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ZAMBIA (D2B16ZM05)

# Advice on the ESIA for the Solwezi Water Supply Project

9 December 2020

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# Advice of the Secretariat

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| **Title** | **Advice on the ESIA for the Solwezi Water Supply Project (D2B16ZM05)** |
| **To** | Netherlands Enterprise Agency (RVO) |
| **Attn** | Mr Z. (Zoran) Lazić<br>Mr H.T. (Harold) Hoiting<br>Mr J.P.R. (Jeroen) Bakker |
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| **From** | The Netherlands Commission for Environmental Assessment |
| **Members of the working group** | Ms M.W.J.A. (Tanya) van Gool (Chair)<br>Mr W. (Wybrand) van Ellen (Expert)<br>Mr L.C. (Luuk) Rietveld (Expert)<br>Ms B.M. (Brenda) Brainch (Expert)<br>Ms L. (Leyla) Özay (Technical Secretary) |
| **Quality control** | Ms G. (Gwen) van Boven (Technical Secretary) |
| **Cover photo** | Ms L. (Leyla) Özay |
| **Reference** | 7216 |



Contact:
w www.eia.nl
t +3130 234 76 60
e ncea@eia.nl

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## List of Acronyms

| | |
|---|---|
| CSO: | Civil Society Organisation |
| DRC: | Democratic Republic of Congo |
| EIS: | Environmental Impact Statement |
| ESIA: | Environmental and Social Impact Assessment |
| ESMP: | Environmental and Social Management Plan |
| ESMMP: | Environmental and Social Management and Monitoring Plan |
| ESMS: | Environmental and Social Management System |
| GoZ: | Government of Zambia |
| IFC PS: | International Finance Corporation Performance Standards |
| LRP: | Livelihood Restoration Plan |
| MWDSEP: | Ministry of Water Development Sanitation and Environmental Protection |
| NCEA: | Netherlands Commission of Environmental Assessment |
| NWWSSCL: | North Western Water Supply and Sewerage Company Limited |
| RAP: | Resettlement Action Plan |
| RVO: | Netherlands Enterprise Agency |
| SEP: | Stakeholder Engagement Plan |
| ToR: | Terms of Reference |
| WARMA: | Water Resources Management Authority |
| ZEMA: | Zambian Environmental Management Agency |

# 1. Introduction

## 1.1 The project and the request to the NCEA

Solwezi is the provincial capital of the North Western Province of Zambia. As a hub of new mining developments in the past fifteen years, Solwezi district and town have been subject to unprecedented transformation and population growth. These changes have come at such pace, that North Wester Water Supply and Sanitation Company Limited (NWWSSCL, from now on the proponent) is not able to meet the growing demand for water[1]. The current water supply coverage is estimated at 34%, which equals to 8500 active connections and 53.000 people of the total of 230.000. NWWSSCL is currently developing a project to expand the existing water system with the aim of 100% coverage by 2031. This is expected to require an increase of 16.000 $m^3$ up to 20.000 $m^3$ water extraction per day on top of the capacity in 2018.

The proposed project shall include the following activities:

- Surface water extraction from the Solwezi River and repairs on the current water intake
- Groundwater extraction through:
  - repairs and sanitary protection of the Kabitaka wellfield
  - construction of new wellfield with 20 boreholes at the Dambo site/Kipemba wellfield
- Construction of transmissions main from the Dambo site/Kipemba wellfield, to the distribution network, a total of 35km transmission mains will be set up or replaced
- Construction and rehabilitation of distribution centers (7 reservoirs, the police station tower)
- Extension of the distribution system (866 km distribution pipes) to currently unserved areas and the replacement and upgrading of distribution lines in all the zones.

In Zambia, the procedural requirements for Environmental and Social Impact Assessments (ESIAs) are provided by the Environmental Impact Assessment Regulation no. 28 of 1997. This regulation requires an ESIA for projects listed under its 1st and 2nd schedule. The proposed project falls under the 2nd schedule section Transportation (part d) and section Dams, Rivers and Water Resources (part b), which both require an ESIA that should result in an Environmental Impact Statement (EIS). The scoping report / ToR for the impact study have been approved by the Zambian Environmental Management Agency (ZEMA) on the 3rd of July 2020. After this date, the impact assessment has been carried out and the design of the water system has continued.

An ESIA is also required by the Netherlands Enterprise Agency (RVO) who supports the development phase of this project. Therefore, NWWSSCL commissioned a feasibility study which included several background studies and an ESIA. At RVO's request, the NCEA advised on the quality of the scoping report/ToR in December 2019. On 21 September 2020, the RVO requested the NCEA to also review the quality of the draft ESIA. At the time of this review, the ESIA/EIS had not yet been submitted to ZEMA for formal review. Earlier at the scoping stage, the NCEA and ZEMA had agreed to keep each other informed about their reviews.

[1] NWWSSCL is a private liability company that is entirely owned by the seven districts of the North Western Province. NWWSSCL was incorporated in the Companies Act of Zambia in 1999 and is regulated under the Water and Sanitation Act of May 1997.

## 1.2 Approach by the NCEA

In order to carry out this review, the NCEA formed a working group with members covering different areas of expertise, including hydro(geo)logy, social impacts and civil engineering of water supply systems. The members of the working group who reviewed the draft ESIA are the same as those who had reviewed the scoping / ToR report for the proposed project. At the scoping stage, the working group had a chance to visit the project area between 9-15 November 2019 and to interact with various institutions. There was no such opportunity in the review of the draft ESIA, due to travel restrictions related to COVID-19. However, also during this review, the working group members could still source from their impressions and information that was obtained during the earlier site visit.

The main focus of this review and advice has been the document '**1st Draft Environmental and Social Impact Assessment for the proposed Solwezi Water Supply Project'** dating **September 2020.** The NCEA also used several background documents as reference in the review of the draft ESIA including:

- Appendix 4- Minutes scoping meetings July-August 2019
- Appendix A – Biodiversity Report
- Appendix J – Solwezi Water Supply Ground Water Study
- Appendix K – Solwezi Hydrogeological Survey Report
- Appendix L – Solwezi Exploratory Drilling and Test Pumping Report
- Appendix M – Risk Assessment for wellfield development Solwezi
- The Resettlement Action Plan Framework

The NCEA has learnt that a Stakeholder Engagement Plan (SEP) has already been formulated for the project. However as the document was received after this advice had been finalised, the NCEA has not been able to review the information contained in the SEP.

It should be noted that the NCEA's observations, conclusions and recommendations do not concern the aforementioned background documents (Appendices) but relate to the main body of the ESIA. The working group made use of the following benchmark in their review:

- Zambian EIA regulations no. 28 of 1997
- International Finance Corporation Performance Standards (IFC PS) (2012)
- World Bank Group Environmental Health and Safety Guidelines (EHS) for Water Supply and Sanitation (2007) & EHS Guidelines for Wastewater and Ambient Water Quality (2007)

This report presents the NCEA's main findings and conclusions of their review of the draft ESIA report. First, in section (§1.3) a summary of key conclusions and recommendations is presented. This section touches upon several strengths and the key shortcomings that according to the NCEA need to be addressed in a revised ESIA. Chapter 2 elaborates on these shortcomings throughout different sections, each ending with a list of recommendations. In the elaboration of key shortcomings and recommendations, IFC PS considerations have already been incorporated. In chapter 3, only additional and more detailed findings in relation to the ESIA's compliance with IFC PS are outlined.

# 2. Summary of key observations & essential shortcomings

Many efforts have been undertaken and useful information has been collected and documented to prepare the ESIA. The NCEA notes in particular that:

- The project rationale is clearly outlined, establishing the need for the project convincingly.
- The non-technical summary has been translated into different local languages.
- Different components of the project have been described in detail and maps are included in Appendices outlining the locations of the piping network and the transmission mains.
- Various useful background studies have been carried out to inform the ESIA such as a groundwater study, risk assessment of the wellfield development and biodiversity report.
- Different options for groundwater and surface water have been compared. Although alternatives such as river bank filtration were not considered, the selection of groundwater is sufficiently justified. Also the need to develop the Kipemba wellfield as a new water source through a phased approach to ensure sustainability is well explained.
- A wide range of risks and potential impacts and nuisance during construction phase have been considered.
- Current shortcomings on sanitation are referenced, and the importance to deal with water supply and sanitation at the same time is recognised.
- Minutes from stakeholder meetings held at the scoping phase are included.
- The project design has sought to minimise resettlement where land may be required, both temporarily and permanently. Section 6 lists in detail the routes where resettlement will take place and notes some considerations for the coming Resettlement Action Plan (RAP) and Livelihood Restoration Plan (LRP).

Notwithstanding that a significant effort has been made to collect, analyse and report information, the NCEA concludes that the ESIA in its present form is still an early draft that requires considerable improvements. This conclusion is drawn on basis of the following:

- The ESIA is difficult to navigate and does not provide a clear picture of the project's key impacts, risks, mitigation measures and monitoring plans. Relevant impacts and mitigation measures are mentioned, but are presented inconsistently, and in some cases contradictory. The conclusions on impact levels are not explained and information from Appendices are not sufficiently taken up and consolidated in the main report. The draft report is therefore not adequate to inform decision making and to guide the proponent and future contractors (see further section 3.1).

- The necessity for a phased approach and a relatively large protection zone has been recognised for sustainability and maintaining good water quality at the Kipemba wellfield. The ESIA does however not include any further detail how this phased approach will be implemented to guarantee that Kipemba wellfield is not used beyond its capacity. Neither does the ESIA propose a clear plan and budgets for how a protection zone will be established, both at the Kipemba as well as the Kabitaka wellfields. It is hence concluded that the key risks and impacts related to water extraction are not addressed sufficiently

- Despite acknowledging the importance of addressing sanitation/wastewater management and water supply in tandem, potential consequences of increased wastewater discharge have not been assessed and no measures have been proposed to prevent, mitigate and monitor and manage impacts. It is hence concluded that an important potential impact is being overlooked and that expecting (only) positive impacts from the project is not substantiated (see further section 3.3).

- A RAP/LRP framework is provided with relevant components. It is however unclear whether the ESIA and the framework address all areas where land acquisition and resettlement will take place. The RAP/LRP framework does not clarify how the project will deal with informal settlements or businesses and people who have already been resettled at the Kipemba wellfield site / protection zone (see further section 3.4).

- The ESIA does not deal adequately with stakeholder engagement. It is unclear how stakeholder comments at the scoping phase have been considered and what the process of stakeholder consultation in the impact assessment phase entailed.

**Overall recommendations**

- Revise the ESIA as proposed in section 3.1 to increase its ability to inform decision makers and stakeholders.
- Address the gaps in information, analysis and plans for mitigating and managing risks and impacts (outlined throughout sections 3.2-3.5) in relation to:

- Groundwater sources (water availability, water quality)
- Increased discharge of domestic wastewater
- Resettlement and livelihoods
- Stakeholder engagement

# 3. Elaboration of essential shortcomings

## 3.1 The overall quality of the report

The NCEA acknowledges that considerable efforts have been made to collect and analyse in formation in order to prepare this ESIA report. However, in its present form the ESIA is difficult to navigate and does not provide a clear picture of the project's potential negative impacts and risks, how these will be avoided, mitigated or managed, costed and monitored. The draft report therefore requires rigorous improvement to be able to 1) inform decision makers and stakeholders; and 2) inform and guide the proponent and future contractors in managing key risks and impacts.

**Inform decision makers and stakeholders**

- The main body of the ESIA report (330 pages) contains extensive descriptions, repetitions and (technical) details that could be simplified, summarised in tables, removed to an Annex or eliminated. At the same time, the quality and depth of explaining key risks/impacts, mitigation and monitoring plans (Chapters 7 and 8) could be improved.
- A gradation of impacts is presented without substantiation. The description of impacts in section 7.8 uses different ratings from those given in previous sections 7.7.3 and 7.7.4.
- The ESIA does not establish a clear link between project descriptions, baselines, impacts/risks, mitigation measures and monitoring plans. Baseline data contains large amounts of contextual information which do not link to impacts.
- Although the report highlights relevant impacts and mitigation measures, these are inconsistent in terms of framing, sequence and contents (see sections 7.5–7.8 and related Tables and chapter 8).

**Inform and guide the proponent and contractors in managing key risks and impacts**

- Several background studies and reports in Appendices come up with useful analysis and suggestions for mitigation. The ESIA does not integrate and consolidate all relevant information from these reports.
- The ES Management and the Monitoring Plan are not sufficiently detailed:
  - The management plan is not specific as to ways the project will address identified issues (e.g. traffic management, water quality monitoring, health and safety plans). It defers responsibility through statements such as 'the project should put in place' or 'mitigation measures will prevent this from occurring' (Table 7i item 5a p. 298). It is not clear how the project will ensure that the necessary expertise and capacity will be in place to deliver on these obligations.
  - The Environmental Monitoring Plan does not indicate the mitigation measures to be monitored, the performance indicators or related cost estimates.

**Recommendations**

- Improve the readability of the ESIA by considering the following:
- Restructure the ESIA report in a way that project activities, justification of design choices, impacts, mitigation measures and plans, come out in a way that is logical and easy to follow.
- Bring coherence and consistency between risks, impacts, mitigation and monitoring throughout the whole ESIA report.

- Eliminate repetitions (such as information on the context and on the selection of water sources) and baseline information (such as wind speed, education, transport and communication) that do not have a direct link to impacts.
- Simplify and shorten the technical details on the proposed project or remove these to an Appendix.

- Integrate and consolidate the information in the Appendices into the ESIA. Explain, where relevant with cross-reference to Appendices, the underlying reasons for the determined impact levels and mitigation.
- Make sure that the ES Management Plan is comprehensive and indicates clear proposals for managing key impacts. Specify in the ES Management Plan and Monitoring Plans the institutions, their responsibilities, actions and timing, performance indicators, as well as budgets. Pay specific attention to ensuring capacity and monitoring of (sub)contractors on delivering on their obligations.

## 3.2 Dealing with uncertainties and risks around water sources

In its earlier advice, the NCEA pointed out the need to present a comparison of how different water sources perform on long-term availability, water quality and social and environmental impacts. This, in order to justify the selection of the source for the water supply system, which is relevant from the perspective of a sustainable use of resources like water (IFC PS 3) and the maintaining benefits from eco-system services (IFC PS 6). It was also advised that cumulative impacts on the quality and quantity of water sources during operations could be significant and need to be studied through appropriate evaluation methods (for instance modelling). Finally, it was advised that risks related to climate change, population growth, deforestation and mining developments need to be taken into consideration.

The NCEA observes that water sources have been compared on different criteria. The ESIA report explains that, based on the available data and analysis, groundwater seems to be the most viable option from water quality and availability perspectives. The ESIA concludes, based on exploratory borehole drillings and pump testing, that the Dambo site/Kipemba wellfield, which is located 15 km west from Solwezi town, has shown *sufficient confidence* to serve as water source for Solwezi on a sustainable basis. This new source will be combined with the existing Kabitaka wellfield, while Solwezi River will be used in the coming 3 years as a backup system until the new wellfield is operational.

- The NCEA observes that background studies of good quality underlie to the ESIA (see groundwater related appendices J, K, L and M) and following conclusions are sufficiently justified:
  - There is currently insufficient reliable information to fully understand the functioning of the groundwater system and potential impacts of water extraction. Also, the long-term availability of the required water volumes at the Kipemba wellfield is uncertain. These uncertainties will be dealt with by developing the Kipemba wellfield through a phased approach. Different pumping regimes will be monitored to better understand the hydrogeological system and to develop a groundwater model. Insights from this model will confirm whether the gradual increase of water yield from 500m³/hour to 1000m³/hour, eventually up to 1500m³/hour can be maintained sustainably.
- The ESIA does however not include any further detail how this phased approach will be implemented to guarantee that Kipemba wellfield is not used beyond its capacity:

  - The ES Management and Monitoring Plans do not assign any roles, responsibilities for data collection and analysis, nor include a plan for a solid monitoring system for a phased development of the wellfield. There is no reference to the inclusion of and interactions with relevant institutions like WARMA.
  - The need for capacity building among the proponent's staff for monitoring and the groundwater model is mentioned, without clear follow up.
  - No risk management plan is included for the scenarios that yields from the Kipemba wellfield turn out to be lower than expected, more water is needed than anticipated or it takes (much) longer before it becomes operational. The ESIA does neither explain how the project intends to deal with water extraction from the Solwezi River in case one of these scenario's become reality[2]. Appendix M proposes the investigation of alternative water sources as a mitigation measure, but this is not included in the ESIA.
- The Kipemba wellfield is stated to be 'extremely vulnerable' to contamination and will require a relatively large and well managed recharge protection zone to maintain water quality[3]. As a mitigation measure, the ESIA proposes that a protection zone is established, without providing a clear plan, guidance or budget. Where and when will this zone be located? Will it require any resettlement? How will it be managed and is there sufficient capacity? The NCEA notes that managing such protection zones can be challenging and will require deliberate efforts from the proponent to establish, maintain and to manage relations with stakeholders to avoid conflicts. The same conclusions and questions also apply for the protection zone for the existing Kabitaka wellfield, which is located in a more residential area. Also note that Appendix M refers to the need to establish these zones as early as possible, which is not explicitly mentioned in the ESIA.
- The ESIA report refers to the danger of non-anticipated impacts from water extraction due to the inhomogeneous character of the aquifer. As potential impacts have not been ruled out, it is surprising that possible effects on water resources have not been listed as potential impacts in the operational phase (Table 7d, 7e p. 289-290) and not included in the ES Management and Monitoring Plans.

**Recommendations**

Develop a clear plan for the phased development of the Kipemba wellfield, by integrating information from Appendix M and by outlining:

- Roles, responsibilities, budgets and timelines for monitoring, data collection and analysis, developing the piezometric map and reporting.
- Capacity building activities among relevant staff and collaboration with institutions like WARMA, to develop and understand the groundwater model.
- A ***risk mitigation plan*** for the case that Kipemba wellfield will not deliver sufficient water, or the case that it takes much longer than 3 years for it to become operational and no alternatives have been found. Include in this mitigation plan the measure that when due to unexpected circumstances the Solwezi river must be used for a longer period than the anticipated 3 years, or more intensively, additional studies are carried out and measures

[2] The intake at the Solwezi River is already being used as water source and the ESIA points out various challenges associated with this source such as contamination, turbidity, unreliable flow records, siltation of the riverbed and increasing number of users. The proposed projects intends to use the intake at Solwezi as a temporary water source for 3 years until Kipemba wellfield is fully operational.

[3] The ESIA refers here to a conclusion from the feasibility study which found that most productive aquifers in the area is located within the Chafungoma Marbles, These are karst aquifer, which can support high yielding boreholes but are also extremely vulnerable to contamination, for instance due to settlement or industrial development.

are taken to deal with associated challenges such as contamination, turbidity, unreliable flows, siltation of the river bed and increasing number of users.

Elaborate a plan for field protection of the Kipemba and Kabitaka wellfields outlining the principles and approach, roles, responsibilities, collaboration with relevant institutions (such as the Solwezi Council) and budgets to establish and manage protection zones. Establish these zones as early as possible and develop a specific plan to monitor water quality of both sources.

## 3.3 Impacts wastewater

Expanding the water supply network as proposed in this project will lead to a significant increase in the uncontrolled discharge of domestic wastewater. Especially in a rapidly urbanising town like Solwezi, the uncontrolled discharge of wastewater may pose serious health risks to the population, which should according to IFC PS 3 be avoided or minimised. During the review of the scoping report, the NCEA had observed that the issue of wastewater management had not been adequately addressed. At that time, there seemed to be an assumption that an expected separate sanitation project would automatically solve this issue. However, the finance and timing of this sanitation project was and still seems to be uncertain. Hence, it is likely that certain parts in town will start receiving water (and generate wastewater), while their connection to sewage networks may still take some time. The NCEA hence recommended that the necessity to address sanitation/waste water management and water supply in tandem is recognised and potential impacts associated with increase in domestic wastewater are addressed.

The ESIA report indeed acknowledges the risk of ground water contamination from large volumes of untreated wastewater (section 4.3.1.1) and that groundwater contamination due to higher hydraulic loads in certain types of sanitation already constitutes a problem in the project area (section 5.8.10.1). It also states that improved water supply and sanitation should be in tandem in order to realise improvements in health conditions (pages 228 and 282). However, these statements have not been given follow up:

- No baseline data is provided on the expected quantities and locations of wastewater as a result of the project, prevalent water related diseases and their causes, needed improvements in sanitation infrastructure in different parts in town and risk areas and factors such as those that may lead to stagnant water. Nor is any data given on willingness and capacity to pay for connecting to a future sewer system or improved septic tanks.
- No (visible) attempts are made to use or integrate the existing baseline information on sanitation[4] into the design or planning of the water supply or into the ESIA.
- The potential impact of wastewater discharge has not been assessed and no measures have been proposed to prevent, mitigate and monitor/manage impacts. Also, the measures as proposed by the NCEA's earlier advice have not been considered.
- Despite the fact that potential negative impacts from wastewater have not been assessed, the ESIA concludes that only positive health impacts are expected from the project. The

[4] Generated under pre-feasibility studies for the sanitation project, with African Development Bank support. In section 3.3.1of the ESIA it is outlined that the following is already available that could be used in preparing this ESIA 1) initial ESIA on sewerage 2) results for sewerage projects up to 2030 3) the need for sanitation services 4) preliminary design of technical feasible measures to comply with sanitation objectives.

NCEA reiterates that improved health from water supply cannot be assumed, or may even deteriorate, if sanitation is not improved at the same time.

**Recommendations**

- Deal with impacts associated with increased wastewater through the following:
- Collect or use existing relevant baseline data on sanitation (e.g. current and predicted situation, capacity and willingness to pay for improvements, prevalent water related diseases and causes). Consider providing house(water) connections only to houses with access to septic tanks or sewer systems where wastewater can be disposed safely.
- Provide an overview of quantities of domestic wastewater generated by the project at different locations over time and identify risk factors and areas (for instance for stagnant water, proximity to surface water).
- Assess potential impacts from increased wastewater discharge and include measures for mitigation and monitoring.
- Organise awareness raising campaigns on wastewater management and sanitation.
- Consult and coordinate with key government departments such as the Department for Health, to get commitment on their role in the ESMP. Discuss opportunities to subsidise poor households for improved sanitation. Also, agree on a plan to jointly respond to emergency situations such as the outbreak of diseases like cholera.
- Use the ESIA as a tool to align water supply with the planned sanitation project. World Bank EHS Guidelines for Water Supply and Sanitation and for Wastewater and Ambient Water Quality could be used for further guidance.

## 3.4 Dealing with resettlement and livelihood restoration

Significant resettlement, both temporary as well as permanent, is anticipated in the project from a) pipelaying in commercial market areas which will disrupt permanent businesses and informal market stalls beside the roads; b) 'major land acquisition' of the Kipemba wellfield area and for the main transmission line from the wellfield to the main gazetted road. This transmission line will pass through farmlands and end in various treatment structures; c) land acquisition for water kiosks, new boreholes and reservoirs.

The NCEA underlines the statement in the ESIA that for resettlement the project requires a rigorous enforcement of IFC PS 5. In relation to a RAP/LRP the NCEA had recommended for the ESIA to include detailed information on how resettlement will be prevented or minimised, who will be affected, how the project will deal with informal/non-titled land users and vulnerable groups[5], how compensation rates will be determined and the grievance mechanism.

In the ESIA and the proposed project design describes proposals to minimising resettlement, taking into account in the design of pipelaying (chapter 6, Table 6a) along the Resettlement Corridor of Impact. A framework for RAP/LRP was submitted at the same time as the ESIA, and a full census to establish the status of affected populations and to determine the measure of compensation is still to be determined. The NCEA notes that the RAP/LRP Framework contains important elements such as an institutional and legislative framework for resettlement, a separate Grievance Mechanism and an outline for a strong monitoring and

[5] See IFC PS 5 Guidance Note 29 for further guidance.

evaluation system, inclusive of the resettled population, women and vulnerable groups. The following issues still require due attention:

- The NCEA is not able to tell whether the ESIA presents a complete picture of all areas where resettlement or livelihood restoration could take place. Not all maps provided extend to the Kipemba/Kabitaka wellfields and it is unclear whether land acquisition will be needed for the two envisaged wellfield protection zones or any borrowed land and associated facilities.
- The RAP/LRP Framework is not clear about some categories of land occupants. Section 4.2 makes no reference to informal settlements or businesses or land based livelihoods. The gap analysis does not propose how the gap between national legislation and IFC PS will be closed with regards to informal settlements and it seems to exclude temporary displacements from being eligible for compensation. Also, the eligibility criteria and the entitlement matrix (section 8) seem to exclude informal occupants and informal enterprises.
- The RAP/LRP does not make a specific policy statement on gender, nor take special note that people who will have to be resettled from the land that will be acquired for the Kipemba wellfield and transmissions lines, have been resettled there before. The RAP/LRP framework does not list this group in the list of settlements directly affected (Table 6) and does not pay attention to their potentially vulnerable status.
- The RAP/LRP framework provides an outline for stakeholder engagement, but this is described in the context of the ESIA, and not dedicated specifically to the resettlement process that is envisaged.

**Recommendations**

- Clarify in the ESIA and the RAP/LRP framework whether land acquisition and/or resettlement will be required for borrowed lands, associated facilities and the protection zones for the Kipemba and Kabitaka wellfield protection zones.
- Clarify in the RAP/LRP framework how the project will deal with informal settlements and businesses.
- Include in the RAP/LRP framework a stakeholder engagement plan dedicated to the processes of resettlement and indicate how gender issues will be dealt with. Embark on consultations with affected groups as early as possible.
- Pay special attention to livelihood and tenure of people who were previously resettled and who may again face resettlement by this project.

## 3.5 Stakeholder Engagement and Grievance Mechanisms

In its advice at the scoping stage, the NCEA recommended that, conform IFC PS 1, relevant stakeholders are consulted and that the ESIA included a Stakeholder Engagement Plan including an analysis of relevant stakeholders, their interests, and roles in the project.

- Appendix 5 of the ESIA are the minutes of 5 community meetings that were held in July-August 2019 as part of the scoping process. These minutes contain inputs and mitigation measures proposed by stakeholders. It is not clear whether and how these inputs may have been considered in the project design and the ESIA.

- There is reference to consultations after July 2020 with government institutions and some stakeholders, but no further details are provided to know if affected stakeholders have been engaged.
- A full Stakeholder Engagement Plan (SEP) has been formulated, but this could not be reviewed by the NCEA. It is important that the SEP will include a specific list of stakeholders, a description of each of their roles, responsibilities, interactions and consultation planning. The list of institutional stakeholders should be complete and include relevant stakeholders like the Resettlement office, the Labour Department and traditional leadership.
- A clear analysis and evidence of engagement and consultation with vulnerable populations would have been expected. It is not possible to ascertain that potentially affected groups have been consulted. Reference is made to consultations with the Kipemba community early 2020, but no further details or minutes are provided and how comments have been considered.
- The ESIA refers to a Grievance Mechanism that, correctly, will be established by the NWWSSC prior to commencement of site works. But it lacks a description of the principles, composition, means of access and response timelines. It is also worthwhile to note that a separate Grievance Mechanism and SEP would be required for the RAP/LRP.

**Recommendations**

- Check whether the presented SEP[6] includes as a minimum:
  - a list of key stakeholders and an outline of their respective interests and roles in the project.
  - a report of stakeholder engagement process to date describing how institutional and other stakeholders, including affected groups, were consulted.
  - a description of the level of engagement required by each key stakeholder and how it will be organised.
  - an assessment of current capacities of key stakeholders as a means of ensuring their capacity is strengthened to fulfill the roles and responsibilities assigned.
  - a strategy for continued interactions and consultation during project implementation, including clear timelines on when and how project information and the ESIA will be disclosed to stakeholders.
- Clarify in the ESIA how the comments and mitigation measures proposed in community meetings (Appendix 4) were considered in project design and risk mitigation.
- Describe the project specific Grievance Mechanism: its structure, how grievances will be handled and by whom, how to access and lodge grievances, as well as response timelines, and how to ensure equal access.
- The RAP/LRP will determine its own SEP and grievance mechanism.

[6] IFC's Stakeholder Engagement: A community good practice handbook for companies doing business in emerging markets is a useful reference to develop this plan.

# 4. Additional observations on IFC Performance Standards

Previous chapter outlined the key shortcomings in the ESIA from a perspective of international best practice. For each of these shortcomings, the link to the (compliance with) IFC PS has also been established. Next to these key shortcomings, the NCEA made several detailed observations in relation to IFC PS that require attention to ensure compliance with the standards.

## PS 1 Assessment & Management of Environmental & Social Risks and Impacts

In addition to various points made in the earlier chapter (e.g. shortcomings in relation to stakeholder engagement, the lack of a grievance mechanism) the NCEA would like to draw attention to the next topic in relation to IFC PS 1.

**Environmental and Social Management and Capacity**

The proposed project implies that NWWSSC is expected to operate a water system that is significantly larger than the current system. This requires an assessment of the organisational changes and capacity building they need to handle their extended responsibility for sustained water supply, and also for environmental and social management. Otherwise, issues outlined in the previous chapter may not be (adequately) dealt with, resulting in depleted water sources, deteriorated health situation and social conflicts. Moreover, as experience from similar contexts shows, weak management systems (and reduced financial capacity) can ultimately result in unequal access to water and health benefits, because the commercial center of a town or the relatively wealthy areas where people can afford to pay regularly are the ones receiving water, while the supply to peri-urban and lower income areas where people are unable to pay may be shut off.

- In the ESIA, no information has been included on the proponent's organisational systems, procedures, how the current water system is being operated, nor an evaluation thereof, to understand what would be needed in terms of organisational adaptations and capacity development. Minutes from the stakeholder consultations (Appendix 4) suggest that the proponent is facing challenges in service delivery (delays in water connections, erratic supply and running out of materials). It is also unclear how the Non-Revenue Water is being monitored and managed. How will these aforementioned issues be addressed by the proponent in the new project?
- The ESIA has not included a clear policy as to how the proponent will manage (sub) contractors and supply chains what may be needed in terms of capacity to deal with environmental and social issues, including the management of labour.

**Recommendations**

- Include in the revised ESIA report the following:
  - An analysis of organisational systems and current operations (e.g. technical and financial management, management of increase in demand, level of cost recovery, monitoring and maintenance of the system, including Non-Revenue Water).

- Plans and costs for organisational capacity development.
- Policies as to how the proponent will manage (sub)contractors and supply chains.

## PS 2 Labour & working conditions

The ESIA does not address labour adequately in terms of numbers, distribution of tasks, training opportunities, gender policy, protection of employees' rights or management of associated risks. There is no outline of a labour Grievance Mechanism. The executive summary refers to intentions for having an equal opportunity policy for women, without any specification. An influx of labour is anticipated without any further details.

**Recommendations**

- Describe the expected labour force in terms of numbers at different phases of the project, distribution of tasks, and management of related risks including safety and proposed mitigation.
- Define labour policies that will underpin approaches for recruitment, training, gender, equal treatment and opportunities.
- Describe a Grievance Mechanism dedicated to labour.
- Clarify the scale of labour influx and how the project intends to deal with this topic.

## PS 3 Resource efficiency & pollution prevention

**Alternatives**

- In the ESIA, several surface and ground water sources have been compared, before deciding on groundwater as the preferred option. This information could be presented in a more transparent manner by outlining for each water source the same economic, social, environmental criteria.
- Even when ground water is selected (and a potential location is found), the inclusion of alternatives would still be expected in an ESIA, for instance by comparing lay outs with a different mix of locations, volumes and technologies (both for the water source as for infrastructural components). As such analysis is lacking, it is not clear why the existing Kabitaka wellfield was selected as the additional source to the new Kipemba wellfield.
- It is observed that the alternative river bank filtration as suggested by the NCEA has not been included in the ESIA. The NCEA still believes that this may be a cost-efficient and climate resilient option with various social and environmental advantages like less resettlement, reduced chemical use and sludge production and lower energy inputs. Especially in the light of uncertainties around Kipemba wellfield, and the need for a risk management plan (see earlier section 2.2), this alternative could still be worthwhile considering. In case this alternative has been considered, indicate in the ESIA the reasons why it has been rejected.

**Recommendations**

- Include in a revised ESIA a (multi-criteria) analysis including social and environmental considerations of different water sources to explain why groundwater is preferred.
- Explain why Kabitaka has been selected as the additional source to the Kipemba wellfield.

- Continue looking for alternatives (such as river bank infiltration) as part of a risk management plan for the Kipemba wellfield. In case river bank filtration is not included, explain why this alternative has not been considered.

**Waste and pollution**

- The project could potentially lead to (large amounts of) waste which are not quantified or adequately mitigated in Table 8i:
  - By products from water treatment chemicals
  - Removal and disposal of excavated materials
  - Removal and disposal of asbestos pipes
  - Substances leached from materials used
  - Upgrading of abstraction point on Solwezi River and potential for polluting river during works
- Potential negative impacts and risks during decommissioning are considered in section 8 but not in sufficient detail and not incorporated in the ES Management and Monitoring Plan.
- Although the operational stage of water supply requires low amounts of energy, the use of solar energy and compensation through (upstream) reforestation could be considered, both from the perspective of GHG reduction, as well to reduce the project's dependence on erratic water supply.

**Recommendations**

- Quantify in the ESIA the volumes of different types of wastes in all project phases, including decommissioning
- Deliver as part of the ES Management and Monitoring Plan a waste management plan outlining how the project will deal with different types of waste and a plan for decommissioning.

## PS 4 Community health, safety & security

- Risk of reduced air quality from the use of borrow pits and quarry sites and material storage sites (p263) is lacking in impact overviews.
- The ESIA makes contradictory statements with regards to blasting. In the executive summary, it is stated that blasting will be prohibited and the project must use other means such as chemical rock splitting. However, section 7.8.2 (Table 7l) proposes mitigating the impact of blasting by methods of excavation with 'minimal damage to the environment'.

**Recommendations**:

- Address the issue of air quality around borrow pits and quarry and material storage sites in the ES Management and Monitoring Plan.
- Whichever method of quarrying is chosen, the ESIA must consider risks and potential impacts on communities and the environment and state the standards that will be applied to minimise these.
- Outline Emergency Responsiveness Plans and how the project will engage with relevant stakeholders.

## PS 5 Land acquisition and involuntary resettlement

Some key findings related to this PS have been outlined in section 2.4 above. In addition, the following observations can be made.

- The ESIA includes a series of separate maps indicating the physical layout of the project and affected areas. There is however no overarching map that provides a picture of the entire project lay out. From the provided maps it is also not possible to distinguish clearly the current land uses and the situation with regards to land tenure, which could help in further steps in the RAP/LRP.
- It is noticed that the ESIA includes detailed information and suggestions for project affected areas along the transmission main and distribution network (see Section 6, Tables 6a-n) which does not feature in the RAP/LRP framework.
- There is no reference to potential costs of translocation.
- The legislation underpinning valuation, calculation of compensation and procedures of payment is not yet set out in the RAP/LRP framework. The question whether relevant institutional stakeholders have the capacity to be able to deliver on their roles and responsibilities is not handled.

**Recommendations**:

- For the sake of clarity and informing stakeholders, include in the ESIA:
  - clear land use and tenure maps outlining formal, informal settlements and (customary) land users
  - an overlay maps that shows a complete project lay out including borrowed sites, associated facilities, as well as the protection zone of the two wellfields
- Include and / or address the following in the RAP/LRP framework:
  - relevant information from the ESIA on affected areas
  - legislation that applies for valuation, calculation and compensation procedures
  - translocation costs
  - capacity of relevant institutional stakeholders to fulfill their roles in resettlement.

## PS 6 Biodiversity conservation & sustainable management of living natural resources

- Section 7.5.2 of the ESIA report concludes that the potential negative impacts on the biophysical environment will be insignificant. No explanation is given on how this impact rating has been determined, and whether this rating is before or after mitigation.
- The ES Management Plan states that endangered, threatened or endemic species, their habitats and sensitive areas will be avoided. At this point in time, this issue should already be clear and if relevant, specific measures (conform IFC PS 6) need to be prescribed that contractors are expected to comply with.
- Although detailed baseline data is provided on flora and fauna in the project area, the biodiversity study (Appendix A) has not been clearly integrated into the sections on impact assessment, mitigation, management and monitoring plans of the ESIA. Similarly, also findings from the Aquatic Study (Appendix B) are not included in the ESIA.
- In 8a the ES Management Plan impacts on flora and fauna is intended to be addressed through 'safeguard procedures' and 'restoration of vegetation' by contractors. There is need to provide further instructions to contractors as to ensure their compliance with the

Forestry Policy (section 2.1.6) and the Wildlife Act (section 2.2.17) and coordination with relevant departments.

- Appendix M (the risk assessment study to wellfield development) suggests that the protection area of the Kipemba wellfield could become a Nature Reserve area. This suggestion is not further explored in the ESIA.

**Recommendations**:

- Clarify whether endangered, threatened or endemic species or sensitive habitats will be impacted and formulate measures and plans accordingly in the ESIA.
- Integrate and consolidate the information in the biodiversity study (Appendix A) and the aquatic study (Appendix B) in the ESIA.
- Specify in the impact assessment chapter to what degree the flora and fauna in different plots outlined (sections 5.5, 5.6) will be affected and what mitigation is proposed.
- In the development of the protection zone, discuss with relevant stakeholders about the feasibility and desirability to designate this area as Nature Reserve.

## PS 7 Indigenous People

In section 2.1.9 it is concluded that this PS is not triggered an no indigenous populations will be impacted by this project. The NCEA is not able to confirm this conclusion, as no further details or explanation has been given on how this issue been verified.

## PS 8 Cultural Heritage

The ESIA is ambiguous on the issue of archaeological sites. Section 2.2.1.9 refers to one known archeological site and a lot of heritage sites in the boundary of the project area. Section 7.5.1 (p 283) states that no listed sites will be affected, while section 7.7.4 (p 297) indicates 'there is potential damage or loss of artefact during construction' with high severity and long term impacts. This issue needs to be clarified and appropriately addressed.

**Recommendations**

- The NCEA's earlier recommendation during the scoping phase still stands:
- Due to the prevalence of archeological sites, the ESIA process should instigate a study in collaboration with the National Heritage Conservation Commission (NHCC) and any relevant communities, to establish the listed and non-listed sites in the project affected area. Consider the impact of the project on each of the sites and propose measures to ensure their protection, as well as monitoring to ensure implementation and all related costs.
- A Chance Find Procedure Policy should be agreed with the NHCC and attached to the ESIA