



# Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 23-Apr-2019 | Report No: PIDISDSA23434

**BASIC INFORMATION****A. Basic Project Data**

Country Mozambique	Project ID P161777	Project Name Mozambique Urban Sanitation Project	Parent Project ID (if any)
Region AFRICA	Estimated Appraisal Date 23-Apr-2019	Estimated Board Date 22-May-2019	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Economy and Finance	Implementing Agency National Directorate of Water Supply and Sanitation (DNAAS), Administração de Infraestruturas de Água e Saneamento (AIAS)	

## Proposed Development Objective(s)

To increase access to safely managed sanitation services and strengthen municipal sanitation service delivery capacity in selected cities.

## Components

Priority Sewerage Investments in Maputo, Quelimane and Tete  
Onsite Sanitation Investments for Quelimane and Tete  
Municipal Sanitation Services Improvements  
Technical Assistance and Project Management Support  
Contingent Emergency Response

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

<b>Total Project Cost</b>	115.00
<b>Total Financing</b>	115.00
<b>of which IBRD/IDA</b>	115.00
<b>Financing Gap</b>	0.00

**DETAILS**



World Bank Group Financing

International Development Association (IDA)	115.00
IDA Grant	115.00

Environmental Assessment Category

A-Full Assessment

Decision

The review did not authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

1. **Mozambique remains one of the poorest countries in the world.** Mozambique ranks 180 out of 189 countries in the 2017 Human Development Index. Of a total population of approximately 29 million (2017), nearly 40 percent (11.3 million) are living in poverty<sup>1</sup>. This contrasts with Mozambique’s rapid economic growth over the past two decades. The economy is dominated by an agricultural sector that accounts for 25 percent of Mozambique’s GDP, and employs about 75 percent of the population, including more than 90 percent of rural residents. The extractive sector has been a driver of the recent improvement in growth, maintaining double-digit output growth in 2016. This trend continued in early 2017 with a 41 percent expansion in output, mostly driven by mineral exports. In addition, the distribution of poverty is uneven across the country, with rural provinces in the center and the north accounting for a disproportionate share of the poor (about 70 percent). The three poorest provinces - Zambezia, Niassa and Nampula – are all located in the Northern region and are rocked by civil disturbances. Mozambique’s ability to boost growth and reduce poverty depends on the working age population being healthy and productive and having access to jobs in the formal and informal sector.

2. **Mozambique’s macroeconomic stability has been compromised in an untenable debt situation after a prolonged period of sustained growth.** After registering seven percent of GDP growth on average since 2011, Mozambique’s economic performance experienced a sharp downturn in 2016, triggered by falling commodity prices, adverse climate conditions, a tense political environment, and the discovery of US\$1.4 billion in previously undisclosed public debt (equal to about 10 percent of GDP). The Government of Mozambique (GoM) responded to the economic slowdown and debt accumulation with a revised budget, restructured spending program, and overtures to creditors to begin restructuring talks. This is accompanied by a tight fiscal context, with a limit on non-concessional borrowing, and with both credit and investment levels continuing at low levels. Therefore, improving the efficiency and impact of existing social spending has become even more of an imperative.

3. **Mozambique’s rapidly growing population, together with its high youth dependency ratio, will pose increasing pressure on public service delivery and infrastructure.** Accessibility to basic services is already low: only one in three households has access to safe water, one in ten to sanitation, and one in four to electricity. The country’s fertility rate is estimated at 5.9 children per woman, and children aged 0-14 represent more than 45 percent of the

<sup>1</sup> National Institute of Statistics (2015), Final Report of the Family Budget Survey



population in 2015. Rapid population growth will continue to put pressure on existing infrastructure, requiring higher rates of investment to enhance capacity and efficiency of service delivery to sustain growth in the medium term.

4. **Poor women and children suffer disproportionately from inadequate access to safe water and sanitation.** Greater exposure to pathogens as a result of inadequate access to safe water and sanitation cause regular cholera outbreaks (on average 7,500 cases per year), endemic diarrheal disease (on average 715,000 reported cases per year), and widespread childhood stunting (42 percent in children under five) according to the Mozambique Water, Sanitation and Hygiene Poverty Diagnostic (MWPD, 2017). The World Health Organization (WHO) estimates that 17 percent of under-five deaths in Mozambique (10,700 children per year) are the result of diarrheal diseases, resulting in very high child mortality (108 per 1,000 live births). Approximately 90 percent of these are caused by poor water, sanitation and hygiene (WASH) services and the provinces with the highest disease risk values are Cabo Delgado, Tete and Zambezia (MWPD, 2017). The latter two also have the highest rates of stunting. An estimated 14 percent of newborns begin life with low birth weight, increasing their risk of infant mortality, delayed cognitive and motor development, and stunting.

5. Poor sanitation is also one of the key factors limiting school attendance and retention of female students. According to the World Health Organization one in ten schoolgirls in Africa miss classes or drop out completely due to menstruation. In Mozambique, for upper primary schooling the official completion rate is very low, especially in rural areas where even at age 19 it is only about 14% for males and 8% for females. Young age marriages are a serious problem for girls in Mozambique, with 60% of girls out of school being married by 18 years of age. It is crucial to keep girls in school, so they have better health and livelihood opportunities. One of the entry points of keeping them in a school is through a supportive school based menstrual hygiene program. A common consequence when girls experience their first menstruation is that they either skip school during the days of menstruation, or that they completely drop out. Without access to proper menstruation protection and sanitation facilities, girls easily feel uncomfortable being in school as it poses challenges to keep a good hygiene.

6. **Urbanization in Mozambique results in increased demand for capital intensive urban infrastructure and management of urban services.** About nine million people (over 30 percent of Mozambique's population) live in urban areas<sup>2</sup>. Of these, about 20 percent live in greater Maputo and about 43 percent in intermediate cities which play an increasingly important role as economic growth poles and as destinations for migration from rural areas. The urban population is growing at an annual rate of 3.8 percent and is expected to account for half the country's total population by 2025. There are approximately 18 intermediate cities with populations between 100,000 and 500,000. None of these cities presently have sanitation coverage that exceeds 50 percent of the population or have any sanitation treatment facilities. To meet the demands of ongoing urbanization, the country will require major investments, estimated at US\$2.05 billion for the urban sanitation sector (National Urban Water and Sanitation Strategy, 2011), if it expects to reach the Sustainable Development Goal (SDG) target of 100 percent access to safely managed sanitation by 2030.

7. **Mozambique is expected to face some of the most extreme climate change effects in all of Sub-Saharan Africa, including increased urban vulnerability to flooding and erosion.** Globally, Mozambique ranks 36<sup>th</sup> in terms of vulnerability and 144<sup>th</sup> in terms of readiness<sup>3</sup>, indicating significant risk to national social and economic development. Climate change and extreme weather-related shocks pose a significant cross-cutting risk to growth and poverty reduction for Mozambique's urban population, especially in coastal areas and along flood prone rivers, where most of the major cities are located. Some recent examples of climate change -related events that have affected the country are: (a) prolonged (2014-present) drought with lower than normal rainfall and reduced water availability for southern Mozambique; (b) increases in temperature punctuated by heat waves involving temperatures above 46°C in various locations across the country; (c) Increased severity and frequency of cyclones and related floods across the country.

<sup>2</sup> Estimates for 2015 from National Institute of Statistics (INE) and UN (2014)

<sup>3</sup> ND-GAIN (University of Notre Dame Global Adaptation Index) is global index that summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience.



Adding to this challenge, informal settlements, where over 80 percent of the urban population reside, are particularly vulnerable to flooding and erosion. Without investments in flood resilient sanitation infrastructure, and efforts aimed at expanding and improving sanitation services in Mozambique’s cities will face increasing risks and set-backs in reducing high-mortality due to waterborne diseases.

Situations of Urgent Need of Assistance or Capacity Constraints

8. From March 3 to 17, 2019, Mozambique was hard-hit by Cyclone IDAI with heavy rains, winds and flooding in the Central and Northern regions of the country, more specifically in the Buzi, Pungue, Zambezi, and Licungo River basins. This disaster has had severe economic and social impacts in the affected areas, resulting in an increase in the poorest people’s vulnerability, and severely damaging the social and production infrastructure. As of April 3<sup>rd</sup>, 2019, about 1.4 million people were affected and 598 killed, while 183,000 houses were either partially or totally destroyed.

9. The impacts of the Cyclone and floods overwhelmed national response capacities. As a result, on March 19, 2019 the Government of Mozambique (GoM) declared a national emergency, triggering major emergency response interventions. The GoM also requested the Bank to assist in addressing the urgent rehabilitation, reconstruction, and preservation of the damaged infrastructure. On March 27, 2019, the initial report on a rapid post disaster damage estimation, with the initial cost of damages estimated to be around US\$773 million, or 6.3 percent of GDP. Based on modelled damages, infrastructure sectors are the hardest hit. The damage negatively impacted the population’s livelihood, housing, social infrastructure and overall agriculture production in addition to public infrastructure, including key national roads, water supply, sanitation and drainage, irrigation infrastructure, and energy transmission grids.

Table 1 - Estimate of capital damages by sector (in US\$ millions).

Modelled			Reported & Modelled	Total
Residential Buildings	Non-Residential Buildings	Infrastructure	Agriculture*	
\$178m	\$149m	\$188m	\$141m-\$258m	\$656m-\$773m

10. This devastating event seriously affected five of Mozambique’s eleven provinces (Sofala, Zambezia, Manica, Nampula and Tete), exacerbating an already precarious situation. With about 18.1 million total inhabitants, these three provinces account for 63 percent of the country’s population. They also host the poorest populations in the country, with high incidences of poverty in Zambezia and Nampula. Four of the project target cities (Beira, Nampula, Quelimane and Tete) are among the affected urban settlements and are at high risk of cholera and acute diarrhea outbreak, due to poor sanitation which is exacerbated by the current floods and damaged sanitation facilities. The poor residents of the peri-urban areas are the most affected. As of April 3<sup>rd</sup>, 2019, 1741 cholera cases were diagnosed with two fatalities. Thus, urgent response on the construction of household and communal sanitation systems is required to prevent further deterioration of the public health situation and losses of life.

11. The Bank is supporting the GoM in addressing the most urgent needs through the Water and Institutional Support Project II (P149377) restoring water supply access in the critical areas. The WASH cluster led by UNICEF is providing support with household water treatment, vaccination and sanitation and hygiene promotion in the affected areas. However, the scale of destruction and reconstruction needs far outweighs the resources that are currently available, particularly which respect to household sanitation systems, without which widespread contamination will prevail. This sanitation project is critically needed to support the Government efforts in improving public health and facilitate the process of restoring basic productive capacities, rehabilitate public services. The Project is thus designed



to provide a comprehensive response across those priority areas in order to restore and rehabilitate critical sanitation infrastructure and services.

#### Sectoral and Institutional Context

12. **Access to water and sanitation is low and highly inequitable.** Half of the population has access to improved water supply, and in rural areas, most people (63 percent) still rely on unimproved sources and practice open defecation (52 percent)<sup>4</sup>. Though significant progress has been made in improving water supply services in the larger cities, the poorest people still face several challenges in accessing sanitation and water supply services. In some of the capital cities, such as Quelimane and Tete, more than 20 percent of the population rely on open defecation. These cities are also among the most affected by recurrent cholera outbreaks. Among urban households in the bottom 40 percent (B40) of wealth quintiles, access to sanitation is estimated at nine percent in 2015, similar to the eight percent access by the B40 of rural populations (MWRP, 2017).

13. **Backbone sanitation infrastructure is largely non-existent.** There have been no major investments in sanitation in Mozambique after Independence, apart from the National Improved Latrines Program and the expansion of the Beira sewerage systems. Maputo has benefited from pilot interventions, including the Maputo Peri-urban Sanitation Project (P132551), which developed Fecal Sludge Management (FSM) services that are now being rolled out at the city level, with private sector support. Yet in all cities safely managed sanitation services are limited, with untreated raw sewage (often mixed with rainwater runoff) being discharged into the sea or nearby rivers. To further complicate the situation, networked sanitation systems have extremely limited coverage, generally reaching less than 10 percent of the municipal population, while the majority rely on on-site sanitation systems. In the near term, the small sewerage networks cannot feasibly be expanded to meet the demand for household sanitation in populous peri-urban neighborhoods, given the limited availability of resources, inadequate water supply coverage, as well as socio-cultural aspects which require extensive behavior change interventions. Thus, any urban sanitation initiative that aims to significantly expand coverage will require a significant focus on “localized solutions,” i.e. on-site domestic latrines and small septic tanks, along with associated services, as well as explore innovative solutions to safely managed sanitation systems which are aligned with the environmental and socioeconomic conditions. To date, on-site sanitation services, including FSM, has been considered a household responsibility provided by a mostly unregulated domestic private sector.

14. **Sanitation is under the authority of the Ministry of Public Works, Housing, and Water Resources (MOPHRH).** The National Directorate of Water Supply and Sanitation (*Direcção Nacional de Abastecimento de Água e Saneamento – DNAAS*) is the lead policy agency for both urban and rural water supply and sanitation; and investment planning and implementation through the Provincial and District Governments<sup>5</sup>. Under a Delegated Management Framework (DMF), the Water and Sanitation Infrastructure Board (*Administração de Infraestruturas de Água e Saneamento, AIAS*) – is the national agency responsible for managing investments in water supply for small towns, and sewerage and drainage infrastructure in all urban settlements in Mozambique<sup>6</sup>; the Water Supply Infrastructure and Asset Investment Agency (*Fundo de Investimento de Infraestrutura e Patrimônio de Abastecimento de Água – FIPAG*) is responsible for water supply in large urban centers<sup>7</sup>; and the Water Regulatory Council (*Conselho de Regulação de Água – CRA*) is responsible for guaranteeing the balance of interests between the stakeholders involved, from the asset manager to service providers and consumers.<sup>8</sup> CRA

<sup>4</sup> WHO/UNICEF (2015) Joint Monitoring Programme for Water Supply and Sanitation (JMP), “Progress on Drinking Water and Sanitation–2015 Update

<sup>5</sup> Boletim da república (2015) Resolução 19/2015 de 17 de Julho, Maputo, Moçambique

<sup>6</sup> Boletim da República (2009) Decreto 19/2009 de 13 de Maio, Maputo, Moçambique

<sup>7</sup> Boletim da República (1998) Decreto 74/98 de 23 de Dezembro, Maputo, Moçambique

<sup>8</sup> Boletim da República (1998) Decreto 74/98 de 23 de Dezembro, Maputo, Moçambique



is therefore charged to oversee and regulate all entities (public and private) that provide urban water and sanitation services<sup>9</sup>.

15. **Among the key sector challenges is the lack of clarity on roles and responsibilities for sanitation, especially at the central government level.** In particular, the roles for DNAAS and AIAS are not clear as both can plan and manage investments for sanitation. Under the DMF, FIPAG which is a corporate entity, has the mandate to mobilize financing, develop critical water supply infrastructure for selected urban centers; and delegate to private entities to operate and maintain the systems. FIPAG is currently undertaking reforms to reestablish the DMF with support from the Bank under the Water and Institutional Support Project II (P149377). Unlike water supply in large urban centers, the framework for urban sanitation is less clear and more complex. AIAS has not been established as a corporate entity and therefore does not have the financial autonomy required to establish a revenue stream and recover its investments. In addition, asset ownership for sanitation infrastructure remains with the municipalities, which is aligned with the Constitutional Amendment of May 2018 and the key sector policies and strategies; including the National Urban Water and Sanitation Strategy, “*Estratégia Nacional de Água e Saneamento Urbano*” - ENASU (2011-2025)<sup>10</sup>, which charges the municipal councils with instituting a comprehensive approach to managing all elements of the sanitation service chain, in urbanized and non-urbanized areas.

16. **Sanitation service provision is a municipal responsibility** as defined in the 1997 local government framework laws and associated regulations. Municipalities are responsible for both sanitary sewerage and storm water drainage as well as solid waste management. Municipalities are also responsible for regulation and enforcement of domestic and private sector land use, as well as environmental management of both solid and liquid waste and associated sanitation facilities. Furthermore, municipal councils play an important role collaborating with local public health authorities in sanitary education and hygiene promotion. To date, the focus of municipal sanitation efforts has been on solid waste management and the maintenance of small mixed rainwater/sewerage networks located in downtown areas of major cities. Municipalities lack the human and financial resources to implement their sanitation mandate.

17. **Financing arrangements for urban sanitation are underdeveloped.** Despite Government recognition of sector needs, the financing framework is yet to be established. Very little is known about affordability, reliability, or efficiency of services in urban areas since sanitation systems are still in their infancy. To date only two municipalities, Beira and Quelimane<sup>11</sup> have established a revenue stream for sanitation and signed regulatory framework agreements with CRA. A financial model for sanitation covering the entire service chain for both onsite and reticulated systems is under development by CRA and will inform tariff setting in the next tariff cycle for the sector, planned for 2020. However, municipalities will be required to develop by-laws to allow sanitation fees to be charged and collected. A dedicated asset manager responsible for capital investment planning and finance mobilization will also be needed at municipal level.

18. **The sector’s medium-term investment plan is packaged in what is called the Integrated Sanitation Program, “Programa Integrado de Saneamento” (PIS) approved in 2014.** The Program consists of a series of

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<sup>9</sup> Revision of the CRA statute in 2011 expanded its competencies to include regulation of urban sanitation, including sanitary sewerage, wastewater transport and treatment as well as storm water drainage.

<sup>10</sup> Ministério das Obras Públicas e Habitação (2012), *Estratégia Nacional de Água e Saneamento Urbano (2012-2025)*, Maputo, Moçambique

<sup>11</sup> A similar agreement is currently under discussion by CRA with the Maputo Municipal Council.



investments and policy reforms designed to address the immediate and medium-term sanitation investment needs and support a long-term solution to universal sanitation access in both urban and rural areas – with the former based on the city-wide inclusive sanitation approach. The sector plans to strengthen the institutional framework and increase the capacity to plan for, and implement, integrated sanitation service improvements which would enable infrastructure investment planning and service delivery in at least 12 urban centers – enough to meet projected 2025 demand. Beyond that, new investments will be required to expand service provision to all urban centers and reduce the impacts of poor sanitation on public health and environment. Local Government legislation and sectoral regulations will need to be established to allow for sanitation fees collection at the municipal level to recover operation and maintenance costs. Municipal level financing and capacity development support will be needed at the national level.

19. **To support PIS implementation the GoM has requested the World Bank to finance priority sanitation investments in six capital cities.** In addition, GoM would like the Bank to support technical assistance activities designed to (i) enhance National Government’s capacity to plan future investments and prepare priority investment packages for the PIS; and (ii) enhance the capacity of the municipal councils to deliver improved sanitation services. The World Bank will thus play a catalytic role through the proposed **Mozambique Urban Sanitation Project** - the first in a series of projects envisaged under the Plan. The Project will support investments in three priority cities (Maputo, Quelimane and Tete), and finance institutional capacity building for the sanitation units in Beira and Nampula.

### C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

To increase access to safely managed sanitation services and strengthen municipal sanitation service delivery capacity in selected cities.

#### Key Results

- (a) Number of people provided with access to safely managed sanitation<sup>12</sup> services under the project (disaggregated by poverty quintile and gender)
- (b) Number of cities with an operational sanitation entity compliant with the Government’s regulatory framework<sup>13</sup>
- (c) Municipal sanitation bylaws approved and published

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<sup>12</sup> Safely managed sanitation is defined by the World Health Organization (WHO) as the use of an improved sanitation facility which is not shared with other households, and where excreta is safely disposed in situ and/or transported and treated off-site. Improved sanitation facilities include flush/pour flush toilets to piped sewer, septic tank or pit latrine; and composting toilet or pit latrine with slab.

<sup>13</sup> The regulatory framework is defined by CRA and signed with the Municipal Council. It enables the city to collect a sanitation fee through the water bill. The units should have evidence of funds transferred and ringfenced to sanitation services, for at least 12 months.



#### D. Project Description

20. The Project consists of five components which are described briefly below. Detailed descriptions and costs are provided in Annex 2.

21. **Component 1: Priority Sewerage Investments in Maputo, Quelimane and Tete (USD 56.50 million).** This component will finance sewerage investments in Maputo, Quelimane and Tete including:

- a. *Priority sewerage works for Maputo*, including the (i) rehabilitation and expansion of the Infulene Wastewater Treatment Plant (WWTP), (ii) rehabilitation and upgrade of 8.5km of sewers, (iii) rehabilitation and upgrade of two pumping stations, and (iv) upgrading of 12,800 existing sewer connections.
- b. *Priority sewerage works for Quelimane*, including the (i) rehabilitation and expansion of 29km of sewers, (ii) construction of a Wastewater Treatment Plant (WWTP), (iii) upgrading of approximately 2,000 existing connections, (iv) construction of three pilot condominial sewer systems to serve about 600 new connections, and (v) rehabilitation of about 10 km of small to medium scale drains to channel excess storm water and water-logged areas, and reduce the risk of urban floods.
- c. *Priority sewerage works for Tete*, including the (i) rehabilitation and expansion of 20km of sewers, (ii) construction of a Wastewater Treatment Plant (WWTP), (iii) upgrading of approximately 3,300 existing connections, (iv) construction of three pilot condominial sewer systems to serve about 600 new connections, and (v) rehabilitation of about 8 km of small to medium scale drains to channel excess storm water and water-logged areas, and reduce the risk of urban floods.

22. The proposed interventions on sewerage improvements, including the drainage investments will reduce the probability of sanitation infrastructure becoming overwhelmed by floods, thereby lowering the risk of contamination of water bodies after floods and the number of service interruptions during and after extreme weather events. Priority will be given to the restoration and reconstruction of the areas affected by the Cyclone Idai in the cities of Quelimane and Tete.

23. **Component 2: On-site Sanitation Investments for Quelimane and Tete (USD 32.50 million).** This component will finance priority on-site sanitation at the household level, and the construction of public sanitation facilities, in Quelimane and Tete including:

- a. *On-site Sanitation investments in Quelimane*, including the (i) sanitation marketing and hygiene promotion to influence sanitation behaviours; (ii) support to the construction and upgrade of 11,000 household on-site sanitation systems, (iii) construction of 65 public sanitation systems in schools and markets, including dedicated facilities for menstrual hygiene management; (iv) construction of two Fecal Sludge Treatment Plants (FSTPs), and (v) support to private sector on FSM business development.
- b. *On-site Sanitation investments in Tete*, including the (i) Sanitation marketing and hygiene promotion to influence sanitation behaviors; (ii) support to the construction and upgrade of 9,200 household on-site sanitation systems, (iii) construction of 13 public sanitation systems in schools and markets, including dedicated facilities for menstrual hygiene management; (iv) construction of two Fecal Sludge Treatment Plants (FSTPs), and (v) support to private sector on FSM business development.

24. The activities under this component will promote personal hygiene and healthy sanitation behavior and reduce the environmental impact of human waste—by reducing the volume of untreated fecal sludge, and



potential contamination of water bodies during floods. Improve hygiene behavior will also enable households to better manage their sanitation conditions during the droughts with limited availability of water, thus contributing to higher resilience of the beneficiaries to these extreme events. Under this component, the Project will also support the emergency response activities in the poor and vulnerable neighborhoods of Quelimane and Tete, though the reconstruction support program for household and public sanitation facilities destroyed during the Cyclone Idai.

25. **Component 3: Municipal Sanitation Services Improvements in Maputo, Beira, Nampula, Tete and Quelimane (USD 11.00 million).** This Component will provide performance-based grants to finance service improvement activities in the cities of Maputo, Beira, Nampula, Tete and Quelimane. The grants will be linked to achievement of a minimum set of indicators (institutional, operational and financial) on a performance scorecard agreed between each participating municipality and DNAAS. The grant will consist of two parts: (i) a fixed part linked to achievement of certain institutional prerequisites (such as establishment of a ring-fenced municipal sanitation department, approval of the sanitation service improvement plan and introduction of a sanitation fee) during the first two years of the project, and (ii) a variable part linked to actual sanitation revenues collected by the municipality throughout the project period. Municipalities will utilize the grants to finance equipment and logistical support, and other assets and tools needed for effective sanitation service provision. It is expected that these funds will be used to improve maintenance and operations of the sanitation infrastructure, thus increasing its climate resilience and lowering the probability of service interruptions even in the face of extreme weather events. The grant will also contribute to, on a declining basis, financing gaps between the cost of delivering sanitation services and the sanitation revenues collected.

26. **Component 4: Technical Assistance and Project Management Support (USD 15.00 million).** This component will finance technical assistance to support national institutional strengthening and project management. Key activities for institutional strengthening include: (i) the review and harmonization of the legal and institutional framework, including the review of the Water Law and Water Policy to clarify roles and responsibilities between the central agencies and the municipal entities for sanitation investment planning, implementation, and service delivery; (ii) Regulatory tools for urban sanitation service delivery ; (iii) key preparatory studies for the next generation of sanitation investments; and iv) development of institutional and financing arrangements for sanitation at the municipal level. The project will also finance staff training for the key institutions involved on sanitation planning at the national level.

27. Project management support comprises technical assistance and incremental operating costs to ensure fiduciary compliance including financial management, procurement and environment and social safeguards, monitoring and evaluation. This component will support necessary equipment (e.g. computers, software and other goods), capacity building (training), and incremental staff to allow the project implementing unit to carry out their responsibilities.

28. **Component 5: Contingency and Emergency Response (USD 0).** This component will provide immediate response to an Eligible Crisis or Emergency, as needed. This would finance emergency works in the case of another disaster event by including a "zero-dollar" Contingency Emergency Response Component (CERC). This would help recover damage to infrastructure, ensure business continuity, and enable early rehabilitation. In parallel, following an adverse event that causes a major disaster, the Government of Mozambique may request the Bank to channel resources from this component into an Immediate Response Mechanism (IRM). The IRM would enable the use of up to 5 percent of uncommitted funds from the overall IDA portfolio to respond to emergencies. This IRM has already been established for Mozambique and is now operational. Specific details around this component (including activation criteria, eligible expenditures, and specific implementation



arrangements as well as required staffing for the Coordinating Authority) are defined in greater detail in the IRM Operations Manual approved in April 2016.

## E. Implementation

### Institutional and Implementation Arrangements

29. The project will be implemented by the Ministry of Public Works, Housing and Water Resources through DNAAS and AIAS. DNAAS will be the agency responsible for overall project coordination, planning and monitoring. It will also lead the implementation of the institutional and service development activities under the project, including capacity building for the city councils – component 3 and provide implementation support for onsite sanitation services – component 2, including the procurement, financial management and safeguards for the sanitation marketing program, toilet construction support program and FSM business development. AIAS will be responsible for the implementation of the sewerage investments – component 1, including the related procurement, financial management and safeguards implementation. The proposed project implementation arrangements result from extensive consultation with the sector agencies, institutional assessments and analytical work to define the most efficient project delivery framework. Further legal and institutional assessments will be carried out under the project to assist in defining the most adequate institutional framework for sustaining sanitation services at the national level.

30. DNAAS has established a Project Implementation Unit (PIU) for this project, with administrative reporting to the National Director and technical reporting to the Department of Sanitation. The World Bank has carried out an assessment of the capacity of this PIU and concluded that it meets the basic requirements for implementing the project. The PIU team at DNAAS includes a project coordinator, a procurement specialist, financial management specialist and a junior engineer. However, the PIU lacks capacity in some key areas such as environmental and social safeguards and monitoring and evaluation. DNAAS has agreed to strengthen the PIU with the recruitment of additional staff, in order to mitigate the capacity risks to the project. These are an institutional development specialist, an onsite sanitation engineer, a safeguards specialist, an M&E specialist and one project assistant. Other specialists could be considered as needed.

31. A new PIU will be established at AIAS to manage component 1, and will be composed of a project manager, a sewerage engineer, procurement specialist from *Unidade de Gestão de Aquisições* (UGEA), a financial management specialist, and two safeguards specialists (environmental and social), and a project assistant. Other specialists could be considered as needed. The project implementing entities will also work closely with the technical teams at CRA and FIPAG, and receive advice from the National Sanitation Task Force- *Equipa Técnica Nacional de Saneamento* (ETNS).

32. At the Municipal level, technical teams will be established within the sanitation units with a minimum of five staff to support project implementation. The technical teams for Maputo, Quelimane and Tete will include at least a city project coordinator and sewerage engineer, an onsite sanitation engineer, a safeguards specialist, a community development specialist which will also support M&E at municipal level. For Beira and Nampula, a city project coordinator will be appointed and will work in close collaboration with the sanitation units of those cities. These technical teams will work closely with DNAAS and be responsible for day-to-day monitoring and evaluation. They will also participate in the technical development, review and evaluation of relevant activities.

33. A set of four agreements will guide Project implementation: The World Bank will sign a financing agreement with the Ministry of Economy and Finance (MEF) as the recipient of the IDA credit/grant. MEF will, in



turn, sign a subsidiary financing agreement with AIAS, with terms and conditions acceptable to the World Bank. The World Bank will also sign a project agreement with AIAS. DNAAS will sign performance agreements with each of the municipalities of Maputo, Quelimane, Tete, Nampula and Beira, with terms acceptable to the Bank. All project operational modalities will be detailed in a Project Implementation Manual (PIM) to be prepared and adopted no later than one month after project effectiveness.

#### **F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)**

The proposed project is located in three cities of Mozambique, namely: Maputo (1.1 million inhabitants), Quelimane (250 thousand inhabitants) and Tete (230 thousand inhabitants). In Quelimane and Tete it is estimated that only 4 percent of the residents are connected to sewers, while the majority rely on on-site sanitation systems (75 percent), and the remaining 21 percent practice open defecation. The latter is more predominant in the peri-urban areas, where the poor live. In both cities, fecal waste is disposed in the environment without any treatment. In Maputo, close to 90 percent of the residents rely on on-site systems and only 9 percent are connected to sewers. Fecal Sludge Management (FSM) operators collect and transport sludge from the peri-urban areas to Infulene. Less than 3 percent of the fecal waste generated in the city is actually treated. Under component 1, in Maputo, the project will finance the (i) rehabilitation and expansion of the Infulene WWTP, (ii) rehabilitation and upgrade of 8.5km of sewers, (iii) rehabilitation and upgrade of two pumping stations, and (iv) upgrading of 12,800 existing sewer connections. In Quelimane and Tete, the project will finance the (i) rehabilitation and expansion of 56.5km of sewers, (ii) construction of two WWTP, (iii) upgrading of approximately 5,300 existing connections, (iv) construction of three pilot condominial sewer systems to serve about 1200 new connections, and (v) rehabilitation of about 18 km of small to medium scale drains to channel excess storm water and water-logged areas. Component 2 activities include (i) sanitation marketing and hygiene promotion; (ii) support to the construction and upgrade of 20,100 household on-site sanitation systems, (iii) construction of 78 public sanitation facilities in schools and markets; (iv) construction of four Fecal Sludge Treatment Plants and (v) support to private sector on FSM business development. In the Municipality of Tete five proposed sites were analyzed for the construction of the wastewater and sludge treatment plants, three sites located in the Francisco Manyanga neighborhood; one in the Mpadue neighborhood; and one in the Xingodzi neighborhood. Except for one of the sites located in the Francisco Manyanga neighborhood, all the other four sites have no buildings. In Quelimane, three proposed sites have been visited during project preparation. All the sites are currently inhabited and do not have specific commercial or agriculture activities.

#### **G. Environmental and Social Safeguards Specialists on the Team**

Salma Omar, Social Specialist

Paulo Jorge Temba Sithoe, Environmental Specialist



SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>The project is classified as category “A” as it is likely to generate significant negative environmental and social impacts and risks. Notwithstanding, project activities are also expected to contribute to positive outcomes such as reduction in the prevalence of unhygienic environmental conditions in urban neighborhoods that have negative impacts on public health including creation of employment opportunities during construction works. Likely negative impacts will occur during construction and operation. While most of the direct impacts will be site-specific some negative impacts can be also expanded to the indirect area of influence and in the auxiliary facilities which will require due safeguards consideration.</p> <p>During construction, likely adverse impacts will largely be associated with civil works and will include: soil degradation: emanating from destruction of the superficial layers of the soil in the preparation of the construction site, spillage of pollutants, soil compaction resulting from the installation and operation of the construction site, and circulation of trucks and heavy machinery; Potential contamination and interference with the hydrological systems: that could lead to changes in surface and groundwater flows by changing the infiltration / flow binomial, creating a barrier effect to natural drainage; alteration of surface and groundwater quality or even impermeabilization of recharge areas of aquifers; Potential production of large quantities of fecal sludge due to removal of existing sludge to clean anaerobic lagoons, large quantities of soils from digging of trenches to install the sewer pipelines and drainage canals; and potential health and safety risks that could result from dust emissions, odor, contamination of potential intruders during construction period. In addition, the expansion and construction of treatment plants may result in a potential loss of agricultural plots and sources of livelihoods.</p>



During the operational phase, the principal environmental risks are largely related to the effects from effluent discharges or incorrect practices in the management of the sewer system and WWTP. Preliminary assessment on the likely impacts of the effluent discharges into the receiving waters indicates long-term improvement in the water quality of the effluent discharged into the receiving waters. However, the increase in load and volume of wastewater and sludge discharge may result in surface and groundwater contamination, interference with the hydrological systems including change in flow regime and surface and groundwater quality, soil contamination due to potential production of large quantities of fecal sludge during removal of accumulated sludge to clean the anaerobic lagoons and production of sludge from waste water treatment processes. Other potential negative impacts during operation include potential public nuisance due to presence of odors, sludge and wastewater handling that could endanger the health of WWTP workers and farmers operating in the vicinity of the plant. In addition, the proposed rehabilitation of the Maputo WWTP is expected to limit the access for industrial waste disposal, which can result in illegal dumping elsewhere if remedial actions are not put in place. Incremental wastewater to be collected will be treated in the rehabilitated and new treatment plants to comply with the national wastewater discharge standards before discharging into the receiving waters. However, there might be some legacy issues related to existing contamination of the soil, ground and surface water, as well as public health risks associated with the current state of abandonment of the Maputo WWTP, with uncontrolled wastewater discharge, including industrial wastewater. The legacy risks will be further analyzed during implementation, as part of the detailed environmental assessment for the Maputo WWTP and mitigation measures will be added as part of Project activities.

Consequently, OP 4.01 was triggered and an ESMF was prepared to provide overall guidance and procedures for the preparation of subsequent



ESIA/ESMPs once the specific details of the subprojects designs and location are known for the proposed investments in Tete and Quelimane. The ESMF include provisions to address OP 4.04 (Natural Habitats), OP 4.09 Pest Management and OP 4.11 (Physical Cultural Resources) requirements. For the rehabilitation of the existing Infulene wastewater Treatment plant, a draft feasibility-stage ESIA has been prepared, but not yet finalized. The ESIA is expected to be finalized during Project implementation pursuant to the safeguards deferral provisions of paragraph 12 of the IPF Policy applied by authority of the Regional Vice President (RVP) in response to the emergency situation and aggravation of capacity constraints in Mozambique caused by cyclone IDAI. The draft feasibility-stage ESIA presents generic impact mitigation measures for the WWTP which will be further updated, during implementation, and prior to bidding, once additional data has been collected. Both ESMF and the draft feasibility-stage ESIA for the Rehabilitation of the Infulene wastewater treatment plant make reference for the use of the World Bank Group's General Environmental Health and Safety Guidelines and the Industry Sector Guidelines for Water and Sanitation.

The ESMF was extensively consulted upon and publicly disclosed both in-country and at the Bank's website prior to appraisal. The ESMF includes provisions for the development of Stakeholder Engagement Plans for the Project and for each subproject as part of their ESMPs. Each ESMP will also address relevant social aspects such as gender and vulnerability, labor issues, equitable access, environmental and hygiene education, and health and safety issues during construction and operation of the infrastructure. Appropriate Grievance Management System and E&S monitoring and supervision framework will also be established at the PIU and other relevant entities. The ESMF also includes the GBV risks and identification measures including the need for capacity building activities of PIUs and code of conduct for contractors.

Performance Standards for Private Sector Activities OP/BP 4.03

No



Natural Habitats OP/BP 4.04	Yes	<p>This policy is triggered since project activities could generate induce negative impacts on natural habitats in the wetlands of the Zambezi river in Tete, the Bons Sinais river (or Cuácua river) in Quelimane, or the mangrove coastal zone in Maputo.</p> <p>While most of the potential affected natural habitats are heavily humanized and degraded, safeguards instruments prepared for the project, ESMF and the prefeasibility ESIA include guidance and provisions to avoid or minimize impacts natural habitats caused by effluent discharges, emissions, sludge disposal, and drainage infrastructure among other project elements/activities that could pose risks to such ecosystems in compliance with OP 4.04 requirements.</p>
Forests OP/BP 4.36	No	<p>The project will be implemented in urban and peri-urban areas of the main capital cities, and does not involve or will affect forests by this policy.</p>
Pest Management OP 4.09	Yes	<p>Under the resettlement activities related to the Infulene Wastewater treatment plant, farmers will be resettled in a new agriculture field of approximately 4ha. Farmers will be provided with technical assistance and agronomical support to improve their productivity and production. The draft ESIA/ESMP includes provisions for pest management.</p>
Physical Cultural Resources OP/BP 4.11	Yes	<p>The nature and scope of the proposed activities suggest triggering OP 4.11 to ensure that any cultural resources are identified and properly managed. This includes subproject siting and design criteria that will seek to ensure that the proposed activities will avoid disturbing or affecting physical cultural resources. Additionally, the ESMF include “chance finds” procedures to address OP 4.11 basic requirements. The draft feasibility-stage ESIA/ESMP for Infulene wastewater treatment plant has also addressed this aspect and includes “chance finds” procedures as well as the relevant national legal requirements.</p>
Indigenous Peoples OP/BP 4.10	No	<p>There are no Indigenous Peoples in the project areas.</p>



The project will finance activities such as rehabilitation and expansion of sewerage networks including network connections, construction of wastewater treatment plants and fecal sludge treatment facilities and transfer stations, drainage infrastructure and other works that will necessitate land acquisition and is likely result in involuntary resettlement of people and/or loss of (or loss of access to) assets, means of livelihoods or resources.

The project therefore, triggers the World Bank safeguard policy on involuntary resettlement (OP/BP 4.12) as land acquisition will be required for new infrastructure related to sanitation. In dense urban and semi-urban areas, this is expected to lead to involuntary resettlement as well as impacts on livelihoods. While the exact impacts are unknown at this stage, except for those related to the Infulene wastewater treatment plant, the disturbances will result in land acquisition, loss/damage of property; damages to road pavements and driveways; damages to building structures; temporary obstruction to passage; temporary disruption to business activities and loss of income. The rehabilitation of the Infulene wastewater treatment plant will also involve livelihood impacts on 89 households who will be directly affected by the rehabilitation and fencing-in of the site. While there is no physical relocation of people involved in this intervention, the livelihood impacts are faced all 89 households including poor and female headed households. A RAP has been prepared acceptable to the Bank and in accordance with Mozambican legislation. Public consultations on the RAP were held on 5th October 2018 and appropriate grievance-handling procedures and arrangements for monitoring RAP implementation are in place. The RAP was publicly disclosed in-country (April 9, 2019) and on the World Bank's website (April 10, 2019). The RAP will be updated during implementation to include indirectly affected people around the site. The Livelihood Restoration Plan will include these people to ensure that the Project has positive impacts on indirectly affected farmers also. A full technical assessment of the site selected for relocation of 89 farmers will be undertaken during

Involuntary Resettlement OP/BP 4.12

Yes



implementation to ensure that it presents a (i) technically feasible (ii) cost effective and (iii) sustainable option for relocation. If the technical assessment does not support these criteria, an alternative site will be found by the Client and a suitable technical assessment will be undertaken.

For the infrastructure not yet fully identified and whose locations are unknown at this stage, a Resettlement Policy Framework (RPF) acceptable to the Bank has been prepared and once known, the infrastructure investments will be screened as per the provisions of the RPF and appropriate subsequent mitigation measures and instruments formulated and implemented as needed. The RPF was publicly disclosed in-country (March 15th, 2019) and on the World Bank’s website on March 20th, 2019. The RPF will guide the preparation of RAPs for all infrastructure works undertaken under the Project. The RAPs will be submitted to the Bank for clearance and implemented prior to the commencement of construction works.

Safety of Dams OP/BP 4.37	No	This Project does not have any activities related to dams.
Projects on International Waterways OP/BP 7.50	Yes	This policy is triggered as some of the wastewater treatment plants may discharge to the Zambezi River, which is considered to be international waterway as defined by this policy. However, the project activities will ensure that effluents to be released will be treated to meet international acceptable standards. Therefore, proposed project activities will not adversely impact the quality or quantity of water flows to other riparians. The Government of Mozambique has requested the World Bank to notify the other riparian states, which was issued on January 14, 2019, with a copy to the Zambeze Water Commission. The riparians were given a month to present any objections to the proposed investments. no objections were received before the submission date of February 15, 2019. The Notification Completion Memo was approved by the RVP on March 14, 2019.
Projects in Disputed Areas OP/BP 7.60	No	The project is not taking place in disputed areas.



## KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

### A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The proposed project will support the development of sanitation infrastructure (e.g. rehabilitation and upgrade of sewerage network and treatment plants, fecal sludge treatment plants, and small drains) and services in selected cities. The project investments are expected to reduce the environmental pollution from wastewater and the incidence of outbreak diseases. Currently, existing sewers and sewage treatment plants are dilapidated due to lack of maintenance, resulting in environmental pollution, as most of the sewage ends up in the environment without treatment. In addition, open defecation is widespread among the peri-urban poor (22 percent in Quelimane and 20 percent in Tete), which increases the risk of contamination and pollution of the water courses. The positive impact will be achieved through the adoption of improved and sustainable toilet systems' designs that improve access to sanitation, facilitate hygienic FSM, and limit groundwater pollution by ensuring separation of fecal waste and urine from grey water. The project is expected to result in reduced public health risks and environmental pollution due to poor sanitation. Further, to maximize environmental benefits from improved sanitation infrastructure, the project will also help strengthen the capacity of the municipalities to provide and promote safely managed sanitation services.

The project is classified as category "A" as it is likely to generate significant negative environmental and social impacts and risks. Notwithstanding, project activities are also expected to contribute to positive outcomes such as reduction in the prevalence of unhygienic environmental conditions in urban neighborhoods that have negative impacts on public health including creation of employment opportunities during construction works. On the other hand, likely negative impacts will occur during construction and operation. While most of the direct impacts will be site-specific some negative impacts can be also expanded to the indirect area of influence and in the auxiliary facilities which will require due safeguards consideration.

During construction, likely adverse impacts will largely be associated with civil works and will include: soil degradation: emanating from destruction of the superficial layers of the soil in the preparation of the construction site, spillage of pollutants, soil compaction resulting from the installation and operation of the construction site, and circulation of trucks and heavy machinery; Potential contamination and interference with the hydrological systems: that could lead to changes in surface and groundwater flows by changing the infiltration / flow binomial, creating a barrier effect to natural drainage; alteration of surface and groundwater quality or even impermeabilization of recharge areas of aquifers; Potential production of large quantities of fecal sludge due to removal of existing sludge to clean anaerobic lagoons, large quantities of soils from digging of trenches to install the sewer pipelines and drainage canals; and potential health and safety risks that could result from dust emissions, odor, contamination of potential intruders during construction period. In addition, the expansion and construction of treatment plants may result in a potential loss of agricultural plots and sources of livelihoods.

During the operational phase, the principal environmental risks are largely related to the effects from effluent discharges or incorrect practices in the management of the sewer system and WWTP. Preliminary assessment on the likely impacts of the effluent discharges into the receiving waters indicates long-term improvement in the water quality of the effluent discharged into the receiving waters. However, the increase in load and volume of wastewater and sludge discharge may result in surface and groundwater contamination, interference with the hydrological systems including change in flow regime and surface and groundwater quality, soil contamination due to potential



production of large quantities of fecal sludge during removal of accumulated sludge to clean the anaerobic lagoons and production of sludge from waste water treatment processes. Other potential negative impacts during operation include potential public nuisance due to presence of odors, sludge and wastewater handling that could endanger the health of WWTP workers and farmers operating in the vicinity of the plant. In addition, the proposed rehabilitation of the Maputo WWTP is expected to limit the access for industrial waste disposal, which can result in illegal dumping elsewhere if remedial actions are not put in place. Incremental wastewater to be collected will be treated in the rehabilitated and new treatment plants to comply with the national wastewater discharge standards before discharging into the receiving waters. However, there might be some legacy issues related to existing contamination of the soil, ground and surface water, as well as public health risks associated with the current state of abandonment of the Maputo WWTP, with uncontrolled wastewater discharge, including industrial wastewater. The legacy risks will be further analyzed during implementation, as part of the detailed environmental assessment for the Maputo WWTP and mitigation measures will be added as part of Project activities.

Some of the Project interventions will result in unintended negative social impacts to be mitigated through application of World Bank social safeguard instruments. Some of the sewer pipeline installation will be in densely populated areas of the city. Although the pipelines will be laid in road reserves to minimize land acquisition and disturbances, there are signs of encroachment on the road reserves in many areas across the city. The project is thus expected to disturb settlements, requiring land acquisition, and is likely to disrupt livelihood activities. The disturbances will result in loss of property; damage to road pavements; damage to concrete driveway; damage to building structures; obstruction to passage on the roads; disruption of public service utilities; and disruption to business activities and loss of income. In Maputo, the rehabilitation of the Infulene wastewater treatment plant will also involve livelihood impacts on 89 project affected persons. For sanitation investments not yet identified in Quelimane and Tete, the exact impact is unknown at this stage, but is likely to be of lower magnitude, given the size of the proposed sewer systems, which will be serving less than 5,000 sewer connections each. However, construction of new Wastewater Treatment Plants can potentially lead to resettlement.

To address the anticipated environmental and social impacts the borrower has prepared and consulted an overall Environmental and Social Management Framework (ESMF), a Resettlement Policy Framework (RPF) for the Project, and a draft feasibility-stage Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP) for the Infulene wastewater treatment plant. The ESMF, RFP and RAP have been disclosed in country and on the World Bank's website. However, additional data collection is required to complete the ESIA risk assessment and mitigation measures, in accordance with OP 4.01 (Environmental Assessment). The ESIA is expected to be finalized during Project implementation pursuant to the safeguards deferral provisions of paragraph 12 of the IPF Policy applied by authority of the RVP in response to the emergency situation and aggravation of capacity constraints in Mozambique caused by cyclone IDAI. Partial safeguards deferral was authorized to expedite project processing and support the emergency recovery efforts in the Cyclone Idai affected areas. For these four cities affected by the cyclone, project preparation is advanced, including in terms of preparation of the required safeguards instruments, per World Bank policy. However, for the fifth city being supported under the Project, namely Maputo, which accounts for 20 percent of the Project funds, additional data is required to finalize the ESIA. Additional data includes groundwater and surface water quality assessment, sludge and soil analysis in both the wet and dry seasons, air quality measurements and an assessment of the sludge disposal site.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: Project supported interventions on sanitation are expected to reduce the incidence of open defecation and related public health hazards. The residents of the selected cities will benefit from improved sanitation conditions at household level. Young girls will benefit from improved school sanitation, including improved menstrual hygiene



management. The proposed project interventions are expected to have long term impacts on public health and the economy. Better sanitation services will improve the business climate and enhance the potential of the selected cities to catalyze economic growth.

The potential negative long-term impact from sewer network expansion is the increase in effluent generation, which will in turn increase surface water and groundwater pollution load, and sludge generated from the sewage treatment systems. This is expected to be counter balanced by the expected positive long-term impact of such sewer network on groundwater quality and public health considering that all waste associated with such discharge was being directed to the surface and groundwater resources through soak away and pit latrines. Considering that it is more difficult to remediate groundwater contamination as compared to surface water, the net impact from both the sewer network investments and onsite sanitation is expected to be positive.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

The proposed systems will be mainly nature based, in order to reduce the use of chemicals and potential contaminants. Alternative sites were assessed but deemed non-viable given the high investment costs and additional large infrastructure required to relocate the current treatment systems.

For major road crossings, the alternative is to use underground tunnel across the major roads as compared to road cuttings. Consultation between the National Directorate of Water Supply and Sanitation (DNAAS), the city councils and National Roads Authority will arrive at the final most sustainable option. Consultation between DNAAS, Mozambique Electricity Company (EDM) and telecommunications companies will avoid relocation of communication and electricity infrastructure by efficiently using the available road reserve. In residential and restricted areas, manual trenching will be employed as compared to mechanical trenching, thereby reducing the impact zone.

For the Maputo WWTP, alternatives for the treatment processes were explored and recommended to the design engineer to improve the effluent quality, including the construction of maturation ponds instead of additional facultative lagoons, use of bed reeds; change in the construction phasing to prioritize the fencing and reduce the risks of public health contamination, and well as implementation of a sludge management program to prevent the illegal discharge of contaminated sludge. Alternative sites were also explored for the location of the treatment plant and the current site was deemed to be the most feasible from a technical, financial and environmental point of view.

On the social impacts, a Resettlement Action Plan and Livelihood Restoration Plan has been prepared to support farmers cultivating in the surrounding areas of the infulene wastewater treatment plant. The resettlement site was selected after a careful evaluation of two locations and in accordance with the wishes of the PAPs. The RAP will be updated during implementation to include indirectly affected people around the site. The Livelihood Restoration Plan will include these people to ensure that the Project has positive impacts on indirectly affected farmers also. A full technical assessment of the site selected for relocation of 89 farmers will be undertaken during implementation to ensure that it presents a (i) technically feasible (ii) cost effective and (iii) sustainable option for relocation. If the technical assessment does not support these criteria, an alternative site will be found by the Client and a suitable technical assessment will be undertaken.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

DNAAS is preparing the safeguards instruments to guide the implementation of the safeguards policies. An ESMF and RPF were prepared predicated on the fact the specific project design details as well as the exact locations for the



implantation of the WWTP in Quelimane and Tete cities are not yet known. Both the ESMF and RPF have been disclosed in country and on the Bank's website. The ESMF and RPF provide detailed guidance and procedures to be considered during all stages of subprojects cycles: (i) design and conception; (ii) rehabilitation and construction of sewers and drains including network connections; (iii) construction of wastewater treatment plants; (iv) construction of latrines and septic tanks; and (v) collection, transport and treatment of fecal sludge. The ESMF and RPF also contain institutional arrangement with roles and responsibilities for all implementing agencies, budget provision, capacity building strategy including the necessary reporting and monitoring procedures to ensure the successful management of the environmental and social impacts related with the project investments.

Simultaneously, a draft feasibility-stage Environmental and Social Impact Assessment (ESIA) has been prepared for the rehabilitation of the Infulene wastewater treatment plant. Although the specific nature of the interventions is not yet known, preliminary designs prepared through the Maputo Sanitation and Drainage Master Plan, outline some options for upgrading and expansion of the WWTP. The draft feasibility-stage ESIA contains an Environmental and Social Management Plan (ESMP) with specific provisions to address among others, impacts on environment receiving the effluents, on natural, physical cultural resources, labor influx, and community health and safety risks; as well as code of conduct for contractors' and supervising engineers' workers. The feasibility-stage ESIA includes an Environmental and Social Action Plan that details the plan with timelines and responsibilities for completing the ESIA for Infulene WWTP, including determining the disposal method and site for the current sludge deposits and other base-line studies and assessments that are currently missing in the pre-feasibility stage ESIA. An Environmental and Social Action Plan (ESAP) has been prepared and incorporated in the Project Appraisal Document for the update of the ESIA/ESMP during project implementation, prior to bidding, including timelines and responsibilities. The feasibility-stage ESIA will be updated during the first months of project implementation to incorporate the additional data, including groundwater and surface water quality assessment, sludge and soil analysis in both the wet and dry seasons, air quality measurements and an assessment of the sludge disposal site.

The rehabilitation of the Infulene wastewater treatment plant will also involve livelihood impacts on 89 households. The GoM will hire independent RAP implementation consultants to implement the RAP in Infulene. Since capacity for RAP preparation and implementation is limited within the client, the Project will use technical assistance and ensure that staff are trained in these issues during project implementation.

The project will be implemented by the Ministry of Public Works, Housing and Water Resources (MOPHRH) at central level through several of its subordinated institutions and by municipalities at the local level. The agencies at central level – DNAAS and AIAS - have some experience and capacity in managing infrastructure investments, including Bank funded operations. However, none of the municipalities currently have adequate capacity for project implementation and will require extensive capacity building including for environmental and social safeguards.

Two project implementation units (PIUs) will be established at DNAAS and AIAS. It will be necessary to recruit at least one environmental and one social safeguards specialist to be part of each of the PIU and help ensure that project interventions in all components are in compliance with the World Bank's safeguards policies and national legislation, including providing relevant assistance to other project Implementation Agencies, especially the Municipalities in the selected cities. As the municipalities have no adequate capacity for E&S safeguards implementation, dedicated E&S safeguards personnel will be required in all Municipalities where project activities will be implemented. The PIUs, through the E&S Specialists will be responsible for overall project oversight in compliance with the social and environmental safeguard requirements of WB policies of Mozambican laws and regulations. All works contracts will be bound by the site specific ESMPs which will include capacity building requirements for all implementers and budget of implementing such ESMPs. In addition to the E&S personnel, the PIU will hire RAP implementation consultants for



implementation of all RAPs developed under the Project. The costs for this have been included in the Influen RAP.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The preparation process for the ESMF and the RPF included extensive consultations with all relevant stakeholders including civil society organizations, project beneficiaries and key government agencies among others. Two rounds of consultations have been carried out in all Project cities: first, to share the initial findings; structure and approach detailed in the draft ESMF and RPF as well as receive feedback and then second, to present the final ESMF and RPF findings. The final drafts of the ESMF and RPF have been disclosed in-country (March 15th, 2019) and on the Bank’s website (March 20th, 2019).

Consultations with the project affected persons (PAPs) formed an important part of the process of preparing the safeguards instruments, particularly the RAP for the Infulene Treatment Plant, where the investments are known. The consultation meetings provided an opportunity for PAPs and other community members around the project areas to express their views on the proposed project activities as well as to raise any issues of concern relating to the project.

City Councils, central government departments, development partners and NGOs were consulted through various stakeholder meetings convened by DNAAS.

**B. Disclosure Requirements**

**Environmental Assessment/Audit/Management Plan/Other**

Date of receipt by the Bank  15-Mar-2019	Date of submission for disclosure  20-Mar-2019	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
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**"In country" Disclosure**

Mozambique  
15-Mar-2019

Comments

**Resettlement Action Plan/Framework/Policy Process**

Date of receipt by the Bank  15-Mar-2019	Date of submission for disclosure  20-Mar-2019
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**"In country" Disclosure**

Mozambique  
15-Mar-2019



Comments

**Pest Management Plan**

Was the document disclosed prior to appraisal?

Date of receipt by the Bank

Date of submission for disclosure

No

**"In country" Disclosure**

**If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.**

If in-country disclosure of any of the above documents is not expected, please explain why:

**C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)**

**OP/BP/GP 4.01 - Environment Assessment**

Does the project require a stand-alone EA (including EMP) report?

Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

No

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

Yes

**OP/BP 4.04 - Natural Habitats**

Would the project result in any significant conversion or degradation of critical natural habitats?

No

If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?

Yes



**OP 4.09 - Pest Management**

Does the EA adequately address the pest management issues?

Yes

Is a separate PMP required?

No

If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?

**OP/BP 4.11 - Physical Cultural Resources**

Does the EA include adequate measures related to cultural property?

Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes

**OP/BP 4.12 - Involuntary Resettlement**

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

**OP 7.50 - Projects on International Waterways**

Have the other riparians been notified of the project?

Yes

If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?

NA

Has the RVP approved such an exception?

NA

**The World Bank Policy on Disclosure of Information**

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes



### All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

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**APPROVAL**

Task Team Leader(s):	Shelley Mcmillan Odete Duarte Muximpua
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**Approved By**

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Country Director:	Raymond Bourdeaux	23-Apr-2019