



25 years Netherlands Commission for
Environmental Assessment

RWANDA (DRIVE)

Advisory Review of the Environmental Impact Assessment for the Lake Kivu Water Transport Project



29 May 2019
Ref: 7316



Advisory Report by the NCEA

Title	Advisory Review of the Environmental Impact Assessment for the Lake Kivu Water Transport Project – Rwanda – DRIVE
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Reference	7316

© Netherlands Commission for Environmental Assessment (NCEA). *Advisory Review of the Environmental Impact Assessment for the Lake Kivu Water Transport Project*. 2019. 18 pages.

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Abbreviations

DRC	Democratic Republic of Congo
EHS	Environmental and Health Safeguards
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Monitoring and Management Plan
IFC PS	International Financing Corporations Performance Standards
GRC	Grievance Redress Committee
LKMP	Lake Kivu Monitoring Programme
NCEA	Netherlands Commission for Environmental Assessment
PAP	Project Affected Person
RAP	Resettlement Action Plan
RDB	Rwanda Development Board
REMA	Rwanda Environmental Management Authority
RNP	Rwanda National Police
RTDA	Rwanda Transport Development Agency
RVO	Netherlands Enterprise Agency
TMEA	TradeMark East Africa
ToR	Terms of Reference

1. Introduction

1.1 Project description

In the policy document Vision 2020 the Rwanda government has stated its intention to improve the transport systems in the country, as transport costs in the region are high. The Rwanda Transport Development Authority (RTDA) has identified inland water transport on Lake Kivu as an additional safe and efficient mode of transportation. Through the development of four Rwandan ports and navigational aids Rwanda aims to provide the basis for enhanced development opportunities. Regulation (e.g. customs), efficiency of passenger and cargo handling and enforcement of safety standards of (ferry) operators are also among the objectives of this intervention.

The project contributes to the larger objective to enable access points for cross-border trade directly across Lake Kivu, to the Democratic Republic of Congo (DRC) and the to-be-built four Rwandan ports. In addition, according to two feasibility studies prepared by WAPCOS and by HPC and Sellhorn, a large increase of small-scale traders and cargo shipments between the cities on the Lake is predicted. This increased demand for enhanced transport and opportunities for small-scale traders will be met by the ferry service.

The ports are located close to villages or within urban limits along Lake Kivu. Lake Kivu is one of the African Rift Lakes, approximately 90 km long and at most 50 km wide. The lake is one of three lakes in the world known to undergo limnic eruptions¹, meaning that lake stability requires special attention for any project located in its vicinity.

The port area surfaces vary between 1.0 and 1.8 hectares. The final design of the ports has not yet been completed, although several accessories such as one or two jetties, immigration posts, and cool storage have already been confirmed. During the construction phase, a total of 5.5 million cubic meters of material needs to be dredged, as indicated in the ESIA. However, how much will be dredged at each port is not described in the designs. The selected sites include pre-existing domestic and economic activities, meaning that resettlements are part of the project. At the time of this review, most resettlements already took place.

In 2016, WAPCOS completed an EIA² for the seven ports that will be part of the project. The content of the EIA was based on a Terms of Reference (ToR) which had been prepared by the Rwanda Development Board (RDB) in 2014. Upon completion, the EIA was reviewed and approved (with conditions attached) by the RDB and reviewed by one of the financiers of the project, TradeMark East Africa (TMEA).

The Netherlands Enterprise Agency (RVO) is considering financing the development of four of the seven ports: the three major ports of Rubavu, Karongi and Rusizi, and the subsidiary port of Nkora. In order to get a better understanding of the environmental and social impacts of

¹ In a limnic eruption, the carbon dioxide and methane gases that have been dissolved in the lake are suddenly released, causing a large cloud of these gases to emerge from the lake. As these gases are poisonous to humans and (most) animals, it can have disastrous effects on the large population living along the lake.

² In its usual parlance, the NCEA speaks of Environmental *and* Social Impact Assessments, or ESIA's. However, the Terms of Reference for WAPCOS did not include social impacts, so their presence in the report is limited. For this reason, in this review the NCEA refers to the WAPCOS report as an EIA.

this project and the way these impacts are managed, RVO has requested the Netherlands Commission for Environmental Assessment (NCEA) to conduct an independent review of the EIA for this project on site.

1.2 NCEA approach

This advice was prepared by a working group of experts acting on behalf of the NCEA. The group comprises expertise in the following disciplines: environmental impacts and (eco)hydrology, ESMP development and social impacts.

The NCEA has reviewed the following report:

- EIA study, delivery H by WAPCOS, finalised January 2016 (including the ToR in annex).

In addition, the NCEA has taken note of the following documents: Resettlement Action Plan (RAP, 2019 draft version and final version), Certificate of Approval and conditions by RDB, feedback on the EIA by TMEA, Pre-Feasibility study and Feasibility study by HPC and Sellhorn, and several tender documents.

In order to effectively review the EIA for the ports project, the NCEA conducted a field visit to the four port locations in May 2019. The visit was facilitated by the RTDA. One representative of RTDA, as well as the two financing organisations (RVO, TMEA) joined the working group during the field visit. During this visit, the working group not only verified the information contained in the EIA, but it also was able to learn about the practice of Rwandan environmental and social management. At the port locations, the NCEA identified potential environmental and social impacts and met with the following people/organisations:

- RTDA;
- TMEA;
- RDB;
- Rwanda Environment Management Agency (REMA);
- Various stakeholders at port locations (fishermen, property manager, cooperatives, Union of Cooperatives, district authorities, Rwanda National Police – Marine Unit);
- Grievance Redress Committee (GRC) set up by RTDA for a road project (the GRCs for the ports project had not yet been established);
- Transparency International offices in Rubavu and Rusizi;
- Rubavu and Karongi District One Stop Center (executive body responsible for, amongst others, resettlement procedures, GRCs, and for ensuring that infrastructure activities comply with national plans and legislation);
- Lake Kivu Monitoring Programme (LKMP) offices in Rubavu and Kigali.

For the review of the EIA report the NCEA made use of the following reference frameworks:

- Rwandan legislation on ESIA;
- The IFC Performance Standards, including further detailing by the World Bank Group Environmental, Health and Safety Guidelines in general and on ports.

2. Main review conclusions

The EIA that was reviewed by the NCEA demonstrates a concerted effort to address environmental impacts, and it meets the requirements set by the Terms of Reference. However, the NCEA observes that the EIA does not yet meet the requirements of the IFC Performance Standards. Main shortcomings include the lack of a comprehensive overview of the consultations conducted, the lack of detailed assessment of potential risks to the environment (such as risks created by dredging), the EIA's limited description of social impacts³, and the lack of detail of the Environmental Management Plan (EMP). Because of these shortcomings, the report does not provide enough insight in potential impacts of the project.

The lack of detail in the EMP leads to serious concerns about the Adaptive Management approach advocated by the proponent. Adaptive Management usually is intended only for specific project-impact relationships. This should be carefully planned, which includes defining "performance thresholds or triggers for adapting mitigation and management" (IFC PS6). Also, the proponent should clearly indicate what capacity is available to adapt project design or mitigation plans in response to new facts and findings.

It is recommended to prepare a more complete and more detailed Environmental and Social Monitoring and Management Plan before contracting to ensure that enough capacity to handle impacts is available. This includes a clear overview of monitoring and management responsibilities, authorizations and tasks, the indicators and impacts that will be studied, clearly identified areas of concern, and the availability of adequate financing for monitoring and mitigation measures.

When comparing the EIA with the requirements of the IFC Performance Standards, several other shortcomings are noted. Some impacts which have not been sufficiently addressed in the EIA are discussed in more detail in chapter two. The remainder is summarised in chapter three.

2.1 EIA Process

2.1.1 Internal consistency and completeness of project documents

Over the last three years (2016–2019), various documents relevant for the financing and approval of the project have been completed (see the overview in Annex 1). These documents include, amongst others, a Feasibility Study, EIA, and RAP. In these documents, relevant information about the project and its potential impacts are given. For example, the RAP gives an overview of the laws and structures governing resettlements in Rwanda. The EIA includes a baseline survey of environmental, social and economic indicators.

However, the process leading to these documents was not undertaken according to international standards, and has resulted in internal inconsistencies. Part of this inconsistency can be explained by the time frame in which the documents were drafted. For example, the EIA doesn't mention resettlements, nor does it refer to the RAP. Instead, the RAP was drafted two

³ The NCEA is aware that social impacts were not included in the ToR for the EIA. However, they are required by the IFC Performance Standards which are used as a reference in this review.

years after the EIA was completed. And the final RAP was published not before May 2019, after the resettlements were completed. The EIA has not been updated since 2016, although in the meantime the project has undergone various changes in purpose and design. According to the approval conditions, RDB should be notified of any change in project design.

Considering the importance of transparency and stakeholder participation for ESIA's in general, it is recommended that the 2016 EIA is updated to include the latest developments in project design and to include the RAP as an annex to the EIA. The EIA should make reference to the fact that resettlements are part of the project and include stakeholder consultations on this. The RAP should include a list of the PAPs who have been resettled and the compensation measures that have been taken (such as payments and/or in-kind compensation). The RTDA should consider whether the updated EIA should be approved by RDB. Also, the EIA should be made public, for example on the website of RTDA (where other ESIA's also are available).

2.1.2 Monitoring and management of project implementation

In order to manage environmental and social risks on a permanent basis, it is necessary to develop and adopt a tailor-made environmental and social management approach. IFC PSI requires an integrated environmental and social management system. In the EIA an Environmental Management Plan (EMP)⁴ is included, but its contents are limited. Social impacts are not included, nor is the overall process for monitoring described in sufficient detail. Other features that are lacking include stakeholder and accountability arrangements as well as sufficient detail in the cost estimates.

According to RTDA and TMEA, the contractor is expected to provide a more detailed ESMMP together with the tender for the construction phase of the project. TMEA foresees Adaptive Management of the project, where financing and impact mitigation or avoidance are done based on the findings of yet-to-be-conducted studies such as a geotechnical study. Although flexibility might be necessary for project implementation, this does not preclude careful planning of impact management. Adaptive Management entails the risk that impacts are not clearly understood, foreseen, or anticipated upon. Timely response to new developments will be difficult, costs are not known upfront and opportunities to analyze alternatives, redesign the project in size, location or focus may be lost.

The proponent has the responsibility to regularly update its approach, be clear about when the project will be adapted in response to new facts and findings and to continually improve upon the existing management of impacts. However, the current EIA does not include something resembling an Adaptive Management Plan clarifying who will be responsible for monitoring, which environmental and social impacts should to be monitored and which responses should be taken.

An additional complication is that an ESMMP is also required for the operational phase, which cannot be prepared by the contractor responsible for construction unless the contractor also operates the ports. The EIA should contain an ESMMP that addresses the construction, operation and maintenance phases, outlining the different measures, including at least methodology, responsibilities, process and outcome monitoring, costs and phasing.

⁴ Note that in general the term 'Environmental *and* Social Monitoring/Management Plan' (ESMMP) is used. As the management plan in the EIA does not include social impacts, it is referred to as an environmental monitoring plan (EMP).

The NCEA expects in any ESIA report an adequate ESMMP in order to establish the robustness of the impact management measures. The report should present a clear picture of potential impacts and it should give assurance on how impacts will be managed.

Under Adaptive Management, the EIA should still include a comprehensive impact management plan. Regular and frequent measurements and inspections are necessary to avoid potential problems with, for example, dredging, piling or new resettlements. The proponent must be clear about when the project will be adapted in response to new facts and findings and to continually improve upon the existing management of impacts. It is recommended to include in the EIA a framework of who is responsible for each aspect of monitoring, and who can be held responsible for resolving issues that are identified during monitoring. Use can be made of existing monitoring mechanisms (see Annex 2).

2.2 Environmental impacts

Lake Kivu is one of the Great African Lakes and is very unique in terms of physical and geochemical structures as it contains large amounts of dissolved carbon dioxide and methane gas. It is known to undergo limnic eruptions, although these are rare. Management of the Lake's resources – including water and methane – is rather complex. Care needs to be taken that the proposed port developments do not lead to any negative cumulative short-term and long-term impacts on the lake and the ecosystem services it provides. For this project, specific areas of concern include the risk of gas eruptions, impacts caused by dredging, impact on ecosystem services, and fuel spill management.

2.2.1 Limnic eruption risk

The composition of Lake Kivu shows remarkable stability, suggesting no significant changes are expected to occur soon. Thorough hazard assessments on limnic eruptions do not exist. The Nyirangongo volcano eruption and consequent lava inflow in 2002 seemed harmless⁵ (Lorke et al., 2004). However, construction activity in the lake might work out differently and should be monitored. Especially the area of the new proposed Nkora port is erosion-prone due to the steep and unstable slopes at this location. It is not clear whether (underwater) landslides caused by construction works can occur near the port sites and whether they could trigger internal waves causing methane gas eruptions. The planned geotechnical study can reduce these uncertainties and can be used to develop management and prevention measures.

The EIA should include a detailed geotechnical study covering the Lake Kivu's coastal zones and detailed bathymetric maps. These are necessary to assess the risk of slope failure (landslides) at the project sites. Based on these analyses, adequate measures should be taken to prevent erosion and landslides which could destabilise the lake.

⁵ Lorke, A., K. Tietze, M. Halbwachs and A. Wuest, 2004. Response of Lake Kivu stratification to lava inflow and climate warming. *Limnol. Oceanogr.*, 49(3), 2004, 778-783

2.2.2 Dredging impacts

The EIA states that the construction of all ports will entail dredging 5.5 million cubic metres of material. However, it seems unlikely that this dredging volume is necessary, and the feasibility study states that the contractor needs to calculate the actual volume of dredging necessary. Although the EMP does mention that a Dredging Plan should be established, it does not yet give an indication of the composition of the dredged materials, whether the materials can be reused or, if not, where the materials will be disposed of. The NCEA notes that positive use might be made of dredging material, if this is planned well.

Although the Feasibility Study states that the contractor should follow best management practices to minimise environmental impacts, this is not specified. Note that some disposal strategies such as discarding dredging material in the lake, might have effect on the stability of the lake and are therefore not recommended.

The geotechnical study should conduct a soil analysis in order to provide information on the opportunities to reuse the dredged materials in the land reclamation for the ports. If reuse is not possible, the EIA should indicate where the dredged materials will be disposed of and where materials for the reclamation will be sourced.

2.2.3 Monitoring and management of impacts on ecosystem services

The coastal zones are important in terms of the ecosystem services they provide (such as the supply of freshwater, biodiversity, and food from fishing and agriculture) as well as its value for tourism. However, the coastal zones are under increasing human-induced pressures. Increased agricultural activity and urbanization in the densely populated western province of Rwanda are sources of environmental pollution that can affect fish catches. This can also trigger potential conflicts among fishermen in Rwanda and DRC.

In the EIA an analysis of possible cumulative impacts, including climate change impacts, is lacking. And the content of the measures, plans and policies described in the EMP do not contain all essential details. Precise timing and performance indicators are often not provided. This makes it difficult to monitor and manage ecological impacts.

The EIA should carefully assess and present potential impacts and include measures to prevent or mitigate negative impacts. Cumulative impacts of all developments near the shore need to be included in order to safeguard the integrity of the coastal land and the water quality. However, as stated before the EMP is lacking in management and monitoring details on various topics.

The NCEA notes that a well-designed project creates the opportunity of improving safety for naval transport. It recommends that outlines of the following plans are composed before final project approval. These outlines should comply with the EHS Guidelines of the World Bank.

- Dredging, Soil and Drainage Management Plan which includes control procedures for re-suspension, sedimentation, run-off, and erosion (see also 2.2.1);
- Fuel and Chemical Spill Prevention and Contingency plans (see 2.2.4);
- Waste and sewage Management and Disposal Plan (including bilge water treatment);
- Hazardous Materials Management Plan;
- Emergency Action and Response Plan identifying potential emergencies (like earthquakes, fire, collision of ships or construction equipment, accidents with ferries), countermeasures, responsibilities, response equipment, and communication lines.

2.2.4 Fuel spill prevention and response

The EIA does not refer to risks of fuel and oil spills during construction of the ports, and the EMP's discussion of oil spills during operation phase is quite limited. Spills can occur on land during the storage, transportation and filling of vessels and construction equipment, but also on the lake in case of collisions, grounding or during filling of vessels. Fuel spills negatively affect the biodiversity and ecosystem services and could create occupational and community safety and health risks. In view of the large quantities of fuel required for the construction and operation phases, these risks should be assessed as high.

The NCEA recommends preparing a comprehensive fuel spill prevention and response plan for the construction and operation phases. This should contain at least:

- risk assessment;
- preventive measures;
- division of responsibilities;
- cost estimates,;
- Indication of necessary equipment, training and education,
- communication structures;
- explanation of how emergency services in the area will be engaged.

In the General Environmental, Health, and Safety (EHS) Guidelines hazardous materials management⁶ and in the EHS Guidelines for ports and terminals⁷ of the World Bank clear requirements are given for fuel spill prevention and response.

2.3 Social impacts

In general, the EIA does not pay sufficient attention to the potential social impacts of the project. The assessment of social impacts in the EIA is limited to the construction phase (mainly related to noise and dust), while the operation phase is not included. This is problematic: if, for example, labor is not sourced locally, the influx of workers from outside the immediate area can have significant negative social effects. It should be noted that some impacts normally only materialise after construction (during the operation phase), when increased

⁶ <https://www.ifc.org/wps/wcm/connect/47d9ca8048865834b4a6f66a6515bb18/1-5%2BHazardous%2BMaterials%2BManagement.pdf?MOD=AJPERES>

⁷ https://www.ifc.org/wps/wcm/connect/d2f2cf88-ce22-4a48-86fc-45ee3b8e9e45/20170201-FINAL_EHS+Guidelines+for+Ports+Harbors+and+Terminals.pdf?MOD=AJPERES

business activity may endanger traditional livelihoods. For example, new businesses may require new land which would entail physical and economic resettlement affecting the livelihood of local people.

From the EIA, it was not clear whether meetings with community members had taken place. In the list of consulted stakeholders, various governmental organisations are mentioned, but only few non-governmental representatives. During the field visit it became apparent that various rounds of consultation were held (especially for the RAP). However, documentation is limited: the final document lacks a list of PAPs consulted. Also, in the RAP the livelihood restoration plan is inadequate.

Regarding compensation for resettlements, this seems to have been well managed: the project was adapted to avoid unnecessary resettlements, stakeholders have been identified and informed, and PAPs have been compensated with new housing, land or cash. Some complaints were mentioned concerning delays in payment (beyond the official time limits). Grievance procedures do exist and are applied; people express their grievances and know whom to contact. However, to meet international standards on transparency and accountability, this process should be well-documented in the RAP and in the recording of the resettlement process.

The NCEA recommends that the assessment of social impacts goes beyond resettlements and that the EIA is updated to include social impacts during the construction phase (e.g. hired workers from other areas, potentially leading to Gender Based Violence) and the operation phase (e.g. social changes because of predicted economic development). Referring to the IFC Performance Standards helps to include potential social impacts.

The resettlement procedures, even now that they have already been carried out, should be well-documented.

2.4 Cumulative impacts of associated facilities

According to IFC PS 1, a project should not be considered in isolation. Associated facilities such as the other ports or a shipyard, as well as indirect impacts stemming from the project should be included in an ESIA-report. Hence, the EIA should mention potential impacts of activities that are caused by the project.

For example, the EIA indicates that several short stretches of road have to be constructed to connect the harbors to the main road. However, the report does not specify in a satisfactory manner the way in which this will be done, nor does it list potential impacts. Road construction can have significant impacts on community health and the ecosystem and will in some cases also entail resettlement.

The project is also directly connected to other projects. One example of a project which is directly related to the ports project is the construction of cross-border markets (some of which have already been completed). These will be located close to the port locations to facilitate the trade with DRC. As the port and the cross-border market are expected to cumulatively lead to an increase in transfers between DRC and Rwanda, measures should be taken

by port management and local authorities to handle increased transboundary trade and to prevent illegal activities (such as illegal trade and smuggling).

Not only will the project go hand in hand with the development of other projects, as discussed above it will also lead to increased economic activity in general attracting, according to the forecasts presented in the Feasibility Study, huge numbers of people. The Feasibility Study and the data in the EIA foresee a strong increase in population movement and economic growth. Based on experience with other ports, these projects indeed tend to attract (informal) businesses such as small factories, (informal) settlements, storage of (hazardous) products and transport. These activities, in turn, will have environmental and social impacts. The EIA, however, does not indicate to what extent the current environment is ready to handle these influxes, nor is a management plan for these impacts established.

The NCEA recommends including associated facilities in the description of the project's area of influence. The EIA should consider the risks and impacts associated with these facilities, as is required by IFC PS1. Relevant activities include:

- Development of feeder roads,
- Construction of cross-border markets,
- Economic growth leading to increased associated activities.

The NCEA recommends drafting a strategic policy for the transport system (lake and land), where relevant long-term developments such as roads, markets, increased water transport, and economic growth are charted and planned in relation to the ports and each other. A Strategic Environmental Assessment supporting this policy can help consider the long-term environmental and social impacts of these developments, and how they can offset or strengthen each other.

3. Comparison with IFC Performance Standards

In general, the NCEA notes that although the EIA includes a chapter on Rwandan legislation on EIA and land management, no reference is made to international guidelines. In general, the IFC Performance Standards are useful guidelines for ESIA development and international good practice. In addition, they are used by many international financiers, including RVO, as criteria for project funding decisions.

The NCEA has assessed the EIA with regard to the IFC Performance Standards and concludes that Performance Standards 1– 6 are relevant for this project. PS 7 and 8 do not seem to apply. The NCEA has reviewed to what extent the relevant IFC PSs are adequately addressed in the EIA. The review resulted in a list of shortcomings that are presented in the table below. The findings listed here summarise and support the general observations made in chapter 2. In some cases, additional detailed observations are included as well.

The NCEA recommends remedying these shortcomings in the next version of the EIA report, and to pay special attention to the monitoring of these aspects.

IFC Performance Standard 1: Social and Environmental Assessment and Management Systems	
<p>Objectives:</p> <ul style="list-style-type: none"> • To identify and evaluate environmental and social risks and impacts of the project. • To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimise and where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment. • To promote improved environmental and social performance of clients through the effective use of management systems. • To ensure that grievances from Affected Communities and external communications from other stakeholders are responded to and managed appropriately. • To promote and provide means for adequate engagement with Affected Communities. • Throughout the project cycle on issues that could potentially 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • Social risks and impacts are not covered sufficiently in EIA. The description of social economic impacts caused by environmental impacts, e.g. on ecosystem services, is lacking. • The EIA does not contain a description of the assessment framework used. • In the impact assessment methodology used, the magnitude of potential impacts is not made explicit. As a result, the effectiveness of proposed measures remains uncertain. In addition, the magnitude of impacts remains unclear in case a measure will not be implemented or proves to be ineffective. • The ESMP does not provide sufficient information with regard to those assigned responsibility, nor how the project will enhance their existing capacity to deliver effectively. • Cooperatives and unions, as representatives of the pelagic and traditional fishermen, should be involved in the monitoring of the economic and social impacts during and after construction. • The NCEA notes that the Lake Kivu Monitoring Programme (LKMP) already independently monitors various relevant environmental indicators. In addition, they will build a new laboratory in Rubavu port. The RTDA could consider involving LKMP in monitoring.

<p>affect them and to ensure that relevant environmental and social information is disclosed and disseminated.</p>	
<p>IFC Performance Standard 2: Labour and Working Conditions</p>	
<p>Objectives:</p> <ul style="list-style-type: none"> • To promote the fair treatment, non-discrimination and equal opportunity of workers. • To establish, maintain, and improve the worker-management relationship. • To promote compliance with national employment and labor laws. • To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the client's supply chain. • To promote safe and healthy working conditions, and the health of workers. • To avoid the use of forced labour. • <i>See PS4 for comments on occupational health and safety.</i> 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The Rwandan legal and institutional system includes many useful safeguards to prevent issues such as child labour. However, from the EIA it does not become clear who will be responsible for the screening of contractors and how they will be monitored on compliance. The EMP should describe the way how the contractors' performance in their compliance to the procedures (as proposed in this EIA), as well as to applicable national employment and labour laws is monitored. This needs to be monitored in order to be sure that the good intentions are being put into practice. • For various reasons, not all employees always receive minimum wage in Rwanda. The EIA should explain how the proponent will guarantee fair income during construction and operation. A recruitment and labour plan should be prepared for construction and operation. An outline should be included in the EIA.
<p>IFC Performance Standard 3: Resource Efficiency</p>	
<p>Objectives 3:</p> <ul style="list-style-type: none"> • To avoid or minimise adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. • To promote more sustainable use of resources, including energy and water. • To reduce project-related GHG emissions. 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The dredging operation will result in dredged materials which need to be disposed of or which can be reused for land reclamation. Since the quality of the materials is not known at this stage, the disposal or reuse options are unclear. This may result in unknown impacts and risks, depending on the end use chosen. The planned geotechnical survey of the materials should define the disposal and reuse opportunities. An estimation of the soil balance should be prepared to know the volumes to be dredged, to be reused, to be disposed and to be sourced for land reclamation. This should be done for each port individually (see 2.2.2). • It is unclear whether dredging will lead to increased GHG emissions. This depends on the composition of the dredged materials; it should

	<p>be included in the dredging management plan (see 2.2.1 and 2.2.2.).</p> <ul style="list-style-type: none"> • Further hydrodynamical investigation (such as a more detailed bathymetric maps) is necessary to determine the refreshment rates of affected waters in the bays. This is necessary to better understand the impact of increased turbidity caused by construction activities. With the current information it is not clear whether mitigation measures proposed will be sufficient (see also below, PS6).
IFC Performance Standard 4: Community Health, Safety and Security	
<p>Objectives:</p> <ul style="list-style-type: none"> • To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances. • To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner, that avoids or minimises risks to the Affected Communities. 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The EIA currently contains only a limited analysis of potential health and safety risks for local communities during the construction and operational phase. Only immediate safety and health risks because of the most immediate activities (e.g. increased traffic) are dealt with. Attention should be given to for example health risks related to activities of future trade markets, increased use of energy sources, and increased risks of diseases as a result of influx of foreigners. Special attention should be given to the risk of Ebola, which might spread through cross-border transport. • When describing the potential impact of noise the EIA states that nearest residential area is 1 km away from the project site. However, nearest residential areas are located closer to the port than 1 km. Thus, the effects of noise should be stated more accurately.
IFC Performance Standard 5: Land Acquisition and Involuntary Resettlement	
<p>Objectives:</p> <ul style="list-style-type: none"> • To avoid and, when avoidance is not possible, minimise displacement by exploring alternative project designs. • To avoid forced eviction. • To anticipate and avoid or, where avoidance is not possible, minimise adverse social and economic impacts from land acquisition or restrictions on land use by (1) providing compensation for loss of assets at replacement cost and (2) ensuring 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The EIA does not describe how the project locations were selected. During the field visit, the NCEA understood that the locations and project design have been adapted so as to avoid unnecessary displacement. Stakeholders (such as the RNP) have been included in this process. This process should be described in the EIA. • Engagement of affected communities is not well-recorded, and minutes are not included in the EIA or the RAP. These should be attached in an update of the EIA (see 2.1.1).

<p>that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.</p> <ul style="list-style-type: none"> • To improve, or restore, the livelihoods and standards of living of displaced persons. • To improve living conditions among physically displaced persons through the provision of adequate housing with security of tenure at resettlement sites. 	<ul style="list-style-type: none"> • Resettlements are mostly completed. Recording of the implementation of the process should be available (see. 2.1.1).
<p>IFC Performance Standard 6: Biodiversity Conservation & Sustainable Management of Living Natural Resources</p>	
<p>Objectives:</p> <ul style="list-style-type: none"> • To protect and conserve biodiversity • To maintain the benefits from ecosystem services • To promote the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities. 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The taxonomic assessment of the EIA seems a temporal ‘snap-shot’ of a limited number of animal and plant species and is incomplete. There are some species in the Lake Kivu area which are considered endangered and were not considered in the EIA. This assessment should be done comprehensively and needs to cover the status and trends of all important and endangered species of the animal and plant classes, like the ones above, in the potentially impacted lake and land areas at the proposed development sites. • The EIA does not pay enough attention to potential adverse impacts of construction and operation on the specific lake shore zones and their environments. Specifically, construction activities such as dredging and piling create sediment plumes (increased turbidity) and can lower oxygen levels, increase pollution and hinder feeding and spawning of fish. In turn, this results in decreased fish populations. Because of the limited refreshment rate in the bay areas and the stratified nature of the lake, turbidity plumes remain relatively stagnant.
<p>IFC Performance Standard 7: Indigenous Peoples</p>	
<p>Objectives:</p> <ul style="list-style-type: none"> • To address the need to avoid or minimise impacts on indigenous peoples. 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The RAP states that the project will not affect directly any vulnerable PAPS. It is not clear whether this is meant to mean indigenous peoples as intended by IFC PS7. The EIA should explicitly state whether indigenous peoples are

<ul style="list-style-type: none"> • To ensure sustainable and culturally appropriate development of benefits and opportunities. • To ensure Free, Prior and Informed Consent (FPIC) of all peoples. 	<p>Affected and on what data and assumptions this statement is based.</p>
<p>IFC Performance Standard 8: Cultural Heritage</p>	
<p>Objectives:</p> <ul style="list-style-type: none"> • To protect cultural heritage from the adverse impacts of project activities and support its preservation. • To promote the equitable sharing of benefits from the use of cultural heritage. 	<p>Shortcomings:</p> <ul style="list-style-type: none"> • The EIA should explicitly state that no cultural heritage is affected. Also, it should state that if cultural heritage is touched upon unexpectedly, it will be handled in accordance with this IFC PS.

Annex 1: List of documents related to EIA process

Year	Document	Comments
2010	Technical & Economic Feasibility Study by M/s KNUD E Hansen and ASEC Consult	The NCEA has not been able to view this document.
2015	Feasibility Study by WAPCOS	The NCEA has not been able to view this document.
2016	EIA (Delivery H) by WAPCOS	ToR approved in 2014
	Certificate of Approval of EIA by RDB	
2017	Pre-Feasibility Study by HPC and Sellhorn	
	Feasibility Study by HPC and Sellhorn	This includes a summary update of the EIA.
2018	Navigation Safety Study by Alpha Logistics	The NCEA has not been able to view this document.
	Resettlement Action Plan by RTDA (internal document)	Not (yet) publicly available. First resettlements took place before finalization of this document.
2019	Final Resettlement Action Plan	
	Review of EIA by independent consultant of TMEA	*not published to date. The NCEA has not been able to view this document.
Recommended documents to follow		
	Updated Management and Monitoring Plan	
	Updated EIA including RAP and outline of impact management plans	

Annex 2: Monitoring and grievance mechanism

Note: this list is compiled by the NCEA, based on observations made during the field visit. The content of Annex 2 is provided for information purposes only.

Project environmental monitoring

- Sector or District Environmental Direction Offices conduct monthly inspections of project sites. This is done together with local stakeholders (who exactly is involved depends on the specific project). Participants can include fishery cooperatives or port officials.
- If major issues arise, REMA is informed. They can conduct an inspection if they deem it necessary.
- In general, REMA aims to conduct inspections twice a year. Depending on the sensitivity of the project and capacity, this can be more often (up to four times a year) or less (once a year).

Project social monitoring

- Complaints can first be brought to the cell administrative level
- Subsequently the sector, and last at district level. At the district level, one of the two vice-mayors is responsible for social issues.
- If the issues cannot be resolved by local administrative officials, the ministry of local government is involved.

Grievance Redress Committee (for RTDA projects)

- The GRC is comprised of PAPs, who are asked to select the members of the committee. Members include a president, vice-president, secretary, and gender balance representative.
- Comments, complaints, and requests are logged in a book. Those who submit a complaint are requested to sign the book.
- Issues that cannot be resolved locally are forwarded to RTDA, who checks the logbook. The RTDA has reserved a budget to meet claims made through the GRC.
- Delays in payments are common; although the legal payment term is four months there are examples of payments taking up to two years.

General grievance mechanism

- In addition to the formal complaint hierarchy, most governmental organisations have a tollfree number that can be called to ask questions or make complaints. This number is published via signs, radio messages, and electricity bills.
- The governmental official who is responsible for answering the tollfree phone calls has to report once a week about the nature of the phone calls and to make suggestions on how improvements can be made to meet complaints.

Other observations

- There seems to be no data sharing between the various monitoring institutes. This could lead to oversights.
- NGOs such as Transparency International also can receive complaints. These NGOs seem to be well-aware of the content of the Rwandan Law. Main complaints received by Transparency International concern delays in payments of reimbursements.