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Public

Environmental and Social Data Sheet

Overview

Project Name:	NAIROBI-NAKURU-MAU HIGHWAY PPP
Project Number:	20160922
Country:	Kenya
Project Description:	Improvement to the A8 Highway in western Kenya, comprising (i) widening from 2 to 4 lanes over 175 km and (ii) strengthening of 58 km of single carriageway, both part of the Northern Corridor linking the port of Mombasa to East and Central Africa.
EIA required:	Yes
Project included in Carbon Footprint Exercise ¹ :	Yes

Environmental and Social Assessment

Context

The project concerns the improvement of the existing A8 and A8 South, collectively referred to as the Nairobi-Nakuru-Mau Summit highway, implemented through a PPP scheme under a 30-year Design Build Finance Operate Maintain Transfer (DBFOMT) arrangement (hereafter the Project Agreement).

The project comprises two components:

- A8 component: rehabilitation and widening from two lane to four lane carriageway along the existing alignment from Rironi to Mau Summit (175 km), including passive provision of most structures for future upgrading of the highway to 2 x 3 lanes when traffic demand requires, expected after 2035.

The route starts at Rironi, at the end of an existing dual section, approximately 35 km North West of Nairobi's Central Business District. The route bears north near Limuru ascending to an altitude of 2,480 m. at the Kijabe escarpment on the eastern rim of the Rift Valley. From Kijabe, the route bears northwest to Kinungi in Nyandarua County, before descending to Naivasha at the bottom of the Rift Valley with an altitude of 1,900 m. It bypasses Gilgil Township and traverses Nakuru city through the existing northern Nakuru bypass, the third-largest urban area in Kenya. The road continues northwest to Salgaa truck stop and market, and climbs to Mau Summit on the western rim of the Rift Valley. The road is located mainly in Kiambu and Nakuru counties.

- A8 South component: rehabilitation of the existing 2 lane A8 South from Rironi to Naivasha (58 km).

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

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The route follows the existing alignment starting in Rironi. The route passes through rolling terrain and open fields for about 4 km after which it travels through the hilly terrain of the Great Rift Valley and Ngubi forest zone and Kikuyu Escarpment forest zone until km 18. The alignment passes through the built-up section of Mai Mahiu town after which it transits mainly plain terrain. The route rejoins the A8 at Naivasha Interchange.

The Project Agreement includes the provision to widen further the A8 into a six-lane dual carriageway dependent upon traffic volumes (expected in 2035). These possible works are not part of the EIB financed project.

Both project sections, A8 and A8 South, are planned to be toll roads; however, the design, construction, implementation and operation of the toll system do not form part of the Project Agreement nor the EIB financed project. The putting into place of a toll system could pose some incremental negative impacts, though likely only local and temporary.

A project options / alternative analysis was undertaken. According to the analysis, the without project alternative would entail adverse effects on traffic congestion and road safety although there would be avoidance of construction project impacts. The alternatives of a railway line from Nairobi to Mau Summit or a parallel greenfield expressway were rejected due to displacement, environmental and social risks as well as economic reasons.

Five road alignment options were considered. The ones following the A8 and A8 south existing alignment were considered the most environmentally and socially sound.

In relation to the design solution at Nakuru town, six options were considered. The following five options were considered and rejected due to socio-economic and/or environmental impacts or technical difficulties: (i) Widening of existing road; (ii) Southern Bypass; (iii) Northern bypass; (iv) Detouring away from Nakuru Town (northern); and (v) Detouring away from Nakuru Town (southern). Option (vi), Provision of Viaduct/Elevated Corridor was considered the best option because of the avoidance of displacement and its minimal environmental risks.

The expected benefits of the selected project include travel time and vehicle operating costs savings, improvement in road safety and local environmental infrastructure improvements.

Environmental Impact Procedure

The project, forming part of the Northern Corridor multi-modal corridor, sits within the National Spatial Plan 2015-45. This applies a multi-dimensional approach to land use planning and development.

If located within the EU, the project would fall under Annex I of Directive 2014/52/EU, amending the EIA Directive 2011/92/EU, and therefore be subject to a full EIA procedure. Under national legislation, the Environment Management and Coordination Act 1999 (EMCA) as amended, the project falls under the Second Schedule of the Act subject to an EIA procedure. The Act requires EIAs to be performed in a certain manner, by qualified persons and for there to be disclosure and adequate opportunity for the public to comment, all as prescribed in applicable legislation. The EIA report is to be submitted to the Competent Authority for review and issuance of a related license; in this case by the National Environmental Management Authority (NEMA).

Accordingly, the public promoter of the project, Kenya National Highway Authority (KeNHA), commissioned consultants to prepare a RFP (Request for Proposal) Stage Environment and Social Impact Assessment (ESIA) report during 2017-2018. Given the final design of the works remained pending at the time of the preparation, the ESIA was described as being

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preliminary in nature (preliminary ESIA (PESIA)). The PESIA report was submitted to NEMA who issued a license in May 2020. The license applies a number of conditions, the main elements being noted below.

The private promoter, Rift Valley Connect Consortium (RVC), is required to undertake two further ESIA reports, taking into account the progress of engineering designs that they also need to prepare. In accordance with the Project Agreement, RVC will present the an ESIA based on their bid design prior to financial close, expected in H2 2021. Then, a second and final ESIA report, based on the final detailed design and with further consultation as necessary, will be prepared by RVC in 2022 once the detailed design is finished. Each report will be subject to the same procedure as the preliminary ESIA already approved. The Bank will condition any disbursement of the loan to the issuance by NEMA of the final environmental license.

Effectively, the ESIA procedure is being performed in three stages. The EMCA does not provide for this multi-stage ESIA procedure. However, on the basis of the issuance of the conditional license in May 2020, it may be concluded that NEMA has accepted this derogation from the normal regulatory process arising from the unusual circumstances presented by the Project Agreement.

The project is also subject to a number of other domestic statutory provisions such as the Water Act, Wildlife Management and Conservation Act, Forest Act and National Land Commission Act. The contractual framework associated with the Project Agreement passes down the relevant obligations arising from these provisions to the relevant parties, principally the works contractor.

Environmental Impact and Mitigants

The project presents the following residual negative impacts: (i) permanent conversion of land and cutting of trees/destruction of flora; (ii) use of scarce resources; (iii) severance/barrier effect for local population, livestock, wildlife, hydrological/geo-hydrological flows; (iv) involuntary resettlement; (v) visual intrusion for some receptors; (vi) unforeseen induced impacts, such as unplanned development adjacent to the road, especially in environmentally sensitive locations; and (vii) additional noise/vibration for some receptors.

The following measures have or will be applied to reduce or mitigate these residual impacts: (i) upgrading on the existing alignment, minimizing the footprint and displacement with only 2 ha of land needed to be acquired for interchanges; (ii) careful final design/recycling existing assets to minimise need for use of scarce resources; (iii) dedicated fauna crossings (in consultation with the Kenya Wildlife Services) and facilities for pedestrians; (iv) implementation of a resettlement action plan; (v) landscaping; and (vi) noise barriers.

The project may also pose short term and more localised environmental and social risks during construction, including: (i) noise, dust and nuisance for local receptors; (ii) congestion and safety risk for existing traffic; (iii) local air and water pollution; (iv) influx of workers; (vii) generation and improper disposal of waste material; (viii) occupational health and safety, labour and working condition; and (ix) risks related to community health and safety.

The project route is within the vicinity of known archaeological and cultural sites including the Kariandusi Pre-historic sites, Hyrax Hill Pre-historic site and Mai Mahiu Catholic Church (Travellers Church). According to the PESIA, the risk significance on the archaeological and cultural sites is low, however, as part of its obligations RVC has to prepare a Chance Finds Procedure and a Cultural Heritage Plan.

The DBFOMT legal structure places an obligation on the relevant parties to develop, implement and monitor various plans to manage permanent and temporary risks. In particular

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RVC will develop and implement an Environmental and Social Management System (ESMS), which will be an umbrella system to include: (i) Biodiversity Management Plan, (ii) Clearing and Revegetation Plan, (iii) Grievance Redress Mechanism Plan (GRMP), (iv) Stakeholder Engagement Plan (SEP), (v) Traffic Management Plan, (vi) Migrant Labour Management Plan, (vii) Labour Recruitment Plan, (viii) HR Policy/Manual, (ix) Occupational Health and Safety Plan, (x) Community Health & Safety Management Plan, (xi) Waste Management Plan, (xii) Water quality Management Plan, (xiii) Emergency Preparedness and Response Plan, (xiv) Air, Noise and Vibration Impact Management Plan, (xv) Monitoring Procedures for Air, Water and Noise pollution, (xvi) Emission Control Plan, (xvii) Invasive Plant Management Protocol, (xviii) Erosion Control and Sedimentation Plan, (xix) Hazard and Risk Assessment and Management Plan; (xx) Code of conduct for workers; and (xxi) Vulnerable and Marginalized Group Plans informed by the Free, Prior, Informed Consent (FPIC) process.

There will be an Independent Engineer, jointly appointed by KeNHA and RVC, whose role includes to check the form and content of the various plans and then to enforce the due application of the various plans by the relevant parties. The lenders also intend to appoint a team of technical advisers who shall monitor and report on the compliance of the project to the various Safeguard Plans and obligations under the project documents. Moreover, KeNHA and other relevant national bodies, may also perform periodic compliance checking in line with their respective rights and duties.

The National Museums of Kenya (NMK) will review and approve the Chance Finds Procedure and Cultural Heritage Plan prepared by RVC. During the construction phase, NMK will be involved in the project by providing guidance whenever Chance Finds are encountered.

Biodiversity

The project has the potential to impact on biodiversity.

The project is in the vicinity of:

- natural forests ecosystems, including Kikuyu Escarpment forest, Kinale forest, Koibatek forest, Mau forest complex, Mau-Narok Grasslands, Aberdare National Park, Kinango grasslands and conservancies (Marulla, Kigio, Soysambu, Kedong and Oserengoni); and
- Surface water bodies (lakes and rivers), among them Lake Nakuru, Lake Naivasha and Lake Elementaita.

The lakes in Nakuru are Protected Areas (PA), Important Bird Areas (IBA), World Heritage Sites (WHS) and Ramsar Convention² Sites. Lake Nakuru National Park, Lake Naivasha National Park and Kigio Wildlife Conservancy are adjacent to the project, but not directly transversed by the project route.

The permanent rivers which the highway crosses include River Molo, River Njoro, River Gilgil, River Malewa, River Kariandusi, River Mereroni and River Gaitamayu some of which have been noted to have critically endangered aquatic species (e.g. Molo River).

The A8 South runs predominantly through natural habitat, through (degraded) natural forest along the escarpment and through open dry grassland and scrub (interspersed with agriculture) on the Rift Valley. As the strengthened road will maintain the same alignment, no loss of Natural Habitat is expected.

² The Ramsar Convention (formally known as the Convention on Wetlands of International Importance, especially as Waterfowl Habitat) is an international treaty for the conservation and sustainable utilization of wetlands, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific, and recreational value.

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The A8 road alignment, including the road reserve that will be used for widening, runs predominantly through modified habitat. However, there are some sections where the footprint of the upgraded road may cause loss of relatively small areas of Natural Habitat:

- Small patches of indigenous forest and scrub in Kinale Forest
- Leleshwa and Acacia scrub within the Kenya Wildlife Service sanctuary in Naivasha
- Mature Acacia xanthophloea woodland in the stretch bordering Delamere Farm and Marula Ranch beyond Naivasha.
- Open dry grassland, Leleshwa, and Acacia scrub habitats where the road passes through or adjacent to Marula Ranch and Kigio and Soysambu Conservancies, between Naivasha and Nakuru.
- A small section of indigenous forest where the road crosses the Koibatek Forest.
- A number of seasonal or permanent wetlands, including: Large roadside ponds at Kamiriithu before the Limuru flyover, Manguo Pond and a number of seasonal ponds in gravel pits immediately adjacent to and north-east of the road, surrounded by rough grassland, between Kinale Forest and the Thika-Manguo flyover. These sites may all be seasonally important for critical habitat qualifying amphibians.

Wildlife cross the existing highway along various points in search of pasture. The expansion of the highway, which will include erection of medians and barriers for safety purposes, will block the movement of wildlife from one side of the highway to the other and hence adversely affect them. Kenya Wildlife Service (KWS) have proposed eleven new and upgraded crossing points. Wildlife Crossings will have to be implemented at all the required locations in consultation with KWS and modified if necessary based on additional surveys and studies.

An initial assessment of the likelihood of project impacts on Critical Habitats (CH) and species has been undertaken as part of the PESIA. Seventeen species were identified as potentially impacted by the project. The habitat of the freshwater fish species, *Aplocheilichthys* sp. nov. 'Baringo', cited on IUCN Red List as critically endangered, was identified as possibly exposed to significant impact by the project. Further investigations and analysis is needed as part of the future ESIA to be performed by RVC and proper measures included as necessary in a Biodiversity Management Plan. The Bank will require, prior to any disbursement, that NEMA, which acts also as the Competent Authority for Nature Conservation, issue an opinion on the impact on protected habitats or species (Form A/B equivalent).

Climate Change Resilience

Kenya faces considerable risk from climate change and, in particular, from greater variance in rainfall which may impact the project in the form of flooding and runoff episodes. Kenya has a National Climate Change Action Plans, NCCAP 2018-2022, which provides a framework for Kenya to deliver on its Nationally Determined Contribution (NDC) under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC) in a manner that prioritises adaptation.

As detailed design is yet to be developed by RVC, the project's vulnerability to climate change will be assessed during a climate risk and vulnerability assessment that will describe projected climate change impacts in the project area to make the project more resilient to climate change.

A flooding report, as part of the climate study, will allow including mitigation measures to possible water pollution and hydrological disruption and designing climate proof structures and drainage systems.

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EIB Carbon Footprint Exercise

The project will be included in the EIB carbon footprint accounts on the following basis.

Estimated annual third party greenhouse emissions (vehicular use, from existing and generated demand) from the use of the project in a standard year of operation:

- Forecast absolute (gross) emission are 262,000 tonnes of CO₂ equivalent per year; and
- Forecast emissions decrease is 22,000 tonnes of CO₂ equivalent per year.

The project boundaries are:

- Existing network comprising: 175km of A8 between Rironi and Mau Summit as well 58 km of A8 South between Rironi and Naivasha;
- In the “with project” case, the new network comprising: 175 km of widened A8 between Rironi and Mau Summit and 58km of A8 South between Rironi and Naivasha.

The baseline is the forecast third party emissions, in the absence of the project, from the existing network only within the boundary defined above. The forecast reflect the Services’ assumptions on traffic, traffic growth, speed/flow, infrastructure capacity, vehicle fleet characteristics, including electric vehicle penetration, and fuel consumption.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment

Involuntary Resettlement

The main adverse social impact is related to involuntary resettlement. The expansion of the road will be implemented in the existing 60m road reserve, which is owned by KeNHA, and land acquisition is only required for the construction of the interchanges, overpasses, underpasses, deceleration lanes and market areas.

KeNHA has prepared a Resettlement Action Plan (RAP), which was approved and disclosed by the World Bank and Government of Kenya in July 2018. There is no specific Kenyan institution which approves RAPs. The RAP was submitted to the National Land Commission for validation and subsequent implementation. The RAP covers both physical and economic displacement irrespective of tenure status. The RAP was prepared in accordance with World Bank Safeguard Policies and is considered consistent with EIB standards. KeNHA is responsible for implementing the RAP.

According to the RAP, the total number of Project Affected Persons (PAPs) is estimated to be 3,900, the majority of whom are small traders. Over 1,000 assets are located within the 60m existing corridor where the project will be constructed. The RAP provides that such informal settlers, including traders along the road, are adequately compensated in line with EIB requirements.

KeNHA will be responsible for updating the RAP if further land acquisition will be required after completion of detailed final road design, including toll stations if located outside the corridor. The implementation of the RAP started in the second half of 2020 and is expected to be fully implemented prior to financial close. The Bank will seek third party confirmation that the RAP is complete prior to committing finance to the project.

A Grievance Redress Mechanism (GRM) has been established to handle disputes that may arise in relation to the resettlement process. In order to ensure accessibility for any aggrieved

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complainants, registration forms are submitted at sub-location level through the chief office. Grievance redress committees have been established along the ROW tasked with arriving at a remedy for complaints raised. Where disputes are not resolved in the grievance redress committees, these will be referred to the Land Compensation Tribunal or the Public Complaint Committees and resolved under Kenyan law.

KeNHA will have the overall responsibility to address concerns brought to the attention of the focal points regarding any environmental and/or social impacts due to Project activities. Copies of complaints shall be recorded in the activity files and progress reports, including the number and type of complaints and the results of their resolution.

The GRM established by KenHA will be harmonized with the GRM put in place as part of the RAP as well as a GRM to be established by RVC. KeNHA will be responsible for grievances related to land acquisition and compensation while RVC will be responsible for grievances relating to construction and operation.

Rights and Interests of Vulnerable Groups

The Maasai community have been identified as being located in a small seasonal settlement on the Nairobi-Mau Summit alignment and in the areas between Mai-Mahiu and Naivasha where they graze livestock on both sides of the highway.

KeNHA has prepared a Vulnerable and Marginalized Groups Planning Framework (VMGPF) in accordance with World Bank Safeguard Policies. Consultations with vulnerable and marginalized groups (VMG) in January-April 2018 and March 2019 confirmed that the road project will affect VMG communities, mainly the Maasai pastoralists. The VMGPF has been prepared to guide KeNHA in undertaking Free, Prior and Informed consultation with VMGs.

KeNHA has the overall responsibility for ensuring the VMGPF is implemented by carrying out relevant social assessment and conducting consultations with VMGs for livestock crossings to be implemented by the concessionaire as part of project design. Vulnerable and Marginalized Group Plans that may be required will be prepared in conjunction with RVC.

Labour Standards

Construction work will be carried out in accordance with Kenyan labour law, including the Occupational Safety and Health Act and the Employment Act, as well as the International Labour Organisations (ILO) conventions, ratified by Kenya.

A number of risks relating to labour are identified in the 2018 ESIA, including risks related to labour conditions (working hours, leave and wages and benefits), workers accommodation, workers grievance mechanism, with particular risk to workers employed by third parties.

The NEMA license of May 2020 specifies the requirement of ensuring that no child labour is used in the project.

Specific requirements in relation to labour and working conditions are contained in the ESMS framework, including construction management plans such as: (i) Employment and Procurement Management Plan, (ii) ESHS Training Plan, and (iii) Code of Conduct.

The Bank will require third party monitoring and evaluation of compliance to labour standards, including periodic labour audits.

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Occupational and Community Health and Safety

Occupational Health and Safety (OHS)

The PESIA identifies OHS risks during construction. The road's location in certain areas with limited physical construction space may result in potentially difficult environmental conditions, posing occupational health and safety risks. During construction, the main occupational health and safety risks are associated with movement of vehicles and traffic management; working at heights and in confined spaces; working with hazardous materials; management of electrical hazards; and prevention of unintended ground movements and collapse. The final ESIA prepared by the contractor will include a Workers Health, Safety and Security Management Plan according to national law containing provisions for health and safety at construction as described in the Occupational Health and Safety Act.

Community Health and Safety

Along the project route, sensitive receptors are located next to the highway and include towns and settlements, schools and hospitals; these are likely to be affected by construction nuisance.

Other community health and safety impacts are related to the transmission of communicable diseases, including sexual transmitted diseases and gender based violence risks to communities resulting from influx of workforce and impacts of community safety related to traffic and presence of security personnel. These risks are avoidable and can be mitigated through implementation of community health, safety and security management plans.

The NEMA license of May 2020 specifies the requirement of ensuring that HIV/AIDS awareness is continually performed among the site workers and the neighbouring communities.

The ESMS framework includes the following construction management plans addressing risks related to Community Health and Safety: (i) Community Health, Safety and Security Management Plan, (ii) Influx Management Plan, (iii) Gender Based Violence Management Plan, (iv) Community Development Plan, and (v) Traffic Management Plan.

Public Consultation and Stakeholder Engagement

KeNHA undertook public consultations during the project preparation process. A number of public consultation meetings were conducted throughout 2015-2016, and in early 2018, for the ESIA preparation. Furthermore, during the preparation of the RAP, consultations were undertaken with communities and PAPs in November and December 2017.

RVC will prepare, as part of the ESIA, a detailed Stakeholder Engagement Plan (SEP) including the grievance mechanism for workers and community members as well as special consultation mechanisms for VMGs.

The SEP will include three rounds of stakeholder engagement activities: (i) prior to development of baselines studies; (ii) early at the impact assessment stage; and (iii) prior to submission of draft reports to environmental authorities.

Other Environmental and Social Aspects

KeNHA has benefitted from the support of the World Bank Group to prepare the safeguard aspects of the project.

RVC will prepare and maintain an Environmental and Social Management System (ESMS), which seeks to ensure the compliance of the project with applicable laws, contractual

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requirements and lenders', including EIB's standards. RVC will pass on to the contractors and sub-contractors the responsibility of preparing relevant construction management plans.

A Lenders' Technical Advisor (LTA) will monitor and report periodically on compliance of the project with the Environmental and Social Management System and, by implication, the compliance to EIB standards.

The Bank will require that a road safety audit, with content and prepared in a manner consistent with the principles of the EU Directive on road infrastructure management (2008/96/EC), have been duly incorporated into the final design for the project.

Conclusions and Recommendations

The project will have positive impacts in terms of travel time and vehicle operating costs savings and improvement in road safety. However, as with any road works that increase road capacity, there will be some permanent and temporary negative impacts that need proper management, more especially as the road is located in an environmentally and socially sensitive area.

As the ESIA procedure and resettlement are yet to be concluded, the following requirements are to be met:

Prior to signature of the EIB Finance Contract:

- The Resettlement Action Plan has been completed.
- Implementation of the Vulnerable and Marginalised Group Framework dated June 2019 is progressing satisfactorily

Prior to any disbursement:

- The Competent Authority for the Environment has issued its final Environmental Impact License in line with clause 63 of the Environmental Management and Coordination Act 2012;
- The Competent Authority for Nature Conservation has issued an opinion to the effect of the project on protected areas and species (Form A/B equivalent);
- The findings of a road safety audit have been duly incorporated into the final design of the works.
- The findings of a climate risk and vulnerability assessment have been duly incorporated into the final design of the works.
- The Borrower has prepared, all in form and content satisfactory to the Bank:
 - the Safeguard Plans constituting the basis for the Environmental and Social Management System
 - Stakeholder Engagement Plan
 - Human Resources Policy

The EIB intends to seek the following undertakings from the Borrower, namely to:

- Implement the project in accordance with the Environmental and Social Management System, Stakeholder Engagement Plan and Human Resources Policy;
- Commission labour audits, by a competent third party and on such terms and conditions as may be acceptable to the Bank.

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- Commission a road safety audit, with content and prepared in a manner consistent with the principles of the Road Safety Directive 2008/96/EC, within six months of the completion of all works.

This ESDS may be updated as necessary at the stage of financial close, expected not before Q4 2021, at which time further or amended conditions and undertakings may be applied.

Given the conditions and assurances to be put in place as outlined above, the project is acceptable for EIB financing in environmental and social terms.