



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT

PROJECT: ESWATINI - CONSTRUCTION OF MANZINI MBADLANE GOLF INTERCHANGE- P-SZ-DB0-013

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN SUMMARY

June 2018

Project Title: ESWATINI - Construction of Manzini Mbadlane Golf Interchange.
SAP Code: P-SZ-DB0-013
Country: Kingdom of eSwatini
Division: RDGS 1

1.0. PROJECT DESCRIPTION AND OBJECTIVES

The Ministry of Public Works and Transport (MoPWT) of the Royal Kingdom of eSwatini is proposing to construct an interchange in the Manzini Golf Course area opposite Coates Valley in Manzini. The interchange starts at the Manzini traffic circle, with a service road that will link the MR-3 with Central Distributor Road on the left hand side (LHS) of the MR-3. It extends along the MR-3 up to km 0 + 600, while extending northwards along Central Distributor Road to the Madonsa Township access road. The total length of the road is about **3km**.

In addition to the road interchange, the Royal Kingdom of eSwatini requested the Bank to include a component of a feasibility study and detailed design for Sindvodvo – Phuzumayo railway Line and Phuzumayo station.

1.1. Project Components

The project components are as follows: (i) Road construction services, (ii) consultancy services to cover design review, preparation of bidding documents, project supervision; road safety audit; and financial audits, technical audits; (iii) a component of a feasibility study and detailed design for Sindvodvo – Phuzumayo railway Line and Phuzumayo station. Implementation of the ESMP will form part of the contractors contract. The major environmental and social sub-components include the following: ; (i) implementation of the Environmental and Social Management Plan (ESMP) (ii) Awareness campaign on road safety (iii) Sensitization of project workers communities HIV/AIDS.

1.2. Environmental and Social Requirements

The Bank's Integrated Safeguard System (ISS) requires that all projects financed by the AfDB and have a potential to engender any Environmental impacts should be subjected to Environmental impact assessment. Similarly, in the Kingdom of eSwatini, it is mandatory through the Environmental Management Act of 2002, that such projects be subjected to an environmental assessment prior to implementation. This document is a summary of the Environmental and Social Management Plan (ESMP), formulated after an ESIA was carried out for the proposed project. The ESMP details the activities required to be carried out prior to, during, and after construction of the road. Although it is part of the ESIA report for the project, the ESMP Summary has been prepared for purposes of disclosure on the African Development Bank website in compliance with the Bank's Integrated Safeguards System. The ESMP is a legal document, and the proponent is also obligated by the eSwatini law as well as the AfDB policies to implement it. Implementation of the ESMP is an integral part of the Loan agreement when it is eventually signed.

1.3. Project Categorization

The preparation of the project to Construct the Manzini Mbadlane Golf Interchange project and the categorization of its environmental and social risks was guided by the African Development Bank's policy requirements and the relevant eSwatini legal framework. The construction of the

Manzini Mbadlane Golf Interchange has a multitude of socio-economic positive impacts and limited Environmental and social negative impacts. The magnitude of involuntary resettlement is minimal. The total project length is only **3.0KMS** and will only impact on two small pieces of land (and not homes and other assets) one belonging to the municipality but utilized by the golf club and a small part of a recreation ground belonging to an individual. This is less than the 200 persons stipulated in the AfDB's ESAP to grade the project as a category 1. The identified likely impacts, which are well articulated in this ESMP can easily be mitigated through a series of appropriate mitigation measures. Therefore, the environmental and social risk characteristics of this project places it in the environmental category 2 according to the Bank's Integrated Safeguard System (ISS) requiring an Environmental and Social Management Plan (ESMP).

The eSwatini Environmental Management Act (2007) provides for distinct project categorization. The initial assessment by the Swaziland Environmental Agency considered the project not to pose high E&S risks in a range that would require a full brown ESIA, hence it was recommended that an environmental scoping report and an Environmental Management Plan (EMP) be prepared for the project within the domain of the eSwatini laws. These requirements are equivalent to the AfDB's category 2 requirement of an ESMP.

1.4.The Purpose and Preparation of the Environmental and Social Management Plan (ESMP)

The purpose of this ESMP, which will form an integral part of the loan covenant, is to describe the actions that will be taken by the Kingdom of eSwatini to enhance positive impacts and to avoid, minimize, mitigate, compensate / offset negative impacts associated with the Construction of Manzini Mbadlane Golf Interchange project. The ESMP will also be used to monitor identified environmental and social impacts of the planned activities. It stipulates the appropriate monitoring mechanism of the mitigation plan to be carried out, and that mitigation measures are actually implemented. Environmentalists from the Supervision Consultant will officially monitor the implementation of this plan on behalf of the proponent, and will prepare and submit compliance reports to the Swaziland Environment Authority¹ at the times stipulated in the (SEA) Compliance Certificate for the Project.

1.5.Compliance

Of particular relevance to the project is the awarding of an Environment Compliance Certificate (ECC) to the proponent by the SEA. It's the certificate that permits the proponent to proceed with the development. In order for the SEA to issue the certificate, the proponent presented, for review, an Environmental Impact Assessment Report and its associated Comprehensive Mitigation Plan, to the SEA. As per SEA requirements, the ESIA and ESMP reports were presented separately as stand-alone documents. This particular document is the summary of the corresponding ESMP for the project that was approved by SEA.

1.6.Public disclosure requirements.

¹ Although the country name has changed from Swaziland to eSwatini, the Environmental Agency is still referred to as the "Swaziland Environmental Agency - SEA"

ESwatini Environmental Management Act (EMA) of 2007 makes public review of Environmental Assessment Reports mandatory. The proponents are required to advertise the project documents stating the exact locations where documents are disclosed for public review. This requirement was applied to this project. The advert was required to be in the print and electro media and was ran for two weeks. Thereafter, the documents were placed/disclosed at the announced locations/public places for 20 days. At this point, the proponent of the project is required to demonstrate and satisfy the Swaziland Environmental Agency how the comments from the public have been incorporated in the project before a license to operate is issued. This provision in the ESwatini environmental law complements the AfDB's requirements for both consultation and disclosure as stipulated in its Disclosure and Access to Information (DAI) policy and ISS. This ESMP summary will also be disclosed by the Bank on its website for 30 days to allow public review and comments.

2.0. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1 African Development Bank Policies

The design, implementation and monitoring and evaluation modalities for the project have been informed by the Bank's environmental and social policies and guidelines. Considerations are premised on expectations for assessing and addressing environmental and social impacts in line with the Bank's Integrated Safeguards System (ISS -2013). The overarching goal of the Banks ISS is to preserve and enhance the ecological capital and life-support systems across the continent. Based on the projects feasibility reports, all the five Operational Safeguards (OS) embedded in the ISS were considered and triggered, and these are;

- **Operational Safeguard 1:** Environmental and social assessment, which is the overarching Operational Safeguard that mainstreams environmental and social considerations in all Bank operations. As a category 2, ESA is required for this project.
- **Operational Safeguard 2:** Involuntary resettlement land acquisition, population displacement and compensation. *Although the land take on the project is limited, OS2 has tentatively been taken into consideration in the management of the compensation of the two pieces of land to be acquired for the project. Subject to resolving the issues with the affected individual and Golf club or even realigning the route to avoid these two entities, OS2 may not be applicable in the long run.*
- **Operational Safeguard 3:** Biodiversity, renewable resources and ecosystem services which reflects the objectives of the Convention on Biological Diversity to conserve biological diversity and promote the sustainable management and use of natural resources.
- **Operational Safeguard 4:** Pollution prevention and control, hazardous materials and resource efficiency, which is intended to achieve high quality environmental performance, efficient and sustainable use of natural resources, over the life of a project
- **Operational Safeguard 5:** Labour conditions, health and safety that basically protects workers right.

The Bank's policy provision on information disclosure and access is also triggered. It requires that all the people residing in the given areas of a project have the right to be informed of the proposed development project in their respective areas.

2.2. International Conventions and Agreements

The Government of ESwatini (GoS) has, in line with international practice, entered into various international agreements (Treaties/Conventions) and formulated its own local policies for conservation of the environment. This follows recognition of the fact that the resources of the earth are finite and conservation or exploitation of the environment cannot be left to a single state. Of particular relevance are the following Conventions and Policies.

International Convention to Combat Desertification Initiatives of 1998: This Convention provides for mechanisms and opportunities for addressing problems of land degradation and desertification within the concept of development. Due care is necessary on every development project to avoid, minimize and mitigate Desertification.

The Convention on Biological Diversity: This Convention seeks to conserve biological diversity in the country and promote sustainable use of its components. It emphasizes on the conservation of natural resources and environmental protection. Construction direct impact on biological diversity hence the relevancy of this convention.

The Ramsar Convention: All member states under this convention are to protect wetlands at all costs. Wetlands are fragile and complex ecosystems. According to this convention, wetlands are defined as areas of marsh, fen or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh or brackish (ematete/emacaphoti). The project is close to a small marsh and hence the applicability

2.3. ESwatini Legislation Relevant to the Development

The Government of ESwatini (GoS) has, in line with international best practice, recognized the need to develop, implement and enforce environmental laws to protect natural resources, public health and social/individual well-being. At present, a number of Acts govern aspects of the environment; this section is thus included here to ensure that this ESIA and its recommendations, especially the legally-enforced mitigations, are in line with current relevant legislation.

Table 1. Summary of Acts of the Kingdom of ESwatini Relevant to the project

Legislation	Regulating Authority	Relevant Section
The Environmental Management Act, 2002	SEA	Controls waste disposal, air and water pollution, as well as promote integrated environmental management.
The Natural Resources Act, 1974	MNRE	A Natural Resources Board (NRB) was established by this Act. The duties of the NRB include exercising supervision over natural resources, such as the protection of source, course or feeders of a public stream, and the mitigation or prevention of soil erosion.
The Water Act, 2003	MNRE	Preparation of a Water Master Plan, establish policies for water resource use and creation of a National Water Authority.
The ESwatini Water Services Corporation Act, 1992	MHUD/SWSC	The ESwatini Water Services Corporation was established by this Act. The objectives of the corporation are to abstract, store, transport, purify and supply water, and to treat sewage in urban areas.
The Public Health Act, 1978	MoH	The part of the act that deals with environmental matters requires local authorities to deal with nuisances and specifically to prevent pollution of any supply, which the public in their district has a right to use, and does use for drinking or domestic purposes, and to purify such polluted supply. Nuisances include wastewater flowing from premises into a public street, collections of water and sewage, which may cause infection.

Key to the tables below: SEA-ESwatini Environment Authority; MNRE- Ministry of Natural Resources and Energy; MoA- Ministry of Agriculture; MHUD-Ministry of Housing and Urban Development; SWSC-ESwatini Water Services Corporation; MoH-Ministry of Health; NRB – Natural Resources Board; MoPWT- Ministry of Public Works and Transport; MTEA-FD Ministry of Tourism and Environmental Affairs-Forestry Department

Table 2. Summary of Acts Relevant to the Project (continued)

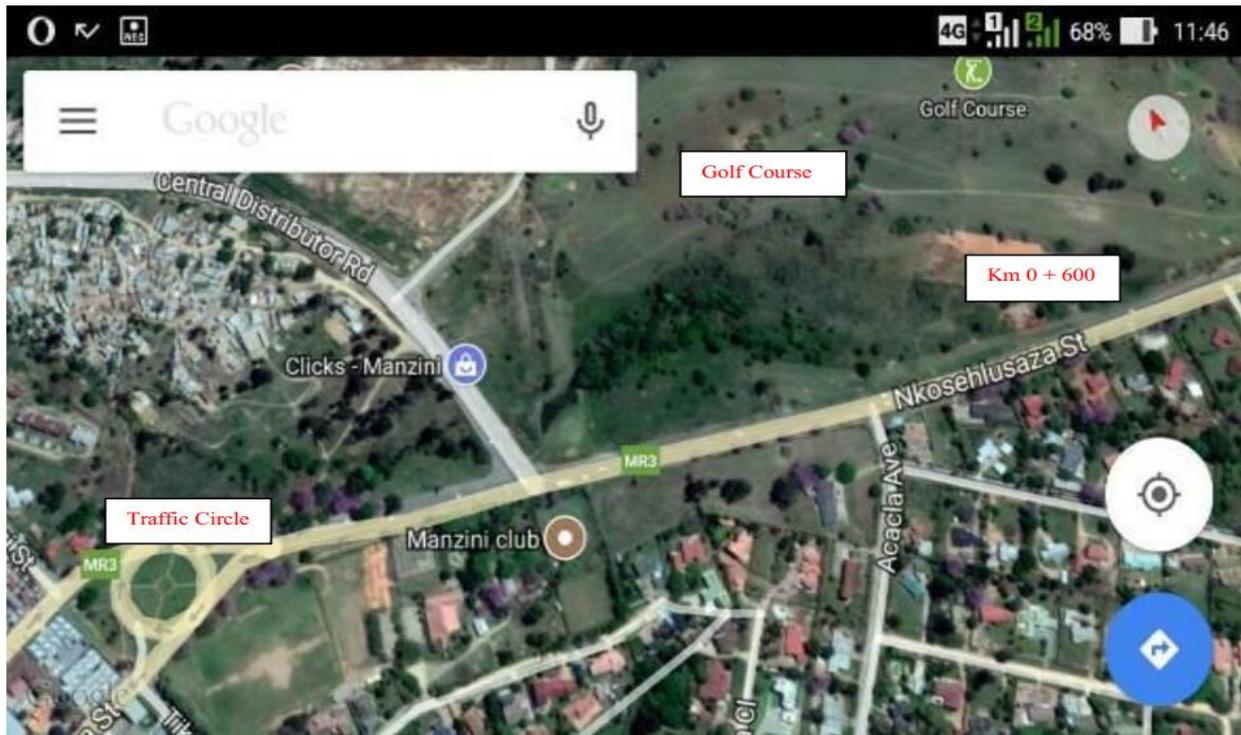
Legislation	Regulating Authority	Relevant Section
11. The Noxious Weeds Act, 19 of 1926	MoA	This Act grants an occupier of land the duty to clear or report any noxious weed on land of which he is responsible. Noxious weed means plants mentioned in Schedule, e.g, Bugweed, Cocklebur, Dagga, Dodder, Jointed Cactus, Spear Thistle, Malta-Thistle, Purple Star Thistle, Yellow-Thistle, Mexican Poppy, Khaki Weed, <i>Lantana camara</i> .
12. The Flora Protection Act, 2001	MoA	It ensures the conservation and sustainable management of a wide range of ESwatini indigenous flora and seeks to address the depletion and extinction of some flora resources in ESwatini.
13. The Game Act, 1953 (1993)	King's Office	This Act was enacted for the preservation of game and other types of wildlife in ESwatini. It prohibits any game. Any person found hunting or is found in possession of protected game, without a valid permit, will be guilty of contravening this Act, and can face a jail term without an option of fine.
14. Urban Government Act # 8, 1969	MHUD	Provides for the establishment and regulations of urban authorities and empowers them to administer developments in accordance with the Ministry of Economic Planning and Development guidelines.
15. Town Planning 196	MHUD	The Town Planning Board (TPB) was established by this act; the duties of the TPB are to ensure that all provision for the preparations and carrying out of town planning schemes in accordance with the Act. It empowers the Surveyor General to approve any general layout or <u>diagrams of subdivisions of land</u> .
16. The Roads Outspans Act # 40, 1931	MoWPT	The Act makes provision for the establishment of public roads and outspans. It stipulates the maximum widths of main roads and compensation for opening, construction and maintenance of any public road/bridge or damage o the environment.
17. The Acquisition of Property Act # 10, 1961	MoWPT	The Act makes provision for the compensation of private land owners having Title Deeds and for loss of crops on Swazi Nation Land held through <i>kukhonta</i> .

3.0. DESCRIPTION OF THE PROJECT AND ENVIRONMENT

3.1. Road Network and surrounding area

The Manzini Mbadlane Golf Interchange project is located opposite Coates Valley. In total, twelve (12) roads will comprise the Manzini Mbadlane Golf Interchange project. It starts just after the Manzini Traffic Circle on the MR-3 and opposite the Manzini Club. It is part of the road network oriented eastwards and northwards on the LHS of the MR3. The Project area is located in the Manzini Urban area. There are residential areas that surround it which include Mangwaneni and Coates Valley. As well, business properties are also located near the site. At the start of the interchange near the Manzini Traffic Circle, surrounding land uses are recreational (the Manzini Club on the RHS). On the LHS is a drainage line between the MR-3 and the Mangwaneni informal settlement. On the RHS north of the traffic lights on the Central Distributor Road is the vast open space of the Manzini Golf Course and the Manzini Landfill/Manzini Cemetery, beyond which is the Madonsa Township. Immediately south of the MR-3 from km 0 to km 0+300 is vacant land on the RHS. In the vicinity of km 0+400 on the RHS is the current access to Coates Valley (Acacia Avenue). On its junction with Eagle Road within Coates Valley Township is the Manzini Regional Administrator's residence.

Figure 1.1 Location of the Manzini Mbadlane Golf Interchange project in Manzini, ESwatini



3.2. Existing Environment

Physiography: The route is situated in the ESwatini middle-veld between the escarpment and the Lubombo Mountains.

Climate: The project area is characterized by a sub-tropical climate with summer rains. The mean minimum temperatures vary from 9°C to 19°C and the mean maximum temperatures range from 22°C to 28°C.

Hydrology: The drainage along the route is generally away from the road, which is situated along the watershed between the Mbuluzane River which runs northeast from the Lutfontja Hills and the Sidvokodvo and Mzimphofu Rivers which run south and southeast from the existing road. At some points the route crosses the headwaters of tributaries of the Mbuluzane and Mzimphofu Rivers.

Geology: Published geological mapping indicates that the underlying geology along the route will comprise mainly of Ngwane Gneiss.

Soils: In summary, the soils found in this area occur mainly as dark red, dark reddish orange, dark olive and pale green clayey and sandy silts. Where tested these soils were generally of G8 quality and of low to intermediate plasticity; however the completely weathered soils in test pits 14 and 19 were found consist of clay of high plasticity with corresponding high swell characteristics resulting in the classification reducing to less than G10.

Flora and Fauna: The natural vegetation of the study area has been extensively altered by industrialization due to past construction activities, new developments and maintenance works. Vegetation consists mainly of middleveld vegetation, which is broad leaf tree and shrub savannah and tends to be “more open veld type with patches of short forest and shrubs persisting”. Most of the vegetation is found in riverine areas. The birds are common woodland species such as *Streptopelia senegalensis*, *Halcyon senegalensis*, etc. Herpetofauna include *Naja mossambica*, *Varanus niloticus* and *Breviceps adspersus*.

Air Quality, Aesthetics, Cultural and Archaeological Resources The quality of air is considered good because there are no emitting manufacturing industries found along the proposed alignment. The area has no cultural and archaeological resources worth preservation.

3.3. Socio-economic Environment

Land use: The Project area is located in the Manzini Urban area. There are residential areas that surround it which include Mangwaneni and Coates Valley. As well, business properties are also located near the site. At the start of the interchange near the Manzini Traffic Circle, surrounding land uses are recreational (the Manzini Club on the RHS). On the LHS is a drainage line between the MR-3 and the Mangwaneni informal settlement. On the RHS north of the traffic lights on the Central Distributor Road is the vast open space of the Manzini Golf Course and the Manzini Landfill/Manzini Cemetery, beyond which is the Madonsa Township. So the land uses at the interchange are mainly residential, noting that the MR-3 provides means to access their areas via the municipal Jacaranda, Eagle and Acacia roads.

Employment: At the Interchange, many residents were found to be migrant labourers at the sugar

belt (Simunye, Mhlume), or textile factories (Matsapha), and government offices in Manzini, and these make up a majority of those in formal employment.

Economic activities: Locally, economic activities vary from formal (the Manzini Club, Eve Guest House, Global Village Guest House, True Reality Guest House, Moneni Shopping Complex, etc.). This provides formal employment. The residential areas also provide formal employment to domestic workers mainly workers. Informal activities include markets stalls (Gogo Shongwe), as well as small-scale three-legged pot (derefudi) manufacturing. On the informal employment aspects, the Mangwaneni Community is mostly unemployed. Crime is rife in this settlement.

Health facilities: The major hospital in the area is the Raleigh Fitkin Memorial (RFM) Hospital, which is ±4km away from the site due west. The nearest clinic is the Emphilo Clinic, which is ± 2km due west. The TB Hospital and Manzini Clinic are ± 3km towards Siteki.

Fire and Emergency Services: The Manzini Fire and Emergency Services station is located about ±3.5km away from the site, near Zakhele Township.

Municipal Facilities: The nearest municipal facilities are the Manzini Municipal Council Park, the King Sobhuza Park opposite Swazi Bank in Manzini, the Coates Valley Park, and the Manzini Traffic Circle and associated park.

Cultural Resources: Religious gatherings are carried out in many churches in Manzini, which include Roman Catholic Church, Nazarene, Living Waters, etc.

Governance: Besides the Municipal Council of Manzini as a local authority, the Manzini Regional Office borders the interchange.

4.0. PROJECT POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND CLIMATE CHANGE RISK

4.1. Introduction

The process for the Environmental and Social Assessment carried out concurrently with the other feasibility studies and detailed design for the project, commenced with a scoping phase. The purpose of the scoping phase was to solicit as many potential issues or impacts as possible. Impacts considered were those that could be identified scientifically or and those which the general public and other interested and affected parties could foresee as a result of the proposed construction of the Manzini Mbadlane Golf Interchange project. The following section presents a summary environmental impacts together with proposed mitigation/enhancement measures as identified during the assessment.

4.2. Major environmental and social impacts

Location of temporary construction camps, storage areas and site offices will result in soil erosion; pollution; loss of vegetation and bio diversity; social disruption; health and safety risks and waste generation. Borrow pits and location of spoil sites will in addition to the mentioned impacts add to loss of certain habitats for some animal species; sanitation risks; dust and noise and visual impacts. Land acquisition will be the one long-term irreversible impact of the project. Service disruption

with regard to use of the road, water services and cattle crossings will also happen. Water quality deterioration and drainage are likely to emanate as well. Air quality in terms of dust generation may also become a significant impact and aesthetics during construction due to storage of machinery and materials. Noise and traffic issues may become significant impacts as well. Certain changes to the socio-economic conditions will emanate due to creation of employment; but also an influx of people into construction areas will be competing for services. The influx is likely to impact negatively on health issues such as HIV/AIDS, safety issues will also arise including the chance of criminal elements; sanitation related health issues and labour and social conflicts.

4.3. Involuntary Resettlement

The project will not have major resettlement impacts. Only two pieces of land are falling within the right way as per the current design. One piece of land belongs to an individual who the Department of roads has initiated discussions with already with the view of compensating him to vacate the land. However during the projects appraisal mission, the Department of Road in the Ministry of Works and Transport floated the idea that there is a possibility of realigning that particular section of the road to avoid the land altogether. Another piece of land to be impacted on is a small piece of land owned by the Municipality but utilized by the golf club. This is not expected to pose any challenges since the Municipality has agreed to the land take and the Department of Roads is liaising with the Golf club on how to re-allocate the teeing ground.

Table 3: Enhancement/Mitigation Measures for bio-physical environment

Component/Issue	Objective	Management Measures	Responsibility/ Partnerships
Management and Monitoring	To ensure that the provisions of the ESMP are implemented during construction.	<ul style="list-style-type: none"> i. The Project Consultant shall ensure that all aspects of the ESMP are implemented during construction. ii. Also the Project Consultant/or appointed staff shall attend regular site inspections and meetings and minutes shall make provision for reporting on every aspect of the ESMP. 	Supervision Consultant/ Environmental Control Officer (ECO).
Communication and Stakeholder Consultation	To ensure that all stakeholders are adequately informed throughout construction phase and that there is effective communication and feedback with all stakeholders.	<ul style="list-style-type: none"> i. The Contractor shall appoint an ECO from the construction team to take responsibility for the implementation for all provisions of this ESMP and to liaise between the Contractor, Community, Client and Consultants. The ECO must be appointed within 14 days after the site-handover. ii. The Contractor shall at every site meeting report on the status of the implementation of all provisions of the ESMP. iii. The Contractor shall implement the environmental awareness training as stipulated in the ESMP. iv. The Contractor shall liaise with the Project’s supervising consultant regarding all issues related to community consultation and negotiation as soon as possible after construction commences. 	Contractor/ Supervising Consultant
Health and Safety	To ensure health and safety of workers and the public at all times during construction	<ul style="list-style-type: none"> i. This is a short length project with minimum disruption to traffic flow however in sections where the construction is likely to affect traffic flow, the Contractor shall submit a strategy to ensure the least possible disruption to traffic and potential safety hazards during construction. ii. The strategy should include a schedule of work indicating when and how road crossings (construction at existing intersections) will be made. The schedule will be updated and distributed to all stakeholders. iii. The Contractor shall also liaise with the Traffic Authorities in this regard. Proper traffic and safety warning signs will be placed at the construction site to the satisfaction of the Engineer and the Roads Department. iv. The Contractor will adhere to the regulations pertaining to Health and Safety, including the provision of protective clothing, failing which the Contract may be temporarily suspended until corrective actions were taken. 	The ECO will monitor. Contractor will ensure the mitigation measures are enforced at his own Expense.

Component/Issue	Objective	Management Measures	Responsibility/ Partnerships
		<ul style="list-style-type: none"> v. Dust protection masks shall be provided to task workers if they are exposed to dust. vi. Surface dust will be contained by wetting dry surfaces periodically with a water bowser, sprinkler system or any suitable method. This applies for the construction site as well as all the roads. vii. Potable water shall be available to workers to avoid dehydration. This water shall be of acceptable standards to avoid any illness. At least 5 liters of drinking water per person per day shall be made available during construction. viii. The Contractor shall enforce relevant Health and Safety Regulations for these specific activities. ix. The Contractor shall also comply with relevant Labour Laws as stipulated by the Labour Act. x. The Contractor shall implement a HIV/AIDS awareness programme as part of Health and Safety. xi. Blasting may only be conducted by a qualified person and all laws and regulations will be enforced before and during blasting. 	
<p>Conservation of the Natural and Historical Environment</p>	<p>To avoid/minimize damage to soil, vegetation and historical resources during the construction phase. Damage is likely to include soil crusting, soil erosion and unnecessary vegetation destruction.</p> <p>Also Management of water (domestic and construction). Management of other sensitive areas.</p>	<ul style="list-style-type: none"> i. At the outset of construction (or during construction as may be applicable), the ECO and the Contractor shall visit all proposed borrow pits, haul roads, access roads, camp sites, and other areas to be disturbed outside the road reserve. Areas to be disturbed shall be clearly demarcated, and no land outside these areas shall be disturbed or used for construction activities. ii. Detailed instructions and final arrangements for protection of sensitive areas, keeping of topsoil and rehabilitation of disturbed areas shall be made, in line with the guidelines in the ESMP. The ECO shall be consulted before any new areas are disturbed which have not yet been visited. iii. No off-road driving shall be allowed, except on the agreed haul and access roads. iv. Vegetation shall be cleared within the road reserve as necessary for the construction of the road. The area on either side of this corridor may not 	<p>Contractor will ensure the mitigation measures are enforced at his own expense.</p> <p>The ECO will monitor implementation.</p>

Component/Issue	Objective	Management Measures	Responsibility/ Partnerships
		<p>be cleared of vegetation, unless permission is given to do so for detours or access roads. This measure is subject to the Roads Department of ESwatini's specifications with regard to the road reserve.</p> <ul style="list-style-type: none"> v. A prescribed penalty will be deducted from the Contractor's payment certificate for every mature tree removed without approval. vi. Where compaction has taken place in disturbed areas, these areas will be ripped and covered with topsoil kept separate for this purpose. vii. The killing of any animal (reptile, bird or mammal) is prohibited. viii. A prescribed penalty will be deducted from the Contractor's payment certificate if it is shown that any of his staff or sub-contractors are involved in trapping, hunting or any kind of collecting of wild animals in the vicinity of the work sites. Offenders will be handed to the authorities for prosecution. ix. Pipelines for the pumping of construction water shall as far possible run within the road reserve and along existing tracks and other roads. Water will not be allowed to be wasted. This includes water required for construction and domestic purposes. x. Collection of plants or parts of plants (including fire wood of any size or description) is forbidden. xi. As far as possible existing tracks alongside the existing road and within the present servitudes should be utilized for both construction and maintenance. These should be clearly indicated, together with designated turning points and construction laydown areas. The area used should be constrained as far as possible. 	
<i>Enhancement/Mitigation Measures for bio-physical environment</i>			
Land acquisition	Compensate for the two pieces of land to make way for the road/road reserve	In order to mitigate the impact of the road, realignment or compensation of the two pieces of land will be considered.	Roads Department
Traffic diversions	Manage the disruption and inconvenience to residents due to detours, local road closures, dust, noise, heavy	During the construction phase, besides normal care to control traffic and ensure safety through road signs and markings, no additional mitigation measures are required.	Contractor/Supervising Engineer and Roads Department

Component/Issue	Objective	Management Measures	Responsibility/ Partnerships
	equipment traffic, changes in level of service, safety hazards and interference with emergency services	Once the interchange is completed it will have a high impact on improvement of levels of service and road safety. No further enhancement measures are required	
Improved road safety	Road safety will be improved but risk of accidents on the new road will increase hence requires mitigation measures	It is necessary to augment this with effective traffic law enforcement, especially speeding, as well as the general sensitization of the travelling public on matters related to traffic safety in general and on this road in particular.	Contractor/Supervising Engineer and Roads Department
Creation of employment opportunities	Manage the employment opportunities as a result of the project	In order to ensure that the benefit of employment creation will filter down to a local level it is necessary to include the obligation to recruit and use local workers from around Manzini and neighboring area to the maximum extent possible and practical. It is recommended that the successful contractor be obliged to only bring key staff from its head office, if outside the region, and to then set up an employment office and recruit local people for as high a proportion of the project scope as possible. Local political leaders and the Ministry of Labour should be involved in this process and partake in formulating the recruitment plan and conditions.	Contractor/Supervising Engineer and Roads Department
Increase in the spread of HIV/AIDS and other STDs	Interaction between workforce and local communities may increase occurrence of communicable diseases, including HIV/AIDS and other sexually transmitted diseases (STDs) which must be mitigated.	It must be a condition of the construction contract that HIV/AIDS awareness campaigns be undertaken amongst all construction staff. A suitably qualified person must design and implement the programme throughout the course of construction. Monitoring and evaluation of this must form part of the EMP.	Contractor/Supervising Engineer
Wider and better local and regional connections, improved transport of commodities and improved access to markets	-	No further enhancement measures required	NA

5.0. MONITORING PROGRAM

It is planned that the environmental and social impacts and their designed mitigation measures shall be monitored during implementation and operation phases of the project. The monitoring of the impacts will focus on the following points: Grievance redress mechanisms, rehabilitation of quarry sites and borrow pits; number of men and women who are employed; number of workers and community members (segregated by gender), who have undergone sensitization on the HIV/AIDS, environmental protection and personal hygiene and sanitation; the number of accidents that occurred during the construction; etc. The implementation of the ESMP will be one of loan covenants in the agreement signed between the borrower and the Bank. All the mitigation measures specified in this plan shall be included in the bid documents for the successful enterprise to implement. Campaigns on HIV/AIDS, environmental protection and personal hygiene and sanitation shall also be undertaken. For this purpose, services of experienced NGOs in the fields will be sought. The HIV/AIDS campaigns would be undertaken in the framework of the Ministry of Health relevant programs.

6.0. PUBLIC CONSULTATIONS

The methodology followed during the public participation process was to make use of existing communications between Beza Consulting Engineers Plc.[Ethiopia], the relevant stakeholders and interested other parties, as well as personal interviews conducted by Beza Coultling Engineers hired by the Kingdom of Eswatin. The objectives of the meetings were to inform the various Stakeholders and the general public about the project and to receive any comments or concerns with regard to the design of the proposed interchange, the natural environment that will be affected by the project as well as the social impact this project might have. The meeting was well attended and the project was explained to the public at large. Representatives of the various land users were present at the meeting and various inputs were received from the public. Although not all comments are included in this summary, a full comment sheet is available in the Social Impacts Assessment

6.1. Summary of Issues and Concerns Raised by Stakeholders

- Some in the community had no idea of what the construction of an interchange in their area would entail. This was explained in detail using drawings and maps
- Extent of Expropriation: Some were of the belief that the interchange would take up large tracks of land to the Milling/Mzimmene River. The extent of land was explained.
- Cracks: Some were concerned that vibrations were going to cause cracks, especially the soup kitchen bordering the interchange. Assurances were given to residents that this would not be the case.
- One person complained that he has been consulted too many times.

Most stakeholders are aware of the proposed interchange. It is only the details of it that most had not grasped before the stakeholder engagement exercise

9.0. INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING REQUIREMENTS

9.1.ESMP Administration

The institution that has overall responsibility of ensuring that the ESMP is implemented is the Roads Department in the Ministry of Works and Transport.. Although there are no permanent Environmental and Social expert in the Ministry of Public Works and Transport, similar projects have been successfully implemented through hiring of Consultants with the necessary capabilities which is the same approach to be used for on this project. From discussions and review of the various reports, Royal Kingdom of ESwatini has appropriate institutional arrangements and substantive capacity to implement the ESMP on this project. To manage the ESMP implementation, copies of the approved ESMP shall be given to all relevant departments, kept at the site office and will be distributed to all senior contract personnel. All senior personnel shall be required to familiarize themselves with the contents of this document.

9.2.Roles and Responsibilities

The implementation of the ESMP requires the involvement of several stakeholders, each fulfilling a different but vital role to ensure sound environmental management during each phase. The key personnel responsible for the implementing the ESMP are:

Environmental Compliance Officer (ECO)

The Ministry of Public Works and Transport will elect an independent Environmental Control Officer (ECO) to ensure that all work conducted is environmentally acceptable and adheres to all aspects of the ESMP in general. The ECO, being knowledgeable about SEA requirements for monitoring ESMP's will act as the SEA liaison in the project, in the sense that all matters requiring SEA approval or consideration will be reported to the SEA through the ECO. The ECO must therefore be aware of all environmental obligations of the Contractor and of all areas of environmental concern at all times. Due to the involved nature of this position, the ECO will ideally be a full time employee and must be located on site. But because of the specialized nature of the environmental specialist, and that the qualifications required of the ECO are quite high, it is not likely that the contractor can employ such an expert on a full time basis for the project. Rather a monitoring budget line is used to secure the services of a reputable consultant who would also prepare monitoring reports on behalf of the proponent. The budget is to provide for travel, site visits, and meetings with the proponent, Interested/Affected Parties (IaP's) and contractor, communication and preparation of the monitoring reports

The Proponent (MoPWT)

The proponent is advised by the ECO on environmental aspects of the project. The proponent must be aware of importance of the environment and ensure that the contractor who is carrying out the project on his behalf, acts in an environmentally acceptable manner. MoPWT will also be tasked with ensuring that all governmental/non-governmental agencies are aware of their specific roles and responsibilities as per the recommendations of the ESMP, to ensure effectiveness and compliance. Such organizations or agencies involve, the essential services providers (ESwatini Water Services Corporation, ESwatini Posts and Telecommunications, Corporation, ESwatini Electricity Company, Fire and Emergency Services), the various government ministries, e.t.c, and NGO's.

The Resident Engineer (RE)

The Resident Engineer (RE) is the one who will be responsible for supervising all construction works and monitoring activities of the contractor. His role will include:

- Produce a Photographic Record / Inventory prior to commencement of construction.
- Run a Site Diary to record events and daily activities in ESMP implementation
- Issue Site Instructions to the Contractor, as and when required (requested by the ECO), where the ESMP
- has been contravened or with regards to more specific issues arising which are not addressed in the ESMP
- Forward copies of all records, site diary, site instructions and other data collected, in terms of the ESMP, to the ECO on a fortnightly basis (i.e. every two weeks)
- Keep an up-to-date Site Visitors Register
- Keep a Complaints & Claims Register, including a record of follow up action.

The Contractor (CO)

The Contractor will be on the forefront of environmental damage by nature of his activities. The ESMP is to guide his actions so as to cause minimal damage to the environment. As it is unlikely that the contractor can monitor his own activities, the ECO will be required to monitor all contractor's activities. In order to ensure that the contractor is committed to this, and generally ensure that the nation, through the SEA, does not find itself left with an environmental disaster due to bad faith, the SEA will not issue the certificate for the project until there is proof of commitment by the contractor as evidenced by inclusion of the ESMP in the Tender Documents.

The Worker (WO)

It is crucial that all workers on site are aware of their environmental responsibilities and understand the environmental impacts of their actions. Site induction must include an environmental code of conduct that must be adhered to at all times, e.g., no killing of animal (even snakes), no hunting of birds – an illegal activity in ESwatini. Because the actions of workers tend to mirror that of the contractor who supervises them, the contractor will act in an environmentally responsible manner, and will actively encourage the workers to do the same.

Public Participation during the construction phase

An on-going process of public participation shall be maintained during construction to ensure the continued involvement of interested and affected parties (I&APs) in a meaningful way.

Public meetings to discuss progress and any construction issues that may arise shall be held at least every three months and more regularly if deemed necessary by the ER. These meetings shall be arranged by the ECO but shall be facilitated by the ER. The Contractor shall present a progress report at each public meeting. All I&APs that participated in or were informed during the EIA shall be invited to each of the public meetings.

10.0. ESTIMATED COSTS

The total Cost for the implementation of the ESMP is estimated to be 100,000UA. Costs of certain items associated with environmental management and monitoring will be an integral part of specific items incorporated in overall project budgets, and no separate budget is necessary to cover these aspects. Such items comprise;

- Marginal costs of the contractor to be incurred in complying with environmental protection clauses in the construction contract are incorporated in unit rates and bill items and will thus be included as construction costs. It should be noted that no significant increase in construction costs is expected in connection with requiring compliance with environmental protection clauses, since these merely require the contractor to behave in a responsible manner in relation to the environment, in accordance with good construction practice.
- Environmental monitoring carried out by the Supervising Engineer's staff including inputs by the Environmental Specialist recruited by the Consultant is an integral part of general supervision duties/responsibilities and will be covered by normal construction supervision cost estimates and contract.

Costs which will be incurred by the various departments of the Government Departments in connection with management duties such as supervision and monitoring of the project also covering the implementation of the ESMP are not included as direct costs on the ESMP implementation

11.0. IMPLEMENTATION SCHEDULE AND REPORTING

The implementation of the environmental and social measures shall last throughout the project cycle. The main responsibility of monitoring the progress of the project implementation shall lie with the Roads department in the Ministry of Public Works and transport. The Roads Department shall be responsible for designing project monitoring systems and record keeping. It will prepare progress reports, including quarterly reports, which will need to be submitted to the Bank. The designated Roads Department staff together with the Engineer will be responsible for the preparation of reports on the effectiveness of the implementation of the environmental and social mitigation measures and any improvement that would be required.

REFERENCES AND CONTACTS

Contacts: **Aaron Mwila Katambula**, Transport Engineer, African Development Bank – South Africa 339 Witch-Hazel Centurion| Office Tel: +27 12 003 6900 |Ext 8463 Email: R.Malinga@AfdB.Org

Annah M. Rutebuka, Social Development Officer, African Development Bank South Africa, 339 Witch-Hazel Centurion| Office Tel: +27 12 003 6900 |Ext 8462 E-Mail: a.rutebuka@afdb.org|

References:

Project Feasibility Study and Detailed Report including
 Volume 1 - Feasibility Study Report - this document
 Volume 2 - Environmental and Social Impact Assessment Report
 Volume 3 - Preliminary Design Drawings
 Draft Detailed Design Report