Luxembourg, 12 September, 2017

Environmental and Social Data Sheet

Overview

Project Name:	KIGALI CENTRAL SEWERAGE
Project Number:	2013-0075
Country:	Rwanda
Project Description:	Construction of a new sewerage system for central areas of Kigali including collector sewers, secondary, tertiary sewers and a wastewater treatment plant.
EIA required:	yes This is required for the project according to Rwandan regulations and the Bank Social and Environmental standards. The documents will be published on the Bank's website

Project included in Carbon Footprint Exercise : no

Environmental and Social Assessment

Environmental Assessment

The proposed Kigali Wastewater Project includes sewerage collection from the central part of Kigali, a trunk main to transport the collected wastewater to a location about 2 km east of the city, and a wastewater treatment plant (WWTP) to treat this wastewater. This plant includes facilities for sludge processing and maturation ponds. The treated effluent will be discharged in the Nyabugogo River, next to the plant and upstream of the confluence with the Nyabarongo River. The treatment performance shall reach the following performance in terms of effluent discharge quality: BOD (Biochemical Oxygen Demand) < 25mg/l; Ammonia (as nitrogen) < 5 mg/l and TSS (Total Suspended Solids) < 50 mg/l.

Within the EU context (2011/92/EU Directive on Environmental Impacts) this project would have been screened as an annex II project.

This is a Greenfield project, as there is currently only onsite sanitation infrastructure in the city. Wastewater in Kigali is today collected predominantly in septic tanks and latrines. Septic tanks are currently emptied by tanker trucks, which discharge the septage in improvised ponds near the city's central solid waste disposal site, however liquids from these ponds infiltrate into the soil and groundwater, or overflow into the open surface water surrounding the city. In addition, most of the wastewater that does not enter the septic tanks is discharged directly in open watercourses and channels without any treatment, ending in Nyabugogo River carrying all pollutants from the City of Kigali (CoK).

The Water and Sanitation Corporation Limited WASAC is the promoter of the Kigali Wastewater Project. It is a public company providing water supply and wastewater collection services to the people of Kigali and other areas in Rwanda. It will benefit from technical assistance by an internationally experienced firm during project implementation.

All environmental matters in Rwanda fall under the responsibility of the Ministry of Natural Resources (MINIRENA), with the main role of preparing and ensuring the follow up and evaluation of policies and strategies related to natural resources protection and management. The institutional framework for environmental management is set out in the Organic Law

determining the modalities of protection, conservation and promotion of the environment in Rwanda, published in the Official Gazette RWA Nº 9 of the 1st May 2005, particularly in Chapter III relating to the establishment of the institutions. Rwanda Environment Management Authority (REMA) is an autonomous agency affiliated to MINIRENA and was established under the Organic Law (No. 04/2005 of 08/04/2005) responsible for managing environmental issues in Rwanda with a duty to implement policies and laws related to the environment. Specifically, this involves co-ordination and supervision of the Environmental Impact Assessment (EIA) process, compliance and monitoring in Rwanda. However, the responsibilities for EIA review and approval have recently been transferred from REMA to the Department of Environmental Compliance of the Rwanda Development Board (RDB) in order to help and facilitate investors to meet environmental standards.

The project preparation studies include an Environmental and Social Impact Assessment (ESIA), a Resettlement Policy Framework (RPF) and a Stakeholder Engagement Plan (SEP). These assessments have been prepared in compliance with the National Regulations and the EIB Environmental and Social standards. The related environmental permit for the project was issued by RDB on 24th April 2017.

Positive impacts

- Improved river water quality: the most beneficial impacts of the Project will be the cessation of the discharge of untreated sewerage in the environment and the Nyabugogo River which discharges to the Akagera River and eventually to Lake Victoria. Amongst other benefits, it will create more favourable conditions for fish populations, aquatic ecosystems and local people.
- Public Health improvement: the project will lead to a reduction in faecal coliform concentrations in the surface water, and improved sanitation in the project area.
- Economic attractiveness: creating efficient and sound sanitation services will improve the attractiveness of the city to new businesses, thus contributing to the economic development of the city.
- Gender: sanitation services are highly gender sensitive, improvement of public health and safety will have an important impact on vulnerable populations (children, women and elderly).

In order to better monitor the water quality development of the Nyabugogo River, the promoter will include in its regular river water quality monitoring program some sampling points upstream and downstream of the wastewater treatment plant.

Negative impacts

The identified negative impacts of the project have been identified in the ESIA and adequate mitigation measures, described below :

- Buffer zone and visual impact: the National Legislation provides that, in relation to a wastewater treatment facility, a safety zone of at least 20 m should be assigned and maintained, thus limiting the activities in these areas. Mitigation: development of a spatial planning order of the City of Kigali or the District of Nyarugenge to limit new developments of housing in the safety area zone around the WWTP. To mitigate the visual impact of the WWTP from the main road, high trees will be planted in the safety zone.
- Impacts of flooding risks: the maturation ponds are located in a flooding area; the WWTP has been located in an area less prone to flooding but not flood proof. Mitigation: the maturation ponds have been designed so that they can be flooded, even if the pond-water will wash into the river. The design of the WWTP includes a flood protection dike.
- Malaria related risks: the density of malaria mosquitos may increase substantially in the wetlands around the new maturation ponds. Mitigation: applying both preventive (biological measures such as introduction of predatory fishes to feed on mosquitoes'

larvae) and control measures (monitor malaria occurrence in the vicinity of the area and provide mosquito nets).

- Odour and Air pollution: odour spread depends on the quantities and composition of influent, and may still be limited upon start of the operations of the plant. However, when the plant is operating at full capacity, the odours will likely be substantial. Mitigation: effective odour monitoring program in a buffer area of the plant with participation from the neighbouring population and applying a mechanical sludge system (Belt Filter Press), instead of open sludge drying beds.
- Sludge disposal: The initial destination for the dried sludge will be a dedicated landfill in the vicinity of the city. Mitigation: the project will include a study related to the preparation of an operational plan for reusing the processed sludge for agricultural purposes.
- Works impacts: during construction, occurrence of occasional and localized disturbances (mainly dust, noise, construction waste and traffic). Mitigation: an Environmental and Social Management Plan has been prepared along with the ESIA and has been included in the works tender document for implementation by the future contractor.

Climate change
Introducing an aerobic wastewater treatment technology to treat wastewater discharges will have a direct mitigation effect against climate change: anaerobic treatment (septic tanks and latrines, the current used technologies) have a much higher GHG production, in particular methane. The effect on climate change mitigation is thus considered significant.

Social Assessment, where applicable

Resettlement
The project is expected to trigger permanent and temporary physical and economic displacement mainly limited to the location of the WWTP and the trunk mains. The related social impacts will be addressed appropriately by the Project's ESMP and RAP as outlined in the Resettlement Policy Framework (RPF). The RPF is based on the strategies of the Government of Rwanda and the EIB Standard 6. The RPF addresses the scale and responsibilities for remedying all adverse impacts of resettlement, in order to maintain and improve the living standards of those affected by land acquisition and any other resettlement impacts of the project.

The RPF estimated that 1,230 people (circa 307 households) shall be resettled and compensated by the Rwandese Authorities. Exact figures will be established after elaboration of the RAP. Specific conditions have been included for the Government to carry out the implementation of the RAP/ESIA/ESMP and the respective public disclosure.

Other social issues
Rwanda has been a member of the International Labour Organization since 1962. Rwanda has ratified 28 ILO conventions which include worker's compensation, recruitment of indigenous workers, safety provisions, minimum age, and forced labour among others. In the 106th International Labour Conference (ILC) held in Geneva, Rwanda was elected to be a Member of the International Labour Organisation Governing Body for a 3-year term (2017-2020). Labour standards will apply to first tier contractors.

Public Consultation and Stakeholder Engagement

A Stakeholder Engagement Plan (SEP), including an accessible grievance mechanism (GRM), has been prepared by international consultants in line with the Bank's standards and it includes a detailed stakeholder mapping and analysis. It provides a description of the affected communities and the institutions specifying roles and responsibilities for the planning

and implementation of mitigation measures. Several stakeholder engagement activities have already been carried out, including Steering Committee meetings, public hearings, bilateral meetings and surveys. Some of the issues raised during public hearings (2015) related to compensation packages, payment conditions and location of the works. These issues were collected and addressed during the meeting and will be taken into account in the RAP elaboration.

The SEP and the GRM will be duly implemented throughout the project's duration. The promoter will report on their implementation including on project information disclosure.

The Promoter will have to ensure compliance with national regulations and facilitate the access by the public to project related relevant information in accordance with the Bank's Transparency Policy. The promoter capacity to manage the E&S will be enhanced through the support of an internationally experienced consultant that will provide services related to RAP elaboration and implementation support and works supervision.

Conclusions and Recommendations

The implementation of this Project will lead to improved public health and environmental conditions in and around Kigali due to prevented flow of untreated sewage into open drains and surface waters, reducing water-borne diseases and pollution. An indirect impact will be improved economic development perspectives for the CoK, specifically the business centre, due to good sanitation facilities.

The Project is not expected to have any significant adverse impact on the environment. Possible negative environmental effects should be temporary and confined to the immediate construction sites. The impacts of flooding, visual pollution, odour, sludge disposal and mosquitoes have been adequately mitigated in the design of the components.

Involuntary resettlement and economic displacement is expected at the location of the WWTP and the trunk main and will need to be addressed appropriately by the Project's Environmental and Social Management Plan and Resettlement Action Plan.

The Project is considered acceptable for EIB financing from an environmental and social point of view with the following conditions relating to environmental and social matters:

Condition for first disbursement (not related to works):

- Resettlement Action Plan (RAP) elaborated and approved by all relevant stakeholders.

Condition for any disbursement related to works:

- Satisfactory evidence of implementation of the ESMP, RAP and the SEP including grievance mechanism.
- All compensation must have been paid to the people affected by the portion of works related to the referred disbursement.

Undertakings

- Compliance with the requirements of the Environmental and Social Management Plan. WASAC shall ensure that an independent audit is carried out to verify the satisfactory implementation of the Resettlement Action Plan.

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