequently, under sub-paragraph 1(d) of Article 17 of the Agreement Establishing the Bank, the procurement of goods, works and consulting services is limited only to those countries that are member countries of the Bank (this restriction is referred to as the "Rule of Origin"). Given that this Project has also received ADF funding, it is recommended that the Board of Directors of the Bank grant a waiver to the rule of origin to allow for universal procurement under the Project in order to facilitate project implementation in the Republic of South Sudan (which is an ADF country).

4.1.8 **Procurement Risks and Capacity Development:** the assessment of procurement risks at the country, sector, and project levels and of the procurement capacity of the Executing Agency (EA) were undertaken for the project and the findings have informed the decisions on the procurement regimes applicable for specific transactions or groups of similar transactions under the project. The Procurement Technical Annex B5 provides details of the analysis and recommendations on the project's procurement arrangements.

Financial management

4.1.9 The financial management (FM) assessment concluded that the overall risk is **"Substantial"**. However, if the proposed mitigation measures, per the financial management action plans in Table 1, and the annexed Risk Analysis sheet are implemented, the Project will be able to (i) use the funds for the intended purposes in an efficient and economical way; (ii) prepare accurate, reliable and timely periodic financial reports; and (iii) safeguard the program assets.

4.1.10 In line with the Paris Declaration and Accra Agenda for Action, the use of country systems and the project's financial management transactions will be managed by a PIT housed in the SSUWC, which is the Implementing Agency under the Ministry of Water Resources and Irrigation. The PIT will report to the Managing Director for SSUWC, who will have the overall responsibility for looking over the project on a daily basis. A desk assessment of the financial management arrangements for the implementation of the ongoing Bank-funded water sector project concluded that, subject to the actions listed in Annex B4 being taken, they meet the Bank requirements for ensuring that the funds made available for financing the project are used economically and efficiently and are used only for the intended purposes.

4.1.11 In accordance with the Bank's requirements, SSUWC/PIT will maintain independent accounts for the project activities financed, in accordance with sound international accounting practices**.** The PIT will prepare Quarterly Progress Reports with quarterly Interim Financial statements (IFRs) and the Annual Financial Statements for the project. The Quarterly Reports will be submitted to the Bank within 45 days after the end of each quarter, showing cash receipts by sources and expenditures by main expenditure categories, together with physical progress reports linking financial information with physical progress and highlighting issues that require attention.

Disbursement Arrangements

4.1.12 The SWSSIP will mainly use the direct payment and the revolving fund (special account) methods, in line with the disbursement procedures provided in the Disbursement Handbook (2012 version). However, the other two disbursement methods set out in the Disbursement Handbook shall also be available for use, in case of need, subject to consultation and prior approval of the Bank. The Bank's Disbursement Letter shall be issued stipulating key disbursement procedures and practices. The project shall open 3 (three) forex special accounts for each of the project's three funding sources, the Transition Support Facility, ADF PBA and the Rural Water Supply and Sanitation Initiative (RWSSI) Trust Fund, two in USD and the RWSSI in Euro and 3 special account in the local SSP in a bank or banks acceptable to the African Development Bank. Government counterpart funding shall be in kind and no separate bank account will, therefore, be

required.

4.1.13 The GRSS shall designate officials authorized to sign withdrawal applications and provide originals of their specimen signatures to the Bank. The letter designating signatories shall clearly state the number and combination of signatories required for withdrawals. Unless otherwise stated, designation will take effect from the date the Bank receives the letter designating authorized signatories. If authorized signatories change during the life of the project, the GRSS shall promptly notify the Bank and provide names and specimen signatures of the newly designated officials. Budget items under component 2 and 3 necessary for office logistics have already been identified to ensure disbursement within the first six months after project effectiveness. (Refer to Annex B4 for further details).

Audit Arrangements

4.1.14 The project audit will be conducted by the National Audit Chamber (NAC) or a private audit firm selected competitively, based on the Bank's procurement procedures and using the Bank's ToRs for external Auditors. The audit report, complete with a management letter, will be submitted to the Bank no later than six (6) months after the end of each financial year and a final audit report will be submitted after the end of the project. If the audit is undertaken by NAC, the audit fee will not be covered from the project's resources. If the audit is conducted by an independent audit firm, the cost of the audit shall be borne by the project.

4.1.15 The Bank will pay the audit service fees through direct payments, but only upon clearance of the related audit reports.

4.2 Monitoring

4.2.1 The PIT will have the overall responsibility for monitoring and evaluation. The Bank will closely follow up the implementation of the project through regular supervision and mid-term review missions, as well as ex-post evaluations. The PIT will compile and submit quarterly progress reports and annual progress reports to the PSC and the Bank. The mid-term review will provide an opportunity to re-examine the implementation progress and further strengthen/fine tune the project, if needed. Upon completion of the project, SSUWC/MWRI will prepare and submit to the Bank a project completion report (PCR). The Bank through the DP meetings will advocate for development of a sector M&E framework and will support participation of relevant staff in Joint Sector reviews organized by neighboring regional member countries to learn from existing M&E frameworks.

Table 4.2: Indicative Mile Stones

Activity	Responsible	Target Date
Grant Negotiation	GRSS/ AfDB	05/2019
Grant Approval	AfDB	06/2019
Signing of Grant Agreement	GRSS/ AfDB	07/2019
Launching mission	GRSS/ AfDB	08/2019
Fulfillment of CPs to First disbursement	GRSS	08/2019
Mid-Term Review	GRSS/ AfDB	10/2021
Completion	GRSS/ AfDB	06/2023
Grant Closing date	AfDB	31/12/2023

4.3 Governance

4.3.1 South Sudan gained independence slightly over 7 years ago on 9th July 2011 and the country is still on the path of institutional reforms and strengthening, with governance challenges arising

from weak administrative capacity and feeble checks and balance systems. South Sudan has not yet signed or ratified any international conventions against corruption. As the world's newest country, the availability of relevant data on corruption trends in South Sudan is limited. The DFID Anti-Corruption Strategy report for South Sudan (January 2013), the 2012 Transparency International Report and the perception survey conducted by the South Sudan Anti-Corruption Commission in 2011 concluded that corruption was a major problem. South Sudan enacted Interim Public Procurement and Disposal Regulations in 2006. However, compliance and enforcement of the regulation is still insufficient. The government has further prepared a Public Procurement Bill, but capacity for its enforcement and implementation needs to be strengthened.

4.3.2 The Bank had a good understanding of the fraud risks and has designed to safeguard the project's funds through predominantly using direct payments as the choice of disbursement method. The recruitment of independent external auditors will improve the level of assurance that the project funds are spent for the intended and approved purposes. Sufficient budget has been provided in the project to cater for annual audit costs. There is a good track record on execution of all condition precedent to first disbursement for the water projects.

4.4 Sustainability

4.4.1 The choice of technology, especially for the rural facilities, has taken into account the need for ensuring sustainability. The solar powered systems to be financed by the project not only reduce the carbon footprint, but also reduce the overall operation and maintenance costs of the system. Rural communities in South Sudan are not yet accustomed to paying for services and need technologies that take this into consideration. As part of the awareness campaigns and community mobilisation, the project will address the issues surrounding tariffs, policies, commercial practices related to tariffs and willingness to payment for services and will put in place an operation and maintenance system to ensure sustainability of the facilities. The IA will benefit from organised exchange visits to neighbouring countries with sound O&M arrangements.

4.4.2 The project will further address issues surrounding tariffs, improved billing and collection efficiency, through training and peer-to-peer learning. The recent tariff study by SMEC International has recommended three options for tariff setting. The first is the fixed charge for unmetered customers. There is need in the short run to have a tariff that will cater for the majority of the customers who are unmetered since only about 37 % of SSUWC customers are metered. It proposes that:
(i) SSUWC increases tariff for 3rd class residential areas marginally from 930 SSP (USD 5.93) to 1250 SSP (USD 7.93) per month;
(ii) SSUWC revises tariff for 2nd class residential areas to 2000 SSP (USD 12.75) per month; and
(iii) SSUWC revises tariff for 1st class residential areas be revised to 2500 SSP (USD 15.93) per month.
Two other options are proposed for the medium and long term. Details in Annex B9. The management of SSUWC approved the proposed tariff and will work with GRSS Economic Cluster Group and the SSUWC board of Directors toward realization of the recommendations.

4.4.3 The strategic approach for management of sanitation facilities outlined in the MWRI strategic framework focuses on 3 components: enabling environment; demand creation and; accelerated supply of products and services. (i) Schools, (ii) clustered villages, small towns, and (iii) peri-urban and urban centres, are targeted as a priority when implementing sanitation and hygiene promotion. CLTS and other related approaches are used to promote sanitation and hygiene. Introduction of payment for such services is a gradual process as many of the areas still go for open defecation. The project awareness consultants will formulate management approaches to work with schools and clustered communities because children are considered as significant change agents within the community, and overall clustered communities because the chances of faecal-oral infection are greatest in areas with the highest population concentration.

4.5 Risk management

4.5.1 The project faces the following potential risks as identified in the RBLF, with the proposed mitigation measures, as summarized below.

Table 4.3: Risks and Mitigation measures

Risk	Rating	Risk mitigation measures
Risk 1: Start up delays affecting first disbursement.	Medium to low impact	**Mitigation:** initiate start up activities upfront, focus on Conditions critical for the project implementation and expedite fulfilment of conditions precedent to first disbursement.
Risk 2: Security concerns and conflicts.	Medium to high impact	**Mitigation:** Bank to closely monitor and track security to guide bank and project staff movements. Restrict project activities to Juba and its environs and the implementation staff are predominantly nationals resident in Juba.
Risk 3: Unwillingness of the consumers to pay tariff for water and sanitation services.	Medium to low impact	**Mitigation:** Detailed and progressive tariff policy and structure supported by skills development, sensitization campaigns and customer care.
Risk 4: Local political interference in project activities.	Medium impact	**Mitigation:** conduct effective project advocacy, transparency, inculcating trust and involvement of local leadership in project planning and monitoring.
Risk 5: Lack of implementation capacity including procurement, financial management and quality control for the outputs.	Medium to high impact	**Mitigation:** Engage International TAs for the posts of Coordinator, Procurement specialist and Financial management specialist, who will be training the seconded local counterpart staff. Intensify the technical launch and conduct a minimum of two supervision missions

4.6 Knowledge building

4.6.1 SSUWC's mandate extends to five other major towns in Southern Sudan. Through Training of Trainers (ToT), exchange visits and joint training workshops organised by SSUWC, the towns located upcountry will benefit from the knowledge and skills generated and acquired during the project's life. The DWRSS will extend the knowledge acquired to the states and other related institutions supporting rural water supply and sanitation. The information gathered by MWRI will feed into the wider annual sector report for dissemination to sector stakeholders. With support from UNICEF, the sector holds annual stakeholders' meetings for information sharing and mutual learning from lessons learned. The PIT will also prepare and share quarterly progress reports and the IPR for monitoring and record keeping by the PSC and the Bank.

V – LEGAL INSTRUMENTS AND AUTHORITY

5.1 Legal instruments

The legal instruments for the Project are as follows:

i) An ADF Protocol of Agreement between the Republic of South Sudan and the ADF for a grant of UA 8.00 million;

ii) A TSF (Pillar I) Protocol of Agreement amongst the Bank and ADF (*as administrators of TSF)* and the Republic of South Sudan for a grant of UA 8 .00 million from the TSF resource; and

iii) A RWSSI Grant Agreement amongst the Bank and the ADF (*as administrators of RWSSI)* and the Republic of South Sudan for a grant of Euro 2.0 million from the RWSSI Trust Fund resources.

The above listed agreements are jointly referred to as the Protocols of Agreements.

5.2 Conditions associated with Bank's intervention

A. Entry into Force of the Protocols of Agreement

5.2.1 The Protocol of Agreement shall enter into force upon its signature by the Parties.

B. Conditions Precedent to First Disbursement of the Grant:

5.2.2 The obligation of the Fund to make the first disbursement of the Grant shall be conditional upon the entry into force of the Protocol Agreement and the fulfillment by the Recipient, in form and substance acceptable to the Fund, of the following conditions:

i) Submission of evidence of the designation of the following staff: Monitoring & Evaluation Officer, Engineering Assistant, Procurement Assistant, Accounts Assistant, Gender and Environment Focal Person from the Implementing Agency and the Directorate of Rural Water Supply and Sanitation to the Project Implementation Team with qualifications and terms of reference acceptable to the Fund.

C. Undertakings

i) The Recipient shall, within six (6) months of the Date of Entry into Force of the Grant Agreement recruit the following experts including a Project Coordinator/ Engineer, Procurement Officer and Project Accountant or Financial Management expert, to strengthen the Project Implementation Team with qualifications and terms of reference acceptable to the Fund.

ii) The Recipient shall ensure timely provisions for its counterpart contribution to the implementation of the Project.

5.3 Compliance with Bank Policies

5.3.1 This project complies with all applicable Bank policies.

VI – RECOMMENDATION

6.1.1. Management recommends that the Boards of Directors approve (i) the proposed Transition Support Facility (TSF) Pillar I grant of UA 8.00 million, (ii) ADF PBA grant of UA 8.00 million and (iii) RWSSI Trust Fund grant of Euro 2.00 million to the Republic of South Sudan for the purposes and subject to the conditions stipulated in this report.

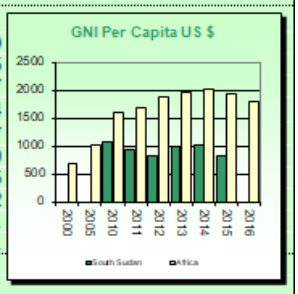
6.1.2 Management recommends that the Board of Directors of the Bank approve a waiver to the Rule of Origin in accordance with Article 17(1)(d) of the Agreement Establishing the Bank and authorise, the procurement of goods, services and works using the proceeds of the RWSSI Grant to be open to all countries including those that are not Member states of the Bank.

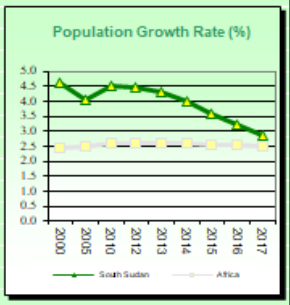
Appendix 1. Country's comparative socio-economic indicators

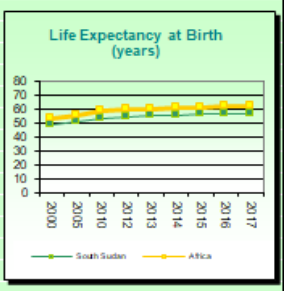
South Sudan

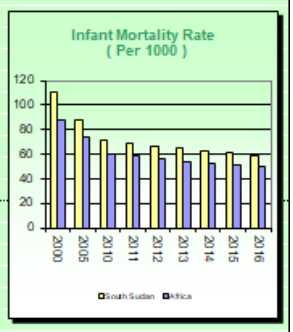
COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	South Sudan	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km²)	2017	644	30,067	80,386	53,939
Total Population (millions)	2017	13.1	1,184.5	5,945.0	1,401.5
Urban Population (% of Total)	2017	18.9	39.7	47.0	80.7
Population Density (per Km²)	2017	21.4	40.3	78.5	25.4
GNI per Capita (US $)	2015	820	2 045	4 226	38 317
Labor Force Participation *- Total (%)			66.3	67.7	72.0
Labor Force Participation **- Female (%)			56.5	53.0	64.5
Sex Ratio (per 100 female)	2017	100.4	0.801	0.506	0.792
Human Develop. Index (Rank among 187 countries)	2015	181	...	...	...
Popul. Living Below $ 1.90 a Day (% of Population)	2009	42.7	39.6	17.0	...
Demographic Indicators					
Population Growth Rate - Total (%)	2017	2.8	2.6	1.3	0.6
Population Growth Rate - Urban (%)	2017	4.1	3.6	2.6	0.8
Population < 15 years (%)	2017	41.7	41.0	28.3	17.3
Population 15-24 years (%)	2017	20.4	3.5	6.2	16.0
Population >= 65 years (%)	2017	3.4	80.1	54.6	50.5
Dependency Ratio (%)	2017	82.2	100.1	102.8	97.4
Female Population 15-49 years (% of total population)	2017	23.9	24.0	25.8	23.0
Life Expectancy at Birth - Total (years)	2017	56.9	61.2	68.9	79.1
Life Expectancy at Birth - Female (years)	2017	57.9	62.6	70.8	82.1
Crude Birth Rate (per 1,000)	2017	35.7	34.8	21.0	11.6
Crude Death Rate (per 1,000)	2017	10.9	9.3	7.7	8.8
Infant Mortality Rate (per 1,000)	2016	59.2	52.2	35.2	5.8
Child Mortality Rate (per 1,000)	2016	90.7	75.5	47.3	6.8
Total Fertility Rate (per woman)	2017	4.8	4.6	2.6	1.7
Maternal Mortality Rate (per 100,000)	2015	789.0	411.3	230.0	22.0
Women Using Contraception (%)	2017	6.5	35.3	62.1	...
Health & Nutrition Indicators					
Physicians (per 100,000 people)			46.9	118.1	308.0
Nurses and midwives (per 100,000 people)			133.4	202.9	857.4
Births attended by Trained Health Personnel (%)	2010	19.4	50.6	67.7	...
Access to Safe Water (% of Population)	2015	58.7	71.6	89.1	99.0
Access to Sanitation (% of Population)	2015	6.7	51.3	57	69
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2016	2.7	39.4	60.8	96.3
Incidence of Tuberculosis (per 100,000)	2016	146.0	3.8	1.2	...
Child Immunization Against Tuberculosis (%)	2016	37.0	245.9	149.0	22.0
Child Immunization Against Measles (%)	2016	20.0	84.1	90.0	...
Underweight Children (% of children under 5 years)	2010	27.6	76.0	82.7	93.9
Prevalence of stunding	2010	31.1	20.8	17.0	0.9
Prevalence of undernourishment (% of pop.)	2011		2 621	2 335	3 416
Public Expenditure on Health (as % of GDP)	2014	1.1	2.7	3.1	7.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2015	66.6	106.4	109.4	101.3
Primary School - Female	2015	55.1	102.6	107.6	101.1
Secondary School - Total	2015	9.9	54.6	69.0	100.2
Secondary School - Female	2015	6.9	51.4	67.7	99.9
Primary School Female Teaching Staff (% of Total)	2015	14.8	45.1	58.1	81.6
Adult literacy Rate - Total (%)	2008	26.8	61.8	80.4	99.2
Adult literacy Rate - Male (%)	2008	34.8	70.7	85.9	99.3
Adult literacy Rate - Female (%)	2008	19.2	53.4	75.2	99.0
Percentage of GDP Spent on Education	2016	1.8	5.3	4.3	5.5
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2014		8.6	11.9	9.4
Agricultural Land (as % of land area)	2014		43.2	43.4	30.0
Forest (As % of Land Area)	2014		23.3	28.0	34.5
Per Capita CO2 Emissions (metric tons)	2014	0.1	1.1	3.0	11.6









Sources : AfDB Statistics Department Databases; World Bank: World Development Indicators; last update : May 2018
UNAIDS; UNSD; WHO, UNICEF, UNDP; Country Reports.
*Note : n.a. : Not Applicable ; ... : Data Not Available. * Labor force participation rate, total (% of total population ages 15+)*
*** Labor force participation rate, female (% of female population ages 15+)*

Appendix II. Bank portfolio in South Sudan

Project Name	Source of Finance	Approval Date	Final Disbursement Date	Effective First Disbursement	Net Commitment (UA million)	Disbursement ratio Feb 2019
Resilience Water Project for Improved Livelihood in Juba	TSF grant	07/14/2016	12/31/2021	12/08/2016	4,950,000	14%
South Sudan Distribution System Rehabilitation and Expansion	ADF grant	12/17/2013	12/31/2019	02/03/2015	16,960,000	59.4%
Juba Distribution System Rehabilitation and Expansion Project	TSF loan	04/12/2017	12/31/2019	11/16/2017	10,610,000	0.11%
Good Governance and Capacity Building for Natural Resources	TSF grant	10/27/2015	12/31/2018	05/23/2016	1,000,000	57.6%
Gender Equality and Women's Economic Empowerment for Inclusion	TSF grant	10/27/2015	12/31/2018	05/23/2016	1,000,000	44.9%
Non-oil Revenue Mobilization and Accountability in South Sudan	ADF/TSF grant/loan	03/30/2017	06/30/2021	05/22/2017	10,650,000	16.4%
Say No to Famine - Short Term Regional Emergency Response Programme	ADF/TST grant	7/21/2017	9/30/2018		31,500,000	40.0%
Total					**76,670.000**	**34%**

Appendix III. Key projects financed by the Bank and other development partners in South Sudan

DPs	Programme / Project	location	Programme implementation period	Amount
AfDB	Resilience Water Project for Improved Livelihood in Juba	Juba	2017-2021	UA 4.95m
JICA	Improvement Of Water Supply System Of Juba (new intake & plant)	Juba	2013 - suspended	JYN 4,402m
UNICEF	water supply system for the UNMISS Protection of Civilian Site (POCs)	Juba	2018-2019	
WB/MDTF	RURAL WATER SUPPLY AND SANITATION PROJECT	Rural nationwide	2007-2009	USD 30m
WB/MDTF	WATER SUPPLY AND SANITATION PROJECT	Rural /urban in 10 state	2010-2012	USD 30m
German	Urban Water Supply and Sanitation	Juba and other towns	2015-2017	€31.0m
German	Development of the urban water and sanitation sector	Yei Yambio & Juba	2009 to 2013	€0.623,m
UNICEF/USAID	water, sanitation and hygiene (WASH) services for chronically vulnerable and displaced populations in South Sudan,	Unity, Upper Nile, Jonglei, Central and Eastern Equatoria	2014-2016	USD 14m
Japan	Management Capacity enhancement	Juba	2010-2013	¥29.96m

Appendix IV: Fragility and Resilience Assessment for SWSSIP

This concise fragility and resilience assessment for the Strategic Water Supply and Sanitation Improvement Project (SWSSIP) builds on the *Fragility and Resilience Assessment Report for South Sudan* from April 2018 and the *Political Economy of South Sudan Report* of August 2018. It also draws upon the latest information gathered throughout the *Country Fragility and Resilience Assessment (CRFA)* exercise, which is complementary to the CPIA. Whilst the CRFA is a continuous process of enhanced data collection and quantification, and hence iterated over time to reflect the latest developments, the initial findings across the 7 dimensions of Pressures and Capacities were valuable for the in-depth assessment of economic, social, political, environmental/climate change and regional drivers of fragility.

1. Fragility context in South Sudan

South Sudan's potential for development remains fragile owing to various factors. As a result of persistent internal conflicts, an estimated 7.6 million South Sudanese, out of an estimated total population of about 12.9 million people, are in need of assistance. More than 2 million are refugees.[2] The peace process remains uncertain and political tensions remain high despite IGAD's efforts.[3] Additionally, the economy is weakening due to limited income opportunities, growing public debt and low revenues as a result of low oil prices and reduced production. The country depends on imports from Uganda, Kenya and Sudan, and Government is unable to provide social services or pay salaries.

The development potential of South Sudan are immense. This is due to the country's resource endowments (especially oil), location in a fast-developing region, the patriotic resilience of its people, and readiness by development partners to support the country transit from conflict to development. Additionally, the large educated and skilled diaspora community supports developments at home. Regional trade and economic interdependence, under the East African Community (EAC), is equally encouraging and can increase if peace and security are restored in the country. While the Government has developed policies, strategies and capacity to revamp and diversify the economy, the implementation is slow and this situation is exacerbated by volatile oil prices.

The economic situation remains fragile with low economic and productive diversification, high poverty and unemployment levels, low tax-revenues, mismanagement of finances, macroeconomic instability, and an un-conducive business and investment climate. Hence, special emphasis has to be placed on inclusive approaches, from governance to project design and implementation, to bolster sustainable development within the humanitarian-security-development nexus.

2. Drivers of fragility in South Sudan

The root causes of fragility in South Sudan are historical legacies of conflicts, marginalization and general underdevelopment.

The key drivers of fragility are political, economic, socio-cultural, and environmental. Political drivers include intense power struggles, ethno-political-class tensions, weak state

[2] WHO, *World Health Statistics 2017;* UNDP, *World Development Report 2016;* Transparency International, *Corruption Perception Index 2017; 2017 Ibrahim Index of African Governance;* The Fund for Peace, *2017 Fragile States Index,* Washington DC: The Fund for Peace

[3] JMEC, Reports, September 2017

capacity (weak and/or underdeveloped political and bureaucratic institutions) and vested interests of regional and foreign actors. Economic drivers revolve around the over-dependence on the oil and gas sector, rent seeking and lack of productive and economic diversification. Socio-cultural drivers include the entitlement mentality, lack of agreed-upon national value systems and the culture of violence and impunity. Others are environmental drivers such as porous borders, infrastructural underdevelopment, regional geo-politics, and climate-change impacts.

The *Country Resilience and Fragility Assessment (CRFA)* substantiates the above quantitatively through highlighting the capacities and pressures across the following 7 dimensions: Inclusive Politics, Security, Justice, Economic and Social Inclusiveness, Social Cohesion, Regional Spillover Effects and Climate/Environmental Impacts. The SWSSIP takes these into account throughout a project design that enhances resilience as outlined below.

3. Fragility-responsive project design

At the project-level, the design and implementation of the project (see activities and sub-activities) specifically targets some of the different drivers of fragility identified above. In applying the *fragility-lens* in this project, the proposed project-level interventions and activities are geared to address the identified pressures and build capacities. The underlying assumption in this approach is that by tailoring project interventions towards addressing project-level risks, the project ultimately contributes to remedy the major drivers of fragility affecting the sector and country at large.

With reference to the *Fragility and Resilience Assessment Report for South Sudan*, specifically 'Table 5: Proposed Interventions in relation to AfDB's High 5s', the SWSSIP is fully aligned with and puts into action the recommendations to "expand projects on water supply systems to other cities" as well as to "support technology transfers and skills development".

The table below presents the approach of applying the fragility-lens in the project design to contribute to addressing the root causes of fragility in South Sudan.

Drivers of fragility	**Project-level design/activities to foster resilience**
Low/underdeveloped infrastructure and human capital base	Basic water and sanitation services were nearly all destroyed by decades of war. Only 27% of the population accesses improved water supplies. Only 16% has access to sanitation networks. The project helps address this via: ▪ Rehabilitation of approximately 40km of SSUWC Juba Station Distribution Network; b) Metering, public water Collections outlets, etc. ▪ Recruitment of consultancy firms to carry out feasibility studies and engineering designs for two other towns (Bor and Renk) in preparation for future investment projects, to be financed by either the Bank or other development partners. ▪ Develop 4 solar powered mini water distributions systems (motorized with elevated reservoirs and distribution networks radiating out from the source, with tap stands and spout

	stations with an option for tanker trucks, donkey carts and bicycle vendors to supply rural institutions as well as the high density rural communities surrounding them.
Un-employment (especially among the youth) and poverty	▪ The project specifically includes the training of women and youth in management of PSP.
Governance failures and limited state capacity/weak public institutions for provision of public goods	▪ The project targets institutional strengthening and building capacity of the relevant government institutions/stakeholders (SSUWC, MWRI, DRWSS and States WSS Departments). The training program will be agreed with the Bank, and will focus on training and learning visits restricted within the African continent. ▪ The RWSSI-TF will support the Directorate of Rural Water Supply and Sanitation (DRWSS) in the MWRI and in Jubek State to strengthen the capacity of the DRWSS to plan, budget, as well as contract and supervise rural WASH projects as well as strengthen the monitoring capacity for the rural WASH sub-sector.
Lack of access to basic social services/Food and livelihood insecurity/Low levels of education, training, and skills:	▪ The project will enhance sanitation infrastructure in selected rural institutions and strengthen linkages between the rural WASH sector and education, health, hygiene and nutrition sectors through targeted support for the rural institutions' curriculum development. ▪ Through Community Led Total Sanitation (CLTS) approaches, the project will advocate and support the wider rural communities surrounding these institutions to start investing in household sanitation.
Environmental degradation/ volatile seasonal rainfall/soil degradation/ Climate change	Following an inclusive project design, the project focuses on WASH provision for urban as well as rural populations: ▪ Juba Population with reliable piped water supply ▪ Jubek stake rural population with reliable water supply

Appendix V. Map of Project Area