Ministry of Foreign Affairs – (Department for Department for Sustainable Investments, Jobs and Equal Opportunities, GJL)

Meeting in the Council for Development Policy 1 July 2020
Agenda item 4

1. Overall purpose	For discussion and recommendation to the Minister
2. Title:	Danida Sustainable Infrastructure Finance: Thika and Githunguri Water Supply and Sanitation Projects, Kenya
3. Presentation for Programme Committee:	18 December 2018

Thika and Githunguri Water Supply and Sanitation Projects

Key results:

- Around 230,000 people in Thika and 20,000 in Githunguri will have improved access to clean and affordable water in 2030.
- Around 116,000 people will be connected to piped sewerage in Thika, and 10,000 in Githunguri.
- Climate mitigation and adaptation from more sustainable operation of the systems due to energy efficient design and use of renewable energy.
- Temporary and permanent jobs and skills developed, especially for the youth.

Justification for support:

- Address a **significant development challenge** in Thika and Githunguri towns by meeting rising demands for water and sanitation in urban and sub-urban areas.
- **Support Government of Kenya's goal** to provide 100% safe water coverage in Urban areas by 2030 and respond to **strong demands from the Kenyan authorities.**
- Promote **Danish priorities** of increasing access to clean water and sanitation in Africa – particularly important in response to on-going COVID 19 epidemic as well as climate change.
- Ensure **effective use of the Danida Sustainable Infrastructure Finance** instrument, as soft loan financing is the most appropriate model for critical large-scale infrastructure with wider social development returns.

Major risks and challenges:

- Future operation and management capacity of the water and sanitation companies in Thika and Githunguri. The mitigating measure is to provide sufficient technical assistance, including twinning with Danish Water Companies and assistance from the relevant local authorities.

File No.	2018-43359						
Country	Kenya						
Responsible Unit	Danida Sustainable Infrastructure Finance						
Sector	Water and Sanitation						
DKK mill.	2020	2021	2022	2023	2024	2025	Total
Commitment	486						
Projected annual Disbursement		10	266	100	100	10	486
Duration	2021-2025						
Finance Act code.	06.38.01.13						
Head of unit	Signe Winding Albjerg						
Desk officer	Lone Bøge Jensen						
Financial officer	Marie Gro Svenstrup						

Relevant SDGs

Total project budget: DKK Million 1127
Of which DSIF financing: DKK Million 1050
DSIF total grant commitment: DKK Million 486
of which budget margin: DKK Million 114.

Concessionality: 35%

Strategic objective:

The overall objective is to improve quality of life, health and livelihoods of people as well as the environment in the towns of Thika and Githunguri by improving access to water and sanitation, which is a recognized human right.

Justification for choice of partner:

Athi Water Works Development Agency, a company under the Kenyan Ministry of Water and Sanitation, has mandate to implement large water and sanitation infrastructure projects in the Athi catchment area (one out of the five catchment areas in Kenya). Athi Water Works and Development Agency is a professional organisation with a solid track record in implementation of large externally financed projects. After commissioning of the projects, the facilities will be operated by the semi-autonomous water and sanitation companies in Thika and Githunguri under the overall responsibility of the Kiambu County Government. Athi Water Works Development Agency has been responsible for project planning and preparation of the feasibility study.

Summary

The project document covers two separate projects for Thika and Githunguri towns and each project include: i) improvement of water supply, ii) provision of sewerage and waste water treatment facilities, iii) improvement of access to water in informal settlements (only Thika) and iv) installation of renewable energy to cover part of the energy requirements. Technical Assistance for institutional and technical capacity development will be provided for Athi Water Works Development Agency as well as the water and sanitation companies in Thika and Githunguri. The technical evaluation of submitted proposals will be based on total life cycle costs, i.e. take into account both capital costs and the costs of operating the facilities, thus promoting innovative solutions, e.g. based on energy saving, energy recovery and use of renewable energy where possible.

Budget	**DKK Millions**		
	DSIF	**Partners**	**Total**
Output 1. Water Treatment Plant and Water Service networks	433		433
Output 2. Sewerage and Sewage Treatment Plants	371		371
Output 3. Water and sanitation, informal settlements		4	4
Output 4. Biogas, hydropower and solar energy	33	0	33
Land acquisition and compensation	0	2	2
Construction supervision and project management team	29	0	29
Contingencies (15%)	114	1	115
VAT	70	70	140
Total budget (excl. TA)	**1050**	**77**	**1127**

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ACRONYMS

AWWDA	Athi Water Works Development Agency
Danida	Danish International Development Assistance
DKK	Danish kroner (7.46 DKK = 1 Euro)
DKSF	Denmark Kenya Strategic Framework
DSIF	Danida Sustainable Infrastructure Finance (earlier DBF)
ESIA	Environment and Social Impact Assessment
GIWASCO	Githunguri Water & Sanitation Company
GoK	Government of Kenya
IFC	International Finance Corporation (part of WB group)
l/d	Litre per day
m^3/d	Cubic meter per day
MoFNT	Ministry of Finance & National Treasury
MoWS	Ministry of Water and Sanitation
O&M	Operation and Maintenance
PAP	Project Affected People
PMT	Project Management Team
RAP	Resettlement Action Plan
SDG	Sustainable Development Goal
STP	Sewage Treatment Plant
THIWASCO	Thika Water & Sewerage Company
KSH	Kenya Shilling (1 USD = 102 KSH, 1 Euro = 113 KSH)
USD	United State Dollars
VAT	Value added tax
WASREB	Water Service Regulatory Board
WSSC	Water Supply and Sewerage Company
WSTF	Water Services Trust Fund
WTP	Water Treatment Plant

1 Introduction

This Programme Document (PD) describes two projects for funding under Danida Sustainable Infrastructure Finance (DSIF). The projects will improve access to water and sanitation for populations in the Thika town and the smaller Githunguri town located in the vicinity of Nairobi. The water and sanitations systems are designed with a capacity to provide services for the estimated population of 500.000 in 2045. By 2030, when the DSIF engagement ends, the project will provide clean and affordable water to 250.000 people and 126.000 people will be connected to piped sewage in the project area. The projects will improve environmental sustainability and climate resilience. During construction and operation, the project will provide jobs, training and income to people living in the area.

The objective of both projects is to improve quality of life and livelihoods of people, as well as the environment, by improving access to water and sanitation. The components of the two projects are slightly different:

- Thika has a developed water and sewage system. The project funds a new **Water Treatment Plant** (WTP), rehabilitation of an existing WTP, new water intakes and dams (to improve raw water availability and to overcome the increasing challenges from climate change), reservoirs, and rehabilitation/extension of water distribution systems. In addition, the project funds three new **Sewage Treatment Plants** (STP), rehabilitation/extension of the sewerage system with specific focus on renewable energy sources to reduce operating cost and mitigate climate effects. Ablution blocks will be provided in the informal settlements.
- Githunguri relies on a few boreholes and has no sewage system. The project funds a new **WTP**, a surface water-intake from a nearby river, rehabilitation of existing boreholes and establishment of new boreholes. In addition, the project funds a **STP** and a sewerage network, thus reducing the current reliance on septic tanks. The project introduces solar power to cover part of the energy requirements.

Besides works of physical infrastructure, DSIF will help strengthen the institutional capacity of Athi Water Works Development Agency (AWWDA), which will implement the projects, and of the two Water Supply and Sewerage Companies (WSSC) in Thika and Githunguri responsible for operations. This will contribute to effective management and operation of the systems and enhance sustainability.

The project budget is DKK 1,126 million (DKK 956 million for Thika and DKK 170 million for Githunguri) – DKK 486 million is a Danish grant.

The projects are the result of a thorough and joint preparation process. In June 2016, Government of Kenya (GoK) requested DSIF to finance the two projects, based on AWWDA's investment plans. Subsequently AWWDA and DSIF agreed to co-finance a feasibility study. The final feasibility study was submitted in August 2019. Subsequently, additional work on institutional capacity development was undertaken. An appraisal in February 2020 by an external team found the projects suitable for financing by DSIF. This Project Document (PD) incorporates the findings and recommendations of the appraisal[1].

[1] See Annex 8 for the Quality Assurance Checklist of Appraisal.

2 Project Context

2.1 National socio-economic context

Kenya is a **political and economic force in Africa** for regional stability and development and a priority country for Denmark in Africa. The Denmark-Kenya Strategic Framework 2021- 2025 (DKSF), which was approved in 2020 includes the full range of development policy instruments, including DSIF.

Kenya is a **lower-middle income country** that has grown around 5% p.a. over the last 10 years. In 2018[2] the per capita income was 1,710 USD. The **Constitution of 2010** strengthened the foundation for democratization, human rights, and gender equality with for instance minimum representation of women in governing bodies of at least 1/3. In addition, it included devolution of government and public service delivery to 47 counties. With an accord between the government and the opposition in 2018, the country enjoys relative political stability, but risks of renewed tensions as seen in the past does exist.

C**orruption** continues to hamper Kenya's development. In addition, the country is experiencing increased threats to its peace and stability due to a broad variety of conflict dynamics including crime, ethnicity, land disputes, radicalization and terrorism. The Constitution fully assures fundamental human rights. However, there are serious problems in practice. DSIF projects have built-in safeguards to manage risks of human rights violations and corruption, through application of **IFC's performance standards**. These include i.a. standards for labour and working conditions, resource efficiency and pollution prevention, and land acquisition and involuntary resettlement.

Kenya struggles with **inequality**, a high level of **poverty** (36%) and severe **social development gaps**[3]. The more arid lands have high concentrations of poverty, and the number of urban poor has increased with urban immigration. Most Kenyans lack access to clean water and fewer have access to basic sanitation. With this project, DSIF will contribute to reduce Kenya's gaps in social services for water and sanitation in urban areas.

Kenya's high **population growth** (2.5% per year), is an extra burden on social infrastructure. Kenya's population is 53 million and will reach 66 million by 2030[4]. The youth population constitutes 75 % of total population. The **urbanizing** rate is high (4.2% p.a.) and Nairobi is expected to grow from the current 4.7 million people to 8.5 million in 2035. Urbanization provides opportunities for development and growth, but is contingent on availability of social infrastructure and a business environment conducive for job creation.

GoK faces challenges meeting the public investment needs as public debt is high and rising (above 60% of GDP), and the ability to borrow is limited, especially at commercial rates. COVID-19 will put further pressure on the budget and increase debt financing. Although debt levels following the COVID-19 crises could lead to a ceiling or a moratorium on public lending, this is not likely to affect highly concessional loans as DSIF. This type of loan would be the preferred option for financing critically needed social infrastructure following a debt crisis.

Kenya suffers from **climate change and a degrading environment**. Floods and droughts are becoming more frequent and that has an adverse effect on Kenya's ability to meet the rising demand

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[2] Current, 2018, World Bank.

[3] https://blogs.worldbank.org/africacan/more-than-just-growth-accelerating-poverty-reduction-in-kenya

4 https://worldpopulationreview.com/countries/kenya-population/pdf

for clean water demanded from the growing population and companies. GoK's water Master Plan[5] has identified the **Athi catchment area**, in which the DSIF projects will be implemented, as a particularly stressed area due to Nairobi's rapid population and economic growth.

2.2 Socio-economic context in Thika and Githunguri

Thika and **Githunguri** are part of Kiambu County and located in the Athi water catchment area. With a population of 2.4 million, Kiambu County is becoming increasingly urban and integrated with Nairobi (Box 1).

Box 1: Summary profiles of Thika and Githunguri:

Thika, one of Kenya's largest towns and major growing industrial centres, is highly urbanized, and due to high growth rates, its population is set to rise from now 207.000 to 440.000 by 2044. The town is well connected by the highway from Nairobi. Meanwhile the town faces major problems with congestion, informal settlements, and overloaded public services.

Githunguri town, a small urban centre with surrounding scattered villages and settlements, will grow from now 15.000 inhabitants to 30.000 by 2044. Only a narrow and busy road provides access to Nairobi. It is home to one of East Africa's largest dairy processing plants, and despite being situated in a rural area, the town has relatively high population density.

The two towns face growing gaps in **access to water and sanitation services**.

In **Thika**, 50% of the population has access to piped water and the current production facilities cannot meet the rising needs. Thika collects raw water from two nearby rivers and has an old water treatment plant, which produce close to capacity at 36,000 m3/day. Demand is estimated to reach 50-54,000 m3/day in 2032 and 74,000 m^3/d in 2045. Thika's sewerage system covers only a minor part of the town and includes a single overloaded sewage treatment plant.

In **Githunguri** town, all water is supplied from four old boreholes and there is no water treatment plant. The capacity of the boreholes is 1,130 m^3/day, and that is insufficient to meet current demands. By 2045, the water demand is estimated to reach at least 3,800 m^3/day. The pipe network is furthermore dilapidated and the levels of non-revenue water (NRW)[6] are high. Presently there is no wastewater collection and treatment in Githunguri.

2.3 Kenya's plans, strategies and priorities

GoK aims for 100% **coverage with safe water** in urban areas by 2030[7], but progress has been too slow mainly due to rapid urbanisation[8]. The projects align overall with Kenya's development plan **Vision 2030**, and the **Third Medium Term Expenditure Plan 2018-2022 (MTEP)**, identifying projects for water supply in major urban towns and upcoming urban areas, as well as water provision for poor, unserved areas and informal settlements. These plans prioritise programmes for green technologies and innovations in collaboration with County Governments. Kenya has a water pricing policy, which charges low tariffs for low-income households with water connections.

5 JICA/Nippon Koei Co. Ltd.: The Project on the Development of the National Water Master Plan 2030, Vol. Page 12

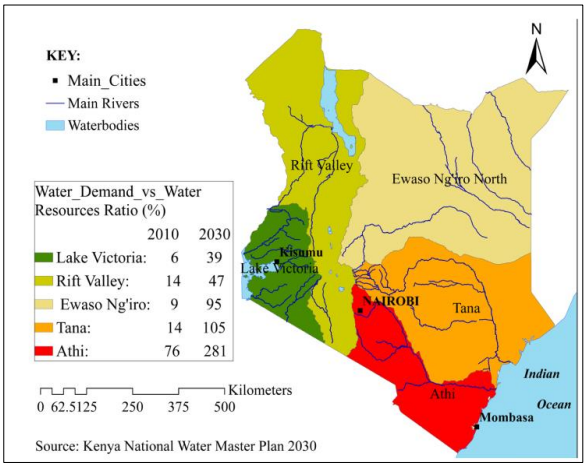
6 Non-revenue water is water submitted in the pipes, but is not paid for due to leakages, non-payment etc.

7 Kenya Vision 2030

8 WASREB: Impact. A Performance Report of Kenya's Water Services Sector 2018/19 (2019). Page 11.

The projects are high priority according to the Kenyan Ministry of Water and Sanitation Strategic Plan (2018-2022). The plan has specific focus on reductions of Non-Revenue Water (NRW) and revenue coverage of operation and maintenance costs over the lifetime of the projects. The projects will be implemented under Kenya's **Water Act** (2016), which provides for devolution of water services in line with Kenya's overarching devolution[9].

2.4 The water and sanitation sector institutions



Ministry of Water and Sanitation (**MoWS**) has the mandate for water sector policy and coordination. Sector coordination is facilitated through a Water Sector Working Group, where also international partners/donors participate[10].

Water management in Kenya is divided into five catchment areas (see figure to the right). Athi Water Works Development Agency (**AWWDA)** oversees the Athi catchment area including Thika and Githunguri (excl. Nairobi). The 2016 Water Act defines AWWDA as an agency with the mandate to: i) develop and manage national public waterworks, ii) operate waterworks and provide water services until such responsibility can transferred to a county government, iii) Provide technical services and capacity building to county government and water providers.

The water and sewerage companies in Thika (THIWASCO) and Githunguri (GIWASCO) are responsible for operation and management. The two institutions have distinct strengths and weaknesses, and thus, have different needs for capacity development:

THIWASCO has good management, capacity and performance, with revenue exceeding operating costs and with own-financed investments in local network expansion. THIWASCO ranks among the top-10 best-managed water companies in Kenya. However, given the company's small revenue base, it is unable to finance larger scale investments. The project will significantly increase the scale of operations and introduce new technologies. Therefore, institutional capacity development is necessary to develop skills to manage larger operations and operate new technologies such as mechanised sewage treatment, biogas collection and hydro/solar power.

GIWASCO is small, has limited resources, and is relatively weak. GIWASCO is challenged on financial performance, as most of the water is purchased from Nairobi at a high price. High non-revenue water (water lost or not paid for) ratio of 45% also needs to be addressed. The project is expected to improve

[9] The Water Act also introduces stronger consumer protection, a focus on the underserved, ring-fencing of sector revenues, and integrated sector investment and financing planning, among other.

[10] A number of **donors** and development finance agencies engage in the water sector. Most important are African Development Bank, World Bank, France, Germany, Sweden and Denmark, but also many minor donors as the European Union, Italy, Finland, Japan, the Netherlands and UNICEF. Japan has supported the elaboration of a Water Supply Master Plan (2014). The main coordination body is the Water Sector Working Group, chaired by MINISTRY OF Water and Sanitation, where Denmark is also participating.

GIWASCO's financial performance by increasing the local water production, activating inactive connections and reducing non-revenue water.

Athi Water Works Development Agency (AWWDA) is responsible for planning and implementation of the projects, while THIWASCO and GIWASCO will be responsible for operations after commissioning. AWWDA and Kiambu County Government will collaborate closely to ensure that the project is aligned with the county development plan, and that the project management team has adequate capacity to implement the projects. AWWDA is well-managed and professional, with a good track-record of successfully implementing large projects. However, it is assessed that AWWDA has weaknesses in some such as technical planning, design and procurement. Moreover, the critical role AWWDA is expected to play for supporting and developing capacity of the two water companies will require further capacity by AWWDA. To address these needs, DSIF will include technical assistance measures, including twinning with Danish water companies, to strengthen AWWDA's capacity to support the water companies such as GIWASCO and THIWASCO.

2.5 Other partners and actors

Other national institutions with specific national mandates in the water and sanitation sector are:

- National Environment Management Authority – issues environmental permits and carry out environmental monitoring during implantation and operation.
- Kenya Water Institute - carries out training and research;
- The National Irrigation Board - develops, improves and controls irrigation schemes;
- The Water Services Trust Fund (WSTF) - finances pro-poor water and sanitation projects;
- The National Water Conservation and Pipeline Corporation - constructs water storage facilities and drills boreholes;
- The Water Appeal Board - arbitrates water-related disputes and conflicts.

AWWDA has the responsibility of ensuring cooperation with relevant national institutions during the implementation of the project and to facilitate the needed permits for implementation.

3 Danish Priorities, Interests and Strengths.

3.1 Key Danish policies and priorities

The project contributes to the commitments in Denmark's Strategy for Development Cooperation and Humanitarian Action, "The World 2030", and directly delivers on the Danish Government's priority of a green development policy, with emphasis on access to energy and water. It will substantially contribute to providing access to water and sanitation to large numbers of people in Africa, and to improve equal access to clean water.

The project furthermore contributes to improving job opportunities for youth, women and men by enabling people to live healthy and productive lives and improve the social infrastructure that allow commercial activities. The project will directly provide job and skills development opportunities by hiring and training workers during the construction phase. In light of the ongoing economic crises caused by restrictions on economic activity the need for creating new jobs in Kenya is even more acute.

The projects will align to National Gender and Equality Commission (NGEC) Act 2011. The Government of Kenya has a performance contracting system in the public service. Engagement of youths

in operations including projects for internship, industrial attachment and apprenticeship is one of the performance contract-targets for the Ministry of Water,Irrigation and Sanitation. This will also apply to the DSIF funded projects, which in support of AWWDA's performance contract will ensure reporting on "youth in jobs" in the contract with the main contractor. This will also include an indicator on apprenticeship. It is the preliminary assessment that 3-400 jobs will be created during construction. This will be monitored closely by the social/environmental expert under the Design, Procurement and Supervision contracts. Furthermore, during the detailed design phase, the consultants will work with the Danish Embassy and relevant stakeholders to explore opportunities for linkages to more formal vocational training activities, to which the projects can offer trainee positions.

The projects support the broader Danish country engagement under the Denmark-Kenya Strategic Framework (DKSF) 2021-2025 in the following areas:

- Expanding social services and promoting **human right** to improved access to water - promoting green, sustainable and inclusive growth.
- Through social focus and scale, the project reinforces the weight of Denmark as partner to Kenya in support of the dialogue on Danish priority issues, including equality, youth, gender, marginalised groups and commercial cooperation.
- Promoting Danish priorities of addressing **climate change** by restraining unsustainable sludge and sewage disposal, introducing renewable energy, and providing climate resilient water and sanitation services.

The projects have potential to strengthen **coherence** and synergies within the overall Danish strategic framework and instruments in Kenya. In the further preparation of the DSIF project, it will be assessed how the project can benefit from the Danish engagement with URAIA Trust. This is a civil society and civic education organisation, which is already enabling community and citizen groups to oversee delivery of public services, including existing Danish health support. Likewise, cooperation on promoting biogas solutions and knowledge sharing with ENDEV -a well-established donor initiative supported by Denmark - will be explored in dialogue with potential local partners. In general the project will reinforce the Danish dialogue with relevant GoK institutions and pave the way for new projects of mutual interest to Kenya and Denmark in the water sector.

The projects align with DSIF's principles, as summarized in Box 2.

Box 2: Integration of DSIF's principles in the projects' focus and design

- DSIF loans contributes to poverty reduction indirectly by supporting large scale, sustainable public infrastructure in line with the SDGs. DSIF-funding is well-suited for single-project investments in urban/peri-urban areas with a mix of poor/non-poor populations.
- DSIF's projects must be based on **local demand and respond to a local development challenge,** where the projects reflect strong priorities by MWE, AWWDA, and Kiambu County and help address clear and rising gaps in water and sanitation services.
- The project must be economically beneficial, but **not viable under commercial conditions,** given DSIF's compliance with OECD regulations ("the Consensus Agreement" 4) for tied aid-credits. The Feasibility Study confirmed that these conditions are met, as commercial financing would require water tariffs of more than double the existing household price.
- **IFC performance standards and UN guiding principles for business and human rights** must be respected, which DSIF safeguard measures will ensure. The tender will be based on **total life cycle cost**, including operating cost (e.g. cost-effectiveness of energy and water efficiency). The credit is tied to procurement of **Danish-based firms**, requiring that competitive Danish firms exist and are interested. In this regard, the water and sanitation-sector is a Danish stronghold sector and the preparation has confirmed a pipeline of interested Danish firms.

3.2 Main Danish strengths, interests, and lessons

Denmark has developed **strengths** in the area of water supply and sanitation in Kenya from decades of development cooperation, which the project can capitalize on.[11] The main **lesson** from the previous Danish support to water supply systems for small towns is to include measures that ensure the sustainable operation and maintenance of the water supply systems. AWWDA has a good track-record in implementation of large-scale projects. Technical and institutional factors of operation and maintenance will be addressed by targeted technical assistance and/or by a twinning arrangement with a Danish water service company. The sector collaboration established with Ministry of Water and Sanitation (MoWs) and development partners provides a solid platform for the project to build on. The proposed project would be the first DSIF-funded investment in Kenya and the first direct Danish collaboration with AWWDA as well as THIWASCO and GIWASCO.

There is a substantial Danish resource base engaged in development of the water sector in Kenya, both engineering and technology companies. Several large Danish contractors have indicated interest in the projects.

The DSIF project have taken into account key lessons from other international water and sewerage projects in the following way: 1) include measures to minimize delays in land acquisitions, 2) include household connections for sewerage network and 3) accompanying measures to improve capacity to ensure adequate operation and management of the facilities after commissioning (including monitoring of non-revenue-water). Other lessons such as appropriate technical design, realistic demand forecasts and assessment of the water source will be addressed during the design phase.

4 Strategic considerations and justification

In summary, the main strategic considerations are that the projects will:

- Address a **significant development challenge** in Thika and Githunguri towns by meeting rising demands for water and sanitation in urban and sub-urban areas. As a result of the projects, around 280.000 people, industries and institutions will gain access to clean water and 360.000 people, industries and institutions will get access to new and renovated sewerage system. The project will contribute to **human rights and poverty reduction**, directly by improving access to water and sanitation to populations in informal settlements, and indirectly by helping to improve the social infrastructure in Thika and Githunguri towns and create jobs. The projects will have a positive **environmental impact** in the two cities and their surroundings by reducing pollution from untreated wastewater and support sustainable energy efficiency by applying renewable energy technology for power production to the plants.

- Support GoK's goal to provide 100% safe water coverage in urban areas by 2030 and respond to **strong demands from the Kenyan authorities** at national and county levels. The projects are reflected in the Ministry of Water and Sanitation strategic plans and Medium Term Expenditure Plan. The projects will be implemented by Athi WaterWorks Development Agency, a capable

[11] Water and sanitation project 2005-2009, followed by the Danish Support to the Water Sector Trust Fund (on-going)

partner responsible for the construction and with the mandate of supporting the utility companies in Thika and Githunguri in operation and maintenance.

- Promote **Danish priorities** of increasing access to clean water and sanitation in Africa – particularly important for climate change adaptation and resilience as well as in response to the on-going COVID 19 pandemic and possible similar in the future. Furthermore, contribute to achieving the vision of the **Denmark-Kenya Strategic Framework (DKSF) 2021-2025** of promoting green, sustainable and inclusive growth, as well as delivery of equitable public services. The project will pave the way for further cooperation in the water sector of mutual Kenyan and Danish interests.

- Ensure **effective use of the Danida Sustainable Infrastructure Finance instrument**, as soft loan financing is the most appropriate model for critical large-scale infrastructure with wider social development returns. The projects supports the SDG's and targets the water and sanitation sector in which Danish firms have competitive advantages and expertise.

5 Theory of change and key assumptions

The theories of change for both projects build on the following main pathways:

- By increasing water supply and distribution capacity, the demand from the growing population and economy will be met, which will lead to more people living healthy lives with improved livelihoods and income opportunities, including those in low -income households.
- By increasing capacity for sewage collection and treatment, present pollution from emptying sewage in rivers will be reduced and future environmental degradation from increasing wastewater quantities from growth in population and economic activity will be lowered.
- By introducing renewable energy and gravity flow, CO_2 emissions and operational costs will be reduced, thereby promoting renewable energy technologies that mitigate climate change and provide economic benefits.
- By building dams and reservoirs, the communities benefiting from the projects will be more resilience to droughts (climate change).
- By providing support for institutional capacity development AWWDA, THIWASCO, and GIWASCO will improve their provision of services and institutional sustainability.
- By hiring local labour and providing skills development in construction and management, the number of temporary and permanent jobs as well as incomes will increase, including for youth and women.

Outputs	Outcome	Impact
1. New water supply systems in Thika and Githunguri Towns. 2. New sewage treatment systems in Thika and Githunguri Towns. 3. Water and sanitation services for informal settlements in Thika Town 4. Biogas and electricity generation unit at Thika Wastewater Treatment Plant North, mini-hydropower plant at Thika, and solar power plants in both Thika and Githunguri. 5. Creation of temporary and permanent jobs 6. Strengthened capacity to manage the new facilities and water/sanitation provision in Thika and Githunguri	1. 223,000 people in Thika Town and 20,000 in Githunguri Town have improved access to clean and affordable water in 2030. 2. 116,000 people in Thika Town and 10,000 in Githunguri Town connected to piped sewerage in 2030. 3. More sustainable operation of the systems, including demonstration of the potential savings from using renewable energy for water treatment, pumping and wastewater treatment. 4. Creation of 3-400 temporary and permanent jobs	
Main assumptions (outputs to outcome) • Danish firms will tender for the projects • AWWDA maintained as project owner	**Main assumptions (outcome to impact)** • The Water Supply and Sewerage Companies remain autonomous with little interference from the County. • The counties will ensure that users are connected to the sewerage system. **Main risk** The water companies are not able to maintain the systems adequately, despite the technical assistance provided.	

6 Project objectives and outline

6.1 Objectives and results

The **overall objective** is to improve quality of life, health and livelihoods of people as well as the environment in the towns of Thika and Githunguri by improving access to water and sanitation, which is a recognized human right.

For DSIF's reporting purposes, the following results indicators have been selected (see also Annex 3)

Thematic Project title	Thika Water and Sanitation Project	Githunguri Water and Sanitation Project
Thematic Project Objective	The overall objective is to improve quality of life, health and livelihoods of people as well as the environment in the town of Thika by improving access to water and sanitation, which is a recognized human right.	The overall objective is to improve quality of life, health and livelihoods of people as well as the environment in the town of Githunguri by improving access to water and sanitation, which is a recognized human right.

Impact indicator 1		Service level as average hours of supply per day		Service level as average hours of supply per day
Baseline	Year	2020	21	14
1st year target	Year	2025	24	24
5-year target	Year	2030	24	24
Impact indicator 2		Quantity of wastewater (m3/day) collected and treated by the new STPs		Quantity of wastewater (m3/day) collected and treated by the new STPs
Baseline	Year	2020	0	0
1st year target	Year	2025	12,000 m3/day	500 m3/day
5-year target	Year	2030	17,000 m3/day	1,000 m3/day
Outcome 1		Households, industries and institutions in Thika Town have improved access to clean and affordable water.		Households, industries and institutions in Githunguri Town have secured access to clean and affordable water
Outcome indicator		Number of people in the project area having improved access to clean piped water from the new project		Number of people in the project area having improved access to clean piped water from the new system
Baseline	Year	2020	0	0
1st year target	Year	2025	210,000 people	15,000 people
5-year target	Year	2030	223,000 people	20,000 people
Outcome 2		Construction of three decentralised sewage treatment plants (STP) in Thika Town with a total capacity of 47,000 m^3/d, including an extension and upgrading of the sewerage system		Construction of a sewage treatment plants (STP) in Githunguri Town with a total capacity of 2,900 m^3/d, including installation of a sewerage network
Outcome indicator		Number of people and institutions benefiting from improved sewerage services from the new STPs (people equivalents)		Number of people and institutions covered with sewerage services (in people equivalents)
Baseline	Year	2020	0	0
1st year target	Year	2025	50,000 people	4,400
5-year target	Year	2030	116,000 people	10,000
Outcome 3		Demonstration of the use of energy saving and renewable energy in water production and wastewater treatment		Demonstration of the use of energy saving and renewable energy in water production and wastewater treatment
Outcome indicator		Reduction of the grid energy used for water and wastewater treatment (MWh/year)		Reduction of the grid energy used for water and wastewater treatment (MWh/year
Baseline	Year	2020	0	
1st year target	Year	2025	5,451 MWh per year	318 MWh/year

5-year target	Year	2030	5,451 MWh per year	318 MWh/year
Outcome 4		Creation of temporary and permanent jobs		Creation of temporary and permanent jobs
Outcome indicator		Number of jobs		Number of jobs
Baseline	Year	2020	0	
1st year target	Year	2023	To be determined	To be determined
5-year target	Year	2025	To determined	To be determined

6.2 Human Rights and Social and Environmental Impact Assessment

The project's immediate impact on human rights will be positive by improving **access to water and sanitation** for people in the towns of Thika and Githunguri. The main impact will be access to affordable water service and the reduced time spent collecting water, which is mostly done by women and children.

During the design and construction phase specific considerations of women's access to the benefits of the project will be considered. This relates in particular to women's equal access to compensation of people affected by the construction of the plants, using a gender responsive approach in implementation of ablution blocks in informal settlements and women's equal access to job and training opportunities in connection with the construction of the plants.

In accordance with Kenya's National Gender and Equality Commission Act 2011, AWWDA has structures in place to ensure that contractors offer equal opportunities for men and women in hiring workers and project managers. The Environmental and Social Management plan or the project focuses on getting more women involved in the project. The plan will be implemented by AWWDA assisted by a social expert under the contracts of the project. There will be specific requirements in the works' contract of reporting on targets and results for female workers in line with Kenyan and Danish priorities. This will be monitored by the social/environmental expert under the Supervision contracts.

The social and environmental unit of AWWDA will involve communities in planning and operation of the ablution blocks, assisted by social consultants financed by the project. AWWDA has several years of experience with implementing Community Project Cycle projects, and it is assessed that the social and environmental unit has sufficient capacity to ensure consultation of communities and that women participate on equal terms. Women´s equal access to compensation will be secured within the framework of IFC performance standard and be monitored by the DSIF monitoring consultant.

The **Environmental and Social Assessments** for the projects are in the process of being approved by the National Environmental Management Authority. The appraisal evaluated that the reports have an acceptable quality. The scope of work for the Design and Procurement Consultant will include a monitoring plan to ensure that implementation comply with IFC standards and that the plans are integrated in the tender material.

There will be **human rights** to consider in connection with the Kenyan authorities' compensation of people affected by the project during and after construction of the plants. It is the responsibility of AWWDA to ensure that compensations adhere to the IFC's Performance Standard 5, which has more restrictive requirements than Kenyan law for handling involuntary settlement and compensation. Of particular relevance for the project are requirements of restoring livelihood and access to appeal mechanism. AWWADA's rules and procedures for managing the compensation process includes both,

and the organisation has a capable safe guard unit. The final Resettlement Action Plan will be based on the detailed design of the projects.

In Thika the preliminary number of people affected by the project is 157, of which the majority will be compensated mainly for loss of crops and trees during construction. There has been a legal dispute over land for the new WTP in Thika, but this matter has been resolved in court in favour of THIWASCO.

In Githunguri the preliminary number of people affected by the project is 26. Land will be acquired for the water treatment plant and the sewage treatment plant. The expectation is that acquisition will be by mutual agreement without need for expropriation. No resettlement will be necessary since the land is used for agriculture only.

The project will provide environmental and social specialist under the contracts for design and procurement and the contracts for supervision in order to assist AWWDA in finalising the Resettlement Action Plan, as well as managing and implementing the compensation process. A particular task will be to support co-existence with current adjacent landowners to the planned dam in Thika. The DSIF monitoring consultant will follow the process closely.

Key elements of the compensation process are included as preconditions for the tender process (availability of funding for compensations) and contract signing (acquisition of land completed).

7 Management arrangements

7.1 Management

AWWDA will be overall responsible for planning and implementation of the project. AWWDA is the Project Owner and Employer (according to international contract terminology) during design and construction. After commissioning of the projects, the water and sanitation companies in Thika and Githunguri will be responsible for operation and maintenance, supported by AWWDA, who has a mandate to take over operation of utility companies temporarily if technical capacity is insufficient.

To manage the two projects during implementation (construction phase), AWWDA will set up a **Project Management Team (PMT)** with representatives from Kiambu County, THIWASCO, GIWASCO and other institutions. The PMT will be headed by a full time Project Manager, drawing on AWWDA staff to receive inputs e.g. on compensation process (acquisition of land, temporary loss of income etc.). The PMT will be part of AWWDA's internal structure, placed in Nairobi. The PMT will manage all inputs (approvals, payments, permits, PR etc.) in close collaboration with THIWASCO and GIWASCO. DSIF will have semi-annual meetings with AWWDA to monitor the project supported by regular visits and meetings by the DSIF monitoring and verification consultant. Institutional Development Support (including twinning) for AWWDA, THIWASCO and GIWASCO will be defined and monitored by AWWDA/DSIF.

A **Steering Committee** will be established to oversee implementation of the project. The steering committee members are AWWDA Directors, Manager for the project, DSIF Investment Director and the Danish Embassy. The steering committee will be chaired by AWWDA and meet semi-annually to ensure that the overall objectives of the project are being met and to discuss progress reports, works plans and budgets. The Project Management Team will be secretary for the Steering Committee.

The projects will include external key inputs by consultants for the various stages of planning, design, procurement, project implementation, results monitoring and project verification, as shown in Table 1.

Table 1: External inputs in support of the project

Contract no.	Input	Client/ Contract holder	DSIF Funding (estimated DDK)	Stage
1	**Thika - Design and Procurement Consultant (Phase 1)** to provide support to AWWDA **in p**reparation of project design and tender documents, procurement/ negotiation/signing of work's contract, monitoring of social/environmental impact assessment and compensation procedures.	AWWDA	Grant 14 million	Planning, design and procurement.
	Thika - Supervision Consultant during implementation (Phase 2) is AWWDA's representative and responsible for overseeing contractors work on site (quality of work within time and budget). Compensation procedures and social/ environmental aspects will be monitored. Progress reports are shared with DSIF.	AWWDA	Loan 23 million	Project implementation.
2	**Githunguri - Design and Procurement Consultant (Phase 1)** to provide support to AWWDA in preparation of project design and tender documents, procurement/ negotiation/signing of work's contract, monitoring of social/environmental impact assessment and compensation procedures.	AWWDA	Grant 6 million	Planning, design and procurement.
	Githunguri - Supervision Consultant during implementation (Phase 2) is AWWDA's representative and responsible for overseeing contractors work on site (quality of work within time and budget). Compensation procedures and social/ environmental aspects will be monitored. Progress reports are shared with DSIF.	AWWDA	Loan 6 million	Project implementation.
3	**Institutional Development Support for AWWDA as well as Thika and Githunguri Water and Sewerage company.** Improvement of management, operation and maintenance capacities and this will possibility include a twinning arrangement with Danish water service providers. This will be elaborated during inception phase by AWWDA and DSIF.	AWWDA	Grant 10 million	Planning/design stage through implementation stage until the end of the defect liability period.
4	**DSIF Procurement Consultant** for preparation of Terms of reference and procurement (including tender evaluation, preparation of contract and contract negotiation), of the above listed contracts (no. 1, 2, and 3).	DSIF	Grant 1 million	Pre-planning/ design stage.
5	**DSIF Monitoring and Verification Consultant.** Facilitate and coordinate key initiatives to move the process forward, monitor progress on behalf of DSIF, advise DSIF on No-objections to be provided. Regular visits to the project (at least every 6 months).	DSIF	Grant 2 million	Implementation and project commissioning until end of defect liability period.
6	**DSIF process consultant for monitoring of results.** Report according to the project document result framework until 5 years after project commissioning. Responsible for dissemination of results in collaboration with AWWDA and DSIF	DSIF	Grant 2 million	Implementation until 5 years after project commissioning.

8 Budget

The budget below is an estimate, as the final costs will depend on the outcome of the tenders. The Total budget is DKK 1.126 million and DSIF provides a mixed credit in an amount of DKK 1072 with 35% concessionality. The appropriation is DKK 486 million including budget margin.

The budget is based on the cost estimate in the Feasibility study.

Budget (DKK million)	Thika			Githunguri			Total		
	DSIF	National	Total	DSIF	National	Total	DSIF	National	Total
Total investment	**890**	**66**	**956**	**158**	**12**	**170**	**1048**	**78**	**1126**
Output 1. Water treatment plant and WS network	369		369	64		64	433	0	433
Output 2. Sewerage and STPs	317		317	54		54	371	0	371
Output 3. Water and Sanitation in informal settlements		4	4			0	0	4	4
Output 4. Biogas, hydropower, and solar power	31		31	2		2	33	0	33
Land acquisition and compensation		1	1		1	1	0	2	2
Construction supervision and PMU	23		23	6		6	29	0	29
Contingencies (15%)	90	1	91	22	1	23	112	2	114
Tax, VAT	60	60	120	10	10	20	70	70	140
Financing of investment									
Loan amount	735			131					866
Cash grant	156			28					184
Total	*891*			*159*					*1050*
Additional expenses financed by DSIF	**252**			**50**					**302**
Interest subsidy on loan	120			21					141
Margin to Danish Lending Bank	10			2					12
Accompanying measures/Technical Assistance	25			10					35
Budget margin (25%)	97			17					114
DSIF Total grant for appropriation (Cash grant + Addition	**408**			**78**					**486**
Total grant excluding budget margin	311			61					372
Summary DSIF financing:									
Loan	735			131					866
DSIF appropriation	408			78					486

9 Procurement

The project will require procurement for each of the external inputs listed in Table 1.

The consultancies procured by **DSIF** will follow DSIF procurement procedures. Consultancies and the contractor procured by AWWDA will follow national procurement rules and DSIF procurement guidelines and thus be restricted to companies established in Denmark. All procurements will be monitored by DSIF and the design and procurement consultant.

The major procurement will be for the **Contractor**. The tender documents for the two projects will follow international standards for construction works. The documents will include 1) detailed design for transmission and main distribution lines, house connections and other civil works and 2) conceptual

design for water treatment plants, sewage treatment plants, hydro/solar/biogas plants for energy production, leaving the main design responsibility and choice of technologies to the bidders. The two projects will be tendered separately, and the bids will be evaluated according to a whole life cost principle, including estimated operating cost for the first two years of operation. Energy efficiency/use of renewable energy will be part of the evaluation criteria.

AWWDA must sign the DSIF Buyer's Declaration, which will require AWWDA to follow the IFC performance standards. The Contractor must sign an Exporter's Declaration before the contract becomes effective. In case of non-compliance, DSIF is entitled to withdraw support to the project.

10 Lending arrangement and financial Management

DSIF will provide funding for the project by a subsidized loan to Ministry of Finance and National Treasury (MoFNT) through an international commercial bank with a branch in Denmark. Ministry of Finance and National Treasury will make an on-lending agreement with AWWDA.

The Contractor will submit invoices for payments under the contract to the Supervision Consultant for assessment and forward to AWWDA for final approval. Subsequently, AWWDA send the invoices to the commercial bank in Denmark for payment to the Contractors. Payments under the contracts for Supervision Consultants will also be paid from the bank, based on requests from AWWDA. The other consultants are paid directly by DSIF. The commercial bank provides final financial reporting to DSIF.

DSIF will sign an agreement with the bank, which specifies the subsidy of 35% of the loan that will be paid by the DSIF grant. Payments of the grant will be paid directly to the bank and reduce the principal to be paid by Kenya.

11 Risks and preconditions

The main **contextual risk** is political and economic instability caused by national and regional tensions, with the recent COVID-19 pandemic as an added factor of uncertainty. The expected impact on the project is assessed as minor, because AWWDA, THIWASCO and GIWASCO are mandated to deliver a common good and thereby sheltered from targeted political turmoil – supported by the location the projects outside of Nairobi.

The main **programmatic risk** is the capacity of THIWASCO and GIWASCO to operate and maintain the new facilities. The main risk mitigation is through provision of training by the contractor and technical support including twinning with Danish Water Companies.

Another programmatic risk is lack of the raw water during dry season particularly in Thika, as several stakeholders are competing for water resources, including Nairobi city and commercial farms. Legally water for human consumption has priority over commercial farming, but pragmatic solutions have to be found to avoid conflicts. Risk mitigation include construction of two small dams on the Thika and Chania rivers, which will improve availability of water.

The risk of delays due to problems with land acquisition is considered minor, as most land has already been secured, and it is expected that the remaining land can be secured through mutual agreement. A precondition for the loan to become effective is that land acquisitions have been concluded.

There are risks related to provision of adequate operation and management of the ablution blocks in the informal settlements in Thika. Therefore, consultants will provide support (to AWWDA,

THIWASCO and the local communities) to monitor implementation of the ablution blocks and to establish the operational structures in close collaboration with the local communities.

The immediate **institutional risk** is corruption as systemic **corruption** is part of the general reality in Kenya, and a risk in large infrastructure projects. In order to minimise the corruption risk, AWWDA uses transparent procurement processes in line with international standards. In addition, a procurement consultant, appointed by DSIF, will monitor the process. During implementation, DSIF funds are channelled from the Danish bank (providing the loan) directly to the Danish suppliers, which helps mitigate the risk of corruption. Moreover, the water and sanitation sector uses transparent, formula-based user tariffs and automated payment systems, which are publicly available for scrutiny. This system is evaluated as being sufficiently robust to reduce the risk of malpractice.

DSIF and AWWDA have agreed the following **preconditions**: **Before tendering**, the project must be approved by GoK, and funding for land acquisition, compensations, and payment for possible future claims from the contractor should be allocated in the annual budgets for Government and AWWDA. **Before contract signing**, land acquisition for the major sites, must be completed by AWWDA. **Before the loan becomes effective**, approval by Parliament and the Attorney General must be obtained and abstraction permits granted.

12 Monitoring, evaluation, and communication of results

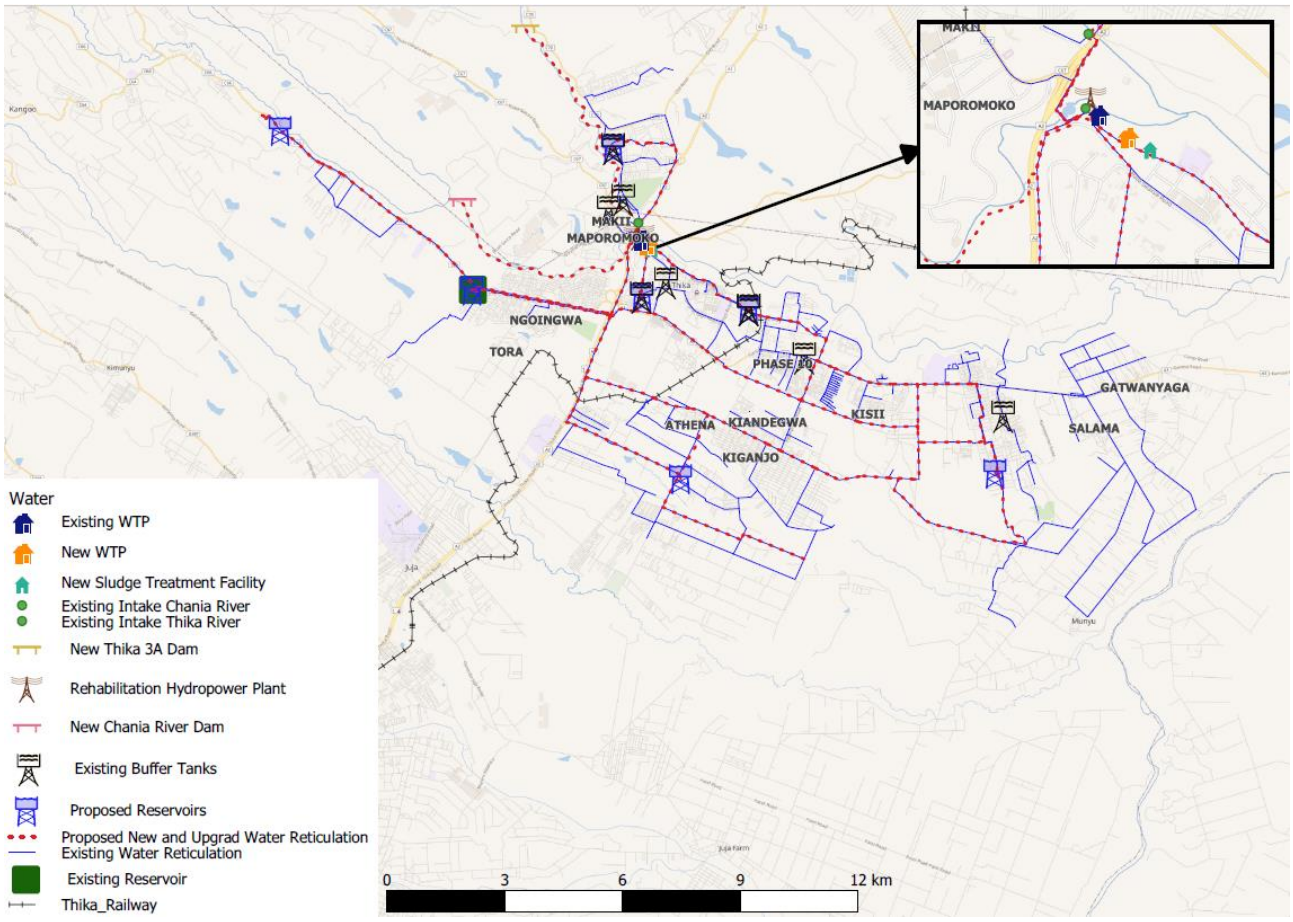
Progress in project implementation during the construction phase will be reported through monthly progress reports from the contractor to the supervision consultant representing AWWDA as stipulated in the commercial contract. The supervision consultant will be responsible for assessing and approving contractor's invoices before AWWDA forwards the invoices to the Danish Bank for payment. The contractor shall also provide quarterly progress reports to DSIF as required in the DSIF Exporter's Declaration.

The **results framework** of the DSIF project defines the results and indicators that DSIF will use for monitoring and communication (se annex 3), but at this stage, the indicators and targets presented are preliminary. The final results framework will, to the extent possible, be based on the established **monitoring system for AWWDA, THIWASCO and GIWASCO** and will be finalised during the detailed design stage supported by the **DSIF process consultant for monitoring of results**. DSIF and AWWDA approves the final results-framework.

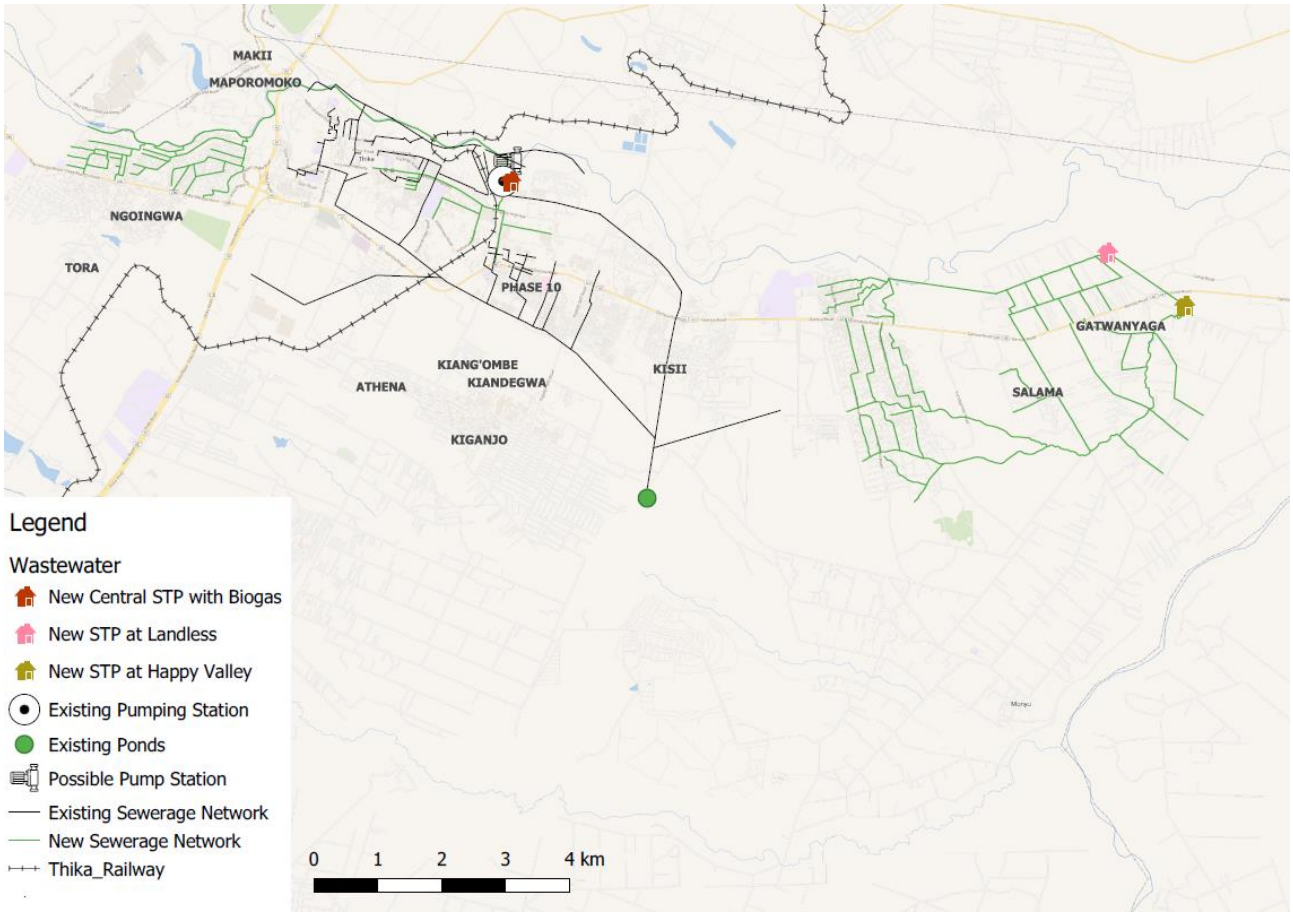
Two years after commissioning DSIF and AWWDA will carry out a **review** to assess preliminary results and lessons learned based on the results framework. A final review will tentatively be carried out five years after commissioning.

Annex 1

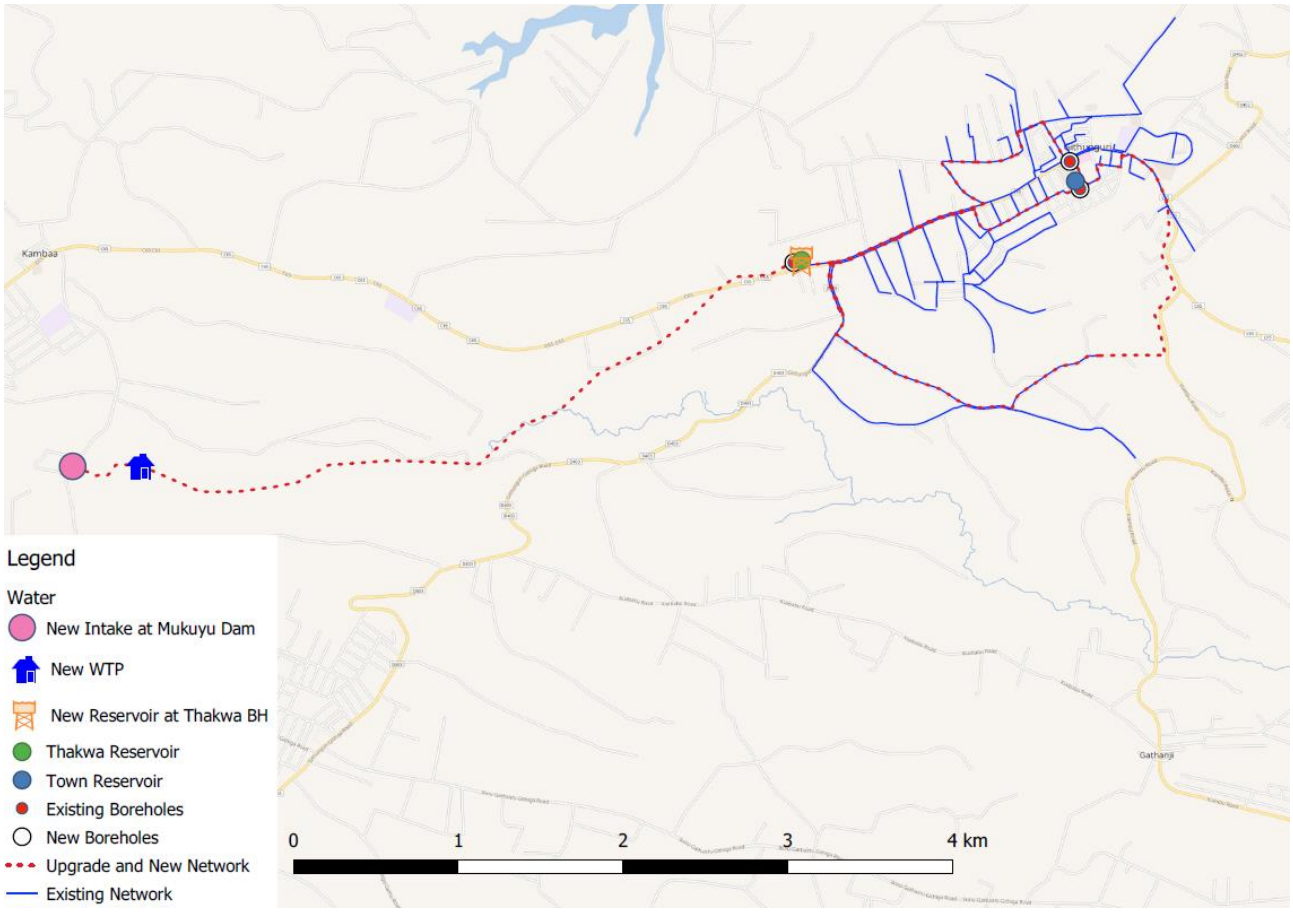
Thika – Water Supply System



Thika – Wastewater System including Sewage Treatment Plants



Githunguri – Water Supply and Wastewater Systems including Treatment Plants



Annex 2. Partners[12]

The main partner during construction is Athi Water Works Development Agency (AWWDA), which has the responsibility for the implementation of larger infrastructure projects in the Athi watershed (excl. Nairobi). The main partners after commissioning are the two water supply and sewerage companies in Thika and Githunguri.

1. Athi Water Works Development Agency.

Athi Water Service Board was established under the Water Act through the Gazette Notice No.1775 of 21st March 2003, in 2019 changing the name to Athi Water Works Development Agency (AWWDA). AWWDA develops water and sewerage infrastructures, which it in turn leases out to service providers on contract terms; the service providers retain the revenue accruing from service provision and remit a percentage to AWWDA as stipulated in the contract.

Since its inception 9 years ago, AWWDA has completed several major water projects. One of the major projects completed was the rehabilitation of the Sasumua dam and the Ngethu Treatment works, a project funded by Agence Française de Développement (AFD). The dam was commissioned in April 2011. The rehabilitation has improved their treatment design capacities to 56,000m³/day and 440,000m³/day for Sasumua and Ngethu respectively.

In partnership with Ministry of Water and Sanitation and the respective water supplies and sewerage companies, AWWDA has upgraded various water supply systems, including Karimenu, Ndarugu, Thiririka, Komothai, Kiambu Urban and Karuri Water supply, which are also expected to supply communities, drawing from the Sasumua and Ndakaini transmission corridor. Other projects will improve the transmission capacity of Ngethu to Gigiri reservoirs and the transfer capacity of water from Gigiri - Kabete – Uthiru- Karen to supply the most water deficient areas of the middle and upper part of Nairobi City.

AWWDA is currently implementing 17 pro-poor Community Project Cycle (CPC) projects in its area of operations. The CPC is an approach developed to support improved access to water and sanitation in the poorest locations of Kenya. It is a common approach applied by all the Water Services Boards and supported by the Water Services Trust Fund (WSTF) under the coordination and guidance of Ministry of Water and Sanitation. Out of the 17 projects, five projects were funded through Kenya Water & Sanitation Programme, which was supported jointly by SIDA and

[12] There is a more detailed analysis of the institutional capacity and need for capacity building support in Annex 13.

DANIDA. One project has been completed and four projects commissioned. The five projects are: Ngumi, Kiambaa-Kawaida, Waing'ere, Ndumberi and Gathiga. Besides, another 12 Community Project Cycle projects (funded by Finland under the Water Service Trust Fund) are in various stages of completion. These projects include: Grey Stone, Muthiga-Mukinye, Runana, Gatuanyaga, St. Velonica, Ngelelya, Giathanine, Matunda, Kahugu-ini, Forteen Falls, Kamae and Kinale.

AWWDA has a solid track record for implementing major infrastructure projects within the sector, and can be considered a capable partner for the present project. Even so, DSIF will provide grant based technical assistance to AWWDA during tendering, and an international construction supervision consultant will be included as part of the loan. AWWDA will furthermore receive support from the planned TA Consultant.

2. Thika Water & Sewerage Company Ltd[13]

THIWASCO was registered in 2009 as a Water and Sewerage Company. Throughout its operation period, THIWASCO has grown to be a reputable institution in the region. It is presently among the best ranked water and sewerage companies in the Water Service regulatory Board ranking. THIWASCO evolved from what started as a Water project in 1950. The water project was then commissioned in 1956 and later operated as one of the departments of the Municipal Council of Thika covering an area of 93 km^2 . In September 2009 it started operation as a company under AWWDA with a mandate to service an area of approximately 254 km^2. THIWASCO is contracted by AWWDA to provide water and sanitation services to Thika town under a service provision agreement.

The main problem to be addressed in the present project is the insufficient water supply in Thika to cover the increasing demand from residential and commercial users. Thika has a rapidly growing population and includes a number of mainly agri-processing industries. The problem with insufficient water supply is related to the present capacity constraint of the Thika WTP, which is currently operating at full capacity.

The water supply problem is exacerbated by losses in the water distribution network. Total non revenue water was 26% in 2018/19, but how this is divided between physical loss in the network and commercial losses is not well documented. While a reduction of technical losses will contribute to the physical supply of water to the consumers, any reduction of commercial losses will not impact the supply, but would contribute to the amount of water being billed and thus would have an effect on the financial situation of THIWASCO.

The population within the service area was 207,000 in 2017. Data on the percentage of the population connected to piped water supply is not available. Records of THIWASCO shows that the number of active connections has increased by 6-7% annually, and the amount of billing per active connection per month has been almost constant, fluctuating between 17.6 and 18.1 m^3, with a slight upward trend. THIWASCO has thus up to now been able to supply an increasing number of connections, keeping the volume of water per connection constant, or increasing slightly.

13 The information was provided by the two WSSC during a workshop at AWWDA on October 1st ,2019, and complemented with information from the regulator (WASREB).

3. Githunguri Water and Sanitation Company Limited

GIWASCO is a company formed by AWWDA in 2007 and given the mandate of providing water and sanitation services within Githunguri sub-county.

The main problem to be addressed is the insufficient water supply in Githunguri to cover the increasing demand from residential and commercial users in a peri-urban and urban suburb of Nairobi. Githunguri has a growing population and includes a few mainly agro-processing industries. This problem is related to the present capacity constraint of the boreholes, which are currently operating at full capacity and the company therefore has to import bulk water from a transmission line to Nairobi.

The supply problem is exacerbated by losses in the supply network. The non revenue water is estimated at 46% in 2018/19. This poor performance reflects the poor state of the current water supply system.

Summary of key partner features

Partner name	Core business	Importance	Influence	Contribution	Capacity	Exit strategy
What is the name of the partner?	What is the main business, interest and goal of the partner?	How important is the programme for the partner's activity-level (Low, medium high)?	How much influence does the partner have over the programme (low, medium, high)?	What will be the partner's main contribution?	What are the main issues emerging from the assessment of the partner's capacity?	What is the strategy for exiting the partnership?
Athi Water Works Deveopment Agency (AWWDA)	AWWDA has the mandate to implement larger water and sanitation infrastructure projects in the Athi Watershed.	Medium. The project is relatively big, but AWWDA has managed larger projects.	High. AWWDA is responsible for project implementation but financing depends on National Treasury.	AWWDA will be responsible for 1) project implementation up to the end of the defect liability period. 2) land acquisition and compensation. 3) providing adequate services to the informal settlements.	AWWDA has a good professional capacity. TA needs identified: planning, design, procurement, and supervision In addition, there will be technical assistance to build institutional capacity including twinning with Danish Water Companies.	The project is limited to the period of construction until the end of the defect liability period.
Thika Water and Sewerage	THIWASCO is licensed by the	High. The project is important for future	Medium during construction. High	THIWASCO will participate in the Project	THIWASCO is a well-established company	The project is limited to the period of

Partner name	Core business	Importance	Influence	Contribution	Capacity	Exit strategy
Company (THIWASCO)	Regulating authority to operate water and sanitation services in Thika town.	Service provision. THIWASCO is also managing other projects.	During operation (after commissioning).	Management Team (PMT) during design and construction to ensure ownership to promote sustainability of the project during operation.	Responsible for operation and provision of services. Operation and management of the new facilities will require support and training where innovative technologies are introduced (e.g. renewable energy such as biogas, hydropower etc.) Therefore, technical assistance will be provided including twinning with Danish Water Companies.	Construction until the end of the defect liability period.
Githunguri Water and Sewerage Company (GIWASCO).	GIWASCO is licensed by the regulating authority to operate water and sanitation services in Githunguri and the surounding.	Very high. The project is vital for GIWASCO's future service provision.	Medium during construction. High during operation (after commissioning).	GIWASCO will participate in the Project Management Team (PMT) during design and construction to ensure ownership and to promote sustainability of the project during operation.	GIWASCO is a well-established company responsible for operation and provision of services. However, GIWASCO has limited capacity and Technical assistance from consultants and AWWDA is required. Operation and management of the new facilities will require support and training where innovative technologies are introduced (e.g. renewable energy) Therefore, technical assistance will be provided including twinning with Danish Water Companies.	The project is limited to the period of construction until the end of the defect liability period.

Annex 3: Results Matrix

Thematic Project title		**Thika Water and Sanitation Project**	
Thematic Project Objective		The overall objective is to improve quality of life, health and livelihoods of people as well as the environment in the town of Thika by improving access to water and sanitation, which is a recognized human right.	
Impact indicator 1		Service level as average hours of supply per day	
Baseline	Year	2020	21
1st year target	Year	2025	24
5-year target	Year	2030	24
Impact indicator 2		Quantity of wastewater (m3/day) collected and treated by the new STPs	
Baseline	Year	2020	0
1st year target	Year	2025	12,000 m3/day
5-year target	Year	2030	17,000 m3/day
Outcome 1		Households, industries and institutions in Thika Towns have improved access to clean and affordable water.	
Outcome indicator		Number of people in the project area having improved access to clean piped water from the new project	
Baseline	Year	2020	0
1st year target	Year	2025	210,000 people
5-year target	Year	2030	223,000 people
Outcome 2		Construction of three decentralised sewage treatment plants (STP) in Thika Town with a total capacity of 47,000 m^3/d, including an extension and upgrading of the sewerage system.	
Outcome indicator		Number of people and institutions benefiting from improved sewerage services from the new STPs (people equivalents)	
Baseline	Year	2020	0
1st year target	Year	2025	50,000 people
5-year target	Year	2030	116,000 people
Outcome 3		Demonstration of the use of energy saving and renewable energy in water production and wastewater treatment	
Outcome indicator		Reduction of the grid energy used for water and wastewater treatment (MWh/year)	
Baseline	Year	2020	0
1st year target	Year	2025	5,451 MWh per year
5-year target	Year	2030	5,451 MWh per year
Outcome 4		Creation of temporary and permanent jobs	
Output indicator		Number of jobs	

Baseline	Year	2020	0
Annual target	Year 1	2023	250 (mainly temporary)
Annual target	Year 5	2025	10 (permanent)
Output 1		Construction of a water supply system in Thika town, consisting of construction of a 36,000 m^3/day Water Treatment Plant (WTP) and rehabilitation of a 20,000 m^3/day WTP, incl. dams ad new intakes on the Thika and Chania rivers and raw water mains, 3 reservoirs and rehabilitation and extension of the water distribution system.	
Output indicator		Quantity of clean water produced and delivered to the consumers in Thika (m3 per day) (excl. non revenue water) from new and rehabilitated water treatment plants	
Baseline	Year	2020	Around 30,000, but with irregular supply and quality. System outdated.
Annual target	Year 1	2025	33,800 m3/d
Annual target	Year 5	2030	39,000 m3/d
Output 2		Prevented wastewater releases to the environment	
Output indicator		Quantity of wastewater (m3/day) collected and treated by the new STPs	
Baseline	Year	2020	0
Annual target	Year 1	2025	10,000 m3/day
Annual target	Year 5	2030	17,000 M3/day
Output 3		Water and sanitation services for informal settlements in Thika Town	
Output indicator		Number of people using the services	
Baseline	Year	2020	0
Annual target	Year 1	2025	1,500 people
Annual target	Year 5	2030	2,350 people
Output 4		Construction of a biogas and electricity generation unit at the Thika Sewage Treatment Plant North, a mini-hydropower plant and solar plants at Thika WTP and the North-East STPs .	
Output indicator		Installed nominal capacity of solar, hydro and biogas generation.	
Baseline	Year	2020	0
Annual target	Year 1	2025	1.4 MW solar, 100 kW hydropower and 400 kW biogas generation capacity installed
Annual target	Year 5	2030	1.4 MW solar, 100 kW hydropower and 400 kW biogas generation capacity installed
Output 5		Strengthened capacity for operation and management of the new facilities in Thika	
Output indicator		Scoring of the Water Supply and Sewerage Companies by the regulator (WASREB), total score/ranking	
Baseline	Year	2020	114 / 13
Annual target	Year 1	2025	120 / 10

Annual target	Year 5	2030	130 / 8

Thematic Project Title		**Githunguri Water and Sanitation Project**	
Impact indicator 1		Service level as average hours of supply per day	
Baseline	Year	2020	14
1st year target	Year	2025	24
5-year target	Year	2030	24
Impact indicator 2		Quantity of wastewater (m3/day) collected and treated by the new STPs	
Baseline	Year	2020	0
1st year target	Year	2025	500 m3/day
5-year target	Year	2030	1,000 m3/day
Outcome 1		Households, industries and institutions in Githunguri Town have secured access to clean and affordable water.	
Outcome indicator		Number of people in the project area having improved access to clean piped water from the new system	
Baseline	Year	2020	0
1st year target	Year	2025	15,000 people
5-year target	Year	2030	20,000 people
Outcome 2		Construction of a sewage treatment plants (STP) in Githunguri Town with a total capacity of 2,900 m^3/d, including installation of a sewerage network.	
Outcome indicator		Number of people and institutions covered with sewerage services (in people equivalents)	
Baseline	Year	2020	0
1st year target	Year	2025	4,400 people
5-year target	Year	2045	10,000 people
Outcome 3		Demonstration of the use of energy saving and renewable energy in water production and wastewater treatment	
Outcome indicator		Reduction of the grid energy used for water and wastewater treatment (MWh/year)	
Baseline	Year	2020	0
1st year target	Year	2025	318 MWh/year
5-year target	Year	2030	318 MWh/year
Outcome 4		Creation of temporary and permanent jobs	
Output indicator		Number of jobs	
Baseline	Year	2020	0

Annual target	Year 1	2023	50 (mainly temporary)
Annual target	Year 5	2025	5 (permanent)
Output 1		Construction of a water supply system in Githunguri Town, consisting of construction of a 5,000 m3/day WTP, rehabilitation of water distribution network and 7 boreholes	
Output indicator		Quantity of clean water produced and delivered to the consumers in Githunguri (m3 per day) (excl. non revenue water)	
Baseline	Year	2020	Around 330 m^3/d but irregular supply and quality
Annual target	Year 1	2025	2,350 m^3/d
Annual target	Year 5	2030	2,500 m^3/d
Output 2		Prevented wastewater releases to the environment	
Output indicator		Quantity of wastewater collected and treated (m3/day)	
Baseline	Year	2020	0
Annual target	Year 1	2025	500 m3/day
Annual target	Year 5	2030	1000 m3/day
Output 3		Construction of a solar power plant at Githunguri WTP.	
Output indicator		Installed nominal solar energy capacity (MW)	
Baseline	Year	2020	0
Annual target	Year 1	2025	0.18 MW
Annual target	Year 5	2030	0.18 MW
Output 4		Strengthened capacity for operation and management of the new facilities in Githunguri	
Output indicator		Scoring of the Water Supply and Sewerage Companies by the regulator (WASREB) Total score / ranking	
Baseline	Year	2020	58 / 48
Annual target	Year 1	2025	70 / 40
Annual target	Year 5	2030	80 / 35

Annex 4. Risk management matrix

Contextual risks

Risk Factor	Likelihood	Impact	Risk response	Residual risk	Background to assessment
The main contextual risk relates to political and economic instability, due to internal and regional tensions, which could spill-over on Kenya. Domestic political, economic and social instability has been further challenged by the effects from the COVID-19 pandemic.	Likely	Minor	Due to a decade of Danish cooperation in the water and sanitation sector and the fact that Denmark is a relative large donor to Kenya, the embassy has leverage to assist the project implementation.	Minor Disruption and delays to implementation	Kenya has a long history of political unrest, particularly after elections. In addition, the COVID-19 pandemic could lead to social unrest. However, the impact of political unrest is expected to be minor as AWWDA, THIWASCO and GIWASCO are mandated to deliver and operate public water and sanitation service and thereby sheltered from targeted political turmoil – supported by the fact of the location the projects outside of Nairobi.

Programmatic risks

Risk Factor	Likelihood	Impact	Risk response	Residual risk	Background to assessment
Land acquisitions are not ready in time, thus delaying the project.	Likely	Major	It is a precondition for loan effectiveness is that the land acquisition has been finished.	Minor	The precondition will put pressure on AWWDA to finish land acquisition as soon as possible.
Inadequate water resource for Thika.	Likely	High	Small dams have been included in the project design for both Thika and Chania rivers, to give a buffer of 25-30 days in case of water scarcity.	Minor	Water is abstracted upstream from both rivers, mainly to provide water to Nairobi and commercial farms. Legally, human consumption has priority, but in case of a serious drought the available water must be prioritised and distributed among the different users.
Water and wastewater demand growth is different from predictions (slower in some areas and faster in others).	Likely	Minor	The project will secure the main network for water supply and wastewater collection. The WSSCs will have the flexibility to	Minor	Historically, there has been rapid population growth and demand for services (in Thika 6-7% per year lately). Particularly in Thika, growth may turn out to be higher than the projected due to the new Nairobi-Thika highway.

Risk Factor	Likelihood	Impact	Risk response	Residual risk	Background to assessment
			connect people depending on where growth comes first.		It is often difficult to get people to connect to new sewers if they have septic tanks, but in Thika the prevalence of multi storey apartment blocks (which are difficult to serve with septic tanks) reduces this risk. In addition County regulations makes it possible to charge users within a certain distance from the sewerage network for the wastewater service, independently of whether they are actually connected or not. According to THIWASCO this practice is implemented.
The project anticipates the location of future water and sewer needs 20 years in the future and lay pipes in the wrong areas.	Likely	Major	The Design and Procurment consultants shall take this into account during detailed design. The Supervision Consultants shall monitor implementation – should there be a need for changes.	Minor	The developments in Thika will follow the Urban Development Plan. The presence of water and sewage services will be an attraction for new development. The project area in Githunguri is more localised and the future plans are to be discussed in detail with stakeholders during planning and design.
AWWDA and the water companies are stretched for senior technical resources and may be reluctant to commit the necessary full-time staff to the PMT.	Likely	Major	It will be made a precondition for the loan that a well-staffed PMT is established. The PMT will furthermore be supported by TA and training under the design and procurement contact	Minor	Experience shows that a well-functioning and capable PMT is essential for satisfactory project implementation.
Inadequate operation and management capacity in Thika and in particular in Githunguri.	Unlikely	Major	AWWDA will support Githunguri until the utility develop sufficient capacity for operation and management The contractors will be contractually obligated to provide training in operation and maintenance of the new water systems to both utilitie In addition, DSIF will finance a specific component to improve the capacity of the two WSSCs including twinning with Danish	Minor	THIWASCO and GIWASCO have experience in managing water supply and sewage systems, but not in use of resource efficient technologies (trickling filters for sewage treatment plants, biogas, solar power etc.) AWWDA has the mandate to operate water services until the responsibility can be transferred to county governments utilities.

Risk Factor	Likelihood	Impact	Risk response	Residual risk	Background to assessment
			Water Companies.		
Inadequate roll out and weak operation and management of the water and sanitation systems provided in the Informal Settlements.	Likely	Major	DSIF to monitor progress via assigned TA and have dialogue with AWWDA and THIWASCO in case of lack of operation and maintenance.	Minor	The social/environmental expert to be provided under the Design/Procurement/Supervision contract in Thika will monitor the process.

Institutional risks

Risk Factor	Likelihood	Impact	Risk response	Residual risk	Background to assessment
Possible corruption during tendering could affect AWWDA and DSIF reputation.	Unlikely	Significant	Support and close monitoring of tender processes and implementation.	Minor	Transparency and anti-corruption are on the top of the agenda for Danida, DSIF and the Government of Kenya. Safeguards will make it difficult for corruption to take place. Tender/procurement consultants will advise and monitor the procurement process. DSIF will give no-objections to tender documents and tender evaluation reports.
Inadequate consultation and compensation to the project affected people	Unlikely	Significant	Support to AWWDA in the process by the construction supervision consultant. Close monitoring by the consultant.	Minor	DSIF has a commitment to comply with the IFC guidelines. The social/environmental experts under the design/procurement/ supervision contracts will provide support.

Annex 5. List main material consulted

The materials used are listed in Annex 1. The main documents used, apart from the partner documentation, are the following:

1. NIRAS/Losai Management: Thika and Githunguri Water and Sanitation Improvement Project. Kenya:
    1. Feasibility Study. August 2019.
    2. Project Scoping, 6 April 2018
    3. Resettlement Action Plan – Thika. 17 September 2018
    4. Resettlement Action Plan – Githunguri. 17 September 2018
    5. Environmental and Social Assessment Report. Water Supply. 1st October 2018.
    6. Environmental and Social Assessment Report. Sanitation. First draft. No date.
2. Danida: Denmark – Kenya Partnership Policy 2015-2020,
3. Danida: Kenya Country Programme, 2016-20, 2015
4. Government of Kenya: Kenya 4Vision 2030. 2008.
5. Ministry of Water And Sanitation: Strategic Plan 2018 –2022, December 2018
6. ICA/Nippon Koei Co. Ltd.: The Project on the Development of the National Water Master Plan 2030, Vol. Page 12
7. Chemeril Chepyegon, Daisuke Kamiya (2018): Challenges Faced by the Kenya Water Sector Management in Improving Water Supply Coverage. Journal of Water Resource and Protection, 2018, 10
8. WASREB: Impact. A Performance Report of Kenya's Water Services Sector 2018/19.
9. World Bank: Policy Options to Advance the Big 4. Unleashing Kenya's Private Sector to Drive Inclusive Growth and Accelerate Poverty Reduction. 2018.
10. UNDP: Country programme document for Kenya (2018-2022)

Annex 6. Process Action Plan for implementation

	Activity/Output	Date	Responsible
1	Prepare Final Draft Programme Document for appraisal.	December 2019	Consultant
2	Appraisal	February 2020	Appraisal consultant
2	Prepare final Programme Document based on input from appraisal	May 2020	Consultant/DSIF
3	Presentation of the project to Council for Development Policy.	July 2020	MFA/GJL
4	Final Project Approval by Danida	July 2020	Minister
5	Approval by GoK	July 2020	AWWDA
5	Draft Country-to-Country Agreement	July 2020	DSIF / AWWDA / MoFNT
6	Signing of Country-to-Country Agreement	July 2020	MFA/ MoFNT
7	Recruitment of **DSIF Procurement Consultant** – Contract no. 3 (incl. preparation of ToR , tender process and signing of contract).	July 2020	DSIF
8	Finalisation of ToR for Design and Procurement Consultants (phase 1) and Supervision (phase 2) for Thika (contract no. 1) and Githunguri (contract no. 2).	August 2020	AWWDA/DSIF Procurement Consultant
9	Pre-qualification of above.	August 2020	AWWDA/DSIF Procurement Consultant
10	Tender and preparation of contracts for contract 1 and 2.	September-October 2020	AWWDA/DSIF Procurement Consultant
11	Contracts effective for Design and Procurement Consultant (phase 1) and Supervision (phase 2) for Thika (contract no. 1) and Githunguri (contract no. 2).	November 2020	AWWDA/DSIF Procurement Consultant
10	Procurement of Institutional Development Support (including preparation of ToR, pre-qualification, tender and contract signing).	September-December 2020	AWWDA/DSIF Procurement Consultant.
12	Detailed design and preparation of tender documents	November 2020 - August 2021	AWWDA/Design and Procurement Consultant
13	Tender of construction contract and signing of contract.	August-December 2021	AWWDA/Design and Procurment Consultant
14	Contract effective – after signing and approval of Loan Agreement.	March 2022	AWWDA/MoFNT/ Bank / Contractor/Design and Procurement Consultant

15	Construction of project	March 2022 to February 2025	AWWDA/Supervision Consultant/Contractor/DSIF Monitoring and Verification Consultant.
16	Commissioning	March 2025	AWWDA/Supervision Consultant/Contractor/DSIF Monitoring and Verification Consultant.
17	Project liability period	March 2025-February 2027	AWWDA/Supervision Consultant/Contractor/DSIF Monitoring and Verification Consultant.

Annex 7. DSIF General introduction

Program mission and vision

Danida Sustainable Infrastructure Finance, DSIF, is a soft loan scheme that blends development aid funds with commercial bank loans. DSIF is guided by a set of guiding principles that, among other includes the following mission: *The facility is: i) an integrated part of the overall Danish development assistance, ii) is demand driven, iii) eases the terms of repayment for the borrowing developing countries, iv) contributes to raising private capital for financing of development projects in selected developing countries, v) supports development projects which can neither be financed on ordinary commercial terms nor with grant assistance, vi) complements other Danish financed activities for the benefit of the recipient countries, and vii) actively involves the Danish private sector.*

Regulation and set-up

The program is tied to Danish companies in the sense that only Danish companies can participate in the tender of DSIF projects. There is no requirement to Danish content in the contracts. DSIF is regulated by OECD regulations for tied aid credits which, among other, stipulate that a minimum subsidy of 35% (50% for LDC) is required. OECD regulations also stipulate that tied aid credits can only be extended to developing countries with GNI per capita of maximum USD 3.955 (2017/18) and only projects that are non-commercially viable can be financed.

The program resembles a normal export credit, as illustrated in figure 1.

Figure 1:

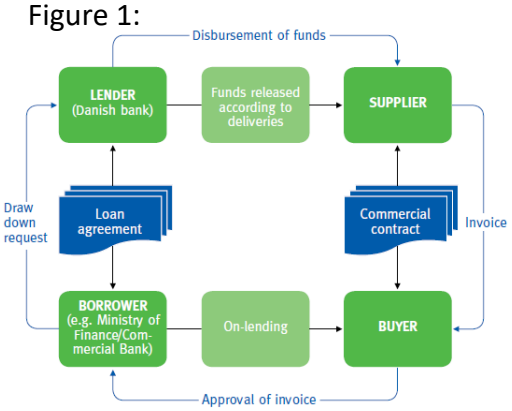
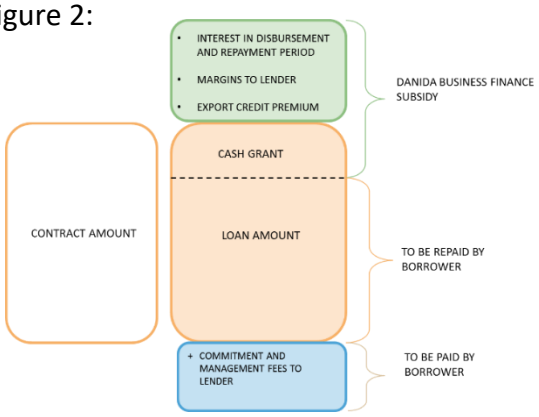


Figure 2:



The commercial bank provides a normal interest-bearing loan with 10 year tenor. The DSIF subsidy covers all the interest on the loan, including margins to the bank. DSIF also provides a cash grant that is used to reduce the principal loan amount to be repaid by borrower. The elements of the DSIF subsidy is illustrated in figure 2.

The cost of the export credit premium is covered by DSIF and therefore included in the DSIF subsidy calculations (calculations to reach 35 or 50% concessionality). However, as the guarantee in effect is covered by the aid budget the premium is not paid out to the Danish Export Credit Agency (EKF), who issues the guarantee to lending bank on behalf of Ministry of Foreign Affairs. The export credit premium is therefore not included in the appropriation as it will only materialise in case of actual default.

Budget and payments

The DSIF subsidy is disbursed over several years according to disbursements under the loan. This way, DSIF may finance larger projects where the total subsidy surpasses the annual DSIF budget.

Annex 8. Quality Assurance Checklist[14]

File number/F2 reference: 2018-4335

Programme/Project name: Thika and Githunguri Water and Sanitation Projects, Kenya

Programme/Project period: 2021-2025

Budget: DKK 486 million

Presentation of quality assurance process:

As part of quality assurance process, an external consultancy company was contracted for the appraisal, which included a field visit to Kenya 1st -7th February 2020. IFU (DSIF), MoFA and the Danish Embassy in Nairobi participated as resource persons during the visit to Nairobi.

- ✓ The design of the programme/project has been appraised by someone independent who has not been involved in the development of the programme/project.

Comments: TJT Consult was not part of developing the programme, but undertook the appraisal and adjustment of programme document after appraisal.

- ✓ The recommendations of the appraisal have been reflected upon in the final design of the programme/project.

Yes, all recommendations have been reflected in the final Programme Document in relevant ways, with some recommendations relating to specific process actions (especially related to the Environmental and Social assessment) to be followed-up during project design/inception. The recommendation related to training of key environmental and social staff in international standards for safeguards is considered an integrated part of the technical assistance to be provided under the contracts for design and procurement contracts.

- ✓ The programme/project complies with Danida policies and Aid Management Guidelines.

Comments: The project complies with the Danish strategy for Development Cooperation and Humanitarian Action. The project adhers to the Guidelines for Programmes and Projects (AMG) and complies with the guiding principles of DSIF as the project 1) Adres poverty reduction indirectly by providing a critiac social infrastructure in line with the SDG, 2) respond to local demand and a local development challenge, 3) the project

[14] This Quality Assurance Checklist should be used by the responsible MFA unit to document the quality assurance process of appropriations where TQS is not involved. The checklist does not replace an appraisal, but aims to help the responsible MFA unit ensure that key questions regarding the quality of the programme/project are asked and that the answers to these questions are properly documented and communicated to the approving authority.

is not viable under commercial terms and 4) the implementation will live up to IFC performance standards and the UN guiding principles for business and human rights.

- ✓ The programme/project addresses relevant challenges and provides adequate responses.

Comments: Yes, it addresses specific and increasing gaps in water and sanitation services in Thika city and Githunguri town and respond to a strong request from the relevant Kenyan authorities. The project address the development gaps in provision of clean water and safe wastewater management by providing substantial blended financing for construction and a elaborated technical assistance package to support all phases of project implementation in cooperation with AWWDA and the water and sewage companies in Thika and Githunguri. DSIF provides a highly concessional loan for a critical social infrastructure for which GoK cannot find other financing. Even during a possible economic crisis and following debt crisis caused by the COVID19 endemic, the value added of a concessional loan for critical health related infrastructure is high.

- ✓ Issues related to HRBA/Gender, Green Growth and Environment have been addressed sufficiently.

Comments: Yes, the programme document address these aspects directly and relates the approach to governemt of Kenya policy and the IFC standards as well as the targets in AWWDA's performance contract with the Ministry of Water & Irrigation and Sanitation. AWWDA's social and environmental units has been assessed as being fully capable of implementing the needed process for addressing gender issue, human rights issues related to the compensation of project affected people (PAP) and CSR goals of promoting jobs for youth in connection with the construction of the plants. The contracts for design and procurement as well as the contracts for supervision of the project will include social and environmental experts that will assist AWWDA in implementing the requirements. The DSIF monitoring consultant will report to DSIF on implementation of key aspects of HR, Gender and environmental safeguards.

- ✓ Comments from the Danida Programme Committee have been addressed (if applicable).

Comments: Yes, the final Programme Document highlights the requirement of carrying out the environment and social impact assessment as basis for addressing needs and concerns of the project affected people and to support targeting of specific social groups. Further, GoK has cancelled plans on merging the water companies. Finally, the programme document highlights the synergies between DSIF and other Danish instruments under the Denmark-Kenya Strategic Framework. DSIF and the Embassy will explore possible concrete activities during the design phase and the implementation of the project in dialoug with relevant partners.

- ✓ The programme/project outcomes are found to be sustainable and is in line with the partner's development policies and strategies. Implementation modalities are well described and justified.

Comments: The project outcome is part of the National Water Master Plan and a priority in the Ministry of Water and Sanitation Strategic Plan (2018-2022). The outcomes have been assessed to be sustainable (confirmed by the appraisal) as the implementing capacity, organisational structure and technical capacity of AWWDA has been access as being adequate. The capacity of the water and sewage companies in Thika and in particular Githuagury to manage operation and maintenance after commissioning of the projects are less strong.

However, AWWDA has the mandate to operate waterworks and provide water services until such responsibility can transferred to a county government and it is assessed that AWWADA over time with the planned package of technical assistance from the project can build up sufficient capacity in both THIWASCO and GIWASCO. The main contract (with the contractor) will adhere to the DSIF procurement rules, including zero tolerance towards corruption, Un Guiding Principles and IFC performance standards. AWWDA is responsible for tendering and procurement relying on "no-objection" from DSIF.

- ✓ The results framework, indicators and monitoring framework of the programme/project provide an adequate basis for monitoring results and outcome.

Comments: The results framework provides an adequate initial basis for DSIF's overall monitoring of the projects and, in accordance with the Programme Document, the results, indicators, and targets will be further developed and detailed during the design stage. During project implementation, typical project process milestones will be agreed upon, e.g. signing of contract, final approval of design, contractor starting construction etc. The day-to-day monitoring of the contractors' works will be handled by the supervision consultant representing AWWDA. DISF's monitoring consultant will on a regular basis report to DSIF.

- ✓ The programme/project is found sound budget-wise.

Comments: Yes, a detailed costing exercise during the preparation stage is the basis for the budget, which furthermore includes a sufficient margin; meanwhile, in accordance with the programme document, the final budget will depend on the winning tender.

- ✓ The programme/project is found realistic in its time-schedule.

Comments: Yes, the overall timeline is broadly realistic, though as mentioned in the risk assessment some delays may be expected, also depending on impacts of Covid-19

- ❑ Other donors involved in the same programme/project have been consulted, and possible harmonised common procedures for funding and monitoring have been explored.

Comments: N/A – as DSIF is the only donor to the project. However, experience from other donors' engagements in the water and sanitation sector has been included in the project and described in the project document.

- ✓ Key programme/project stakeholders have been identified, the choice of partner has been justified and criteria for selection have been documented.

Comments: Yes, the choice and assessment of the partners are based on extended and detailed examination of capacities, and they are selected by the criteria of being the main formal actors in the sector and areas.

- ✓ The executing partner(s) is/are found to have the capacity to properly manage, implement and report on the funds for the programme/project and lines of management responsibility are clear.

Comments: Yes, the main partner AWWDA has the sufficient basic management capacity to implement the projects, while some weaknesses exist especially with one of the water companies. The project includes measures to address capacity weakness, as described in the programme document.

- ✓ Risks involved have been considered and risk management integrated in the programme/project document.

Yes, risks and proper risk management measures have been addressed in annex 4 and measures to mitigate or avoid risks have been considered in project design. Due to a decade of Danish cooperation in the water and sanitation sector and the fact that Denmark is a relative large donor to Kenya, the embassy has leverage to assist the project implementation

- In conclusion, the programme/project can be recommended for approval: yes

Date and signature of desk officer: 16.06.2020 Lone Bøge Jensen

Date and signature of management: 16.06.2020 Lis Rosenholm