

Environmental and Social Data Sheet

Overview

Project Name: Zambia Water and Sanitation
 Project Number: 2010 0303
 Country: Zambia
 Project Description: The project consists of investments improving the performance of Mulonga Water and Sewerage Company (MWSC), one of three commercial utilities (CUs) serving the Copperbelt area. These investments will also address non-revenue water, increase billing collection rates, and expand networks, especially in poor areas.

EIA required: yes

Project included in Carbon Footprint Exercise¹: no

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project consists of rehabilitation and expansion of existing water and wastewater infrastructure. Under the EU EIA Directive none of these measures would mandatorily require an EIA, i.e. they do not fall under Annex I of Directive 2011/92/EU.

A baseline ESIA has been carried out in line with international best practices as part of the project formulation study. The initial survey was carried out in January- February 2011 with all sites inspected and subsequent visual surveys by the technical team in July 2011 and by the project socio-economist in February 2012. The baseline ESIA concludes that environmental impacts are neutral or slightly adverse during construction. No adverse impact on biodiversity is expected.

The overall social impacts of the proposed programme at completion are expected to be **moderate to major beneficial** due to the anticipated improvement of water supply particularly in low income areas (LIAs). A full EIA to be submitted to the Zambian Environmental Management Agency (ZEMA) is not required under Zambian law. The planned work has little environmental impact apart from a generally positive impact on health and community and potentially positive impacts relating to contaminated land and water quality since it is largely repair of existing infrastructure. The detailed planning of the water treatment options will have to confirm this conclusion.

The Kafue River is considered likely to be heavily contaminated, although still cleaner than the ground water sources used by the plants in the mines. River water that is proposed to be used for supply to the Water Treatment Works will be treated to a quality suitable for potable supply according to Zambian Drinking Water regulations. This refers in particular to high Copper and Cobalt levels in the Kafue River for which few international guideline-values exist. The Bank has undertaken a review of the Zambian Drinking water standards and found them to be acceptable.

Considering the relatively complex environmental and social issues that involve the expansion of services into peri-urban and low cost housing areas the Bank will require a comprehensive Environmental and Social management Plan (ESMP) to be carried out as part of the detailed

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

design tasks. The following disbursement condition/ undertaking will become part of the Finance Contract:

Conditions for 2nd disbursement:

Acceptance by ZEMA and the Bank of an Environmental and Social Management Plan (ESMP).

Undertaking:

Compliance with the requirements of the ESMP.

Environmental and Social Assessment

Environmental Assessment

The baseline ESIA concludes that in terms of environmental impact there should be no major negative impacts concerning the proposed Chingola project or the options at Mufulira and Chililabombwe largely because the engineering proposals are localised construction or management within existing operational sites. Impacts as set out below apply equally to the proposed Chingola project or the options at Mufulira and Chililabombwe. Landscape, biodiversity, socio-economic and cultural heritage impacts at the proposed engineering sites are **neutral**. Noise and air impacts are **slight adverse**. Water quality and contaminated land impacts will be **moderate-high adverse** during construction though in the case of contaminated land this may be much less depending on the outcome of contaminated land surveys to be carried out at the detailed design stage on all the specific sites where excavation is proposed. The predicted moderate impact from contaminated land relates to likely elevated levels of soil contamination in the Copperbelt which may be disturbed during construction. Where contaminated land is identified, and remediated or removed during the site works, the quality of the remaining soil is expected to be improved giving a **moderate beneficial** impact. The moderate impact also relates to the creation of waste sediments, that may contain elevated concentrations of contaminants, during dredging of the settlement ponds, and their ultimate re-use or disposal. The high impact on water quality relates to likely elevated levels of contamination in the River Kafue and in the settlement ponds which may be further stirred up by construction/dredging operations. Most environmental impacts will arise through construction and so main mitigations will be managed through the Environmental Management Plan.

Social Assessment, where applicable

The baseline ESIA concludes that the overall social impacts of the proposed programme at completion are expected to be **moderate to major beneficial** due to the anticipated improvement of water supply. The rehabilitation of water treatment plants will provide improved access to better quality drinking water and improved coverage of the target populations across the Low, Medium and High Cost Areas of the Copperbelt. This will produce **major beneficial** impacts to at least 200,000 inhabitants in the service area. The likely impacts arising from extensions of supply of water and sewerage improvements and extensions to 25,000 households in low cost areas are expected to be **moderately to major beneficial**. **Major beneficial** public health impacts are expected in Chililabombwe and Mufulira, in particular, as a result of the sewer rehabilitation. The socio-economic impacts of delegated management in PUAS are expected to be **major beneficial**.

Public Consultation and Stakeholder Engagement, where required

Public consultations will be carried out as part of the detailed design and planning process for all measures in line with Zambian regulation and international best practices. That applies in particular to the service expansion plans for the low income areas (LIAs). Similar consultations will be carried out for those areas where the population currently (illegally and at great health risks) diverts wastewater for irrigation purposes. Public campaigns are an

essential tool to increase water and sanitation coverage in LIAs and also to reduce vandalism and theft of water infrastructure.

Other Environmental and Social Aspects

Legislative and Policy Background

The Water Act (Chapter 198)

The Water Act provides for the control, ownership and uses of water, excluding water that is part of international boundaries. The Act established the Water Development Board (WDB). Ownership of water is vested in the President on behalf of the Republic of Zambia, and therefore all use of water is made in accordance with the Act. The WDB regulates the use of public water other than for domestic use, and has a special section dealing with industrial water uses. The Act further establishes polluting public water as an offence.

Environmental Protection and Pollution Control Act No. 12 of 1990

This Act establishes the Environmental Council of Zambia (ECZ) (now ZEMA). The ECZ mandate is to enforce the provision of the Act relating to monitoring and enforcement authority regarding environmental protection and pollution control in Zambia. The Act is organized in sections and parts for water, air, waste, pesticides and toxic substances, noise, ionizing radiation and natural resources conservation.

The Water Pollution (Effluent and Waste Water) Regulations, Statutory Instrument No. 72 of 1993

The Water Pollution Control Regulations were issued in pursuance to the Environmental Protection and Pollution Control Act. The Regulations establish that operators of sewage systems require a license from the ECZ to discharge sewage effluent. The regulations outline the application format. All water and sewage systems operators are thus licensed by ECZ without which they would not operate. The Inspectorate (ECZ) shall ensure that the applicant has adequate and appropriate facilities and equipment for pre-treatment and that any effluent from operation processes shall not cause significant damage to the environment. The license holder shall conform to the conditions and standards for chemical and physical parameters as set out in a table of standards for effluent and waste water attached to the license. The license is normally issued for a period of three years and may be renewed for a similar period. ECZ may limit the validity of the license when necessary. Similar regulations are outlined for withdrawal of water from a watercourse for the purpose of diluting effluents. The holder of a license shall keep records of licensed activities and submit the records every six months to ECZ. Abnormal discharge of effluents shall be reported to ECZ. The ECZ has the authority to order the license holder to install metering devices and take samples for monitoring of the operations. Applications shall be gazetted four weeks prior to the issue of licenses.

Environmental Impact Assessment Regulations, SI No. 28 of 1997

The Regulations divide projects in two categories, one that require a project brief to be prepared by the developer, and the other that require environmental impact statement to be prepared. Water supply schemes (pipelines with diameter of 0.5m and above and 10km length outside built up areas, and reservoirs with 50m² surface area or more), sewage disposal works (capacity 15,000 litres or more a day) and solid waste disposal (1,000 tons/day and above) would require an Environmental Impact Statement.

The Public Health Act (CAP295)

The Act regulates monitoring procedures for portable water quality standards. The Central Board of Health has issued guidelines for drinking water quality and sampling procedures.

Zambian Environmental Management Agency (ZEMA)

ZEMA was originally established as the Environmental Council of Zambia (ECZ) under the Environmental Protection and Pollution Control Act No. 12 of 1990. The ECZ was a body corporate with the power of the Act to do all such things a body corporate may lawfully perform. ZEMA is the Environmental Inspectorate with technical staff and facilities required to administer, monitor and enforce the Statutory Instrument No. 28 of 1997 and its updates on EIA.

Luxembourg, 18 December 2012

[Ministry of Health](#)

The Ministry of Health through the Chief Health Inspector is responsible for monitoring potable water quality. Monitoring of water quality is carried out through provincial laboratories by the Public Health Officers of the District Health Management Teams.

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