

REPUBLIC OF RWANDA



MINISTRY OF LOCAL GOVERNMENT

LOCAL ADMINISTRATIVE ENTITIES DEVELOPMENT AGENCY

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# **ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK**

FOR THE

**SOCIAL PROTECTION INVESTMENT PROJECT FINANCING OPERATION  
(P162646)**

September, 2017

## EXECUTIVE SUMMARY

The Government of Rwanda aims to eradicate extreme poverty by 2020. In order to achieve this demanding target, there is a need to strengthen social protection policies and programs to more effectively promote sustainable graduation out of extreme poverty and strengthen household resilience to a wide range of shocks. Similarly, the Government of Rwanda has established reducing child chronic malnutrition as a national priority and recently approved a new ECD policy that calls for social protection to contribute to meeting ECD goals. The VUP, as the main social protection intervention in Rwanda, has therefore been called upon to ensure greater focus on nutrition and child sensitive social protection.

The Government with the support from the World Bank, is therefore in the process of preparing a Social Protection Investment Project Financing (IPF) operation to help accelerate the achievement of Rwanda's poverty and malnutrition reduction goals and set the foundations for a more comprehensive, efficient, effective, inclusive and sustainable social protection system for the future. The Programme Development Objective is to “*support the Government of Rwanda to improve the coverage of the vulnerable and the effective delivery of Rwanda's main social protection programmes*”. The programme will support the strengthening and expansion of Rwanda's flagship social protection programme – the Vision 2020 Umurenge Programme (VUP) – as well as key complementary initiatives relating to nutrition. Furthermore, the programme will build capacity for evidence-based policy-making and service delivery at both national and decentralized levels.

At the time of project development and preparation of ESMF, the detailed design of the social protection investment project financing (SP IPF) has three components:

**Component 1: Improving coverage, adequacy and effectiveness of the Vision Umurenge Program (VUP) cash transfers;** which will focus on (i) Continuation of provision of direct support to all eligible households without labour or severely labour-constrained households caring for a person with severe disability; (ii) Expansion of Classic Public Works (cPW) from ? households currently to approximately 131,000 households with labour<sup>1</sup>; (iii) Extension of the new Expanded Public Works (ePW) sub-component to approximately 54,000 households which are moderately labour-constrained through offering multi-year, flexible, part-time work opportunities, (mainly road maintenance and community-based child care projects). (iv) Strengthening the VUP sensitisation component.

**Component 2: Enhancing access to human capital and economic inclusion services** which is geared towards improving the contribution of the Social Protection sector to boost human capital creation and economic inclusion services, with a particular focus on combating chronic malnutrition and improving child development goals.

**Component 3: Capacity building for policy development, systems strengthening and program management:** This component will support the Government at various levels to implement Components 1 and 2,

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<sup>1</sup> VUP Classic Public Works scheme primary objective is to provide consumption smoothing employment and promote graduation from extreme poverty among labour-endowed households as well as support long-term economic development through community asset creation.

as well as improvements of the larger social protection system in Rwanda. MINALOC will lead this component with the strong involvement of LODA. This component will cover:

- i) Evidence-based policy and program implementation and development;
- ii) Improvements in service delivery systems, and
- iii) capacity building and institutional strengthening

The project is expected to have both positive and negative social and environmental impacts. It is envisaged that the project will create employment opportunities for extremely poor households, support extremely poor households to meet their basic needs, increase social interaction among communities, reduce poverty and food insecurity, and raise Government revenues. On the other hand, as Public Works projects are implemented, there will be a number of excavations, soil disturbance and some increased traffic around sites associated with the delivery and removal of construction materials and construction debris. There is therefore a risk of temporary increases in pollution and degradation of the environment, including through mud slides, noise, dust and air pollution. In addition, there may be some increased risk of generation of vectors and vector borne diseases spread of STD/HIV amongst the construction workers and within the community in the vicinity of construction activities and certain other indirect negative impacts.

However, it is important to note that the types of project implemented under VUP public works are characterized by their high labour-intensity (at least 70% of project budgets are spent on wages for unskilled manual labour), community-based implementation modality (use of contractors is rare, except for supply of materials or machinery), relatively small size (PW projects typically are valued at less than RWF120,000,000, of which at least 70% is wages for unskilled labour) and extremely limited (if any) use of heavy machinery. Project types are likely to include: greening and beautification; community road maintenance and rehabilitation; urban drainage; reclamation of degraded marshland for agriculture; progressive and radical terracing; and rehabilitation and construction of water and sanitation networks and refurbishment of small structures to house community-based child care centers. The operation will not support new road construction where this contravenes the VUP's regulations on minimum labour intensity. VUP Public Works project designs are supported by simple feasibility studies which consider social and environmental risks and all proposals are all reviewed by the Local Administrative Entities Development Agency (LODA) prior to their implementation by Local Governments to ensure compliance with VUP Public Works guidelines (including, for example, project type and labour-intensity) with ineligible or inappropriate projects being rejected where necessary. These principles, along with clear inclusion/exclusion criteria for subprojects, are set-out in the VUP Programme Document and associated VUP Classic Public Works Guidelines and LODA's guidelines on conducting feasibility studies for public works. Subprojects that would have potential environmental and social impacts commensurate to category A would be excluded as they would likely contravene the VUP's regulations on labour intensity and implementation of the necessary environmental safeguarding would likely delay project implementation.

It is in this context, that the project has been assigned Environmental Assessment (EA) Category B. Following on from this categorisation, an Environmental and Social Management Framework (ESMF) is required to provide guidance and processes to the project planners, proponents and implementers of the Social Protection Investment Project Financing (IPF) operation in identifying, appraising and implementing sub-projects to

adequately address and mitigate adverse environmental and social impacts that potentially may be generated by the sub-project activities. The ESMF therefore provides a corporate environmental and social safeguard policy framework, institutional arrangements and capacities required to identify and mitigate potential safeguards issues and impacts in each District. The ESMF aims to ensure that appropriate institutional and capacity building arrangements are established and strengthened through the project. Finally, it also provides mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances.

The ESMF will be consistent with the World Bank Operational policies OP4.01 and OP4.12 as well as other applicable safeguard provisions of the World Bank. It also represents a statement of policy, guiding principles and procedures of reference, satisfactory to all key stakeholders such as the Rwanda Environmental Management Authority (REMA), Rwanda Development Board (RDB), the World Bank, Ministry of Infrastructure (MININFRA), Ministry of Agriculture and Animal Resources (MINAGRI), Ministry of Local Government (MINALOC), Local Administrative Entities Development Agency (LODA) and other relevant agencies. Apart from the ESMF, the project has also prepared the Resettlement Policy Framework (RPF) to provide guidance on the social principles, organizational arrangements and funding mechanisms for any displacement and resettlements that may be necessary during implementation. Environmental and Social Impact Assessments (ESIAs) and Resettlement Action Plans (RAPs) will also be prepared for subprojects requiring them.

Environmental and social screening of potential activities is a key pillar of the ESMF approach and is a critical element of the for the approval process of SP-IPF activities. The screening process, managed by the Rwandan Development Board (RDB), aims to: identify potential impacts of selected subprojects including whether they are likely to cause negative environmental and social impacts; determine appropriate mitigation measures for activities with adverse impacts; incorporate mitigation measures into project design; review and approve project proposals, monitor environmental and social parameters during project implementation. The screening process comprises the following steps; (1) Screening of Project Activities and Sites for eligibility and assess potential environmental and social impacts, (2) Re-categorize (if necessary) activities as per World Bank Operational Policy on Environmental Assessment (OP4.01) (3) Assessment of the need for, and level of ESIAs and ESMPs required for the project, (4) Implementation of ESIA/ESMPs if necessary; (5) Review and Approval of the Screening Activity, (6) Public Consultation and Disclosure; and (7) Environmental Monitoring and Follow-up.

The Project will be implemented by the Ministry of Local Government (MINALOC) and the Local Administrative Entities Development Agency (LODA) with sub-projects implemented through District Local Governments who, through the District One-Stop Center and Sector Land/Infrastructure Officers, are responsible for ensuring good quality design and implementation of VUP Public Works projects. The project will be administered through the Single Project Implementation Unit (SPIU) of LODA and additional human resources will be added to the current LODA team, with an overall Project Manager based in LODA's SPIU hired to oversee the project as a whole and ensure the administrative functions are done in a timely and effective way. LODA will determine the number and specializations of additional staff to the current SPIU team which shall include a safeguards team of two people including an Environmental Safeguards Specialist and a Social Safeguards Specialist.

The ESMF implementation will follow the same structure as the Project implementation mechanisms. Specific to the ESMF implementation, the following arrangements are going to be made;

- LODA/SPIU will recruit a social and an Environmental Safeguard Specialists to supervise and oversee the overall implementation of the ESMF at SPIU, District and Sector level. These specialists will conduct capacity building and training sessions for the designated Environment/ Social safeguards staff at District and Sector Level.
- LODA/SPIU safeguards staff will be responsible for ensuring Project compliance with National and World Bank policies on Environment and Social Safeguards. The safeguard specialist will conduct the screening and scoping of subprojects under review to ensure the mainstreaming of environmental and social concerns; and the preparation of the appropriate subproject environment and social management plan (usually by a specialist consultant).
- The District technical supervisor/designated safeguard staff will coordinate the implementation of subprojects environment and social management plan at the District level.
- The Sector designated safeguard staff will support the District technical supervisor in monitoring and supervision the implementation of the environment and social management plans.

ESMF implementation will cost an estimated budget of USD 1.15 million which will cover Environmental and Impact Assessment preparation in all Districts throughout the project period, environmental audits, awareness creation and capacity building of different stakeholders including Districts and national stakeholder agencies. This budget shall come from the overall project cost.

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## GLOSSARY OF TERMS

- **Cumulative impacts/effects:** The total effects on the same aspect of the environment resulting from a number of activities or projects.
- **Developer/Developer:** The entity, person, company/agency proposing to develop/implement/install a new project/sub-project or expand an existing road construction or rehabilitation project.
- **Direct impacts:** An effect on the environment brought about directly by the project.
- **Disclosure:** Information availability to all stakeholders at all stages of the development.
- **Environment:** The totality of the natural (physical and biological components) and societal (cultural, social, economic, political) components and processes that define our surroundings.
- **Environmental Assessment (EA):** Includes environmental reviews, environmental scans, initial environmental examinations, environmental audits, etc.
- **Environmental and Social Impact Assessment (ESIA):** A systematic, comprehensive, logical process of analysis of a project and its effects (positive and negative) on the environment based on prevailing baseline conditions and a description of the mitigation actions that will be carried out in order to avoid or minimize these negative effects.
- **Environmental Impact Statement:** Report submitted to the authority by the developer stating the likely impacts of the proposed project, as well as measures for mitigating or managing the environmental impacts during the project development and operation.
- **Environmental monitoring:** describes follow-up activities and decisions on a regular basis to ensure the development and operational activities of the project comply with the conditions agreed upon in the environmental management plan.
- **Impact:** A positive or negative effect that the project is likely to have on any aspect of the biophysical and/ or socio-economic environment.
- **Indirect impact:** A positive or negative effect that the project indirectly has on an aspect of the environment
- **Involuntary resettlement:** The forceful loss of land / resources that requires individuals, families and / or groups to move and resettle elsewhere.
- **Lead Agency:** The agency with primary responsibility. For instance, the lead agency for environmental matters in Rwanda is REMA.
- **Mitigation measures:** The actions identified or proposed to negate or minimize the negative environmental impact that a project may have on the environment.
- **Pollution:** Contamination altering the state of purity (e.g. chemical effluent discharge into a surface water body).
- **Project and sub-project:** A set of planned activities designed to achieve specific objectives within a given area and time frame. With respect to hydroelectric development projects, the terminology can be confusing.
- **Project Brief:** The initial submitted document to REMA to initiate the process that will lead to the issuance of the ESIA certificate of approval.
- **Scoping:** This refers to the initial stage in an environmental assessment that determines the major environmental parameters which are likely to be affected and the aspects of the project that may cause these effects.

- **Reviewing:** Is an assessment of the so far submitted project details by an environmental agency to decide as to whether there are gaps to be answered.
- **Screening:** An initial step when a project is being considered for environmental assessment. The screening is the determination of the level of assessment that will be conducted. In the case of GoR, screening will place the project into one of three environmental categories (I, II, or III). At this stage, it may be decided that the project does not require a full ESIA and therefore can proceed based on the Project Brief recommendations.
- **Stakeholder:** A person, group(s) of persons or institutions who have an interest in the project, and who will be directly or indirectly affected by the project activities.

## ABBREVIATIONS AND ACRONYMS

<b>ASSTEP</b>	Public Works Contracts Management Agency
<b>CBD</b>	Convention on Biological Diversity
<b>CDF</b>	Common Development Fund
<b>CMS</b>	Convention on the Conservation of Migratory Species
<b>COMESA</b>	Common Markets for Eastern and Southern Africa
<b>DEOs</b>	District Environmental Officers
<b>DFID</b>	UK's Department for International Development and Social Affairs
<b>EA</b>	Environmental Assessment or Analysis
<b>EAC</b>	East African Community
<b>EDPRS</b>	Economic Development and Poverty Reduction Strategy
<b>ESIA</b>	Environmental Impact Assessment
<b>EIR</b>	Environmental Impact Review
<b>EIS</b>	Environment Impact Statement
<b>EMP</b>	Environmental Management Plan
<b>ESMF</b>	Environmental and Social Management Framework
<b>FIs</b>	Financial Institutions
<b>GEF</b>	Global Environmental Facility
<b>GoR</b>	Government of Rwanda
<b>GTZ</b>	German Technical Cooperation
<b>HIMO</b>	Labour Intensive Public Works Programme (French Acronym)
<b>IDA</b>	International Development Association
<b>IFC</b>	International Finance Corporation
<b>IMF</b>	International Monetary Fund
<b>IPCC</b>	Intergovernmental Panel on climate change
<b>IPM</b>	Integrated Pest Management
<b>LODA</b>	Local Administrative Entities Development Agency
<b>MINAGRI:</b>	Ministry of Agriculture and Animal Resources
<b>MININFRA</b>	Ministry of Infrastructures
<b>MINIRENA:</b>	Ministry of Natural Resources
<b>MINALOC</b>	Ministry of Local Government
<b>MINECOFIN</b>	Ministry of Finance and Economic Planning

<b>NGOs</b>	Non-Government Organisations
<b>PRA</b>	Participatory Rural Appraisal
<b>PW</b>	Public Works
<b>RAB</b>	Rwanda Agriculture Board
<b>RAP</b>	Resettlement Action Plan
<b>RDB</b>	Rwanda Development Board
<b>REMA</b>	Rwanda Environment Management Authority
<b>RLMUA</b>	Rwanda Land Management and Use Authority
<b>RURA</b>	Rwanda Utilities Regulatory Authority
<b>RPF</b>	Resettlement Policy Framework
<b>SOPs</b>	Standard Operating Procedures
<b>SP-IPF</b>	Social Protection Investment project Financing
<b>ToR</b>	Terms of Reference
<b>RBS</b>	Rwanda Bureau of Standards
<b>VUP</b>	Vision Umurenge 2020 Programme
<b>WB</b>	World Bank

## CHAPTER ONE: INTRODUCTION

### 1.1 Background

Since 2005, Rwanda has recorded a remarkable socio-economic transformation characterised by an impressive poverty reduction which has fallen down from 56.7 to 39.1% by 2014. Extreme poverty reduced from 35.8 to 16.3% during the same period. It is estimated that from 2010 alone, and by 2015, about one million of people were moved out from poverty. However, despite the progress that has been made, there is still a lot to be done to achieve the Vision 2020 targets of eradicating extreme poverty and reducing the number of people under the poverty line by 20%.

In addition to that, the Comprehensive Food Security and Vulnerability Analysis (CFSVA) carried out in 2015 established that 80 percent of all households are food secure, have an acceptable diet and use a low share of their budget to cover food needs. This corresponds to about 1,963,975 households being food secure. However, the study found out that 473,847 households are food insecure and out of these, 63,696 are severely food insecure. Stunting, which is an indicator of chronic malnutrition and is a key nutritional issue in Rwanda, as it has only reduced from 43% in 2012 to 37% in 2015. The prevalence of wasting is now 1.7% and underweight 8%.

The Government's EDPRS2 says that graduation of the poorest households out of extreme poverty will require a combination of Social Protection programmes with improvements in productivity across both farm and off-farm employment activities; but recognises that Social Protection will be critical to enabling some of the poorest households to graduate out of in a sustainable way.

Social protection in Rwanda is defined as “a set of public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable against livelihood risks and enhance the social status and rights of the marginalized; with the overall objective of reducing the social and economic vulnerability of poor, vulnerable and marginalized groups.” (National Social Protection Policy, 2005). The mission of the social protection sector, as defined in the National Social Protection Strategy (2013), is to “ensure that all poor and vulnerable men, women and children are guaranteed a minimum standard of living and access to core public services, those who can work are provided with the opportunities for escaping poverty, and that increasing numbers of people are able to access risk sharing mechanisms that protect them from crises and shocks”.

Large-scale social protection programs first emerged in Rwanda to support post-Genocide recovery (FARG and RDRC were initiated in 1997 and 1998 respectively). During the evaluation of Poverty reduction strategy paper in 1996, it was revealed that Social Protection had not been well addressed in PRSP 1 and hence in EDPRS 1, a broader social protection policy agenda emerged with the re-launch of Ubudehe in 2001 and the introduction of the Vision Umurenge 2020 Programme (VUP) in 2007. In 2017, approximately 230,000 households are in receipt of some form of income support from the VUP, RDRC and FARG programs.

The broader social protection system also includes a range of programs that address malnutrition and ensure access to basic services, including: the One-Cup-of Milk per child scheme; Fortified blended food for children under 2 and pregnant mothers; School feeding programme; health insurance premium subsidies for poor households; education stipends schemes and healthcare user fee subsidies. Finally, a range of social care and support services are also provided under MIGEPROF and through the National Council for Children (NCC) and National Council for People with Disabilities (NCPD).

In order to achieve the targets relating to the reduction of poverty and malnutrition, there is a need to strengthen social protection policies and programs to more effectively promote sustainable graduation out of extreme poverty and strengthen household resilience to a wide range of shocks. Furthermore, international evidence clearly suggests that social protection programs can be designed and implemented to make significant contributions to addressing malnutrition.

It is in that context that the World Bank has accepted to finance a proposed Social Protection Investment Project to “Support the Government of Rwanda to improve the coverage of the vulnerable and the effective delivery of Rwanda's main social protection program” with a view to enhancing prospects for achieving Rwanda’s ambitious targets relating to the eradication of poverty and malnutrition.

- According the VUP program document (July 2016), VUP public works create agricultural assets and other rural infrastructure. The majority of community assets (project) constructed through VUP public works to date support agricultural livelihoods and will continue to do so. Types of projects include rehabilitation of existing community roads, anti-erosive ditches, radical terracing and agriculture projects account for the majority of VUP public works projects. In addition, refurbishment of home based care facilities such as latrines or other public or community child care infrastructure facilities shall be implemented as part of expanded public works.

Some of these public works projects may pose environmental and social impacts if not carefully done. It involves light earth excavation, burning of fossil fuels though to a lesser extent, noise and destruction of vegetation and trampling of the earth. Air pollution is increasing and very much linked to health problems including cancer, bronchitis among others. Hence the importance of the preparation and implementation of Environmental and Social Management Framework (ESMF) to ensure that the planned activities are environmentally and socially implemented in full compliance with Rwanda’s and the World Bank’s environmental and social policies and regulations.

## 1.2 Project Description

The Project will be implemented by the Ministry of Local Government (MINALOC) and Local Administrative Entities Development Agency (LODA).

The Programme Development Objective is will be to “to improve the coverage and effectiveness of Rwanda’s main social protection program, the Vision Umurenge Program (VUP), for targeted vulnerable groups”.

”. The project is currently in the final design stages and below is a summarized description of the proposed project components:

**Component 1: Improving coverage, adequacy and effectiveness of the Vision Umurenge Program (VUP) cash transfers.**

- i) The project will support the continuation of Direct Support (DS) to households without labor capacity and expand coverage to moderately labor-constrained households caring for a person with a severe disability.
- ii) The project will support the expansion of Classic Public Works (cPW) from 240 sectors to 270 sectors over the lifecycle of the project or by the end of the operation, with progressive improvements in coverage of eligible households, improve effectiveness in timeliness of payments as well as increase the average number of days’ work offered, so that households can accumulate total annual transfers.
- iii) The project will support the extension of the Expanded Public Works (ePW) sub-component to reach moderately labor-constrained households caring for children, through multi-year, flexible, part-time work opportunities to in road maintenance and home-based childcare sub projects. The ePW participants will be employed as child caregivers and trained and supervised by appropriate staffs with resultant synergies to the nutrition and early childhood development objectives of the IPF. The coverage of ePW will be deepened in each sector to reach more households and geographical coverage will be expanded from the current 30 sectors to all 270 cPW sectors by the end of the project period.

However, it is important to note that the types of project implemented under VUP public works are characterized by their high labour-intensity (at least 70% of project budgets are spent on wages for unskilled manual labour), community-based implementation modality, relatively small size (for example community road rehabilitation projects are expected to average only 11km in length in FY2017/18)) and extremely limited (if any) use of heavy machinery. Project types are likely to include: greening and beautification; community road maintenance and rehabilitation<sup>2</sup>; urban drainage; reclamation of degraded marshland for agriculture; progressive and radical terracing; and rehabilitation and construction of water and sanitation networks and refurbishment of small structures to house community-based child care centers. VUP Public Works project designs are supported by simple feasibility studies which consider social and environmental risks and all proposals are all reviewed by the Local Administrative Entities Development Agency (LODA) prior to their implementation by Local Governments to ensure compliance with VUP Public Works guidelines (including, for example, project type and labour-intensity) with ineligible or inappropriate projects being rejected where necessary. Furthermore, VUP PW projects are often implemented as sub-components of wider infrastructure development projects (such as the construction of Integrated Development Programme Model Villages) for which comprehensive environmental and social safeguarding mechanisms may already be in place.

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<sup>2</sup> VUP public works road construction, reabhilitation VUP and maintenance projects largely focus on Class II unpaved roads and unclassified roads (as per RTDA guidelines)

These principles are set-out in the VUP Programme Document and associated VUP Classic Public Works Guidelines and LODA's guidelines on conducting feasibility studies for public works. As per these guidelines and established practices, the following subprojects are considered eligible/ineligible:

Eligible subprojects	Ineligible subprojects
Greening & beautification projects	Construction of health centers and schools
Progressive terrace construction	Electrification projects
Radical terrace construction	Any project that is not compliant with labour-intensity regulations
Road construction <sup>3</sup>	
Road maintenance	
Road rehabilitation <sup>4</sup>	
Marsh rehabilitation	

However, that the enhanced environmental and social safeguarding requirements often associated with Road Construction would significantly affect timeliness of implementation of VUP PW projects (and thereby undermine achievement of social protection objectives), it is unlikely that the SP-IPF funds will support many Road Construction projects. Similarly, if the cost of environmental or social mitigations leads to a decline in labour-intensity below the 70% threshold, projects will be rejected by LODA or an alternative source of funds will be identified for either the project as a whole or for implementation of the mitigation measures.

## Component 2: Enhancing access to human capital and economic inclusion services

- i) This component is designed to contribute to and improve human capital creation and economic inclusion services, with a particular focus on combating chronic malnutrition and improving child development goals. Included also is the scale up of Minimum Package for Graduation (MPG) to promote skills, resilience and graduation from extreme poverty. Scaling up will be based on and adopting principles of “learning by doing” approach with innovative solutions/interventions to improve resilience in poor households.
- ii) Sensitization and community mobilization sub-component will provide group-based awareness-raising and training of beneficiaries, as well as public information. Strong linkages shall be formed between the caseworker model and individual households to enable the identification of common household priorities for group training and awareness-raising that will result in strengthen beneficiaries’ awareness of their social protection entitlements and available complementary services and provide training on a range of issues critical to the realization of households’ productive and human capital potential.
- iii) There shall also be implementation of behavior change communication (BCC) as stunting remains a major challenge across all wealth quintiles, with evidence pointing to deeply grounded behavioral issues. Two different type of interventions will be carried out: i) community-based activities targeting pregnant

<sup>3</sup> Road construction refers largely to Category II unpaved and unclassified community roads.

<sup>4</sup> Road rehabilitation includes: Install/repair ditch blocks; Restore drainage channels; Install additional cross-drain culverts; Repair/stabilize road embankment or running surface; Repair or remove bridge structures; Install open top culverts; Construct water bars; Remove all windrows or berms on road; Construct fords. Roads are usually ‘Class II unpaved’ roads or unclassified roads as per RTDA guidelines.

- and lactating mothers, community health workers (CHWs), local leaders and religious leaders at the village level; and ii) national communication campaigns to promote proper nutrition through mass media.
- iv) Also implemented under this component is “improving childcare services for vulnerable families sub component”. The project will provide support to low-cost ECD services through home-based childcare modalities that would include through: (i) refurbishment work on homes (or community spaces in case no suitable homes can be found) to provide support to home-based childcare groups, (ii) specialized supervision and training arrangements will be established to support the new home-based care ePW sub-component.
  - v) Another sub component is “parenting training and support for nutritionally vulnerable families” will involve outreach and support to nutritionally vulnerable communities and households utilizing the different cadres of sectorial caseworkers available at the local level.
  - vi) Scaling up the “Minimum Package for Graduation” shall involve case workers and asset transfer. MPG program document will be reviewed and tools updated or developed where necessary to strengthen case worker impact and asset transfers results. The MPG will be scaled up in 270 by the end of project cycle.

### **Component 3: Capacity building for policy development, systems strengthening and program management**

This component will support the Government at various levels to implement Components 1 and 2, as well as improvements of the larger social protection system in Rwanda. Key sub components include:

- i) Evidence-Based Policy and Program Implementation and Development including new and innovative program design changes for the VUP as well as support to other analytical work and expert technical advice to improve VUP monitoring mechanisms and impact evaluation design and implementation. Policy and strategy assessments, including a mid-term assessment of the new NSPS, will be supported, as well as VUP evaluations and M&E training.
- ii) Improvements in service delivery systems with substantial efforts have gone into designing and improving social protection service delivery systems such as a comprehensive integrated social protection management information system (iSP-MIS), which serves as an integrated registry and link to the Ubudehe database (social registry) and other program specific registries as well as the national identification database.
- iii) Capacity Building and Institutional Strengthening. Support will be provided to build human resource capacity at all levels: central, district, sector and cell. At central level, the IPF will finance additional posts in the LODA and MINALOC SPIUs and technical assistance to the NFNCs, in order to strengthen technical, financial and procurement capacities for implementation of the IPF.

### 1.3 Objectives of the ESMF

The objectives of the present ESMF are:

- To establish clear procedures and methodologies for environmental and social planning, review, approval and implementation of subprojects to be financed under the proposed Social Protection Investment Project Financing Operation;
- To prescribe project arrangements for the preparation and implementation of subprojects in order to adequately address World Bank safeguard issues;
- To assess the potential environmental and social impacts of envisaged subprojects;
- To propose mitigation measures which will effectively address identified negative impacts, and to outline a simple Environmental and Social Management Plan (ESMP);
- To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to subprojects;
- To define a public consultation and disclosure process;
- To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF; and
- To establish the project funding required to implement the ESMF requirements

### 1.4 Rationale, principles and methodology of the ESMF

World Bank Safeguards Policies and the laws of the Government of Rwanda require that potential environmental and social impacts are predicted and measures to offset or reduce them to acceptable levels are set. However, since the exact location and activities of some of the development initiatives are not defined during project preparation, the Bank requires that the Environmental and Social Management Framework is prepared (ESMF). The ESMF is a safeguard tool which outlines a mechanism to determine and assess future potential environmental and social impacts of all activities to be financed by the Bank, and then to set out mitigation, monitoring and institutional measures to be taken during implementation and operation of the activities to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels and to enhance beneficial impacts. The Environmental Assessment (EA) Regulations of Rwanda provide the general framework and procedures for carrying out ESIA of development activities of all sectors. Some Development Partners (DPs) and funding institutions, including the World Bank also have their ESIA requirements, which should be followed as a key conditionality to fund projects.

#### **1.4.1 Rationale and principles of ESMF for the Social Protection Investment Project Financing Operation**

The project has been assigned Environmental Assessment (EA) Category B as it will finance subprojects involving the execution of various public works activities in numerous sites that will potentially impact the environment. The Environmental Assessment examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" scenario), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse

impacts and improve environmental performance. The World Bank safeguards policies require the borrower to prepare safeguards instruments, normally ESMF and site Environmental and Social Impact Assessment, Resettlement and Policy Framework (RPF) and associated Resettlement Action Plans (RAP). The stand alone RPF was prepared and lays out the process for the preparation of RAPs.

The ESMF is used in the case of operations with multiple sub-projects, under which most of specific activities, scope and locations are not determined during project approval. It spells out corporate environmental and social safeguard policy frameworks, institutional arrangements and capacity available to identify and mitigate potential safeguard concerns and impacts of each sub-project.

This ensures that the sub-projects meet the national and World Bank environmental and social safeguards policies. The project will trigger the following World Bank Operational safeguards policies: (i) Environmental Assessment (OP 4.01); (ii) Involuntary Resettlement (OP/BP 4.12); (iii) Natural Habitats (OP/BP 4.04) and (v) Physical Cultural Resources (OP/BP 4.11).

The decision to prepare an ESMF for the implementation of the SP-IPF Project aims at facilitating the compliance with relevant national and the World Bank safeguards policies requirements for project in a coherent manner. The ESMF provides the guiding principles and institutional arrangements as well as environmental and social safeguards instrument to be prepared as part of the implementation of road sector activities. The framework gives a platform of standard principles and processes for the project activities agreeable to all parties and stakeholders – MININFRA/RTDA, MINIRENA/RNRA, MINAGRI and the implementing Districts, National Project Implementation Unit, the World Bank and others, as appropriate.

This ESMF builds on infrastructure ESIA guidelines already developed by REMA. For example, roads are one of the most important infrastructure developments in Rwanda, and by their nature, they have potentially disastrous environmental impacts. Hence, there is need for ESIA guidelines to ensure that such infrastructure developments are pursued in environmentally friendly and sustainable way.

Previous Social Protection activities included mostly construction and rehabilitation of community roads, and most likely the tendency will remain the same during the implementation of the proposed project. Since around 2001 when the emergency post-genocide rehabilitation ended, the Government of Rwanda embarked on long-term development, often including large scale infrastructure developments. Accordingly, the number and scale of national and district road projects have considerably increased, leading to a significant increase in the number of Environmental Impact Studies to be undertaken for roads. Road projects occur over long distances that typically cross through a number of different environmental and administrative settings. With the enactment of the Organic law on environment (No. 04/2005 of 08/04/2005), these projects are increasingly being required to address complex environmental issues. An EIA for a road project needs to allow sufficient scope to cater for procurement methods that sometimes provide scope for design input by the contractor after development consent has been obtained. This may often involve the use of innovative methods by the contractor to mitigate significant environmental impacts.

The ESMF widens the scope of ESIA guidelines for various infrastructures by enhancing both environmental and social considerations in the project cycle. Therefore the ESMF is expected to assist Districts, Project teams, ESIA practitioners and planners, to:

- a) Ensure that planned infrastructure development meets the statutory provisions of article 67 of the organic law No. 04/2005 on environment, and associated subsidiary legislations as well as OP 4.01 policy of the World Bank;
- b) Provide a tool that guides the ESIA process so that ESIA in the road sector is satisfactory and cost-effective. To ensure this, the ESMF presents a framework for screening, monitoring and mitigating potential impacts, and specifically:
  - Provides basic information to be collected on biophysical, social, cultural and economic parameters relevant for infrastructure development, in each phase of the subproject cycle;
  - Advises on the methodology for collecting and analyzing data;
  - Provides a generic framework for logically documenting and presenting the ESIA results (general report outline);
  - Provides basic guide on how to execute ESIA activities including conducting public hearings for multi-stakeholder projects like roads development.

The Table below presents the requirements for the World Bank safeguards policies triggered for the project.

**Table 1: Requirements for World Bank safeguard policies triggered by the project implementation**

Bank Policy Triggered	Safeguard	Action required to trigger the Policy	Responsible Institution	Timeframe
OP Environmental Assessment,	4.01	1. Preparation of the ESMF	MINALOC/LODA and Districts	1. ESMF to be approved by the GoR and Bank and disclosed in Rwanda and Bank InfoShop before project appraisal date.
OP/BP Habitats	4.04 Natural	2. Preparation of subproject ESIA/ESMP including an action plan for chance finds for PCRs when applicable		2. ESIA's to be approved by RDB and World Bank and disclosed in Rwanda and Bank InfoShop before the start of civil works.
OP Cultural (PCRs)	4.11 Physical Resources			N.B. Cat A will be excluded since they would significantly affect timeliness of implementation of VUP PW projects (and thereby undermine achievement of social protection objectives), cost of environmental or social mitigations leads to a decline in labour-intensity below the 70% threshold, projects will be rejected by LODA or an alternative source of funds will be identified for either the project as a whole or for implementation of the mitigation measures, etc. <sup>5</sup>

<sup>5</sup> This policy will be subject to review during project implementation. In the event that Category A projects are required the ESMF will be revised with World bank approval and measures put in place to ensure the necessary safeguarding procedures are implemented and required mitigations are put in place

OP 4.12 Involuntary Resettlement	1. Preparation of Resettlement Policy Framework (RPF).  2. Preparation of District Resettlement Action Plan (RAPs)	MINALOC/LODA and Districts	1. RPF to be approved by the GoR and the Bank and disclosed in Rwanda and Info-shop before appraisal date for additional finance  2. Subproject RAPs to be approved by the Bank and disclosed in Rwanda and Bank infoshop before subproject approval for funding by WB
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#### **1.4.2. Methodology for the preparation of ESMF**

The present ESMF report was conducted by a consultant using the following approaches and methodology.

##### 1.4.2.1 Literature review

Review on the existing baseline information and literature material was undertaken to gain a further and deeper understanding of the project.

Among the documents that were reviewed included the project design documents, Vision 2020, Second Economic Development and Poverty Reduction Strategy, National Environmental Policy, the National Transport Policy, National Land Policy, ESMF and RPF prepared for a similar World Bank funded project; the Feeder Roads Development Project. The consultant also undertook detailed review and analysis of the current national relevant legislations, policies and guidelines, and the World Bank Safeguards Policies, international conventions related to this project and other relevant documents.

##### 1.4.2.2. Field Visits

The Consultant carried out visits in Nyaruguru and Muhanga Districts to existing, relevant and potential projects sites that are similar to the subprojects to be funded under the IPF to assess social and environmental site conditions, practices (including level of compliance with existing social and environmental safeguards legislation and regulations) and verify potential risks and impacts.

##### 1.4.2.3 Public consultations

Various consultation meetings were held with Project Affected persons, the Districts and Sectors officials and other relevant staff of the key implementing partners of the Social Protection Investment Project Operation, including Local Administrative Entities Development Agency (LODA), Rwanda Environment Management Authority (REMA), Feeder Roads Development Project in MINAGRI and the Ministry of Local Government.

##### 1.4.2.4 Preparation of ESMF Report

The preparation of ESMF for Social Protection Investment Project Operation consisted of:

- Collection of baseline data on the environmental conditions of the project area;

- Identification of positive and negative environmental and social impacts;
- Identification of environmental and social mitigation measures;
- Preparation of screening procedures to be used while screening subproject activities, and
- Formulation of environmental and social monitoring plans.

## CHAPTER TWO: DESCRIPTION OF BASELINE CONDITIONS

The project will have a national coverage with all the 30 Districts eligible to implement funded public works. However, at the end the project is expected to be implemented in 270 Sectors out 416 but these are to be identified later during project implementation. Therefore, it would be difficult at this stage of the project preparation to customize to the project area specific environmental and social impacts generated by the implementation of public works. However, the Environmental and Social Management Plans will be more specific about the areas and the generated impacts.

### 2.1. Physical Environment

#### 2.1.1 Climate

Rwanda enjoys a tropical temperate climate due to its high altitude. The average annual temperature ranges between 16°C and 22°C, without significant variations. Rainfall is abundant although it has some irregularities. Winds are generally around 1-3 m/s. In the high regions of the Congo - Nile ridge, the average temperatures ranges between 15 and 17°C and the rainfall is abundant. The volcanic region has much lower temperatures that can go below 10°C in some places. In areas with intermediary altitude, the average temperatures vary between 19 and 21°C and the average rainfall is around 1000 mm/year. Rainfall is less irregular, and sometimes causes periods of drought, especially in the Eastern and lowland of Southern Province of Rwanda. In the lowlands (East and Southeast), temperatures are higher and at times can go beyond 30°C in February and July-August. Rainfall is less abundant in that region (750 to 900 mm/year).

Weather in Rwanda is determined by the rainfall patterns. Thus, the climate of the country is characterized by an alternation of four seasons of which two are wet and the other two are dry. However, rainfall is generally well distributed throughout the year, despite some irregularities.

Eastern and Southern regions are more affected by prolonged droughts while the Northern, Western regions and South-Western regions experience abundant rainfall that may cause catastrophic landslides and flooding. The quantity of total annual rainfall varies between 800 mm in the North-East of Rwanda and 1600 mm in the National Park of Nyungwe (Wisumo) and in the highlands of the North-West. A decrease in rainfall is generally observed from West to East.

#### 2.1.2 Relief

Rwanda has a hilly and mountainous relief with an altitude ranging between 900 m and 4,507 m.

The components of that relief are:

- *Congo-Nil Ridge* overlaying Kivu Lake with an altitude between 2,500 m and 3,000 m. It is dominated in the Northwest by the volcanic ranges consisting of five volcanic massifs of which the highest is Kalisimbi with 4,507 m.
- *The central plateau* presents a relief of hills with an altitude ranging between 1,500 m and 2,000 m.
- *The lowlands of the East* are dominated by a depression characterized by hills with more or less round

top and 1,000 to 1,500 m in altitude. The lowlands of the South-West in Bugarama plain with an altitude of 900m are part of the tectonic depression of the African Rift Valley.

### **2.1.3 Catchment and Hydrology**

Rwanda has abundant water resources estimated at 417,000 ha, including 101 lakes covering almost 128,000 hectares, water courses (7,260 ha) with 6,400 km of rivers and 860 marshlands spanning an estimated 278,000 hectares.

#### Surface water

The sources of surface water of Rwanda include water courses and runoff. Rwanda has a dense hydrographical network of  $\pm 2$  km/km<sup>2</sup> (length of the superficial flow network by km<sup>2</sup> of surface). The country is divided into two hydrographical basins with a separating line called Congo-Nile Ridge, moving from the North to the South and approximately perpendicular to the volcanic chain, making natural obstacles exchange between the catchments basins of the Northern Kivu and the Southwest of Uganda and those of Rwanda.

In the West of that line, there is the Congolese basin (33 % of the surface of the national territory) that drains 10 % of water resources of the country. It comprises rivers of Sebeya, Koko, Rusizi, Rubyiro, as tributaries of Lake Kivu (102,800 ha on the Rwanda side, 473 m of maximum depth), Ruhwa and many other small streams. In the East of the Congo Nile Ridge, there is the Nile basin which covers 67 % of the National territory and drains 90 % of Rwandan waters by two main rivers namely Nyabarongo and Akagera.

The latter is the main tributary of Lake Victoria with an average outflow of 256 m<sup>3</sup>/s at Rusumo station and thus considered as the source of Nile.

The Nile basin in Rwanda comprises of many small lakes (e.g. Bulera, Ruhondo, Cyohoha South, Mugesera, Muhazi, Rwampanga, Mihindi, Mirayi and others). Those lakes are not very deep (5 to 7 m), except Bulera and Ruhondo Lake, which are 50 to 90 m deep respectively.

Most rivers originate from the slopes of the Congo-Nile ridge. The two main rivers, namely Nyabarongo and Akanyaru, together with their numerous tributaries, form, downstream from Lake Rweru, the river Akagera which drains the most part of Rwanda's waters towards the Nile, forming the border with Burundi in the South and Tanzania in the East. Nyabarongo and Akagera rivers are closely associated with vast marshes and numerous shallow lakes found along these rivers. The ecology of these ecosystems is very dynamic and complex. Marshland vegetation and the size of the lakes change continuously with the rainfall and the flow rate of the rivers.

The hydrographic network is very limited in the Eastern Province but becomes so dense in Western Province, Southern Province and Northern Province of Rwanda. Very few and small rivers, some of them erratic and intermittent, are observed in Eastern Province while permanently abundant and big rivers dominate the South, West and North.

### Underground water

The Rwandan underground water is dominated by the water of wetlands covering some 278,000 ha. The catchment/watershed of these wetlands are the many hills that catch rainwater and drain slowly to the lower areas where the marshlands modify the movement of water in the channel network by lowering the peak flow and volume of flood discharges. Groundwater in most of these marshlands areas is found at a depth of 8 m. The marshlands provide recharge of the ground water through percolation during water retention time in the area. The outflow of the underground renewable water resource is estimated at 66m<sup>3</sup>/s.

Out of this, the 22,000 known sources contribute an output of 9m<sup>3</sup>/s. In general, little information is available on underground resources. The total area of marshlands of Rwanda is estimated at about 278,000 ha which are partially exploited depending on their degree of flooding.

### Lakes

Rwanda has some 28 lakes of significant size and 73 lakes of small size. Six largest are located entirely within the national territory: Ruhondo, Burera, Muhazi, Mugesera, Ihema and Rwanyakizinga. Three others, Rweru, Cyohoha and Kivu, are shared with neighboring countries. The largest and most spectacular is Lake Kivu. It lies at 1,460 m above sea level and is 90 km long (North-South) and 49 km wide (East-West). From an average depth of 220 m, it plunges to a maximum depth of 475 m.

Lake Kivu has a rough, jagged coast and contains numerous islands of which Idjwi is the largest. Lake Kivu lies on the border with Congo in Western Rwanda at the foot of the volcanoes. Although there are species of small edible fish in the lake, it is poor in fauna, but rich in volcanic substances. Great volumes of dissolved methane gases exist in its deep waters, which have begun to be developed as an energy source. Lake Kivu drains to the south into Lake Tanganyika by the swiftly descending Rusizi River.

### Quality of water

In Rwanda, the quality of water is generally good with a pH ranging between 6 and 7.5. Surface water often carries a lot of soil sediments and, in mining and volcanic regions, the water can contain traces of arsenic, lead, mercury, fluoride, iodide and other toxic metalloids and heavy metals, leading to water resources degradation.

The physico-chemical pollution of water is not frequent due to the low level of industrialization and use of agricultural chemical inputs. The microbiological pollution is often observed and it comes from various domestic wastes and debris carried by rain water. The pollution of watercourses and lakes by the water hyacinth and other invasive species is a very recent and alarming phenomenon in Rwanda.

#### **2.1.4 Wetlands**

Wetlands cover a total area of 278,000 ha or about 10.6 % of the national territory. They include a variety of ecosystems, ranging from large, permanently flooded swampy peat-lands to smaller, seasonally flooded wetlands with a more mineral soil.

The wetlands are composed of marshlands, lakes, rivers and streams representing around 10.6 % of the national territory. In the highlands of the Northwest, there are Burera and Ruhondo lakes as well as the marshland of Rugezi. In the Central and the Eastern part of the country, wide marshlands are those of Nyabarongo, Akanyaru and Akagera rivers. Many lakes connect with rivers and most of them are located in the Akagera National Park. The main swamps are Akanyaru (30,000 ha) on the border with Burundi, Mugesera-Rweru in the Southeast, Akagera swamp along the Tanzania border in the East, Nyabarongo (10,000 ha) and the Rugezi wetlands (5,000 ha) and Mukungwa and Base wetlands in the North.

The wetlands serve as troughs for sediment particles and play an important role in the national water balance by acting as a buffer, thus reducing the maximal flow rates during the rainy season and maintaining a relatively high flow rate during the dry season. Currently, an estimated 94,000 ha have been brought under agriculture, the large majority of this being spontaneous agriculture with maize, sweet potatoes and beans. In addition, the wetlands are used for a variety of traditional activities including the collection of leaves to make handicrafts, extensive grazing and making of bricks. Wetlands also provide a spawning habitat for fish, and are of great significance for biodiversity conservation. They play a role of alleviating the erosive force of water and thus facilitate the deposit of sediments in suspension that could block watercourses downstream.

Given the importance that the Government of Rwanda attaches to wetlands, in 2003, Rwanda ratified the RAMSAR Convention (or convention on wetlands) and has already registered on the RAMSAR list the site of Rugezi and identified other potential sites that will be registered in the future, like the complex of Mugesera-Rweru, Kamiranzovu marshes and the wet zones of the Akagera National Park. In addition, an action plan for the implementation of the RAMSAR Convention was developed in June 2004.

## **2.1.5 Soils and land uses**

### 2.1.5.1 Arable land

The average arable surface area available is about 0.60 ha per household. This causes over exploitation of available land which is often accompanied by agricultural malpractices with disastrous consequences on land resources and on environment in general.

### 2.1.5.2 Soil degradation

Rwandan soils are naturally fragile. They are generated by physico-chemical alteration of basic schistose, quartzite, gneissic, granite and volcanic rocks that make up the superficial geology of the country. The degradation of the natural environment is particularly linked with soil erosion that affects the important portion of agricultural land. Generic impacts of erosion are numerous: i) loss of soil fertility by leaching arable lands; ii) increasing sedimentation on land cultivated downhill from eroded plots; iii) Risk of destruction of crops and sand banks which are particularly high in marshlands and valleys; iv) Risks of landslides, flooding and mudslides and v) risk of irreversible leaching of soils.

### 2.1.5.3 Land uses

About 79 % of Rwanda's land is classified as agricultural farming, and about 11% of agricultural land represents permanent crop land. The remaining agricultural lands are covered with forests, marshlands and marginal lands in the hillsides where permanent and routine cultivation of crops are not tenable. Of the total arable land, 1,735,025 Ha is cultivated with food and cash crops and the remaining represents pastures and bushes (Kathiresan, 2012).

The exploitation of land employs 83% of the active population. The number of agricultural households is about 1.4 million with an average surface area of 0.30 ha. Land resources are thus limited, resulting in the overexploitation and inappropriate use of lands with potentially disastrous consequences on land resources and on environment in general.

### **2.1.6 Air**

Rwanda has one of the lowest emissions per capita in the world, estimated at 0.65 tonnes CO<sub>2</sub>/person (including land use change), compared to a global average of 4.63 tonnes CO<sub>2</sub>/person (Nsengimana *et al.*, 2011). The majority of greenhouse gases (GHG) emissions were CO<sub>2</sub> (87%) at 531 Gg, dominated by transport (52%) and industrial processes (28.5%).

The air pollution from dust particles and vehicle emission is increasingly growing. During the dry season, there is a marked increase in air borne diseases due to dust particles emission especially in urban areas (REMA, 2009). Poorly maintained roads, old mopeds, motorcycles and vehicles cause an increasing concentration of different air pollutants (Henninger, 2009). The air pollution resulting from dust is expected to increase during road rehabilitation works, especially during dry seasons. Adequate mitigation measures should be proposed to minimize air pollution levels as well as diseases and ill-health effects associated with transport.

## **2.2. Biological Environment**

The Rwandan territory is covered with diverse ecosystems which include natural ecosystems (consisting of mountain rainforests, gallery forests, savannah woodland, wetlands and aquatic resources), forested area and agro-ecosystems. All these ecosystems are very rich with flora and fauna.

The biological environment of Rwanda is composed of protected areas which include national parks (Akagera, Nyungwe, Mukura-Gishwati and Volcanoes National Park); forest reserves (Iwawa Island); forests of cultural importance (Buhanga, Busaga forest) and wetlands of global importance (Rugezi wetland, Kamiranzovu, etc). Besides the forests with a legal status of protected areas, there are other remnant natural forests (like gallery-forests and savannahs of Bugesera, Gisaka and Nyagatare) which are more or less protected by law and forest plantations dominated by exotic species (Eucalyptus sp, Pinus sp, Grevillea robusta) and trees scattered on farmlands (agroforestry) and along anti-erosion ditches and roads. Some other areas are occupied with food and cash crops.

### 2.2.1 National Parks

Rwanda possesses four national parks mainly the four national parks: (i) Volcanoes National Park which is famous worldwide due to the presence of mountain gorillas-*Gorilla gorilla beringei* and variety of plants and animal species, (ii) Nyungwe National Park has more than 1,200 species of flora, 275 species of birds, (iii) Akagera National Park covers a surface area of about 108,500 ha and inhabits more than 900 species of plants and 90 mammals, and (iv) Mukura – Gishwati National Park. However, it should be realised that the protected areas of Rwanda have lost around 50% of their original surface area during the last 40 years.

The Volcanoes National Park is home to about 30 per cent of the global population of Mountain Gorilla (*Gorilla gorilla beringei*). It has other 115 mammals' species, including the golden monkey (*Cercopithecus mitis kandti*), elephants and buffaloes; 187 bird species, 27 species of reptiles and amphibians and 33 arthropod species. CITES consider *Rana anolensis*, *Chameleo rudi* and *Leptosiphos graueras* endangered (MINAGRI 1998, Chemonics International Inc. 2003). It has also 245 plants, 17 of which are threatened; and 13 species of orchids including *Disa starsii*, *Polystachya kermessia*, *Calanthes sylvatica*, *Chamaengis sarcophylla*, *Cyrtorchis arcuata*, *Habenaria praestans*, *Stolzia cupuligera*, *Eulophia horsfallii*, among others (Chemonics International Inc. 2003).

Nyungwe National Park has 75 species of mammals, including 13 species of primates with some on the IUCN red list such as the Eastern Chimpanzee (*Pantroglydytes schweinfurthii*), owl-faced guenons (*Cercopithecus hamlyni*) and the Angolan Colobus monkey (*Colobus angolensis ruwenzorii*). The national park is also considered as an African Important Bird Area (IBA) with 285 bird species comprising 25 endemic to the Albertine Rift (Plumptre *et. al.*, 2002, Fischer and Killmann 2008). Out of the 1,200 plant species inventoried in the Nyungwe National Park, 265 species were trees and shrubs and of these 24 are endemic to the Albertine Rift. Among the plant species in the park, 5 species of trees and 6 species of grass are endemic to the park.

These include *Oricia renieri*, *Pentadesma reyndersii*, *Pavetta troupinii*, *Psychotria palustris* and *Tarenna rwandensis*. The flora of the park also comprises 148 species of orchids, of which 19 are endemic (MINITERE, 2005). The following species of orchids found on the CITES list are also found in the park: *Diaphananthe biloba*, *Disa eminii*, *Disperis kilimanjarica*, *Euggelingia ligulifolia*, *Eulophia horsfallii*, *Polystachya fabriana*, *Polystachya hastate* and *Tridactyle anthomaniaca* (MINITERE, 2005).

In the Akagera National Park, there is the largest variety of wildlife species that include 90 species of mammals (buffaloes, zebras, antelopes, elephants, hippopotamus, warthogs, baboons, Giraffes, etc), reptiles (crocodiles, etc), 530 bird species and 35 fish species. The most threatened species are rhinoceros, large carnivores. Many species in the Akagera National Park are protected by the CITES convention such as *Loxodonta africana* (African elephant), *Sincerus caffer* (buffalo), *Panthera leo* (leopard) and *Tragelaphus spekii* (Sitatunga) (MINITERE 2003a, MINITERE 2005). The flora of the Akagera National Park is diverse and 6 species of orchids are recorded. The grass savanna is dominated by *Themeda triandra* and *Hyparrhenia sp.* accompanied with normal species like *Sporobolus pyramidalis* and *Botriochloa insculpta*. Acacias are the most trees found in the forest savannah, and the following species are recorded: *Acacia senegal*, *A. Sieberiana*, *A. polyacantha campylacantha*, *A. gerardii* and *A. brevispica*.

Species of *Combretum* are also found in the park (MINITERE 2005). The main threats remaining for these species are the destruction of their habitats and poaching. The Eastern region, especially Nyagatare and Gatsibo District, also accommodates a huge variety of birds (birds of prey, guinea-fowl, partridges, herons, etc), monkeys and many other small animals in the wooded savanna and natural vegetation. This implicates the potentials for tourism and related economic activities to the region.

Mukura – Gishwati forest reserve becomes a national park in 2015. This new National Park has an area of 4,419.94 ha including 1,439.72 ha of Gishwati Forest, 1,987.74 ha of Mukura forest and 992.48 ha of the Park buffer zone. Gishwati – Mukura national park is rich in fauna species including *Pan troglodytes schweinfurthii*, *Colobus angolensis ruwenzorii*, *Potamochoerus porcus*, *Cephalophus nigrifrons*, *Dendrohyrax arboreus*, *Felis serval* and *Felis aurata* (MINAGRI 2002 in Munanura et. al, 2006), Tree squirrel (*Funisciurus pyrropus*), Rwenzori sun squirrel (*Heliosciurus ruwenzori*), Ground hog (*Thryonomys swinderianus*) and the jackal species (*Canus spp.*). The Park is also rich in birds with 59 species recorded, among them 7 Albertine Rift endemic species: *Tauraco johnstoni*, *Apalis personata*, *Apalis Ruwenzori*, *Cynnyris regia*, *Zoothera tanganjicae*, *Bradypterus graueri* and *Parus fasciiventer* (Munanura et. al, 2006).

The population pressures have already drastically reduced the land area of Rwanda natural forests from about 30 % to presently fewer than 10 % in less than a century for agricultural, pastoral and settlement purposes.

The production of food and cash crops (Irish potato and pyrethrum plantations around Volcanoes National Park, tea plantation around Nyungwe and Mukura – Gishwati, potato around Mukura – Gishwati), pastures around Akagera and Mukura – Gishwati National park, etc. contributed to loss of natural forests. The deforestation of Rwanda's remaining forests is also a result of high fuel wood consumption. Heavily populated and cultivated areas adjacent to the natural forests have caused significant loss of genetic diversity within Rwanda's natural forest.

In general, for a period of about 40 years, the surface area of the natural forests of Rwanda underwent a decrease of about 65 % between 1960 and 2002. The search for arable lands, extensive farming, illegal cutting of forests for firewood, production of charcoal and poles for construction in urban areas, as well as improper land use have drastically contributed to the reduction of the surface area of forests.

During the implementation of community roads public works planned in the Social Protection Investment Project Operation, the project will avoid or minimize adverse impacts on parks buffer zones by limiting works within the existing Right of Way and not doing any widening or expansion in those areas or in areas that could impact sensitive natural habitat. Traffic signs and wildlife passes, where needed, canals be included in the road design. The Environmental and Social Management Plans (ESMPs) will therefore ensure the protection of the Parks as well as their biodiversity.

## 2.2.2 Forests plantations

In addition to natural forests, there are forest plantations dominated by exotic species (Eucalyptus sp, Pinus sp, Grevillea robusta). They cover an estimated area of 114,837 ha.

## 2.2.3 Agricultural systems

### Croplands

The natural ecosystems that covered the country before the colonial period have been modified by the demographic pressure on more than 85 % of the national territory. Human settlement, diversified agropastoral practices, consumption of forest products, bush fires and urbanization has caused the disappearance of natural ecosystem. Those changes caused secondary formations consisting essentially of graminaceous plants, numerous seasonal or perennial species alternating with crops.

Agricultural land presently covers around 55.8 % of the total surface area of the country and is continuously cultivated. The time between two growing seasons is the only period of respite. These areas have various crops that play an essential role in the national economy. These crops are usually grouped in two categories: subsistence and cash crops. Some of the food and cash crops include sorghum, bean (*Phaseolus vulgaris*), maize (*Zea mays*), rice (*Oryza sativa*), soja bean (*Soja hispada*), peanut (*Arachis hypogea*), sweet potato (*Ipomea durcis*), cassava (*Manihot esculanta*), banana (*Musa spp*), Coffee in the East; Cereals (mostly sorghum, maize, rice and wheat), legumes (bean, sojabean, peanut), sweet potato (*Ipomea durcis*), cassava (*Manihot esculanta*), banana (*Musa spp*), tea and Coffee in South; Cereals (mostly sorghum, maize, rice, eleusine and wheat), legumes (bean, peas), sweet potato, irish potato, cassava, banana, tea and Coffee in West as well as Eleusine, Colocase, bean, maize, wheat, barley, peas, sweet potato, irish potato, vegetables, pyrethrum and tea in the North.

The importance of each crop varies according to regions. Some crops, like bananas, potatoes, different varieties of wheat, sorghum, irish potato, tea, coffee and beans are subject to high commercial trade. Potatoes, beans, cassava and bananas are present everywhere for the daily diet of the people.

### Pastoral zones

In Rwanda, the essential part of animal husbandry is comprised of one family ownership with a small number of animals per household. As agriculture occupies the biggest portion of land, the cows graze in paddocks, on road sides, and in some parts of marginal lands. This obliges farmers to adopt the zero grazing or semi-permanent farming and grow fodder crops such as *Tripsacum laxum*, *Setaria spp*, *Desmodeum spp*, *Pennisetum purpureum*, *Mucuna pruriensis*, *Cajanus cajan*, *Calliandra calothyrsus*, *Leucaena diverifolia*, *Sesbania sesban*, etc.

However, one can notice the development of ranching in East (especially in Nyagatare, Kayonza and Gatsibo Districts) and Gishwati (Nyabihu and Rutsiro Districts). Other pastoral land is very limited across the country. These areas are prone to bush fires, trampling and sometimes overgrazing. The latter is the main cause of reduction of the biological diversity as it exterminates the threatened species along with pyrophile species with small bromatological value, such as *Eragrostis spp*, *Sporobolus spp* and *Digitaria spp*.

## Agroforestry

Due to land shortage, tree planting in Rwanda is limited to some plants around households or within farmland. Agroforestry trees around households mainly include native species such as *Ficus thoningii*, *Euphorbia tirucalli*, *Erythrina abyssinica*, *Vernonia amygdalina*, *Dracaena afromontana*, etc. The tree plantations within farms or alongside roads include *Grevillea robusta*, *Cedrella spp*, *Cupressus spp.*, *Calliandra spp*, *Leucaena spp*, *Alnus spp*, *Pinus spp*, *Callistris spp*.

## **2.3. Socio-economic environment**

### **2.3.1 Population and Demographic Characteristics**

Rwanda is classified among the densely populated countries of the world. The Fourth Rwanda Population and Housing Census of 2012 places Rwanda's population at 10,515,973 residents, of which 52% are women and 48% men. The population density in 2012 was 415 inhabitants per square kilometer. Compared to neighbouring countries, Burundi (333), Uganda (173) or Kenya (73), Rwanda is the highest densely populated country in the region.

In general, urban districts have the highest population densities, particularly the districts of Nyarugenge with 2,124 inhabitants/ km<sup>2</sup>, Kicukiro with 1,911 inhabitants/km<sup>2</sup>, Gasabo with 1,234 inhabitants/km<sup>2</sup> and Rubavu with 1,039 inhabitants/km<sup>2</sup>.

Low densities are recorded in rural districts; those with the lowest density are Bugesera (280 inhabitants/km<sup>2</sup>), Gatsibo (274 inhabitants/km<sup>2</sup>), Nyagatare (242 inhabitants/km<sup>2</sup>) and Kayonza (178 inhabitants/ km<sup>2</sup>).

The population of Rwanda is still largely rural, with 83% living in rural areas. The majority of the population of Rwanda lives in private households with an average size of 4.3 persons. Households are a bit smaller in urban areas with 4.0 persons. The Rwandan population is young, with one in two persons being under 19 years old. People aged 65 and above account for only 3% of the resident population. This has consequences in that the demographic dependency ratio, measuring the number of potential dependent persons per 100 persons of productive age, is 93 at national level (NISR, 2012). The Table below indicates the population in the Project areas.

**Table 2. Population in the Project areas**

Provinces and Districts	Sex			Population share (% of the total population)	Population density (Inhabitants per Square km)
	Both sexes	Male	Female		
<b>RWANDA</b>	<b>10,515,973</b>	<b>5,064,868</b>	<b>5,451,105</b>	<b>100</b>	<b>415</b>
<b>Kigali City</b>	<b>1,132,686</b>	<b>586,123</b>	<b>546,563</b>	<b>10.8</b>	<b>1,552</b>
Nyarugenge	284,561	148,132	136,429	2.7	2,124
Gasabo	529,561	274,546	255,015	5	1,234
Kicukiro	318,564	163,445	155,119	3	1,911
<b>South</b>	<b>2,589,975</b>	<b>1,233,754</b>	<b>1,356,221</b>	<b>24.6</b>	<b>434</b>
Nyanza	323,719	157,650	166,069	3.1	482
Gisagara	322,506	150,455	172,051	3.1	475
Nyaruguru	294,334	139,279	155,055	2.8	291
Huye	328,398	158,104	170,294	3.1	565
Nyamagabe	341,491	161,219	180,272	3.2	313
Ruhango	319,885	152,075	167,810	3	510
Muhanga	319,141	152,783	166,358	3	493
Kamonyi	340,501	162,189	178,312	3.2	519
<b>West</b>	<b>2,471,239</b>	<b>1,168,445</b>	<b>1,302,794</b>	<b>23.5</b>	<b>420</b>
Karongi	331,808	156,073	175,735	3.2	334
Rutsiro	324,654	154,044	170,610	3.1	281
Rubavu	403,662	194,989	208,673	3.8	1,039
Nyabihu	294,740	137,799	156,941	2.8	555
Ngororero	333,713	154,591	179,122	3.2	491
Rusizi	400,858	192,528	208,330	3.8	418
Nyamasheke	381,804	178,421	203,383	3.6	325
<b>North</b>	<b>1,726,370</b>	<b>818,456</b>	<b>907,914</b>	<b>16.4</b>	<b>527</b>
Rulindo	287,681	135,625	152,056	2.7	507
Gakenke	338,234	159,366	178,868	3.2	480
Musanze	368,267	174,399	193,868	3.5	694
Burera	336,582	160,395	176,187	3.2	522
Gicumbi	395,606	188,671	206,935	3.8	477
<b>East</b>	<b>2,595,703</b>	<b>1,258,090</b>	<b>1,337,613</b>	<b>24.7</b>	<b>274</b>
Rwamagana	313,461	153,607	159,854	3	460
Nyagatare	465,855	228,325	237,530	4.4	242
Gatsibo	433,020	207,669	225,351	4.1	274
Kayonza	344,157	166,720	177,437	3.3	178
Kirehe	340,368	163,790	176,578	3.2	287
Ngoma	336,928	161,769	175,159	3.2	388
Bugesera	361,914	176,210	185,704	3.4	280

Source: NISR, 2012

### 2.3.2 Gender-Based Violence and communicable diseases

Gender-based violence (GBV) is a universal reality existing in all societies. Though there are very limited data on GBV, it has not become a big problem in Rwanda. The child labour or abuse situation in the Country is also not

alarming.

The Country has achieved impressive results in the fight against GBV, child labour or abuse situation and women and child trafficking. The National Policy against Gender-Based Violence and its strategic plan, the Law No 59/2008 of 10/09/2008 on prevention and punishment of gender based violence, Law No 22/1999 of 12<sup>th</sup> November 1999 to supplement Book one of the Civil Code and to institute Part Five regarding Matrimonial Regimes, Liberalities and Successions, Law No 13/2009 of 27<sup>th</sup> May 2009 regulating Labor in Rwanda, Law No 32/2016 of 28/08/2016 governing persons and family among others were put in place and awareness campaigns on GBV, human trafficking and child labour prevention done. All those legal provisions prevent and punish GBV Crimes in all of its forms, sexual harassment in the workplace inclusive, provide for equal inheritance rights between women and men, girls and boys and provide for equal opportunities and equal pay for women and men.

Communicable diseases include Malaria, HIV/AIDS, Tuberculosis, epidemics and other transmittable diseases. Social services were put in place across the country for their prevention. The malaria treatment drugs were introduced in all health facilities, community health workers in all Districts and in some interested private pharmacies. The HIV/AIDS prevalence at the national level is 3%. All health centers within the project site offer HIV/AIDS services.

### **2.3.3 Human settlements**

The rural settlement of Rwanda has been scattered and characterized by unplanned settlements which has lead to land degradation and soil erosion. In some urban areas, Rwanda has developed master plans. Towns have earlier been developed spontaneously without taking into consideration the environmental aspects. The present policy of the Government of Rwanda encourages a system of grouped settlement which is commonly known as Imidugudu (Villages).

### **2.3.4 Socio – economic activities**

The Rwandan economy is mostly based on subsistence farming. An estimated of 80% of the population is generally occupied with agriculture. Commerce, mining are other socio-economic activities in the project areas.

### **Agriculture**

Agriculture is the most important sector of the Rwandan economy with a contribution of 42.1% to the GDP (12 % for livestock) and contributes 71% of export revenue. Coffee and tea are the main export crops, with about 62 million US\$ of export revenue in 2005, of which 38 million US\$ were from coffee and 24 million US\$ from tea. The agriculture production system is based on small family subsistence farms whose production is consumed by the owners at more than 80 %. The systems of crops are complex, based on the product diversification and the association of crops. Seven main crops, namely banana, bean, sweet potato, cassava, sorghum and potatoes, of which the first five are present in 90% of production units and constitute the common basis for all the regions of Rwanda.

The little use of chemical fertilizers and pesticides, the low level of equipment and the very limited use of research

based technologies result in small yields which are also very vulnerable to climatic changes. The agricultural intensification at the projects level was often realized without taking into account environmental drawbacks accrued from excessive inputs like mineral fertilizers, pesticides and herbicides. The poor conditions of the feeder roads in the Districts, especially Western and northern districts limit the access to market of the produce and increase post harvest losses.

In addition to agricultural activities, most farmers in Rwanda raise livestock. Livestock production has increased, especially in Eastern districts, due to disease control, insemination and cross breeding programs. The national average milk production is 1litre/cow/day for 180 days of lactation (MINAGRI, 2001). The pastures mostly consist of family fallows or marginal lands considered as inappropriate to agriculture. The demographic pressure led to zero grazing system, especially in Northern, Western and Southern Districts. In East, animal's transformations have registered significant changes where the long horned cows were replaced by the improved ones with high level of production.

MINAGRI (2006) showed that the number of cows nationally increased by 60 % between 2000 and 2005. The number of goats increased by 67%, sheep by 195 %, pigs by 93 %, poultry by 44 % and rabbits by 67 %. The limited subsisting pastoral areas are used inefficiently, because farmers do not master the rotative management of pastures, resulting in overgrazing and overexploitation caused by trampling, degradation and reduction of vegetation cover. The permanent stabulation, the semi-stabulation and extensive farming constitute the three main types of animal husbandry. It should be noted that there is a program managed by MINAGRI called "One Cow per Every Poor Family in Rwanda (Girinka Program)" that will cover all the districts of the country in order to contribute to poverty reduction and food security.

### Energy and transport

In Rwanda, the biomass serves as the main source of energy as it covers 86.3 % of national needs, against only 13.7 % for the contribution of petroleum products. About 16% of households are connected to the grid. Woody fuels and biomass wastes are the sources of energy used in households, industries and handicrafts. However, the country has alternative sources of energy, which have are under development, such as peat, methane gas from Lake Kivu, geothermal energy, solar energy and biogas.

Combined with anthropic factors (agriculture, drainage of marshes, deforestation and overexploitation of river basins), the hydrous deficit is considered to be the main factor of vulnerability of the hydropower sector. It is evident that the pluviometric deficit leads to the reduction of offer in water resource and, consequently, in hydroelectricity. That was the case for the power plants of Ntaruka and Mukungwa on lakes Burera and Ruhondo, two main interior sources of electric energy of Rwanda.

Moreover, the hydropower-related infrastructure is still weak with present production not exceeding 112MW, while the demand is estimated to be more than 400MW. Construction or mobilization of funds and investors is underway for other electricity projects including:

- 60 MW (three countries) on Akagera at Rusumo;
- Rusizi II, Mukungwa III, Rukarara and various other micro hydropower plants.
- Methane gas from Kivu lake and Geothermal energy;
- Peat and Solar energy
- Biogas

As also confirmed during the consultant's public consultations, roads in the project and in this ESMF, should take a special consideration as previous social protection projects and activities showed that roads rehabilitation involve high numbers of beneficiaries more than other social protection activities.

About 60 percent of the classified road network is designated as national roads consisting of about 1,100 km of paved roads and 1,800 km of gravel roads while the remaining 40 percent of the classified network (about 1,800 km) is designated as district road. Out of the 14,000 km of the overall road network about 66 percent (9,300 km) are unclassified roads, which are predominantly earth roads and considered as communal roads.

According to a road condition survey carried out in 2010, about 23 percent of the district roads are in good condition while 44 percent and 32 percent are in fair and poor condition, respectively. The unclassified roads are not surveyed, but generally in poor state and impassable during the rainy season. Moreover, the feeder roads in Rwanda, especially in Western and Northern Provinces, traverse hilly terrain with high rainfall and soft soils, and the earth roads, which are not engineered roads, are often washed out during the rainy season.

Further, with its mountainous terrain, excessive rain fall, and severe erosion Rwanda's road network is rendered to high maintenance cost, which is twice higher than that of most Sub-Saharan countries.

## CHAPTER THREE: POLICY, INSTITUTIONAL AND LEGAL FRAMEWORK FOR ESMF

This section of the ESMF outlines and reviews the existing legislations, policies and institutions and identifies requirements as well as gaps and conflicts of the relevant legal and institutional arrangements that would hinder or guide the development of the project in line with the national and international laws applicable. Rwanda being a signatory to various international conventions and laws, it is important that national projects are in line with these laws and as such some of the relevant international conventions are reviewed in this chapter. This section will also refer to the World Bank general Environmental and Health Safety guidelines.

### 3.1 National environmental and social management requirements

This part describes National institutional, legal and policy framework for environmental and social requirements in Rwanda, applicable to the project as well as the international laws and conventions that bear relevance to the implementation of this project.

#### 3.1.1 Policy framework

The Government of Rwanda is committed to eliminating poverty and reducing inequality. Its five-year aims were set out in the Economic Development and Poverty Reduction Strategy (EDPRS), approved in 2007. In the EDPRS, social protection was given a prominent role and, in the past three years, the government has taken major steps towards realising its commitments. The gradual expansion of social protection across Rwanda – in particular through the Vision 2020 Umurenge Programme (VUP), a flagship programme of the EDPRS – has already begun to make significant in-roads into reducing poverty, in particular in the sectors where it has been implemented.

#### The National Social Protection Strategy

This National Social Protection Strategy sets out in detail the government's vision and commitments within the sector. It describes how the government builds on commitments already made in the EDPRS2 and demonstrate how the country's vision continues to grow. It takes significant steps to broaden the coverage of social protection to those in need of support from government. At the same time, it gives priority to enabling households to become self-sufficient and graduate from social protection: key to this will be the broadening and strengthening of the VUP Public Works programme as well as measures to establish complementary social development programmes to social protection, such as increasing the access of poor people to financial services.

The Strategy has built on, integrated and extended the cash programmes that were currently part of the Vision 2020 Umurenge Programme (VUP), Genocide Survivors Support and Assistance Fund (FARG) and Rwanda Demobilisation and Reintegration Commission (RDRC): the VUP Direct Support and Public Works programmes, the FARG emergency assistance and the subsistence allowances for disabled ex-combatants. These will enable the government to take the first steps in establishing a comprehensive Social Protection Floor.

### The National Transport Policy

Among the public works, road rehabilitation, construction and maintenance have always been the main activities under the VUP activities given the number of the beneficiaries the program was able to achieve through it. The project will most probably keep the same tendency, and the sector policy and legal framework will always be followed. The National Transport Policy highlights the main objective of the road sub-sector in Rwanda as to Maintain, Rehabilitate and Develop the National Road Network, which is responsible for more than 80% of human and goods traffic in the country. The policy's strategies to meet these objectives are:

- expanding and improving Rwanda's road infrastructure, protecting existing capital investments, and improving road safety;
- establishing an appropriate institutional framework for the accelerated development of the road sub sector;
- financing road maintenance works through multi-year maintenance contracts,
- renewable under performance evaluation;
- encouraging community participation in road maintenance through the district development committees;
- improving the ability and quality of local road infrastructure, thereby enabling the rural community to market its crops;
- Creating an environment conducive to the encouragement of Private Sector Participation in rehabilitating, maintaining, and developing road infrastructure. Accordingly, a Road Maintenance Fund was established to provide adequate, reliable financing for road maintenance activities; and a Road Maintenance Strategy was formulated to guide the process.

### Decentralisation Policy

Decentralisation Policy has, since 2001, effectively transferred power and service delivery responsibilities from the central Government to districts. As a result of this policy, a lot of financing for infrastructure establishment are managed by districts, through the Local Administrative Entities Development Agency (LODA). Under decentralization, the District Departments of Infrastructure have the responsibility of executing infrastructure works, with technical guidance from MININFRA. Districts are required to undertake and report regularly, on road maintenance activities.

### The Road Maintenance Strategy

The Road Maintenance Strategy (RMS) of May 2008 emphasises routine maintenance as a more cost-effective of establishing and managing road infrastructure. The strategy aims to: (a) provide a policy framework to guide RTB/Districts/ or Roads Agency staff in maintenance programming, planning and execution; (b) ensure that investments that are made in the development of roads; (c) ensure that infrastructures are safeguarded and allowed to deliver their maximum benefit; and to allow all stakeholders to understand the investment decisions taken by MININFRA.

The RMS lays emphasis on building capacity, fostering public-private partnerships and a long-term project cycle involving multi-year contracts management. Environmental management is a key aspect of the RMS, as this is critical for cost-effective road maintenance and rehabilitation.

### Land Policy

The 2004 land policy emphasises productive use of land based on suitability of specific land units. It also advocates for and entrenches land rights and tenure security by promoting land registration and titling. For road scheme development, the implications of this policy relate to resettlement and compensation; assessing the suitability of particular areas for road infrastructure; and the influence of infrastructure development on the changing value and use of land.

### Environmental policy

The 2004 policy seeks to integrate environmental sustainability principles into all development processes, programmes and projects. For roads, the nature of the terrain in Rwanda makes environmental issues (e.g. water runoff and landslides), the main threats to sustainable road maintenance. The terrain and the settlement patterns also indicate that roads – which are the most common mode of transport – could be a potentially dangerous development, unless environmental and social considerations of human safety, risk of losses, are prior anticipated, identified, analysed and integrated into the project design and implementation. This underscores the importance of ESIA in road projects.

### **3.1.2 Legal and regulatory framework**

The main national legislations that provide for and guide Environmental Impact Assessment (ESIA) for public infrastructure, and the provisions, thereof, include the following:

#### Constitution as revised in December 2015

As the supreme law of the country, the constitution of the Republic of Rwanda stipulates that the state shall protect important natural resources including land, water, wetlands, mineral, oil, fauna and flora on behalf of the people of Rwanda. This constitution entrusts the Government with the duty of ensuring that Rwandese enjoy a clean and healthy environment. Article 49 states that every citizen is entitled to a healthy and satisfying environment. Every person has the duty to protect, safeguard and promote the environment. The state shall protect the environment. The law determines the modalities for protecting, safeguarding and promoting the environment.

#### Law on Environment Protection and Management

The most relevant legislation for this study is the Organic Law on Environmental Protection, Conservation and Management. The legislation sets out the general legal framework for Environment protection and management in Rwanda. The law centers on avoiding and reducing disastrous consequences on Environment.

The Ministry of Natural Resources, the ministry responsible for the Environment, puts in place the organic law regarding environment conservation. Initially until very recently, REMA was responsible for the approval of ESIA reports; this responsibility has now been transferred to Rwanda Development Board (RDB) where there is a department for ESIA responsible for review and approval of all ESIA reports.

#### Law No 43/2013 of 16/06/2013 governing land in Rwanda

The law on the land determines how land should be used in Rwanda. It also institutes the principles that are respected on land legal rights accepted on any land in the country as well as all other appendages whether natural or artificial.

The Chapter II of the law categorizes land according to its uses. Article 12 and 13 of the law gives the state ownership over land which makes up the public domain including lakes and rivers as listed by an order of the Minister having water in his or her attributions, shores of lakes and rivers up to the length determined land occupied by springs and wells determined in accordance with an order of the Minister having water in land reserved for Environmental conservation composed of natural forests, national parks, reserved swamps, public gardens and touristic sites among others.

The Articles 12, 13 and 14 categorize the public land into state land into public domain, land in the public domain of the local government and state land in the private domain respectively. The Article 12 gives the state control over national roads and their boundaries. As per Article 13 of the land law, local administration has the authority over Districts and City of Kigali roads and that of other urban areas linking different Sectors headquarters within the same District or those roads that are used within the same Sector with their boundaries as well as arterial roads that connect Districts roads to rural community centres that are inhabited as an agglomeration with their boundaries.

#### Law No 55/2011 of 14/12/2011 governing roads in Rwanda

The roads law regulates the road network in Rwanda and determines its reserves, classification and management. For national roads, the minimum viable widths of the lane of a roadway shall be three metres and a half (3.5 m) not including the drainage ditches and embankments.

The minimum width of the roadway in Districts and City of Kigali roads and other urban areas - Class 2, not including drainage ditches and embankments shall be six (6) metres. In suburbs and at the entrances of towns, grouped settlements and agglomeration, the width of a road may be increased when it is deemed necessary. In addition to such width, each road must have a large piece of land for drainage ditches, embankments, dumps and sidewalks on all integral parts of the road.

The Article 22 of the roads law sets up the Road reserve for national roads, Districts and City of Kigali roads and those of other urban areas. The road reserve for national roads, Districts and City of Kigali roads and those of other urban areas -Class One shall be demarcated by two parallel lines at twenty two (22m) meters on both sides

of the road from the median line. The road reserve for national roads, Districts and City of Kigali roads and those of other urban areas -Class One shall be demarcated by two parallel lines at twenty two (22m) meters on both sides of the road from the median line. The road reserve for Districts and City of Kigali roads and those of other urban areas -Class 2- shall be delimited by two parallel lines at twelve (12) meters on both sides of the road from the median line. The Road classification automatically entails the incorporation of the right of way into public domain and creates the road easement over the land bordering the road (Article 23).

The management and maintenance of the National Roads shall be under the jurisdiction of the Rwanda Transport Development Agency. Works meant for national roads maintenance and development shall be funded by the Government. The District or the City of Kigali has the responsibilities as regards to the routine maintenance of the part of the national road passing over it and its surroundings. Maintenance works shall be funded by the Road Maintenance Fund.

### Agriculture Policy

The main objective of Rwanda agricultural policy is to intensify and the transform subsistence agriculture into a market oriented agriculture, and which requires the modern inputs, notably improved seeds and fertilizers. The policy puts emphasis on marshland development for increased food production because the soil on hills is degraded by erosion and not sufficient. The policy promotes small scale irrigation infrastructure development in the country's selected marshlands while preventing Environmental degradation. To achieve sustainable agricultural development, the policy emphasizes the need to adopt Integrated Pest Management practices.

### Water and Sanitation Policy

The sectoral policy on water and sanitation is based on vision 2020, sustainable development goals and poverty reduction strategy. The policy provides for decentralization in line with the national decentralization policy, institutional aspects, integrated watershed management, monitoring and assessment and participatory approach to water and sanitation among other sectoral reforms in Rwanda. The policy identifies the sub sector constraints and proposes measures to achieve policy objectives of improving the living conditions of the population through optimal use of water resources and access of all to water and sanitation services. One of the programs of this policy is on water supply and sanitation program in rural area In order to achieve the millennium goals and the 2020 Vision, the Government of Rwanda launched 15 years water and sanitation program in rural area. This program aims to improve the population rate with access to water, presently at 44%, and increase the sanitation rate, presently at 8%, to 66% in 2010, to 80% in 2015 and 100% in 2020.

### National Water Resources Management Policy

The water policy aims at fair and sustainable access to water, improvement of the management of water resources, etc. through reforestation on hillsides and water catchments areas. This policy would seem in conflict with other sector policies including agriculture and marshland development. The policy also needs to adopt a holistic approach to the management of water resources and integrate other polices related to it including the forest, wetlands, agriculture and land. This policy is relevant to SP-IPF subprojects as some of the project

activities will be undertaken in areas with water resources and one of the key project input is water which is governed by the policy.

#### The National Biodiversity Strategy and Action Plan (NBSAP)

The National Biodiversity Strategy and Action Plan (NBSAP) reflects a framework for conservation, sustainable use and equitable sharing of benefits from biodiversity use and ecosystem services of the country. It also provides a framework for maintaining the necessary environmental conditions to reduce poverty, ensure sustainable development and food security in the country. Causes of biodiversity loss range from natural processes to anthropogenic actions. Results from recent research have shown that threats to biodiversity arise from loss of habitat due to encroachment for agricultural activities, over-harvesting of resources through poaching and deforestation, mining, urban development, etc.

Modalities for improving biodiversity policy and legal framework have been emphasized as well as capacity building for a better management of natural resources. The major objectives of the NBSAP are:

- Improving environmental stability for natural ecosystems and their biodiversity;
- Restoring degraded ecosystems and maintain equilibrium among biological communities;
- Establishing an appropriate framework for access to genetic resources and equitable sharing of benefits arising from biodiversity use and ecosystems services; and
- Improving policy, legal and institutional framework for a better management and conservation of national biodiversity.

#### Law No. 32/2015 of 11/06/2015 relating to Expropriation in the Public interest

This law determines the procedures relating to expropriation of land in the interest of the public. Article 3 of the law stipulates that it is only the government that has authority to carry out expropriation. However the project, at any level, which intends to carry out acts of expropriation in public interest, shall provide funds for inventory of assets of the person to be expropriated and for just compensation on its budget.

According to the above expropriation law, no person shall hinder the implementation of the program of expropriation on pretext of self centered justifications and no land owner shall oppose any underground or surface activity carried out on his or her land with an aim of public interest. In case it causes any loss to him or her, he or she shall receive just compensation for it. Chapter IV deals with valuation of land earmarked for expropriation. The law identifies properties to be valued for just compensation to be land and activities that were carried out on the land including different crops, forests, buildings or any other activity aimed at efficient use of land or its productivity. Here the law is silent on access to economic activities on the land.

#### Other relevant legal instruments

Other relevant regulations applicable to this project include: Ministerial Instruction No. 02/UPPR/09 with respect to Excavations and restoration of public infrastructure by communications and Infrastructure Service Providers

(CISPs) operating in Rwanda, April 21, 2009 and General Guidelines and Procedures for Environmental Impact Assessment of November 2006, prepared by REMA.

### ***3.1.3 Institutional framework arrangements for environmental and social management in Rwanda***

The institutional framework for environmental management is currently enshrined in the Organic Law determining the modalities of protection, conservation and promotion of the environment in Rwanda, published in the Official Gazette RWA N° 9 of the 1<sup>st</sup> May 2005, particularly in its chapter III relating to the establishment of the institutions.

#### Ministry of Natural Resources (MINIRENA)

MINIRENA is a multispectral ministry covering five sectors: Lands, WaterResources, Forest, Mining and Environment. Environment is a crosscutting sector because it covers the four other sectors. MINIRENA is responsible for the development of policies, laws and regulations as well as coordination of all activities in the management of land, water resources, forest, mining activities and environment, as well as their follow up and evaluation.

#### Ministry of Infrastructure (MININFRA)

The Ministry of Infrastructure is responsible for developing policies in infrastructure sectors namely roads, housing, transport, communication, energy, water and sanitation. MININFRA is also responsible for monitoring the implementation of those policies.

#### Ministry of Agriculture and Animal Resources (MINAGRI)

The Ministry of Agriculture and Animal Resources (MINAGRI) is the policy guiding agency for agriculture related infrastructure projects including feeder roads, marshlands rehabilitation and radical terracing among others. Rwanda Agriculture Board is the executing agency for these activities.

#### Rwanda Transport Development Agency (RTDA)

RTDA is a newly established institution under MININFRA and is in charge of the implementation of the national policy on public infrastructure in particular roads, bridges, airports, railway, etc. It provides technical guidance on the proper implementation of feeder roads in selected Districts across the country.

#### Rwanda Environment Management Authority (REMA)

Rwanda Environment Management Authority (REMA) was established in 2004 to act as the implementation organ of environment-related policies and laws in Rwanda. REMA is also tasked to coordinate different

environmental protection activities undertaken by environmental promotion agencies; to promote the integration of environmental issues in development policies, projects, plans and programmes; to coordinate implementation of Government policies and decisions taken by the Board of Directors and ensure the integration of environmental issues in national planning among concerned departments and institutions within the Government; to advise the Government with regard to the legislation and other measures relating to environmental management or implementation of conventions, treaties and international agreements relevant to the field of environment as and when necessary; to make proposals to the Government in the field of environmental policies and strategies; etc.

### Rwanda Development Board (RDB)

RDB was created by Organic Law N° 53/2008 of 02/09/2008 with a mission of improving the well-being of all Rwandans by fast-tracking development, catalyzing sustainable economic growth, and creating prosperity for all. According to the recent restructuring of government institutions, RDB was assigned the responsibility of reviewing the ESIA reports and authorising the project to proceed by issuing an ESIA certificate.

### **3.2 World Bank environmental and social safeguard policies**

The World Bank has developed 10 environmental and social safeguard policies, which are a cornerstone of its support to sustainable poverty reduction. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for Bank and borrower in the identification, preparation, and implementation of programs and projects. This ESMF has been designed so that all investments in the transport sector funded under the World Bank support will comply with all the Environmental laws of the Government of Rwanda and the Environmental and Social Safeguard Policies of the World Bank. In this chapter, the Bank's safeguards policies and their applicability to the transport sector are discussed and in the subsequent chapter those of the Government of Rwanda are presented. The World Bank Safeguard Operational Policies (OP) and Bank Procedures (BP) are;

1. Environmental Assessment (OP4.01)
2. Natural Habitats (OP/BP 4.04)
3. Forestry (OP/BP 4.36)
4. Pest Management (OP 4.09)
5. Physical Cultural Resources (OP 4.11)
6. Indigenous Peoples (OP 4.10)
7. Involuntary Resettlement (OP/BP 4.12)
8. Safety of Dams (OP/BP 4.37)
9. Projects on International Waters (OP/BP 7.50).
10. Projects in Disputed Areas (OP/BP 7.60)

These policies apply differently depending on the activities to be supported by the World Bank. In preparing this ESMF, a consideration of the type of investment/activities to be undertaken under the SP-IPF vis-à-vis the

baseline data presented in Chapter two against the requirements of the Bank Safeguard policies, has led to the determination that the following Bank policies are likely to apply.

It was agreed that the Social Protection Investment Project Financing Operation has to trigger the Environmental Assessment (OP4.01), Natural Habitats (OP/BP 4.04), Physical Cultural Resources (OP 4.11) and Involuntary Resettlement (OP/BP 4.12) policies. These policies are discussed below:

### **3.2.1. Environmental Assessment (OP4.01)**

This policy requires environmental assessment (EA) of projects/programs proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus improve decision making. The core requirement of this policy is to screen early for potential impacts and select appropriate instrument to assess, minimize and mitigate the potentially adverse impacts. Relevant safeguard instrument for the policy include Environmental and Social Impact Assessment (ESIA), which is prepared for specific projects already identified before project appraisal; Environmental and Social Management Framework (ESMF), which is prepared to establish a mechanism to determine and assess future potential environmental and social impacts during implementation of the project activities and investments, which are not specified before project appraisal; and Environmental and Social Management Plan (ESMP).

The policy calls for the proposed project as a whole, and for activities/investments to be identified at a later stage during project implementation to be environmentally screened to determine the extent and type of the EA process.

At screening stage, the proposed project or sub-projects will be classified as Category A, B or C, depending on the type, location sensitivity, and the full scale of the project and the nature and magnitude of its potential environmental impacts. For Category A: full Environmental and Social Impact Assessment (ESIA) will be required, since project activities may have adverse, irreversible and significant environmental impacts. For Category B: a limited ESIA will be adequate, since projects may have site-specific environmental impacts, and their mitigation measure can be designed more readily. Under Category C: subprojects are likely to have minimal or no adverse environmental impacts, hence beyond screening; no further environmental assessment action may be required.

The World Bank Environmental Health and Safety Guidelines which provide guidance to users on Environmental Health and Safety issues in specific industry sectors, and specifically the Bank Industry Sector Guidelines for Construction Materials Extraction which provide guidance on environmental issues during the operational, construction, and decommissioning phases of construction materials extraction (including mainly air emissions, noise and vibrations, water, waste and land conversion) will be applicable to this project.

OP 4.01 further requires that the ESIA and ESMF report must be disclosed as separate and stand-alone documents by the Government of Rwanda and the World Bank as a condition for Bank Appraisal of the proposed project. The disclosure should be both in Rwanda where it can be accessed by the general public and local communities and at the Info-shop of the World Bank.

### **3.2.2 Involuntary Resettlement (OP/BP 4.12)**

Interventions in public works and other infrastructure development could lead to displacement, loss of assets and restriction of access to sources of livelihood. All candidate infrastructures to be developed would be screened for impacts and a Resettlement Action Plan (RAP) will be prepared, if required.

Resettlement Policy Framework (RPF) sets the guidelines for the Resettlement and Compensation Plans (RAPs) that would have to be prepared when any project investment (activity) triggers this policy. The standalone Resettlement Policy Framework (RPF) has to be prepared by the Government and approved by the Bank in compliance with OP 4.12. The RAPs would be prepared by the subproject implementers (e.g. districts) and would have to be submitted to the Bank for approval.

This policy is triggered when a project activity causes the involuntary taking of land and other assets resulting in: (a) relocation or loss of shelter, (b) loss of assets or access to assets (c) loss of income sources or means of livelihood, whether or not the affected persons must move to another location. Therefore, people are in most cases compensated for their loss (of land, property or access) either in kind or in cash of which the former is preferred. The resettlement policy applies to all displaced persons regardless of the total number affected, the severity of the impact and whether or not they have legal title to the land. Particular attention should be paid to the needs of vulnerable groups among those displaced.

The policy also requires that the implementation of the resettlement plans are a pre-requisite for the implementation/start of the construction to ensure that displacement or restriction of access does not occur before necessary measures for resettlement and compensation are in place. For chosen sites involving land acquisition, it is further required that these measures include provision of compensation and of other assistance required for relocation, prior to displacement, and preparation and provision of resettlement sites with adequate facilities, where required. In particular, the taking of land and related assets may take place only after compensation has been paid, and where applicable, resettlement sites, new homes, related infrastructure and moving allowances have been provided to displaced persons.

For project activities requiring relocation or loss of shelter, the policy further requires that measures to assist the displaced persons are implemented in accordance with the project resettlement plans of action.

The policy aims to have the displaced persons perceive the process to be fair and transparent. Where there is a conflict between the Laws of Rwanda and the Bank OP4.12, the latter must take precedence if the Bank is to fund the project/activity.

#### Comparison between Rwandan legislation and OP 4.12

This section compares the similarities and differences between the National requirements and the World Bank safeguards policies. Basically there is no big difference in regards to environment and Social management framework between national requirements and World Bank safeguards. However some differences are observed

in Rwandan laws related to expropriation and the World Bank's safeguards on Involuntary Resettlement. The promulgation of the new Expropriation Law introduces a legal framework within which expropriation activities must be conducted, and above all, attempts to bring Rwandan legislation more in line with international best practice requirements.

Despite these provisions, there are still some gaps between the national Rwandan legislation and the World Bank Policy OP4.12 and in the implementation of feeder roads project, where the local law differs with the Banks' the latter will apply or take precedence. These relate to the general principles for resettlement, eligibility criteria, the notification period for expropriation and resettlement, and the procedures required throughout the resettlement process. Therefore, Rwanda being the signatory to international laws and conventions the implementation of this ESMF will refer to both national and World Bank safeguards policies.

**Table 3: Differences between Rwanda regulations and World Bank Policies**

Area	Rwandan Law	World Bank OP 4.12
Avoid Resettlement	Rwandan national legislation regards expropriation of land for public interest as inevitable	Resettlement should be avoided whenever possible
Notification period required	Property must be handed over in a period not exceeding 120 days after compensation has been paid	OP4.12 requires that displacement must not occur before necessary measures for resettlement are in place
Meaningful and participative consultation	The Rwandan Expropriation Law simply stipulates that affected people be fully informed of expropriation issues and goes further to prohibit any opposition to the expropriation program	OP 4.12 requires that persons to be displaced should be meaningfully consulted and should have opportunity to participate in planning and design of resettlement programs
Eligibility determination	Rwandan legislation stipulates that compensation be due both to land owners and land users	The World Bank OP4.12 allows a broader range of eligibility than the national policy, as described in Section 8. Thus OP4.12 will provide the framework for Resettlement for project infrastructure activities
Fair and just compensation	The Expropriation and Valuation Laws provide for fair and just compensation to expropriated people eligible for compensation.	OP4.12 stipulates a clear preference for non-cash compensation for land based livelihoods to be provided. Thus OP4.12 will provide the framework for resettlement for project infrastructure activities
Monitoring:	Monitoring measures are provided for in Rwandan legislation but the focus is to ensure that contracted compensation has been provided in full.	OP4.12 requires assessment as to whether the compensation provided was appropriate, and whether the PAPs livelihoods have been restored or improved.
Environmental assesment	Projects with minimal adverse impacts, which can easily be identified through a Project Brief, do not require EIA. For potential impacts of these projects,	OP 4.01: Many rehabilitation, maintenance and upgrading projects may require attention to existing environmental problems at the site rather than potential new impacts. In these

	mitigation measures can be integrated in the design of the project without necessarily requiring a detailed EIA.	cases, a simplified ESMP could be prepared to address potential environmental and social impacts. fulfilling the EA needs for such projects. For those subprojects that do not have impacts based upon screening, no ESMP or ESIA will be prepared. These actions would be consistent with OP 4.01.
Natural Habitat	<p>The EIA regulations require EIA for all projects to predict impacts on biophysical environment.</p> <p>Rwanda's EIA regulation explicitly outline the contents of an EIA report. A key chapter in the EIA content is "Determination and Assessment of Potential Project Impacts (biophysical and socio-economic)" which require the proponent of a project to identify the environmental effects of the project including the direct, indirect, cumulative, short-term and long-term effects and possible alternatives.</p> <p>Under Rwandan regulations, an ESIA will be required for projects affecting natural habitats</p>	The policy intends to prohibit financing projects that degrade or convert critical habitats, Project activities do not involve degradation or covention of critical habitats. Wetland rehabilitation subprojects will require a detail assessment to ensure negative impacts are minimized. Impacts and mitigating measures on HN will be integrated/included in the ESIA or ESMP.
Physical Cultural Resources	There is an established procedure for protection of physical cultural resources by Ministry of Sports and Culture, through the policy on cultural heritage. The policy describes the principles relating to physical cultural heritage that includes, architectural heritage; genocide memorial sites; areas of cultural interest; archaeological heritage; and heritage of community life	The policy intends to protect cultural resources that are affected by the project. The Project has included chance finds procedures for the management of potential subproject impacts to physical cultural resources during project implementation.

### 3.2.3 Natural Habitats (OP/BP 4.04)

The core requirement of the policy is to avoid financing projects that degrade or convert critical habitats. In case there are no alternatives and if acceptable, mitigation measures should be put in place. Natural Habitat Policy is triggered because some swamps or marshlands, forest reserves or any other natural habitat may be crossed by

the roads to be constructed/rehabilitated under the project. These areas may have ecological value, such as habitat to some important fauna (birds, insects, and aquatic animal species) or flora. Therefore, it is important to confirm it during Environmental and Social Impact Assessment and mitigation measures should be included in the ESMPs and contract documents, if required.

### **3.2.4 Physical Cultural Resources (OP/BP 4.11)**

Cultural heritage resources are normally not fully known during project preparation, but some road works may be located in the influence area of some sites. Graves for instance, could be located along road project sites. Road reconstruction and rehabilitation operations may require borrow pit excavations or some limited movements of earth. Such activities may have potential impacts on previously unidentified physical cultural resources through chance finds of an archaeological nature.

This policy requires that whenever physical cultural resources are encountered, an investigation and inventory of cultural resources potentially affected need to be carried out. Mitigation measures need to be included where there are adverse impacts on physical cultural resources.

This ESMF provides a clear procedure for identification, protection and treatment of archaeological artefacts discovered; these procedures will be included in the environmental and social management plan and in standard bidding documents. The environmental and social screening tool will include the identification of chance finds. The project will be reviewed for potential impact on physical cultural property and clear procedures will be required for identification, protection of cultural property from theft, and treatment of discovered artefacts will be included in standard bidding documents. While not damaging cultural property, sub-project preparation may identify and include assistance for preservation of historic or archaeological sites. However, the civil works shall not start until the final RAP and ESIA (including a Cultural Resource Management Plan acceptable to the Association) have been submitted to the Bank, cleared, and disclosed and compensation has been paid.

## CHAPTER FOUR: PUBLIC CONSULTATION AND PARTICIPATION

The Project stakeholder consultation is a vital component of the ESMF process. The consultation process focuses on providing information on the proposed project in a manner that can be understood and interpreted by the relevant audience, seeking comment on key issues and concerns, sourcing accurate information, identifying potential impacts and offering the opportunity for alternatives or objections to be raised by the potentially affected parties; nongovernmental organizations, civil society, members of the public and other stakeholders. Consultation has also been found to develop a sense of stakeholder ownership of the project and the realization that their concerns are taken seriously, and that the issues they raise, if relevant, will be addressed in the ESMF process and will be considered during the project design refinement.

### 4.1 Public consultation

Consultation with all project stakeholders began during the Scoping phase and continued throughout the entire ESMF process and will continue into the social protection public works implementation and operational phases. Consultations with districts administration, community members, church leaders, local investors, project staff, and project affected persons were or will be organized. Interactive discussions with Muhanga and Nyaruguru Districts and Sectors officials of Cyahinda, Shyogwe and Muhanga; Districts One Stop Center teams, both District Environmental Officers, the in charge of land administration and the in charge Social Development Unit were organized. Consultations were carried out in Muhanga on 19 July 2017, and Nyaruguru on the dates of 17 to 18 July 2017.

All stakeholders are favourable to the project and see it as the possibility of reducing poverty in the area with the improved infrastructure and wages received by community members involved in public works. Communities requested to get information earlier on when works will start and what will be the compensation packages to be able to analyze how many families will be directly affected, land and crops which will be affected and if expropriations and relocation of families to other areas will be necessary. Districts officials and technical teams wished timely disbursement of compensation and public works funds to ensure projects are completed on time and without interruptions.

Minutes of these meetings are in annex.

#### 4.1.1 Consultations with Other Relevant Stakeholders

Other relevant stakeholders at national level such as government institutions (REMA, LODA, MINALOC and MINAGRI) have been consulted and informed about the project.

The implementation of these subprojects will involve collaboration with REMA and MINALOC/LODA to ensure diligent implementation of the proposed mitigation measures in the ESMPs by the Districts.

#### **4.1.2 Consultation with Directly Affected Persons**

As the identification of Project sites has not been finalized, public consultations were carried out in similar sites planned to be developed or whose works were completed to give a representative picture of environmental and social impacts of the proposed project.

Generally, people appreciate the project because they expect to be employed and have an income to gain access good infrastructure which may contribute to improving their living standard and economic opportunities. The negative impacts are considered as minor. However, people have a right to be informed in advance and to receive just and timely compensation of lost assets.

Below, are some pictures of consultation meetings.



***Public consultation in Muhanga/Shyogwe (19 July 2017)  
Nyaruguru***



***Road developed under VUP programme in***



*Public Consultations in Nyaruguru (17-18 July 2017)*

**Figure 3: Photos of consultation meetings in various project sites**

All stakeholders and communities consulted were much concerned with compensation. Prior to compensation and resettlement, the PAPs and affected communities should be informed of the compensation process and cut off date. A detailed valuation of affected assets in the presence of the PAPs and local authorities, should then be undertaken, current market value of the affected assets be negotiated with the PAPs and communities for payment. In regards to environmental concerns, consultation meetings revealed that all expected negative impacts, will be addressed during specific ESIA studies.

**Table 4: Key outcome of the consultation meetings**

ISSUE RAISED	RESPONSE
Availability of funds for Expropriation	The government of Rwanda will provide funds for compensation and Project Affected persons will be compensated prior works.
Perceptions and awareness of stakeholders and the public in general, in relation to the proposed project.	Interviewed communities in the project area and other stakeholders including local authorities are aware of the project and the role of the project to increase livelihoods of local communities.
Roles of District in implementation of safeguards tools	The Districts are the implementers of the project. They will therefore participate actively in ESIA/ESMPs implementation

Expected risks and negative effects of the Project to the local community.	<ul style="list-style-type: none"> <li>- Compensation for loss of properties (land, crops, trees, structures) and business</li> <li>- Relocation of PAPs whose houses will be affected by project works</li> <li>- Erosion control measures to limit land sliding likely to cause properties loss and pollution in high steepy areas</li> <li>- Roads works during heavy rains should be avoided to minimize landsliding risks</li> </ul>
Mitigation measures to potential risks and adverse project impacts to local community	<ul style="list-style-type: none"> <li>- Just and fair compensation of PAPs for lost assets</li> <li>- Assistance to resettled PAPs, including the poorest PAPs</li> <li>- Appropriate mitigation measures taken for pollution and health safety control</li> <li>- Ensure transparent selection of people to participate in public works and hire as much as possible PAPs</li> </ul>
Anticipated benefits likely to be occurred from the project for stakeholders.	<ul style="list-style-type: none"> <li>- Employment creation</li> <li>- Increased income for all employed community members</li> <li>- Improvement of welfare conditions.</li> </ul>
The willing to accept and participate in resources mobilization for all involved stakeholders.	<ul style="list-style-type: none"> <li>- Government, related ministries and institutions to advocate and enhance the technical capacity of all stakeholders.</li> <li>- Local communities to accept and implement project activities.</li> </ul>
Raised concerns/complaints from land owners.	<ul style="list-style-type: none"> <li>- Compensation for assets will be as per the Rwandan regulation.</li> <li>- Property owners will be informed when assets inventory and compensation payment will be done; but should be done before the start of works</li> </ul>
Raised the issue of employment; they suggested that the local people should be the first ones to be employed project.	The consultant team explained that VUP guidelines will be followed. But those with no skills will be trained during project implementation.
What are the benefit for vulnerable people who cannot work	The project will benefit all people and it needs people with the ability to work on the project as well. The project will identify activities which can be implemented by vulnerable People and people with disabilities. Tree nurseries to be established by the Project is one example. The Project will collaborate with the District to ensure that poorest vulnerable PAPs benefit from the Government support.
Concern about the speed of vehicles, they are noisy and dangerous.	In collaboration with traffic police, traffic signal and Roads speed Humps will be put in these Roads especially near public places like Schools, Hospitals
Soil erosion and landslides	In ESIA, studies measures for soil erosion control and landslides will be provided

During the project implementation phase, the proposed community consultations and training at the beginning of the sub-project cycle would be responsive to the requirements of the EIAs that call for identification of interested parties and opportunity to voice concerns or objections to a proposed activity. The Project Implementation Manual (PIM) that will be prepared, will provide in detail guidelines for the process of consultation and participation. The SP-IPF will require that notification of such community consultations are made through the most logical local methods (community meetings, churches, umuganda meetings, local radios, etc.) to ensure the broadest level of participation. Districts are responsible for identifying interested and affected parties in the community and ensuring that all parties concerned are given adequate opportunity to participate in the process. Using their usual communication tools, Districts will ensure that all concerned are informed of the sub-project process.

## CHAPTER FIVE: POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND GUIDELINES FOR MITIGATION

The Social Protection Investment Project Operation will have potential impacts (both positive and negative) on the surrounding environment, both directly and indirectly as there will be direct and indirect interactions between project activities and the environment. The environmental and social impacts identified at this stage are preliminary in nature and will need to be further elaborated and potential for occurrence has to be ascertained during further stages of project design and implementation, during ESIA and RAPs preparation. Having categorized the potential impacts by the stage of the project, which are mostly generic to various proposed activities, impacts that are specific to a project type will be further elaborated in the appropriate stage of their occurrence.

This chapter identifies potential impacts that could arise from the activities of the project, either during the planning, construction phase or the operation phase. The identified impacts apply to the socio economic environment (health, security, economic activities, employment, finances, etc) and on the biophysical environment (fauna, flora, water, air, soil, landscape). All these impacts affect the environment at different degrees, and their duration differs. That is why the impacts are classified differently according to their range in space and time. It is necessary to note that it is not only the project that will have impacts on the environment, but also the environment will have some impacts on the project. These impacts, as said earlier, can be positive or negative, direct or indirect and are also described as such in this study.

### 5.1 Positive Impacts

Throughout the construction period, local inhabitants of this area stand to benefit in the following ways:

#### 5.1.1 Employment opportunities

During the planning, construction and operation phases, new jobs will be created for both skilled and unskilled manpower. The project will ensure VUP guidelines are followed at the time of selection of casual or skilled labour, and no workers' camps will be required. VUP public works guidelines require that eligible participants are selected from or near the project site and imported labour is allowed as VUP selection of projects and beneficiaries is sector based.

#### 5.1.2 Government revenues

Revenues shall be collected by Government from the procurement of construction materials such as VAT and other taxes and duties as applicable.

#### 5.1.3 Affordability of medical insurance for workers

Employees shall afford medical insurance (mutuelle de santé) from their pay and even pay school fees for those who have children. VUP beneficiaries employed in public works are mostly Ubudehe category 1 households who have access to health insurance.

#### 5.1.4 Food Security, poverty alleviation, raise of rural income

The income from works will improve livelihoods of the people and the rural economy. In addition, the supply of construction materials, direct sale of household goods, consumables and food stuffs to the workers will be done during the construction phase, and this will improve trade at local and regional levels in Rwanda. Those who are involved in trade will have opportunity to supply construction materials for the project or the items required for the work force working at site.

The rehabilitation and maintenance of roads infrastructure will reduce the overall transportation cost and allow exchange of food and goods between regions. Furthermore farmers will get market for their production and earn a lot of money.

#### 5.1.5 Social Interaction

This interaction among community members is likely to enhance social interaction between people from different places.

### 5.2 Negative impacts

As Public Works projects are implemented, there will be a number of excavations, soil disturbance and some increased traffic around sites associated with the delivery and removal of construction materials and construction debris. There is therefore a risk of temporary increases in pollution and degradation of the environment, including through mud slides, noise, dust and air pollution. There is also risk of run-off from construction sites, inadequate or inappropriate drainage of the construction site and inadequate safety measures, etc. The above environmental impacts are generic in nature occurring along all the project activities where civil works are involved. In addition to the above, there are risks of indirect negative impacts such as generation of vectors and vector borne diseases, and spread of STD/HIV amongst the construction workers and within the community in the vicinity of construction activities etc.

Tables below summarize the potential environmental and social impact associated the project activities.

**Table 5: Potential Environmental impacts from proposed project**

Potential Impact/ Issue	Subproject type	Description	Environmental Significance
Air quality pollution	Community roads rehabilitation,	Exhaust fumes and dust emission from movement of construction trucks and equipment and construction activities like digging etc	Moderate
Solid waste	Community roads rehabilitation, , terrace construction	Waste from bush/vegetation clearing, and removal of trees, camp sites. etc	Moderate
Water pollution	Community roads	Sediment laden runoff from exposed areas	Moderate;

Potential Impact/ Issue	Subproject type	Description	Environmental Significance
	rehabilitation, , marshland rehabilitation and construction of water and sanitation networks	mainly due to vegetation clearing during construction; Improper use of waste oils from construction equipment; Drainage discharging their sediments into water bodies Increased use of agro chemicals and fertilizers.	Minor  Moderate
Noise pollution	Community roads rehabilitation,	Movement of heavy vehicles Noise from employed labour force and their equipments	Minor Minor
Soil erosion	Community roads rehabilitation,	Exposed land surfaces from cleared vegetation may induce erosion from rain events (soil/mass movement) Embankment slopes are prone to landsliding	Moderate
Loss of biodiversity	Community roads rehabilitation, , land terracing works and marshland rehabilitation.	Due to the removal of vegetation during public works, borrow pits, waste dumping area, protected areas, etc	Moderate
Public safety	Community roads rehabilitation,	Badly managed work activity/site within community Poor housekeeping leading to stagnant water as breeding grounds for insect vectors (causing malaria etc) Movement of heavy trucks and equipment and road safety	Moderate Moderate Moderate
Land use	Community roads rehabilitation,	Conflicts with incompatible activities and land uses.	Major
Land take	Community roads rehabilitation,	Project sites will occupy some space in or close to the community. It may either be private or public land for which compensation may be required. No compensation for Government land should be required.	Moderate
Raw material usage	Community roads rehabilitation, , rehabilitation and construction of water and sanitation networks	PVC pipes, sand, stones, laterites from local and external sources (quarries etc)	Minor
Occupational	Community Roads	Hazards from handling heavy equipment,	Minor

Potential Impact/ Issue	Subproject type	Description	Environmental Significance
health and safety	rehabilitation,	including noise, ergonomic stress, lifting heavy materials etc	
Socio- economic	Community Roads rehabilitation, , terrace construction, rehabilitation and construction of water and sanitation networks	Use of local labour and therefore income earning; Destruction of property- farm crops, structures; Community convenience vs Consultant's technical judgement for chosen routes Visual intrusion by heavy trucks and equipment; Disruption of social activities	Moderate Moderate; Minor  Minor Minor

**Table 6: Potential adverse social impacts from the project**

Type of impact	Description of Potential Impact/ Issue	Social Significance
Physical displacement	The Project will result in the physical displacement of communities.	Minor
Loss of employment and livelihood	Some community members may lose some assets (trees, crops, structures) located projects sites. No person will lose employment as the project will rather create employment opportunities.	Minor
Deprivation of use of land	New infrastructure, like feeder roads to be rehabilitated may take up individual or community land	Minor
Loss of crops/ properties	New infrastructure may interfere with individual or community crops and properties.	Minor
Impact on vulnerable groups	No negative impacts on vulnerable groups in the society (such as the elderly, disabled, women, children and minority groups) will occur as a result of the proposed development. The Project has no inherent negative impact or bias towards any vulnerable group.	Negligible
Impact on Social and Cultural Structures	The Project will have positive impacts on social and cultural structures as the Project activities will bring together persons from different communities and interact for their common good.	Major
Impact on Cultural Heritage/	The risks to cultural heritage would be on buried resources encountered or sacred sites or touristic sites during excavation	Minor

Type of impact	Description of Potential Impact/ Issue	Social Significance
Archaeological interest	on land.	
Impacts on Human Health/ Safety and sanitation	(a) Human health and safety could be compromised through traffic accidents involving construction vehicles/equipment. Occupational injury associated with construction activities will be limited to the work force only. (b) Indiscriminate disposal of human waste or free-range defecation by project workers could create environmental health problems for local communities (c) Indiscriminate disposal of litter at the project sites and work camps will create unsightly conditions and pose safety and health risks	Minor to Moderate  Moderate to Major  Moderate

### 5.3 Guidelines for mitigation measures

All significant adverse impacts are considered for mitigation. Specific measures have been suggested in this section when practicable. The mitigation options considered include project modification, provision of alternatives, and pollution control. In case where the effectiveness of the mitigation is uncertain, monitoring programmes will be introduced. The mitigation measures are applied to significant impacts arising from construction, operation and maintenance aspects of the various subproject projects. The Project and Districts are responsible for determining the cost of mitigation and to include such cost as part of the total cost for executing the works. This ESMF will make reference to the Bank's general Environmental, Health and Safety (EHS) Guidelines to address potential impacts. The WB general EHS guidelines can be found on the following link:

<https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final+-+General+EHS+Guidelines.pdf?MOD=AJPERES> (viewed on 4 August 2017)

The mitigation measures are presented in the following tables in a descriptive format.

**Table 7: Mitigation measures for Environmental impact from the project**

Type of impact	Description of mitigation measures
Water quality and pollution	<ul style="list-style-type: none"> <li>• Temporary storage of sanitary and cleaning wastes in containers. Disposal should occur at waste dumps.</li> <li>• No solid waste, fuels or oils should be discharged into water bodies.</li> <li>• Where works take place adjacent to a watercourse, temporary sediment barriers should be installed on slopes to prevent silt from entering the watercourse.</li> </ul>

Soil erosion and landslide	<ul style="list-style-type: none"> <li>Integrating land stability into the roads and radical terraces (and other relevant project activities) designs to address the landslide risks. The planting of grasses on embankments slopes with low landslide risks, stone masonry construction on embankments' slopes with high risks; tree planting along rehabilitated roads/terraces embankments and other critical areas should be considered.</li> <li>Application of appropriate erosion-protection measures, in particular where it concerns works on slopes and in stream beddings.</li> <li>Road and other works should not be executed under aggressive weather conditions (rains, strong winds).</li> </ul>
Public health problems	<ul style="list-style-type: none"> <li>Adequate sanitary facilities should be available for workers and open range defecation should not be countenanced.</li> <li>Imported skilled labour (supervising engineers for example) should be provided with proper housing, including sanitary facilities.</li> <li>Labourers should adhere to basic rules with regards to protection of public health, including most importantly hygiene and disease (HIV) prevention.</li> <li>All land depressions and disturbed areas at work sites should be filled to avoid water pond which could breed mosquitoes.</li> </ul>
Safety of the public	<ul style="list-style-type: none"> <li>Contractors will inform local communities early of the construction programme.</li> <li>Contractors will provide security barriers to ward off inquisitive persons and animals from active work sites.</li> </ul>
Loss of biodiversity	<ul style="list-style-type: none"> <li>For roads projects, alignment will be done by avoiding rare and endemic species where possible and new forest, shrubs and grasses will be planted in other places to compensate the lost forest.</li> </ul>
Visual intrusion	<ul style="list-style-type: none"> <li>Adequate organisation and maintenance of construction sites through good housekeeping.</li> <li>Restoration of construction sites directly upon completion of works.</li> </ul>
Disturbance and interruption of commercial and social activities	<ul style="list-style-type: none"> <li>Contractors to inform the affected communities early of the construction programme.</li> <li>Limit any temporary interference with private property (e.g. farms) in creating routes.</li> <li>Relocation (even temporarily) to be avoided as much as possible.</li> <li>Where private land or other property is affected, or where there is loss of income as a result of project activities, agree on compensation measures with affected persons and ensure payment is done prior to start of construction. Compensation will occur in accordance with the defined Resettlement Policy Framework.</li> <li>Interference with the access to and use and local community roads, foot paths should be avoided or minimized.</li> </ul>
Land take	<ul style="list-style-type: none"> <li>Avoidance, as much as possible, the need for resettlement by considering other options</li> <li>Where resettlement is unavoidable, develop and implement appropriate plans in accordance with the Resettlement Policy Framework developed for the Project.</li> </ul>
Occupational health and safety	<ul style="list-style-type: none"> <li>Workers should be protected by ensuring the use of protective equipment</li> </ul>

**Table 8: Mitigating Potential Social Impacts/Concerns from the project**

Type of impact	Description of mitigation measures
Employment and loss of livelihood	Any affected person will be provided with livelihood assistance based on crops or properties to be affected. It should be done in accordance with the Resettlement Policy Framework (RPF)  It is expected that the project will further offer opportunities for the youth, women food vendors and income for community members who will supply the site with sands and stones
Deprivation of use of land	Land compensation should be based upon current market value of land in the area and in accordance with the resettlement policy framework (RPF).
Loss of crops/ properties	Appropriate compensation should be paid for any damaged or destroyed crops and property that belongs to the affected persons. All compensation process should satisfy the RPF developed for the project.
Impacts on Human Health/ Safety and sanitation	<ul style="list-style-type: none"> <li>• Trucks carrying construction materials such as sand, quarry dust, laterite etc will have the buckets covered with tarpaulin or appropriate material from or to project site</li> <li>• Only experienced drivers/operators for trucks should be employed</li> <li>• Except for areas secured by fencing, all active construction areas will be marked with high-visibility tape to reduce the risk accidents involving pedestrians and vehicles.</li> <li>• All open trenches and excavated areas will be backfilled as soon as possible after construction has been completed. Access to open trenches and excavated areas will be secured to prevent pedestrians or vehicles from falling in.</li> <li>• Adequate sanitary facilities will be available for workers and open range defecation will not be countenanced.</li> <li>• Labour will be provided with and educated to wear suitable Personal Protective Equipment (PPE) including hard hats, overalls, high-visibility vests, safety boots, earplugs, gloves etc.</li> <li>• Labour should be educated to adhere to basic rules with regard to protection of public health, including most importantly hygiene, HIV and other diseases prevention and will be required to adhere to a code of Conduct regulating their interaction with the public and in particular women and children.</li> <li>• No child labor will be tolerated.</li> </ul>

#### 5.4 Environmental and Social Impacts during operation phase

These will depend on the types of subprojects implemented. Road and marshlands rehabilitation are the main subprojects expected to have negative environmental impacts during the operation phase. EIAs and ESMPs will provide more details and will customize the impacts to the specific locations of the subprojects. The below table shows negative impacts per type of subproject:

**Table 9: Negative impacts and mitigation per type of subproject**

Types of subprojects with	Negative Impacts	Mitigation Measures
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significant impacts		
Marshland rehabilitation	This irrigation system is controlled to irrigate dry parcels in the marshland. This arrangement is likely to destabilize the receiving population downstream and temporary destabilize the ecosystem dependent on the current river flow.	Design should ensure a proper drainage network allowing for return flow from the plantation plots into the river during the dry season
	Use of fertilizers and pesticides is a non-point source potential for introduction of nutrients into the likely receiving waters downstream of the catchment plantations as a result of run-off. Agrochemical fertilizers such as; DAP, NPK and Urea (CO (NH <sub>2</sub> ) <sub>2</sub> ) containing compounds of Nitrogen, Phosphorus and Potassium and, proposed for boosting soil fertility and pesticides will very likely drain into the river.	To avoid this impact, the project should prepare a Pest Management Plan (PMP) and train farmers on practices proposed for their crops. For fertilizer, the farmers should be trained on the right application of fertilizer and safe use of pesticides.  A baseline test of the water quality, preferably every two years, and progressive tests are necessary to understand the effect of the project on the quality of water bodies and curb any likely impacts there may be before water quality deteriorates.
	Salinization can occur in irrigation practice. There is therefore a probability of salt build up to occur in the intervention areas especially through the residue salts and salt build up in the soil profile.	With a properly determined crop water requirement, micro-management of irrigation water to specifically satisfy this need and regular monitoring of CropWat requirement to regulate the water quantity released to the catchments, the likelihood of water logging and salinization will be minimized.  Training of farmers to regulate quantities of water used will be a long term investment in sustaining the chemical properties of the soil for continuous fertility.  Regulated amounts of fertilizer applied based on actual nutrients required.
Community roads construction	Air pollution causing health risks due to dust and exhaust gas from vehicles	Provision of speed restriction measures (speed limit signs, bumps) near villages and special facilities (schools, health

		posts, markets)
	Noise pollution causing health risks due to noise from vehicles	Provision of speed restriction measures (speed limit signs, bumps) near villages and special facilities (schools, health posts, markets)  Adhere to speed limits
	Reduced traffic safety due to improved roads, inducing drivers to exceed the speed limits and cause accidents (mostly to pedestrians)	Provide traffic control signage prominently at the entrance and throughout populated village areas Provision of speed bumps in the vicinity of populated Operation phase areas like villages, schools, markets, health posts, etc Wear helmets when driving two wheeler Community awareness meetings on traffic safety issues
	Water pollution and Property damages	Regular maintenance of the road drainage system

## CHAPTER SIX: ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCESS FOR THE SOCIAL PROTECTION INVESTMENT PROJECT FINANCING OPERATION

This chapter of the ESMF describes the process for ensuring that environmental and social concerns are adequately addressed through the institutional arrangements and procedures used by the project for managing the identification, preparation, approval and implementation of subprojects. It sets out the reporting systems and responsibilities of the institutions in implementing the ESMF including the details to be addressed by the ESMF and the specific steps to be undertaken to ensure adherence to the ESMF.

Based on the project implementation approach adopted by the project, the project and subproject preparation and reporting will be through LODA as the focal point for environmental approvals.

### 6.1 Subproject brief preparation and submission

The screening will determine the eligibility of subprojects and the level of assessment that will be conducted. It will place the subproject into one of three environmental categories (I, II, or III). At this stage, it may be decided that the project does not require an ESIA and that it may only need an ESMP; and therefore can proceed based on the Subproject Brief recommendations. The screening will be prepared by the District, and will be reviewed by LODA before submission together with ESIA terms of reference to RDB for approval. The final terms of reference will also need a clearance from the World Bank.

The subproject brief (Annex 1) provides information on the intended subproject and the basis for the screening to the Authority designing or approving the ESIA Terms of Reference (ToRs), ie RDB. In preparing the project brief, it is important to identify, analyse and include the structure and interests of the key actors in infrastructure development depending on the scale i.e. the Ministry responsible for infrastructures; the national implementing agencies which are MINALOC and LODA, the Ministry responsible for finance, the ministry responsible for natural resources; the regulating authority agencies (RDB, REMA, RLMUA and RTDA) and the concerned Local Governments (where public works are to be implemented). It is also important to include the donors and development partners.

The ESIA team and the proponent should endeavour to simplify technical and engineering information to levels easily comprehensible by non technical managers and decision makers. The project brief should indeed be brief, no more than 10 pages for the most sophisticated project including any attachments except technical drawings.

The project brief should present arguments of facts justifying the project, including the potential benefits and the analysis of alternatives. Project motivations are important especially to inform the analysis of costs and benefits and in considering trade-offs and future sustainability.

Two major questions should be asked and answered in the ESIA:

- What are the likely benefits and how will these be spread/distributed? In other words, who are the beneficiaries?; and secondly
- What are the alternatives, and what are the implications in terms of cost, social acceptability, economic and ecological sustainability, and a conclusive argument proving that the selected site and the project design are the best alternative?

During the screening process, some activities will be deemed ineligible and rejected. Such activities involve the significant conversion or degradation of critical natural habitats; those that will significantly damage non-replicable cultural property or involve production or activities involving harmful or exploitative forms of forced labor/harmful child labor and those that will have environmental and social impacts commensurate to category A since they would take time to prepare and would significantly affect timeliness of implementation of VUP PW projects (and thereby undermine achievement of social protection objectives) and cost of environmental or social mitigations leads to a decline in labour-intensity below the 70% threshold.

The following subprojects are considered eligible/ineligible:

<b>Eligible subprojects</b>	<b>Ineligible subprojects</b>
Greening & beautification projects	Construction of health centers and schools
Progressive terrace construction	Electrification projects
Radical terrace construction	Any project that is not compliant with labour-intensity regulations
Road construction <sup>6</sup>	
Road maintenance	
Road rehabilitation <sup>7</sup>	
Marsh rehabilitation	

In the following sub-section, the screening process is more detailed:

### **6.1.1 Environmental and Social Screening Process**

The section below illustrates the steps involved during environmental and social screening process leading to the review and approval of SP-IPF activities. The screening process intends to:

Determine potential impacts of selected subprojects as to whether they are likely to cause negative environmental and social impacts;

- Determine appropriate mitigation measures for activities with adverse impacts;
- Incorporate mitigation measures into project design;
- Review and approve project proposals,

<sup>6</sup> Road construction refers largely to Category II unpaved and unclassified community roads.

<sup>7</sup> Road rehabilitation includes: Install/repair ditch blocks; Restore drainage channels; Install additional cross-drain culverts; Repair/stabilize road embankment or running surface; Repair or remove bridge structures; Install open top culverts; Construct water bars; Remove all windrows or berms on road; Construct fords. Roads are usually 'Class II unpaved' roads or unclassified roads as per RTDA guidelines.

- Monitor environmental and social parameters during project implementation.

The classification of each subproject under the appropriate environmental category will be based on the provisions of the World Bank Operational Policy on Environmental Assessment (OP4.01). The environmental and social screening of each proposed sub-project will result in its classification in one of the three categories (A, B or C), depending on the type, location, sensitivity and scale of the subproject and the nature and the magnitude of its potential environmental and social impact.

- Category A: any project which is likely to have significant adverse environmental and social impacts that are sensitive, diverse or unprecedented. The impacts under this category affect broader area than the sites or facilities subject to physical works. This category is equivalent to Impact Level 3 (IL3) in Rwanda's General Guidelines for EIA (2006). Subprojects of this type will be excluded from project financing.<sup>8</sup>
- Category B: any project which is likely to have potential adverse environmental and social impacts, which are less adverse than those of category A projects, on human populations or environmentally important areas including wetlands, forests, grasslands and any other natural habitat. The impacts are usually site specific, few or none of them are irreversible, and most of them are mitigated more readily than impacts from category A subprojects. This category is equivalent to Impact Level 2 (IL2) in Rwanda's General Guidelines for EIA (2006).
- Category C: any project which is likely to have minimal or no adverse environmental and social impacts. Beyond screening no further EA action is required. This category is equivalent to Impact Level 1 (IL1) in Rwanda's General Guidelines for EIA (2006).

The extent of environmental work that might be required for sub-projects prior to implementation will depend on the outcome of the screening process described below:

#### Step 1: Screening of Project Activities and Sites

The initial environmental and social screening will be carried out through the use of the Project Screening Criteria Form (PSCF) used by RDB. This form will be completed by the District Environmental Officer (DEO) assisted by Sectors as found necessary for the purposes of identifying the potential environmental and social impacts, determining their significance, assigning the appropriate environmental category, proposing appropriate environmental and social impact mitigation measures, and carrying out Environmental Impact Assessments (EIAs) if necessary.

The environmental screening procedure can lead to one of the following decisions:

- All category A subprojects will be excluded from project financing for reasons cited above.
- For subprojects classified as category B, it will be required that the appropriate level of environmental and social impact assessment be carried out, and Environmental Management Plan be prepared.

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<sup>8</sup> This policy will be kept under review during implementation and, if necessary, the ESMF will be revised (with World Bank approval) to enable the implementation of Category A projects, including with the required safeguarding provisions.

- For subprojects classified as category C, no further environmental and social assessment will be required.
- For pollution control plans, feasibility studies, and engineering designs for SP-IPF components, the studies and designs don't cause any direct social or environmental impacts, either positive or negative. However, future implementation of such plans with other sources of funds could generate potential Category B, or maybe even Category A impacts. For this reason, any feasibility studies and engineering designs financed under SP-IPF will follow the recommendation of OP 4.01, in addition to any determinations under Rwanda environmental legislation, as if future investments would be financed by the World Bank. This will ensure that World Bank safeguard policies standards will be applied to all activities supported by SP-IPF.

In addition, in case subprojects trigger World Bank Operational Policies on Involuntary Resettlement (OP 4.12) and or Physical Cultural Properties (OP 4.11), the following measures are required;

- The project will also prepare and implement a plan for construction supervision and quality assurance, an instrumentation plan, an operation and maintenance plan, and an emergency preparedness plan.
- In case the project may result in involuntary resettlement, then the resettlement procedures shall be instituted through the preparation of a site specific Resettlement Action Plan (RAP) as provided for in the Resettlement Policy Framework (RPF).
- In case some cultural resources shall be affected by the project, then the chance finding procedures shall apply and required authorization collected before resuming any construction work.

#### Step 2: Re-categorize activities according to expected Environmental and Social impact

The assignment of the appropriate environmental category will be based on the provisions of the World Bank Operational Policy on Environmental Assessment (OP 4.01). Rwanda's EIA guidelines are consistent with the Environmental and Social Impact screening categories contained in OP 4.01. With regard to subprojects to be financed under SP-IPF, it is likely that most will be categorized as B (IL2). Some subprojects categorized as B (IL2) will require EIAs that need to be approved by both RDB and the World Bank, through normal procedures, prior to the commencement of activities. Important to note, high risk projects such as road works in mountainous regions with high erosion and landslide incidents will undergo a scoping exercise to establish the significance and extent of the negative impacts as part of the subproject screening process; and the subsequent environmental and social impact assessments and management plans will be prepared specific to those subprojects, the assessment reports and management plans of these subprojects will be shared with RDB and World Bank for clearance. Some projects might be categorized as C (IL1) if the environmental and social screening results indicate that the projects will have no or minimal environmental and social impacts and therefore do not require additional environmental work. Thus, if the screening form has only "No" entries, the project will not require further environmental work, and the District Environmental Officer (DEO) will recommend approval of the project to LODA and RDB, and implementation can proceed. All implementers will have to pay particular attention to projects such as construction in fragile ecosystems within declared conservation areas, effluent discharges and the rehabilitation and expansion of existing schemes.

Based on the recommendation arising from the screening process, the following environmental work can be carried out:

Use of Environmental and Social Check List (ESCL) for subprojects assigned as Category B (IL2): The District Environmental Officer (DEO) would fill out the ESCL. This document will then be scrutinized and amended by qualified personnel based on the requirements of the subproject being assessed. An Environmental Management Plan (EMP) will be prepared to (i) identify the set of responses to potentially adverse impacts; (ii) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (iii) describe the means for meeting those requirements. Where the screening process identifies the need for land acquisition, qualified consultants would prepare a Resettlement Action Plan (RAP) in accordance with the World Bank OP 4.12 and the Resettlement Policy Framework (RPF).

### Step 3: Preparation of the appropriate level of ESIA and ESMPs

The safeguard tools such as Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plans (ESMP) will be prepared and implemented based on guidance from the ESMF and REMA environmental impact assessment guidelines, 2006. Environmental Impact Study phase is the investigative stage of the ESIA/EMP process for which District hires a firm with/or certified ESIA experts. The District and the selected ESIA consultant shall work together throughout the Environmental Impact Statement phase to develop adequate measures to identify, offset and mitigate negative impacts and enhance positive ones. Road and marshland rehabilitation works, and works for rehabilitation or construction of water and sanitation networks will require the preparation of ESIA and ESMPs. The necessity of ESIA and ESMPs for other types of subprojects will be determined after the screening process.

### Step 4: Review and Approval of the Screening Activity

RDB will review the environmental and social screening results as well as the environmental checklists that were completed in the course of project preparation to ensure that all environmental and social impacts have been identified and successfully addressed. If the screening form has any "Yes" entries, or unjustified "No" entries, the application would need to adequately explain and demonstrate that the issues raised have been addressed appropriately.

If RDB finds that the submitted design is not consistent with the requirements of the environmental screening form or the environmental checklist, then LODA and the District would be requested to re-design the project (e.g. make additional modifications and/or choose other sites). Any proposed projects that do not comply with the requirements of Rwanda and the World Bank Safeguards policies will not be cleared for implementation.

If RDB is satisfied that the designs/project proposals are environmentally and socially compliant, LODA will submit them to the District, Sectors and at the Village levels for disclosure. The project documentation must be accompanied by the completed environmental and social screening forms, and where applicable, the RAP. If the application is seen to satisfactorily address all environmental and social issues, RDB will then clear the project and recommend its approval while informing LODA subsequently, RDB will recommend the project to LODA and the District Council for approval. For projects which require construction/rehabilitation works, the District Council will give a conditional approval for detailed planning, construction and operation of the investment. These

conditions may include, for example, such measures as public involvement, siting or routing restrictions, construction and operation practices, restoration of disturbed areas, the complete implementation of a resettlement action plan and/or, construction supervision to ensure the approval conditions are being followed.

#### Step 5 - Public Consultation and Disclosure

In line with transparency principles, the public will be consulted on the proposed subprojects. Public consultations will be held as part of the environmental and social screening process. The purpose of these consultations is to allow for the identification of the main issues and how the concerns of all parties should be taken into account in deciding whether or not to issue a permit for the sub-project.

During the EA process, project affected groups and local Non-Governmental Organizations (NGOs) will be consulted about the project's environmental aspects and their views are taken into account. Such consultations should be initiated as early as possible in the subproject elaboration stage. In addition, project implementers consult with such groups throughout project implementation as necessary to discuss the status of implementation of the EMP and identify and address any pending EA related issues that may affect them.

The final EIA reports for B subprojects will be disclosed to the public by presenting the findings and recommendations to the village assembly and disclosing the document at the offices of the concerned districts. NGO's and other civil society organizations in the village and the district will be informed of the meeting, and copies of the EIA report will be made available before the meeting, in a language that is understood by the recipients.

Once a draft EIA is ready, the District must (a) circulate it for written comments from the various agencies and government agencies (b) notify the public of the place and time for its review and (c) solicit oral or written comments from those affected. RDB will decide whether or not the EIA review is to be conducted through public hearing.

Beneficiaries under SP-IPF sub projects or any affected interested party, have the right to appeal. If dissatisfied with the decision reached at any stage in the EIA process, the affected party has the right to bring their concerns to District and/or LODA, and also of appeal to the Minister responsible for Environment.

#### Step 6 - Environmental Monitoring and Follow-up

The purpose of environmental monitoring is to check the effectiveness and relevance of the implementation of the proposed mitigation measures. Monitoring will be done by District Environmental Officers together with trained personnel at the lower LG levels based on the scale and complexity of the sub-project. It shall be carried out in accordance with the procedures and at the intervals prescribed in the Project Implementation Plan (including Maintenance Schedules where appropriate). The District Environmental Officer working with the relevant sector heads at high and lower LG levels will monitor the implementation of environmental mitigations measures based on contractors' plans for investments. Oversight monitoring by REMA will be carried out on an annual basis.

Monitoring will be carried in accordance with the Environmental Management Plan (EMP) prepared for each sub-project, which shall include the monitoring indicators for the project. Environmental Indicators may include but need not be limited to the following:

- Loss of Vegetation
- Land Degradation
- Land and water pollution
- Biodiversity loss
- Legislative Compliance

## 6.2 ESIA requirements

The project has been assigned Environmental Assessment (EA) Category B as it will finance subprojects involving the execution of various public works activities in numerous sites without significant environmental impacts. However, as per the law No. 04/2005 of 08/04/2005 on Rwandan environment protection and World Bank policy on Environmental Assessment (OP 4.01); roads rehabilitation or development, marshlands rehabilitation development, are among the activities that require conducting an ESIA before the start of civil works.

## 6.3 Scoping (Environmental Impact Assessment - Phase 1)

The next stage, after screening and determining that a proposed infrastructure should be subject to the ESIA process, is to decide on the scope and content of the ESIA. The planned infrastructure sector legislations, the Organic Law on Environment (No. 04/2005); the Organic Environment Law and associated Regulations determine a core of key topics that must be covered as the minimum information to be contained in an ESIA.

Each Environmental Impact Assessment is a unique interaction of the components of a specific infrastructure with a specific set of environmental factors and a unique receiving environment. Scoping is the process of specifying the content of an EIS. During scoping, the key issues specific to a particular infrastructure project or a specific receiving environment, that are likely to be significantly impacted during ESIA, are identified, and those that are not are eliminated. The process of scoping is examined in more detail in paragraph below.

The aim of scoping is to identify matters that should be covered in the EIS. The process of scoping involves assessing a project's possible impacts and the alternatives that could be addressed, and deciding which impacts are significant. An initial scoping of possible impacts may identify those impacts thought to be potentially significant, those thought to be not significant and those where significance is unclear. Those considered to be not significant are eliminated; those in the uncertain category are added to the initial category of other potentially significant impacts.

The general information required to be included in the EIS is detailed in Annex 7. Based on this, an EIS should contain descriptions of:

- the proposed infrastructure development comprising information on the site, design and its size;
- the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects on the environment;
- the data required to identify and assess the main effects which the proposed infrastructure development is likely to have on the environment;

- the main alternatives studied and an indication of the main reasons for its choice, taking into account the environmental effects;
- a summary in non-technical language of the above information.

Scoping builds on the minimum requirements, already identified, to determine the issues that are relevant to the particular infrastructure project. All parties must be conscious of the need to keep the EIS comprehensive and at the same time as tightly focused as possible.

In this regard, the following 3 basic criteria may be useful guides to the scoping process:

- Use precedence; avoid 're-inventing the wheel'. Where similar projects in similar locations, e.g., in a specific type of habitat, have previously been the subject of a satisfactory EIS then it is reasonable to use such reference for scoping;
- Use likely and Significant as criteria for determining the range of impacts and thresholds for data assembly respectively.
- Maintain the environmental focus. Note that ESIA remains a techno-scientific process of identifying and dealing with environmental issues.

The ESIA will examine the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance. At least two public consultation meetings, the first at the scoping stage and the 2<sup>nd</sup> when the ESIA report is ready, will be conducted for each subproject.

#### **6.4 Terms of References for ESIA**

LODA, the implementing agency, in close collaboration with infrastructure responsible agency (RTDA for roads for example), should develop terms of reference (ToRs) and send them to RDB and World Bank for approval before the ESIA process commences. The project brief submitted and any follow-up discussions may be the main basis for modification, approval or rejection of the ToRs. This will be applicable to the subprojects identified as requiring ESIA's after the screening process. The general format of the terms of reference (ToRs) for a roads scheme is attached in Annex.

#### **6.5 ESIA Study**

##### **6.5.1 Basic Issues to be included in the proposed infrastructure subproject ESIA Study**

The screening will determine the level of assessment that will be conducted. It will place the subproject into one of three environmental categories (I, II, or III). At this stage, it may be decided that the project does not require a full ESIA and therefore can proceed based on the Subproject Brief recommendations. However, for projects that require full ESIA, the main issues to be assessed and described in the ESIA are outlined as follows (depending on the design of the subproject to be implemented, some of the issues may not be necessary):

- Land planning/zoning and detailed location of the land affected;
- Status of the land affected by the proposed infrastructure (e.g., municipal area, national park or reserve, private property), describe land ownership rights and expropriation issues;

- Provide spatial information of the proposed infrastructure location, including, where possible, recent aerial photographs and topographic maps.
- Technical specifications for the conception of the infrastructures;
- Preliminary surveys, construction activities, and operation (e.g. deforestation, burning, excavation, explosion, digging, filling, extraction of material, deviation and/ or crossing of watercourse, drainage of watercourse, removal of top soil, soil compacting using heavy equipment);
- Land stability: in areas where land stability is a concern, measures will be integrated into designs to address the risks. The planting of grasses on embankments slopes with low landslide risks, stone masonry construction on embankments' slopes with high risks; tree planting along rehabilitated roads and other critical areas should be considered.
- Possible direct or indirect impacts on national parks or sensitive natural habitats or endangered species.
- Temporary infrastructure installations (e.g., access roads, retaining walls, temporary deviation of a watercourse, and material storage areas). Include infrastructures such as temporary housing for construction staff;
- Excavation and filling (i.e., estimate the volume, origin, transport, storage and disposal area of excavated material or fill);
- Surface and drainage water (i.e., collection, control, deviation, and confinement);
- Solid and liquid wastes disposal (i.e., volume produced, and storage and disposal areas);
- Material required (i.e., quantity, characteristic, and access);
- Status and Management of borrow and quarry areas (location Vs construction site, quantity to produce, potential adverse impacts, management techniques, etc)
- Maintenance and operation (i.e., layout of the right-of-way, landscape planning, maintenance of the road reserve, installations, and infrastructure);
- Measures to reduce the use of resources (e.g., reduction at source, more efficient use, or application of new technologies);
- Schedule for the construction activities including duration of the construction work (i.e., start date, end date, and work sequence);
- Employees required and daily work schedule based on construction program;
- Duration of the project and future development phases;
- Cost estimate of the project and the alternatives, including the maintenance costs.

### **6.5.2 Composition and Qualifications of the ESIA Team of Experts**

The type of expertise needed in the ESIA team for the proposed District projects will vary with the location and magnitude of the projects but should in any case include:

- *Environmental Specialist*, with extensive experience various infrastructure development activities;
- *Ecologist or Natural Resource Management Specialist* with vast experience in ecosystems management (aquatic ecosystems, land ecosystem, protected areas, etc)
- *Hydrology or Water resource management Specialist* with experience in water consumption, runoff and water bodies

- *Socio-economy Specialist* particularly those specialised in investment analysis and/ or rural economy.

The selection of ESIA experts should be guided by the team's overall experience and/ or reputation in ESIA or related assignments; the appropriateness of the team (including balance of professionals/ expertise, allocation of responsibilities), as well as the formal/ academic qualifications including professional affiliation. For Architects, Engineers, Surveyors and Accountants, professional certification or affiliation should be strongly considered for ethical concerns.

The ESIA consulting firm will be required to prepare a full report for all approved infrastructure deemed that they need an ESIA.

### **6.5.3 Scoping Report**

The proponent will prepare a Scoping Report specifying the project's area of influence, the thematic scope and depth of assessments required, the composition of the required ESIA team, and the probable budget required to mount the ESIA study. The public consultation meeting will also be held and findings from the consultation will be included in the report.

### **6.5.4 ESIA Study**

Upon review and approval of the Scoping Report, the consultant will start the ESIA study. The Study will entail a systematic investigation of all impact areas as identified in the scoping report, taking care to document the current baseline environment, resource exploitation patterns and ecological pressure points. It is mandatory for the ESIA study to undertake public consultation with all stakeholders in the project's area of influence. The ESIA team should note and understand all stakeholder interests so as to cater for them in the ESMP. Details on public consultation are presented under Section 6.6. All accruing information will be written into a Draft ESIA Report.

In addition to policies and legal framework, environmental baseline and public consultation findings, the report will also include the environmental management plans and environmental monitoring plans as well as estimated cost.

The ESMP presents adverse impacts likely to occur and lays out the mitigation measures to address the environmental and social impacts identified and time frame. The logic is that whenever a significant impact has been identified, the proponent must describe how the impacts will be managed. It should be a realistic plan of actions that can be implementable, and not just an impressive set of ideas designed for the purposes of getting the ESIA report passed. Details on ESMP development are presented in Annex 3.

The main issues to consider in the ESMP include the following:

#### Time frame (duration) and sequencing of mitigating activities

Every mitigation measure in the ESMP must have a specific plan and timeframe, and there must be logic in the way the activities are sequenced. These dates are estimates and are dependent on the economic and social

conditions pertaining from time to time. There might be need for adjustments, which must be agreed with LODA and the specialized Ministry or Agency (RTDA for roads or RHA and MINEDUC for settlements and schools for example). The plan should spell out the start and duration of construction period; proposed rehabilitation programme; and proposed operational programme.

#### Resettlement and Compensation Procedures

When a sub-project is expected to cause physical or economic resettlement, a RAP must be prepared by the project in close collaboration with the participating District. This will be approved by the LODA/Project and World Bank. The RAP will need to be as detailed as possible in order to guide resettlement of each of the sub-projects. There is a resettlement policy framework (RPF) that lays out the process for preparing the RAPs.

Compensation and/or resettlement shall be carried according to the Expropriation law N° 32/2015 of 11/06/2015, Law N°55/2011 of 14/12/2011 governing roads in Rwanda and the Law No 43/2013 of 16/06/2013 governing Land and Organic Law N° 04/2005 of 08/04/2005 determining the modalities of protection, conservation and promotion of environment in Rwanda as supplemented to meet the specific requirements of OP 4.12 (as identified in the RPF).

#### Responsibility for environmental restoration:

Some projects will need to excavate stone, rock, sand or soil quarry site for purposes of construction. The District or the public works supervising agency will have the obligation to rehabilitate the affected area to that effect. This arrangement might, however, require subsidiary legislation building on the Polluter Pays principle enshrined in the Organic Law No. 4/2005 of 08/04/2005.

#### Financial provision:

The ESMP must include assurance that LODA/SP-IPF has made sufficient financial provision (Budget) to implement the measures indicated in the ESMP.

### **6.5.5 Review of the ESIA Report**

The Consultant will prepare the ESIA report which will be submitted to the client (District and LODA/SP-IPF) for review and approval. A validation workshop involving all stakeholders including public agencies (participating District, LODA, REMA, RDB, RTDA, RLMUA, MINIRENA, etc), private sector and communities representations. The reviewed and corrected report will be submitted to RDB and World Bank for review and approval of the report. The Project shall obtain clearance and completion Certificate from RDB and World Bank respectively and in that order.

### **6.6 Public Consultation and participatory process**

The objective of the public consultations with stakeholders is to gather information on their concerns, perceptions and fears of the livelihood changes to be brought about as a result/consequence of the Social Protection Investment Project Financing activities. Public consultations will be organized as a way to collect first-hand accounts of benefits and grievances from interested/and affected parties by the project.

For each district, direct interview and discussion should be organized with purposively selected individuals/stakeholders including the Vice mayor in charge of economic affairs, the vice Mayor in Charge of Social affairs or District Executive Secretary, District road Engineer, District environmental officer; Executive Secretary and in charge of resettlement, Environmental officer, officer in charge of Social Affairs at sector level (where selected roads pass by), representative of District Consultative council, representative of Sector consultative council, affected communities, private sector, community members and NGOs operating in project area.

The purpose of those consultation meetings should be to gain more information on their concerns, perceptions, reactions and experiences of livelihood changes brought as a result/consequence of proposed public works. Group discussions provide multiple views within a group context and were particularly useful in exploring the level of consensus on a given felt impact.

At National level, all stakeholders involved in public works, in environmental management and resettlement and local administration should be consulted. Key stakeholders include representatives from the Ministry of Local Government (MINALOC), Ministry of Environment and Natural Resources (MINERENA), Ministry of Agriculture and Animal Resources (MINAGRI), Ministry of infrastructure (MININFRA), Local Administrative Entities Development Agency (LODA), Rwanda Environment Management Authority (REMA), Rwanda Development Board (RDB), Rwanda Transport Development Agency (RTDA), Rwanda Land Management and Use Authority (RLMUA), Civil Society, Government Projects and Private Sector among other stakeholders.

Discussions should be conducted around the following points: Awareness, concerns, perceptions and interests of Social Protection activities, other similar development projects and operating in project area (district); employment opportunities during the project implementation (women, youth and vulnerable people); education, health and welfare of the community; erosion control; land tenure, conflicts, risks and fears of the community. At least two (2) public consultation meetings will be done during the ESIA study. First is during the scoping exercise and the 2nd consultation may take place when the draft ESIA report is ready (for its validation).

## CHAPTER SEVEN: ESMF IMPLEMENTATION, MONITORING AND BUDGET

The Environmental and Social Management framework implementation, monitoring and budgeting process presented under this section considers institutional arrangements required to implement the environmental actions, as well as a presentation of some monitoring indicators and an estimated cost for its implementation. It is worth to note that the real cost of the mitigation measures will be determined during the preparation of Environmental impact assessments (ESIA), Environmental Management Plan (EMPs) and Resettlement Action Plans (RAPs) for each sub-projects/district.

### 7.1 ESMF implementation

This section of the ESMF describes the process for ensuring that environmental and social concerns are adequately addressed through the institutional arrangements and procedures used by the project for managing the identification, preparation, approval and implementation of subprojects. This section sets out the reporting systems and responsibilities of the institutions in implementing the ESMF including the details to be addressed by the ESMF and the specific steps to be undertaken to ensure adherence to the ESMF.

#### 7.1.1 Project Coordination

The Project will be implemented by the Ministry of Local Government (MINALOC) and the Local Administrative Entities Development Agency (LODA). The project will be administered through the Single Project Implementation Unit (SPIU) of LODA and some human resources may be added to the current MINALOC team, with an overall Project Manager sitting in SPIU/LODA hired to oversee the project as a whole and ensure the administrative functions are done in a timely and effective way. LODA may determine the number and specializations of additional staff to the current SPIU team which shall include a safeguards team of three people; made of an Environmental Safeguards Specialist, a Social Safeguards Specialist; both reporting to the Head of Social and Environmental Safeguards Unit.

The Project Implementation Manual (PIM) will provide guidance on the formats for planning, reporting, monitoring and evaluation, and fiduciary management procedures. The Project will use existing government procedures and also harmonize with procedures and formats already used under LODA.

At the local level, the project activities will be implemented through the District level under MoUs between MINALOC and the participating District, in accordance with the national decentralization policies. The Districts will appoint a District Project Management Team which may be composed by existing District staff.

In the beginning and periodically over the project period, capacity building will be needed for District and Sector on environmental and social safeguards implementation, monitoring and reporting.

## 7.1.2 Roles and responsibility in ESMF implementation

Table 10: Roles and responsibilities in project screening and ESIA implementation

No	Activity	Responsible institutions
1	Identification of projects and preparation of feasibility study	Districts
2	Review of project proposal	LODA
3	Sub-project brief preparation	Districts and LODA
4	Sub-project Screening and screening Checklist	Rwanda Development Board
5	Preparation of terms of Reference for ESIA/ESMP studies	Districts and LODA
6	Approval of terms of Reference	LODA and the World Bank
7	ESIA/ESMP study implementation	Consultants hired by Districts
8	Review and approval of ESIA/ESMP report <sup>9</sup>	Districts, LODA and World Bank
9	Issuing ESIA Completion Certificate	Rwanda Development Board
10	Implementation of the ESMF	Sectors and Districts
11	Implementation of ESMPs	Districts and Supervising Engineers
12	Monitoring of safeguards implementation	LODA; Districts;REMA; World Bank

## 7.2 ESMF implementation mechanism

The ESMF implementation will follow the same structure as the Project implementation mechanisms. Specific to the ESMF implementation, the following arrangements are going to be made;

- LODA/SPIU will recruit a social and an Environmental Safeguard Specialists to supervise and over see the overall implementation of the ESMF at SPIU, District and Sector level. These specialists will conduct capacity building and training sessions for the designated Environment/ Social safeguards staff at District and Sector Level.
- LODA/SPIU safeguards staff will be responsible for ensuring Project compliance with National and World Bank policies on Environment and Social Safeguards. The safeguard specialist will conduct the screening and scoping of subprojects under review to ensure the mainstreaming of environmental and social concerns; and the preparation of the appropriate subproject environment and social management plan.
- The District technical supervisor/designated safeguard staff will coordinate the implementation of subprojects environment and social management plan at the District level.
- The Sector designated safeguard staff will support the District technical supervisor in monitoring and supervision the implementation of the environment and social management plans.

<sup>9</sup> The high risk subprojects that will require World Bank clearance before commencement of works mainly include roads projects with significant environmental impacts particularly in mountainous areas with high landslides and soil erosion risk.

### 7.3 Monitoring plan of the ESMF

The objective of monitoring is two fold:

- (1) To alert project authorities by providing timely information about the success or otherwise of the environmental management process outlined in this ESMF in such a manner that changes can be made as required to ensure continuous improvement to SP-IPF environmental management; and
- (2) To make a final evaluation in order to determine whether the mitigation measures incorporated in the technical designs and the EMP have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon or is worst than before and to determine what further mitigation measures may be required.

#### 7.3.1 Monitoring of Environmental and Social Indicators

This section sets out requirements for the monitoring of the environmental and social impacts of the SP-IPF subprojects. Monitoring of environmental and social indicators will be mainstreamed into the overall monitoring and evaluation system for the project. In addition, monitoring of the implementation of this ESMF will be carried out by REMA and the key implementing institutions of SP-IPF.

Two opportunities will be taken to build a simple system for the monitoring and evaluation of environmental and social impacts. The Environmental Safeguards Specialist should consider the environmental and social criteria that require measurement (i.e. groundwater levels, levels of income etc); a list of initial proposals is given below;

**Table 11: List of initial proposals of monitoring indicator;**

Type of impact/ issue	Monitoring indicators
<b>During rehabilitation/development works</b>	
Water quality and pollution	Availability and number of temporary storage containers for sanitary and cleaning wastes including waste oils.  Design provisions for temporary sediment barriers on slopes to prevent silt from entering the water course.
Soil erosion	Constructed appropriate erosion-protection measures.
Public health problems	Availability and number of sanitary facilities for workers. Number of local labourers and other workers Number of environmental and safety meetings with workers
Safety of the public	Number of reported cases of accidents involving general public and related to works.
Land take/ and other resettlement related issues	RAP/ Compensation reports  Compensation payments Time taken to pay compensation
Occupational health and safety	Number of recorded accident cases

Type of impact/ issue	Monitoring indicators
Air pollution	Speed control ramps with appropriate road signs in case of roads
Sustainability of provided facility	Size of constructed infrastructure Time taken to repair damaged infrastructure Number of reported water related diseases and malaria cases Incidence and severity of flooding
Socio economic	Number of local youth, vulnerable and women employed Number of women food vendors Number of community members supplying sand and stones

Using this list of criteria, a set of indicators can be integrated into the screening forms used in the project approval process in each district. This will ensure flexibility at the subproject design stage, integration of monitoring considerations throughout the subproject cycle, as well as a participatory approach to environmental and social monitoring.

The goals of monitoring are to measure the success rate of the project, determine whether interventions have resulted in dealing with negative impacts, whether further interventions are needed or monitoring is to be extended in some areas.

Monitoring indicators will be very much dependent on specific project contexts. Monitoring and surveillance of subprojects will take place on a “spot check” basis as it would be impossible to monitor all the subprojects to be financed under the project. The spot checks consist of controlling the establishment of mitigation measures. It is not recommended to collect large amounts of data, but rather to base monitoring on observations by project technicians and stakeholders to determine the trends in indicators.

### 7.3.2 Monitoring of Participation Process

The following are indicators for monitoring of the participation process involved in the project activities. Number and percentage of affected households consulted during the planning stage:

- Level of decision making of affected people;
- Level of understanding of project impacts and mitigation;
- Effectiveness of local authorities to make decisions;
- Frequency and quality of public meetings;
- Degree of involvement of women or disadvantaged groups in discussions.

### 7.3.3 Evaluation of Results

The evaluation of results of environmental and social mitigation can be carried out by comparing baseline data collected in the planning phases with targets and post-project situations. A number of indicators would be used in order to determine the status of affected people and their environment (land being used compared to before, how

many clean watersources than before, etc).In order to assess whether these goals are met, the SP-IPF Environmental and Social Safeguards Specialists will indicate in the EMP, parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities.

### **7.3.4 Monitoring of ESMF Implementation**

The Project will monitor the implementation of the ESMF and subproject ESMP and regularly produce progress reports. In addition to the Project Reports and ESMPs required by the World Bank and under the Law on Environment, an Annual Audit on ESMF implementation will be prepared by LODA, and delivered to REMA and the World Bank.

In addition, each subproject that has been subject to an ESMP (or RAP) will also be required to produce an annual audit report, for delivery to REMA.

In case the District is found not to comply with environmental and social safeguards during public works execution, LODA and the Project safeguards team shall technically assist and advise the District on how compliance with environmental and social safeguards should be done.

### **7.3.5 Monitoring Roles and Responsibilities**

#### Rwanda Environment Management Authority (REMA)

REMA will play the leading oversight role of monitoring the safeguards activities of this project. REMA will carry out this role by ensuring that the environmental management plans (EMPs) contained in the cleared design package is being implemented as specified therein. REMA will monitor the reports on a regular basis, perhaps quarterly. They will rely on a bottom up feedback system from the ground by going through the monitoring reports and making regular site visits to inspect and verify for themselves the nature and extent of the impacts and the success or lackoff, of the mitigation measures.

#### Project Implementation Unit (SPIU)

The SPIU Monitoring and Evaluation Specialist will be primarily responsible for ensuring compliance to the monitoring framework. Jointly with the Environmental and Social Safeguards Specialists, they will undertake review of the monitoring reports emanating from the Districts and will then upon approval submit these monitoring reports to REMA and the World Bank. The SPIU will also provide overall coordination in monitoring including training coordination in collection and analysis of monitoring data for data collectors.

Critical role of the SPIU will include data analysis, as well as maintenance of management information systems and all baseline data. Lately other than preparation of periodic reports, the SPIU will implement all the necessary modifications in the monitoring framework.

#### Districts and Sectors

Districts will hire a consultant who will work with Sectors to prepare ESMPs for all approved subprojects. The ESMPs will be implemented by Sectors under close collaboration with Districts who have the responsibility of

project implementation at the District level. The reporting system will also be similar as Sectors will be reporting periodically to Districts, and Districts shall be reviewing the reports before submission to LODA.

### SP-IPF Implementing Partner Institutions

All the SP-IPF implementing institutions identified under this project, will monitor the specific components of project that they are targeted to execute. They include MINIRENA and its Agencies (REMA and RLMUA), MINALOC and LODA, MININFRA and its agency (RTDA) and PSF. The Ministry of Natural Resources (MINIRENA) and its Agencies will support the project in pollution control, land use and acquisition as well as in soil erosion control. The Ministry of Infrastructure (MININFRA) and RTDA will assist in improving infrastructures and roads safety.

MINALOC and LODA through participating Districts will assist in mobilizing local communities in the project intervention areas for the adoption and maintenance of SP-IPF infrastructure and in resettlement process through the district environmental officer, road engineer and social protection officer, the district will monitor on daily basis the implementation of safeguards measures reflected in the safeguards documents.

### Local Communities

Local communities will be useful agents in collection of data that will be vital in monitoring and as such they will play a role in the monitoring framework. Local communities in the project intervention areas will receive training and capacity building skills in data collection to be done by the implementing agencies so as to equip them with the ability to collect data. District Councils will, as part of the planning process, communities who will play a key role in identifying community infrastructure investments, prioritizing project interventions. Community consultation protocols will ensure representation of potentially vulnerable and under-represented groups.

#### **7.3.6 ESMF and ESIA Disclosure**

The World Bank policies require that environmental safeguards reports for subprojects are made available to project affected groups, local NGOs, and the public at large. Public disclosure of ESMF and ESIA documents is also a requirement of Rwanda ESIA procedures. However, there is no limitation as to the extent and scope of disclosure.

Therefore, the Government of Rwanda, through the MINALOC and LODA, will disclose this ESMF by: a) publication in a government newspaper; b) on its website; c) making copies available at its head office, d) making copies available to the local government agencies and other stakeholders. It will also disclose final ESIA/ESMP reports by making copies available at its head office and District headquarters, District websites and Project website, local government's agencies, RDB, REMA and other stakeholders of the SP-IPF. The Government of Rwanda will also authorize the World Bank to disclose this ESMF and ESIA to be prepared under SP-IPF electronically through its InfoShop. Relevant documents are made available prior to consultation in a form and language accessible and understandable to the groups being consulted.

### 7.3.7 Grievance Redress Mechanism

Grievance procedures will be required to ensure that project affected people are able to lodge complaints or concerns, without cost, and with the assurance of a timely and satisfactory resolution of the issue. The procedures also ensure that the entitlements are effectively transferred to the intended beneficiaries. Stakeholders will be informed of the intention to implement the grievance mechanism, and the procedure will be communicated at the time that the ESIA is completed and finalized. Grievances may arise from members of communities who are dissatisfied with eligibility criteria use, community planning and resettlement measures, actual implementation or compensation.

#### Established procedures and time frame for Grievance redress mechanism

Grievance redress mechanisms are increasingly important for development projects, social protection inclusive, where ongoing risks or adverse impacts are anticipated. They serve as a way to prevent and address community concerns, reduce risk, and assist larger processes that create positive social change.

The subprojects to be implemented under SP-IPF are small in nature with relatively straight-forward issues. Addressing complaints through Districts, Grievance redress committee, community meetings and suggestion boxes allowing for anonymity are simple means that should be used. The creation of a Grievance Redress Committee (GRC) will be given priority in each subproject.

The members of the GRC for SP-IPF shall include the District Director of Social Development Unit who will be coordinate act as Chair, District Environmental Officer (DEO) Vice-Chair, Representative of the sector with project activities, Social Protection Officer as the secretary and community representative. GRCs should be established at the to assure accessibility for affected people and the committee can be chaired by the Sector representative (mainly the in charge of environment) in the absence of the DEO. The GRC meetings are held at the respective Sector's office at least once a week. The local GRCs will be informed of the existing Bank's online Grievance Redress Services as one of the GR mechanisms.

#### Grievance resolution approach

The channels of receiving complaints include presentation of complaints via face-to-face meetings, written complaints, telephones, etc.

If the aggrieved person does not receive a response or is not satisfied with the outcome within the agreed time, s/he may lodge his/her grievance to the relevant Municipal Administration such as the Sector Executive Secretary or District Mayor, also mandated to help resolve such matters. If requested, or deemed necessary by the subproject Committee, the District Project Coordination officer will assist the aggrieved person in this matter.

The relevant Local Administration will then attempt to resolve the problem (through dialogue and negotiation) within 30 days of the complaint being lodged. If no agreement is reached at this stage, then the complaint is dealt with through the local courts (Abunzi) where possible. Where matters cannot be resolved through local routes, the grievance will be referred to higher authorities at the national level. The subproject Resettlement and

Compensation Committee will provide assistance at all stages to the aggrieved person to facilitate resolution of their complaint and ensure that the matter is addressed in the optimal way possible.

### Grievance Log

The District will ensure that each complaint has an individual reference number, and is appropriately tracked and recorded actions are completed. The log will contain record of the person responsible for an individual complaint, and records dates for the following events:

- Date the complaint was reported;
- Date the Grievance Log was added onto the project database;
- Date information on proposed corrective action sent to complainant (if appropriate);
- The date the complaint was closed out; and
- Date response was sent to complainant.

### Monitoring Complaints

District will be responsible for:

- Providing the sub-project GRC reports to SP-IPF national coordination office on a bi-weekly (every two weeks) basis detailing the number and status of complaints;
- Any outstanding issues to be addressed; and
- Monthly reports, including analysis of the type of complaints, levels of complaints, actions to reduce complaints and initiator of such action.

### **7.3 ESMF implementation budget**

The Budget for the implementation of this ESMF will be provided by the SP-IPF and will mainly consist on preparation of safeguards tools. The cost for mitigation measures will be included in the EIs, EMPs and RAPs. The table below show the estimated cost for the implementation of the ESMF for the proposed Project.

**Table 12: Estimated budget for the implementation ESMF**

<b>Component</b>	<b>Broad Activities</b>	<b>Activities</b>	<b>Cost (US\$)</b>	<b>Notes</b>
Strengthening and expanding the coverage of the core social protection programs	- Roads Development and Rehabilitation,	Environmental and Social Impact Assessment	900,000	For each district ESIA studies will be done for a cost of 30,000 \$ US per District.
	- Marshlands Rehabilitation, - Settlements and Schools	Environmental Monitoring of ESMPs and related safeguard instruments	150,000	30 environmental audits (30 Districts) at a cost of US\$ 5,000 per audit will be undertaken throughout the project life in addition to routine monitoring of ESMPs

	construction	Awareness creation and Capacity building	20,000	Public awareness creation on the project through Radio, TV discussions, Newspaper adverts.
		Capacity building/improvement for Line Ministries	80,000	Training workshop/seminars on safeguards implementation, project staff in the districts.
Enhancing social protection's contribution to nutrition and early childhood development goals	Refurbishment of infrastructures for home based care or community based ECD centres	Monitoring of ESMPs		The cost for ESMP monitoring for all project phases already included in the ESMP cost above.
<b>Total</b>			<b>1,150,000</b>	

It is important to note that, where necessary, measures to mitigate environmental and/or social risks will be integrated into the budgets of VUP Classic Public Works subproject as per the recommendations emerging from ESIA's. In the event that such mitigation results in a project's expected labour intensity falling below the minimum 70% threshold, alternative sources of funding shall be identified by the districts or the project shall be not be implementable under the SP-IPF.

## CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS

The Government of Rwanda (GoR) prepared the ESMF for the implementation of the Social Protection Investment Project Financing Operation to ensure the project implementation is in full compliance with Rwanda and WB environmental and social safeguards policies.

The policy, legal and institutional frameworks for the ESMF and the socio-economic baseline were developed. The public consultation and participation were also organized. This report provides potential environmental and social impacts and guidelines for mitigation. It also provides the SP-IPF environmental and social management process. The implementation and monitoring procedures of the ESMF as well as capacity needs were provided. This ESMF has an inbuilt grievance procedure that will be used to address grievances that arise during the ESMF implementation. The estimated budget for updated ESMF averages US \$ 1,450,000.

The air pollution, water pollution, noise pollution, soil erosion and landslides, loss of land and assets on that land, loss of livelihoods, public safety, impacts on PCR and natural habitats, national parks inclusive, are some of the potential negative impacts in Social Protection Investment Project Financing Operation. Given the nature and location of the development, the potential project impacts associated with the SP-IPF are of a nature and extent that can be controlled through proposed mitigation measures. The proposed subproject Environmental and Social Impact Assessment (ESIA) if properly implemented will be prepared and propose measures to mitigate adverse impacts.

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## ANNEXES

### Annex 1: KEY INFORMATION TO BE INCLUDED IN THE SUBPROJECT BRIEF

Key information that should appear in the project brief to be submitted to RDB, include:

- a) Name, title and address of the developer
- b) Name, purpose, objectives and nature of project including attributes such as project size, design, planned activities, what are the likely sources of funds (whether conformed or not), the type of funding (whether local or foreign, grants or credit), and the local contribution (including the beneficiary communities especially if a local road);
- c) The type/ category of infrastructure to be constructed
- d) The activities the infrastructure will serve – whether international, national, regional or local (within district); and of what economic or social importance;
- e) A description of the spatial dimensions including length or surface and location
- f) Where the materials for construction will be sourced from- e.g. excavation of materials (soil/ earth, rock, tones, sand,..) from within what distance;
- g) Names and addresses of owners of land or property thereof where the infrastructure will be located (and for road, where it will pass) and/ or where construction materials will be extracted. Present a summary description of the soil types and rock structure and grading in terms of suitability for construction (indicate whether this is based on laboratory analysis or expert opinion);
- h) Numbers and if possible, Names and exact addresses of all parties who are likely to be affected by the project and the scale of effect. Provide information about land tenure/ownership of the area affected (including those with and without title deeds) and whether public, institutional or individual private ownership;
- i) Description of the biophysical characteristics (including all species of flora, fauna) and legal status of the areas where the proposed infrastructure will be located. Indicate where there are physical or natural barriers like escarpments, Rocky Mountains, rivers, natural forests, permanent swamps. A map (may be a sketch not to exact scale) of where the proposed infrastructure will be located and shade the areas likely to be affected;
- j) Description of the social, cultural and economic activities of the areas where the proposed infrastructure will be constructed or will pass if it is a road (including cultural sites, social investments like schools, human settlements, burial sites/ memorial grounds,..) economic activities like markets, commercial centres, industries or large scale commercial farms and/ or forest plantations; and other surface and aerial infrastructures like airfields, electricity and telecommunication lines, water supply and/ or sewage pipes;
- k) Projections of use (traffic volume) and estimated lifetime when the road will be decommissioned or require re-construction;
- l) Describe possible alternative sites/ routes considered for the same project and the comparative scores in terms of economic and financial viability, technical feasibility, social acceptability and/ ecological/ environmental sustainability;

- m) Overview of the governance arrangements including local administrative structures, policies strategies and plans of Government regarding land and natural resources management, infrastructure development, urban and rural development, conflict management;
- n) Opinions of local leaders and other opinion leaders if preliminary consultations have been made or better still when and how the District plans to do it;
- o) Full contacts of the person responsible for the project (on behalf of the proponent: This is because ESIA work involves decision making and accountability and there must be some specific and known person (or designate) to be held accountable.

## **Annex 2: SAMPLE TORS FOR ESIA/ESMP STUDY FOR ROAD DEVELOPMENT PROJECTS**

**1. Background Information:** Describe the pertinent background issues. This should include a brief description of the major components of the proposed project, a statement of the need for the project, the objectives it is intended to meet, the implementing agency, a brief history of the project (including alternatives considered), its status and timetable, and a list any associated projects. If there are other projects in progress or planned within the region that may compete for the same resources, they should also be identified here.

**2. Objectives:** Summarize the general scope of the environmental assessment and discuss its timing in relation to the project preparation, design, and execution processes.

**3. Study Area:** Specify the boundaries of the study area for the assessment (e.g., water catchment area and land use), as well as any adjacent or remote areas that should be considered with respect to specific impacts (temporary infrastructure). The project could have different study areas corresponding to the level of impact.

**4. Scope of Work:** Define the tasks. In some cases, the tasks to be carried out by a consultant will be known with sufficient certainty to be specified completely in the terms of reference. In other cases, specialised field studies or modelling activities will need to be performed to assess impacts. In that case, the consultant will define particular tasks in more detail after some period of assessment and will submit the detailed scope of work to the District for approval at a later date. Task 4 in the Scope of Work (below) is an example of the latter.

**Task 1: Describe the Proposed Project:** Provide a brief description of the relevant parts of the project using maps of appropriate scale where necessary and include the following information:

- Project justification;
- Location; General layout, size, and capacity;
- Pre-construction activities;
- Construction activities;
- Schedule of activities;
- Staffing and support;
- Facilities and services;
- Operation and maintenance activities;
- Required offsite investments;
- Life span.

[Note: specify any other type of information relevant to the description of the project category.]

## **Task 2: Describe the Environment**

Assemble, evaluate, and present baseline data on the relevant environmental characteristics of the study area. Include information on any changes anticipated before the project commences. Modify the list below to show critical project information (e.g., information relevant to the project category and other project-specific information). Avoid compiling irrelevant data. Present environmental characteristics of the study area on a map to facilitate the understanding.

**[a] Physical environment:** geology; topography; soils; climate and meteorology; ambient air quality; surface and groundwater hydrology; coastal and oceanic parameters; existing sources of air emissions; existing water pollution discharges; and receiving water quality.

**[b] Biological environment:** flora; fauna; rare or endangered species; ecologically important or sensitive habitats, including parks or reserves, and significant natural sites; species of commercial importance; and species with potential to become nuisances, vectors, or dangerous (of project site and potential area of influence of the project).

**[c] Socio-cultural environment:** population; land use; planned development activities; community structure; employment; distribution of income, goods and services; recreation; public health; cultural/ historic properties; tribal peoples; and customs, aspirations, and attitudes.

## **Task 3: Describe and analyse the legislative and regulatory framework and issues**

Describe the pertinent regulations and standards at international, national, regional and local levels that govern environmental quality, health and safety, protection of sensitive areas, protection of endangered species, site, and land use control. ToRs should specify those that are known and should require the consultant to investigate for others.

Then review and analyse relevant laws, regulations and guidelines that govern the conduct of the assessment or specify the content of the report, including international treaties, national laws and/ or regulations and/ or guidelines on environmental reviews and impact assessments.

## **Task 4: Determination of the Potential Impacts of the Proposed Project**

Distinguish between positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Identify impacts that are unavoidable or irreversible.

Wherever possible, describe impacts quantitatively, in terms of the affected environmental components (e.g., area, number) and environmental costs and benefits. Assign economic values when feasible. Characterise the extent and quality of available data, explaining significant information deficiencies and any uncertainties

associated with the predicted impacts. If possible, develop ToRs to conduct research to obtain the missing information. Identify the types of special studies likely to be needed for this project category.

The engineering plans should reflect "best practice" in alignment and construction to ensure that potential negative environmental impacts are minimised (e.g., through measures to prevent soil erosion risk, ensure proper drainage, and provide for waste disposal, landfill material, and used oil).

#### **Task 5: Analyse the Alternatives to the Proposed Project**

Describe alternatives that were examined in the course of developing the proposed project and identify other alternatives, which would achieve the same objectives. The concept of alternatives extends to site, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. Try to quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures. Include the 'no project' alternative to demonstrate environmental conditions without the project.

#### **Task 6: Develop the Management Plan to Mitigate Negative Impacts**

The Environmental Management Plan focuses on three generic areas: mitigation measures, institutional strengthening and training, and monitoring. The emphasis on each of these areas depends on the context-specific project needs.

**Mitigation of environmental impact:** Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Quantify the impacts and estimate the costs of the mitigation measures.

Consider compensation to affected parties for impacts that 'cannot be mitigated'. The plan should include proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigation measures. Summarize the environmental impacts and mitigation measures using a map at the same scale as that of the road design.

**Institutional strengthening and training:** Identify institutional needs to implement environmental assessment recommendations. Review the authority and capability of institutions at local, provincial, regional, and national levels and recommend how to strengthen the capacity to implement the environmental management and

monitoring plans. The recommendations may cover such diverse topics as new laws and regulations, new agencies or agency functions, inter-sectoral arrangements, management procedures, training, staffing, operation and maintenance training, budgeting, and financial support,

**Monitoring:** Prepare detailed arrangements to monitor the implementation of mitigation measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs and a description of other required inputs (e.g., training and institutional strengthening).

**Task 7: Organise and facilitate public consultations**, in accordance with the provisions of the General ESIA guidelines and other attendant legislation. **Assist in Interagency**

**Task 8: Prepare the ESIA Report:** The ESIA report should be concise and limited to significant environmental issues. The main text should focus on findings, conclusions, and recommended actions supported by summaries of the data collected and citations for any references used in interpreting data. Detailed data should be presented in appendices or in a separate volume.

The ESIA report according to the outline below:

- Executive Summary;
- Introduction
- Policy, Legal, and Administrative Framework;
- Description of the Proposed Project; "
- Description of the existing Environment;
- Significant Environmental Impacts and Mitigation Measures;
- Analysis of the Alternatives;
- Emergency Plan;
- Environmental Management Plan (including Monitoring Plan);
- Conclusion and recommendation
- List of References;
- Appendices:
  - Terms of reference;
  - List of the ESIA team;
  - Records of Interagency and Public/ NGO Communications;
  - Data and Unpublished Reference Documents.

**8.Consulting Team:** Identify the expertise to include on the ESIA team. Environmental assessment requires interdisciplinary analysis. Members of the team could consist of people with the following specializations: rural

sociology (in the case of rural roads); human geography; and/or terrestrial ecology (e.g., wildlife, plant, and conservation ecology).

**9. Other Information:** List data sources, project background reports and studies, relevant publications, and other items to which the consultant's attention should be directed.

## **Annex 3: CHECKLIST FOR IDENTIFICATION OF ENVIRONMENTAL IMPACTS**

### **1. Resource use and socio-economic impacts**

- Is the local population living a basically traditional lifestyle? If so, how will the subproject affect people's use of local resources?
- Will the project affect resources (e.g., drinking and washing water, marine or land food, fuel, medicines, building materials) that local people take from the natural environment?
- Will there be additional demands on local water supplies or other local resources as a result of the project?
- Will the project restrict people's access to natural resources at any time before, during, or after construction? If so, what plans are there to provide additional resources to meet increased permanent and-temporary needs?
- Will the project affect downstream users of resources, especially water resources? If so, how will those resources be protected?
- Are future natural-resource-use opportunities being cut off? If so, what compensation will be offered?
- Will the project affect land or water use, or require leases, or changes in tenure?
- Will the project require resettlement of any residents?
- Will the project result in construction workers or other people moving into or having access to the area? How many people? How will this affect the availability of local resources?
- Will the project create jobs locally? If so, will this include work for local women?
- Will the project provide safe reliable transport to and from the work place and a safe working environment?
- Can some project outputs be targeted to meet the needs of special groups in the community (e.g., women, youths, old, or infirm people)?
- Is the area culturally or archaeologically sensitive? Are rock shelters or caves present? Is the area named in stories? Is it a burial area?

### **2. Biophysical/ landscape impacts**

- Is the local vegetation mainly forest, mangroves, swamp vegetation, or farmland?
- Will the immediate or 'downstream' effects of the project change the vegetation cover?
- Will the project affect important species, habitats, or ecosystems in the area? Is the area environmentally sensitive or fragile? Check the list of environmentally sensitive environments for Tanzania?
- Can construction areas be located away from sensitive ecosystems and on flat to very-gently-sloping land?
- Are there areas of limestone karst or wetlands? If so, have special consideration been given to their management?

- Will vegetation be removed or any surface left bare? If so, what will be the impact of clearance? Will sediments be prevented from entering streams?
- Will the project affect coastal areas, wetlands, or swamps or have 'downstream' effects?
- Will slope or soil stability be affected by the project (e.g., by using heavy machinery)?
- Will a large land area or a high proportion of a community's land be affected?
- Will quarries or borrow pits be developed or operated under the project?
- Will the present landscape be altered (e.g., by rock or soil removal, spoil dumping, or timber removal)?

### **3. For projects affecting forested areas**

- Is the local vegetation mainly savannah, savannah woodland, tropical forest, tropical rainforest, or mangrove forest?
- Are there important species, habitats, or ecosystems in the affected area (in the immediate area or off site) or is the area environmentally sensitive or fragile? (Check the environmental database if it is available.)
- Are forested areas used as locally-important hunting areas?
- Will vegetation be removed or any surface left bare? If so, what will be the impact of clearance and how will sediments be prevented from burying vegetation, entering streams, or reaching the shoreline?
- Can construction areas be located so as to avoid disturbing local habitats?
- Will the forest landscape be altered (e.g., by rock or soil removal, spoil dumping, or timber removal)?

### **4. Impacts on water and air quality**

- Will the project generate waste products (including increased sewage or solid wastes)? Will waste products be disposed of locally? How will sewage be treated?
- How will solid waste be treated? How will rock or soil waste be treated? Are there site-specific-erosion plans and sediment-control plans for the project area?
- Will the project or its waste disposal affect the quality of local streams or the groundwater? What steps are planned to minimise sedimentation in streams and contamination of groundwater?
- Will toxic chemicals (e.g., herbicides, tar, oils, paints, and other hazardous chemicals) be used or disposed of along the route of road construction?
- Will hazardous substances (e.g., large quantities of fuels) be used or stored in the project area? What plans are there to contain these substances? How will fuel, oil, or other hazardous chemicals be delivered, transferred, and stored to prevent leaks from contaminating the soil, streams or beaches?
- Will the project create dust or noise problems or reduce safety for pedestrians, including children and old people? What plans are there to minimise these impacts?

- Will the batching areas (for concrete or bitumen) produce some waste and spillage? Will these and other construction sites be contained while in use and cleaned and rehabilitated after use?
- Will there be serious dust problems in settled areas during project operation? What measures will be taken to reduce this impact?

##### **5. Environmental health, natural hazards, and construction hazards**

- Will there be a water logging problem at the site? What steps will be taken to control disease vectors, especially mosquitoes?
- Is the environment naturally unstable (i.e., in an area prone to coastal erosion, within a zone which would be affected by any rise in sea level, in an area of known earthquake or landslip activity, in an area prone to severe storms, floods, or droughts)? What plans are there to protect the development against these natural hazards?
- Will the presence of the developments-cause- increased environmental damage should a natural hazardous event occur? If so, what environmental protection measures will be implemented?
- Are safety measures in place to protect the workforce? Do all workers have the necessary safety clothing and equipment? Have workers been trained in the use of safety equipment?
- Is there a contingency plan to deal with spills of hazardous chemicals (including oil products) in the project area?
- Are fire-fighting and spill-clean-up materials / chemicals available for use at the site (e.g., water, sand, detergent, acid, or alkali)?
- Are measures being taken to ensure safety to road users after project completion (e.g., speed bumps and adequate road furniture)?
- For Bridge Projects
  - In addition to the impacts that are associated with other infrastructure projects, there are special issues to consider for bridges.
    - (a) For single span no-pile bridges
- Will bank vegetation, farmland, levee, or straight bank edges be disturbed? Identify bed and bank sediments clearly (e.g., as predominantly clay, sand or gravel).
- Are sediments likely to enter the stream system? Identify control methods.
- Will there be a need for an access road or a temporary diversion? Consider the physical impacts of these structures and propose methods of rehabilitation after use.

- Is there a risk of runoff draining onto farmland, resulting in flooding? If so, this should be addressed in the design.
  - Will containment structures block existing watercourses to farmland? If so, the design should address this as well.
  - Will there be temporary construction in or diversions of rivers? If so, all possible impacts in terms of bank erosion, sediment accumulation, and subsequent disposal of materials should be considered.
- (b) For longer bridges with piling
- Will the bridge pilings cause turbulence, sediment movement, and deposition and consequent bank and streambed erosion? This should be taken into account in planning.
  - Is there a risk of bank instability? For piles near riverbanks, there should be controls on bank stability and an assessment of the upstream and downstream impacts of any proposed river retention structures.
  - Will there be any temporary construction works in the river, such as drilling and pile-driving works? If so, what will be the impact of these works on flows and on potential erosion? What steps will be taken to rehabilitate the river section when the works are completed?
  - Where are the sources of fill and concrete aggregate? These should also be assessed.
  - Are there any issues of noise or safe pedestrian access across the bridge and along the bank?
  - What type of wastes will be generated? For construction areas, all wastes should be controlled and contained (including sewage). Subsequently, the waste should be removed to an appropriate disposal site, and the site should be rehabilitated. Methods to deal with any hazardous chemicals (including, fuel and oils), the management of cement batching plants (including their location), and methods to control noise, dust, and runoff should be addressed.
  - What is the main composition of the stream channel (i.e., clay, sand, or gravel)? If it is sandy or gravelly, describe methods that will be used to stabilise the bank at the construction site. If it is clayey, explain the methods that will be used to prevent bank erosion and consequent downstream changes and explain the methods to minimise sediment-induced turbidity.
  - Are there habitat corridors along the riverbank that need to be protected? What methods will be used to protect these ecosystems or habitats? What is the land- and water-use in the immediate area? What resources of local or traditional importance will be affected by the construction? What arrangements have or will be made with the local communities to manage the impacts on these resources?

#### Annex 4: CHECKLIST OF ENVIRONMENTAL MANAGEMENT ACTIVITIES FOR EACH PHASE OF PLANNED INFRASTRUCTURE

PROJECT PHASE	CYCLE	ENVIRONMENTAL MANAGEMENT ACTIVITY
Conceptual & Pre-feasibility Phase	Pre-	<ul style="list-style-type: none"> <li>• Registering the project: describing and classifying the project</li> <li>• Initial site inspection visit and coordinating with project team members;</li> <li>• Screening projects to identify salient environmental parameters of the proposed road works and to assess the sensitivity of the receiving environment;</li> <li>• Identifying alternatives to the proposed project;</li> <li>• Scoping the environmental study;</li> <li>• Developing terms of references for the ESIA.</li> </ul>
Feasibility Preliminary Phase	Study/ Design	<ul style="list-style-type: none"> <li>• Obtaining consulting, services for the Environmental Assessment (ESIA);</li> <li>• Conducting and overseeing the EA;</li> <li>• Analysing for significant environmental impacts;</li> <li>• Conducting consultations with the public, as required;</li> <li>• Incorporating results of the ESIA into the project design and implementation process through mitigation measures;</li> <li>• Designing mitigation measures.</li> </ul>
Detailed Design Phase		<ul style="list-style-type: none"> <li>• Incorporating results of the ESIA into the project design and implementation process through mitigation measures;</li> <li>• Submitting the ESIA to the regulatory agency for review and approval;</li> <li>• Participating on the Technical Advisory Committee (ESIA);</li> <li>• Designing mitigation measures;</li> <li>• Preparing a Resettlement Plan (RP), as needed;</li> <li>• Preparing an Emergency Plan;</li> <li>• Preparing an Environmental Management Plan (EMP);</li> <li>• Preparing a Project Monitoring Program;</li> <li>• Issuing the ESIA certificate.</li> </ul>
Contract Preparation and Contract Tendering Phase	Tendering	<ul style="list-style-type: none"> <li>• Integrating environmental considerations in contractual specifications/ conditions to implement environmental management procedures;</li> <li>• Reviewing tenders;</li> <li>• Performing an assessment of the institutional requirements of the EMP;</li> <li>• Strengthening stakeholder institutional capabilities to perform environmental management activities, as required.</li> </ul>
Construction, Supervision, and Monitoring Phase	and	<ul style="list-style-type: none"> <li>• Follow-up to ensure that mitigation measures, conditions and specifications are fully implemented during construction;</li> <li>• Monitoring effectiveness of mitigation measures on particular environmental impacts;</li> <li>• Resolving problems as encountered.</li> </ul>
Traffic Operation and Road Maintenance Phase	Operation and Maintenance	<ul style="list-style-type: none"> <li>• Evaluating and implementing remedial measures during road operation;</li> <li>• Conducting consultation with key stakeholders;</li> <li>• Incorporating lessons learned into future road project planning.</li> </ul>

## **Annex 5: KEY CONTENT TO BE INCLUDED IN THE ESIA REPORT**

The ESIA report should include:

- a) who the infrastructure will serve – which areas it connects? Does it connect to major city or large administrative centre; major resource like industry or national park or fishery?
- b) Estimate of the total annual traffic volume for humans and goods (real or monetary terms); for roads projects
- c) how the local population will benefit
- d) estimated total number of skilled and unskilled people employed in construction, operation and maintenance of the road and annual indirect jobs (if possible estimate total wages);
- e) an estimate of the expenditure to get the project into operation;
- f) an estimate of the total population displaced/ re-settled involuntarily and the estimated impact on social stability, community bonding or cultural heritage;
- g) an estimate of the total annual expenditure on operation and maintenance of the infrastructure;
- h) an estimate of the total annual costs incurred or suffered as a result of the road (e.g. total number of accidents, incidences of floods or landslides attributed to the roads, crime cases attributed to the road,..);
- i) estimate of the multiplier effect on the local, regional and national economy;
- j) estimate of political and socio-cultural returns such as regional integration, reduced local conflicts, directly attributed to the infrastructure;

### **Alternative subprojects sites or options**

In the ESIA process, before an environmental management plan (EMP) is formulated, Districts and their ESIA expert teams should have analysed a series of alternatives and considered a few project alternatives and their likely impacts. This should be carefully documented and presented. Alternatives in project development use a series of permutations – which refer to a combination of factors. Such alternatives are likely to include: site locations/ routes; land use options; size; types of construction materials; source of construction materials; technology to be used in surveying, site preparation and/ or construction; mode of transportation of materials, personnel; housing sites; waste disposal sites; types and/ or source of power, water, other utilities and/ or their supply routes. Each of these alternatives should be analysed and scored on pre-set criteria that considers environmental sustainability in relation to other factors including economic viability or benefits, technical feasibility and social/ cultural acceptability. This is an important piece of information for decision makers because it educates or guides policy makers on how to manage the balance between development and environment.

## Description of the environment

The logic here is that before the impacts of a project are estimated, there needs to be thorough understanding of what exists in the pre-project situation. A detailed inventory of biotic and abiotic environment and associated socioeconomic phenomena is important. For road projects, the most important information required is summarized in the proceeding sections:

## Description of the Biophysical Environment

Describe the geology and geophysical characteristics:

- Geology and geological formations of the regions, district and project area, and in sufficient detail the geological features – including geological structures, formation and mineralogical characteristics- of the project area right down to sites (routes where the road will pass);
- Surface material and bedrock characteristics of the proposed project area; isolate and categorise overburden material that will be disturbed and which, once disturbed, may adversely affect water quality in the area or neighbourhood;
- Presence of sills and faults that cut across or extend through the planned project area according to the plan/ technical drawings); and alternative route;

**Climate:** Climatic factors are important features in the planning, design and construction of roads and influence the impact of road projects on the area. Detailed information required includes:

- ✓ a brief and analytical description of the regional and local climate; where possible give recent trends and projections. More specifically,
- ✓ mean monthly and annual rainfall for the site and number of days per month with measurable precipitation. For accuracy purposes, indicate the nearest weather station;
- ✓ maximum rainfall intensities per month – 60 min, 24 hrs, 24hrs/ 50yr and 24hrs/100 yr storm events for the previous 5-10 years;
- ✓ mean monthly, max and mini temperatures for the past 3-5 years;
- ✓ monthly mean wind direction and speed – where appropriate hourly wind direction and speed, with the maximum one minute speed in each hour for the past 3-5 years may be required. If this is hard to get for the specific area, extrapolate from the nearby station;
- ✓ mean monthly evaporation for the previous 5 years;
- ✓ record of incidences of extreme weather conditions – e.g. hail, severe or prolonged drought, high winds, volcanic eruptions or massive landslides, extraordinary heavy rainfall or flooding, for the previous 5 years.

The data from the weather stations may be supplemented by collecting data from communities using techniques such as historical profiling which documents historical events. It is essential that precipitation, temperature and other climatic parameters be presented in form of maps and showing comparisons with other areas of the country.

**Topography:** The most suitable representation of the topography is the topographical map of the area. This should be current and to appropriate scale. A range of scales should be used depending on the size of the area to be mapped. Scales of 1: 10,000 and 1: 100,000 (for comparison with national level, may be appropriate. Surface contours should be delineated to appropriate intervals and describe topographic patterns and landforms with regard to parameters such as elevation, relief and aspect (slope orientation/direction).

**Soil characteristics:** A description of the soil types to be disturbed by the road project, their fertility, erodibility and depth should be provided and the soils should be mapped according to a recognized soil classification system.

#### **Land capability and land use before the road project**

Land capability: Inventories and evaluations of land capabilities in the proposed area (all land where expropriation is expected for purposes of the road project). For the various land capabilities described, document the area and location of the capacity classes to be disturbed by the project.

Land use within 100 Km (i.e. 50 Km on either side) of the proposed road. Please attach the plan or technical drawings and the map:

- Pre-road design land use;
- Historical production of agriculture, forestry, mining, conservation;
- historical pattern of settlements (although these could appear in the socioeconomic component – just describe the building structures as land use/cover);
- any evidence of misuse e.g. overexploitation, extensive deforestation, abandonment,..;
- existing structures;

Likely post-project land use capability: record any anticipation of land use change;

**Ecology:** the natural vegetation/ plant life within 100 Km (50 Km on either side) of the proposed infrastructure area. Please, not the level of diversity. This should include: dominant species; endangered, rare or threatened species; exotic or invasive species and how they were introduced. Indicate the location

and documentation of the area of the various vegetation and forest types that is likely to be directly or indirectly disturbed by the road project. It may be important to prepare and submit a vegetation map for the pre-project area.

Wildlife resources: include parameters as species composition, distribution, abundance; Rare, endangered or threatened species; migration route and staging areas; Habitat evaluation, distribution and utilization; critical habitat; regional and local significance of populations; Sensitivity to disturbance.

Document the type, location, quantity/ numbers and capability of habitat (carrying capacity) that is likely to be disturbed or lost as a result of the project.

**Water resources:** All water catchment and water courses, streams, rivers and dams; Pans; Position of the estimated maximum flood-line for the 1 in 50 year flood event; Water rights and water use in the affected area. The scope should be up to the point where the affected catchment discharges into the receiving water body.

This description should include:

- i) A map indicating the catchment boundaries, boundaries of the sub-catchment occupied by the proposed road and the water course which would be followed by water emanating or passing through or under the road or including other water courses likely to be affected).
- ii) The mean annual runoff from the catchment upstream, of the point of discharge to the receiving water body and from the sub-catchment upstream (side) of the road.
- iii) Normal dry weather flow in the affected watercourse.
- iv) Floods peaks and volumes for recurrence intervals of 1:20 and 1: 50 years and the regional maximum flood.
- v) For river diversions only.

In addition, an estimate of the contribution of the mean annual runoff normally entering the river over the affected section and the total mean annual runoff entering upstream of the proposed diversion.

**Surface water quality:** an analysis of surface water samples must be done in sufficient detail the characterize the water quality in the affected water course(s);

**Drainage density of areas to be disturbed/ affected:** make a record in Kilometres of drainage path per square Kilometre of land area.

**Surface water use:** identify who uses the surface water along the affected water courses, down to the receiving water body, for what purpose and how much in cubic metres per day.

**Ground Water:** information required includes:

- Depth of the water table(s);
- Presence of water boreholes and springs and their estimated yields;
- Ground water quality – the ESIA experts must analyse water in boreholes and springs in the affected zone so as to be able to characterise the water quality;
- Ground water use- identify, where possible, ground water and spring water users in the study area and the quantities used;
- Ground water zone - Identify the groundwater zone which is likely to be affected the construction or operation of the road.

Its importance as national, regional or international resource (e.g. where transboundary water resources are affected) should be described. If available, maps at appropriate scales should be provided indicating the ground water zone boundaries. Stratigraphic sections, in sufficient detail to indicate the conceptual ground water model, the nature and location of significant aquifers and aquacultures and relevant physical properties, should be provided.

Where construction of bridges and roads is likely to result in river diversion, the ESIA report should provide an estimate of the contribution of the stream or river to ground water recharge and an estimate of the contribution of ground water to surface water over the diverted section.

**Wetlands:** information that should be documented include location of wetlands on, along, around or in position to the road; the extent thereof and an indication of the significance in terms of ecological functioning and socioeconomic services; the biodiversity of the wetlands.

**Air Quality:** A survey of the air quality and existing sources of air pollution in the area should be made including fallout dust, suspended dust and gaseous emissions (only if the project include a scheduled process as defined in the relevant provisions of Environmental laws).

**Noise and Vibration:** Existing noise levels on and around the property should be identified as well as potential noise impact sites. If the potential impacts warrant it, pre-road construction noise levels may be required. Similar exercises should be done for vibration.

**Archaeological and Cultural Aspects:** The ESIA team needs to:

- conduct a baseline survey to identify and describe archaeological sites in the study area;
- examine monuments and site records held by National Museums of Rwanda, Monuments (in Huye and elsewhere), Art Galleries and other areas with custody of historical records;
- document and provide sites of recognised archaeological and cultural interest should be described and shown on a plan, which should be provided.

**Sensitive Landscapes and Protected Areas:** Sensitive landscapes should be described and if possible, should be indicated on the technical drawings and how they will be protected. Indicate which ones have statutory protection (by local byelaws or national legislation).

**Visual Aspects:** Describe the visibility of the project site from scenic views, tourist routes and existing residential areas. This should include the visibility of dust and other air-borne pollutants.

**Local socioeconomic and cultural characteristics:** Include, social and economic infrastructure; people and their cultures and norms; and the governance features;

- population density, growth and location;
- unemployment estimate for the area
- housing- demand, availability
- Social infrastructure – schools, hospitals, sporting and recreational facilities, shops, police, civil administration
- Water supply/ distribution, access and use
- Power supply
- Telecommunication lines/ use
- demographic and human settlement patterns
- describe old and current road networks, including closed roads and their categories and when they were constructed and de-commissioned;

## **Description of the Project Alternatives**

This section identifies potential alternatives and selects the most optimal alternative(s). Multi-criteria analysis (MCA) may be used to identify, score and rank alternatives in a feasibility study. The feasibility study phase of the project cycle is, thus very important for environmental assessment. Analysis of alternatives very often involves comparing impacts that are not easily quantifiable and/ or those that vary in time and space.

Some qualitative measures for analysing biophysical and socio-economic parameters that represent visual or other forms of expressing relative magnitudes may be used e.g., histograms that vary in size or relative scores. A common method is weighting and ranking of the impacts (based on stakeholder perceptions) and then aggregate the resulting scores. Each alternative is then compared on the basis of a single overall measure of impacts.

## **Proposed Activities and Developments at different levels**

The proposed major surface infrastructure required for the road project should be described briefly and illustrated clearly on a topographical map or technical drawings. This should include:

- 1) Other infrastructure e.g. electric power lines, industries, housing, recreation facilities;
- 2) Waterways, drainage systems (whether natural or man-made) and water pollution management systems; pollution control dams, etc;
- 3) Industrial, municipal and other waste disposal sites (landfills, mine residue disposal sites);
- 4) Production facilities such as mining plant (and direction of location, level and machinery);
- 5) Sources of water, earth/ soil, stones, sand and other local materials; indicate how pollution of existing natural water sources would be prevented and information on water balance;
- 6) On-site project offices (administration) and workshops
- 7) Disturbance of water courses: detail how the road layout will disturb the natural water courses. Indicate measures for storm water diversion and how it will protect the road and other infrastructure e.g. residential houses.

## Annex 6: FORMAT OF A TYPICAL EMP

The EA process involves the identification and development of measures aimed at eliminating, offsetting and/or reducing environmental and social impacts to levels that are acceptable during implementation and operation of the projects. As an integral part of EA, EMP provides an essential link between the impacts predicted and mitigation measures specified within the EA and implementation and operation activities. The World Bank guidelines state that detailed EMPs are essential elements for Category “A” projects, but for many Category “B” projects, a simple EMP will suffice.

An **Emergency Plan** describing any actions foreseen in case of accidents or emergencies and mechanisms to sound the alarm should be included. This emergency plan should, in general, include:

- A description of the different potential situations;
- Pertinent information in case of emergency (e.g. coordinates of the responsible authorities, available equipment, and maps with prioritized routes);
- The command structure in case of an emergency and the mode of communication with the local or regional authorities;
- A list of priority actions in case of emergency (e.g., emergency calls,

**Operational and Maintenance Phase:** Operation here implies the period during which the infrastructure is in use. The EMP should describe how the significant impacts, identified in construction phase, will be managed during the period when the road is in use, including what will be done to manage the traffic when undertaking minor repairs. The checklist below should provide the guide:

1. Geology of the area and surrounding parts.
2. Topography: here, a plan of anticipated post-road construction (during operational phase) topography is required.
3. Soils: include depth of soil that will be used and how fertility and erosion will be managed;
4. Land capability: indicate anticipated land capability during post-construction/ operational phase, and a plan to restore or improve land capability;
5. Land use: Include what type of land use is planned.
6. Natural vegetation/ plant life;
7. Animal life: For river diversions, the ESIA team should emphasise how aquatic fauna life will be maintained or restored;
8. Surface water: water is a known enemy/ destroyer of infrastructure and very often construction work tends to divert or block natural water flow. Indicate the strategies for managing the following:
  - i) water balance previously described in parts 3 and 4;
  - ii) storm water
  - iii) surface rehabilitation (in so far as this affects surface water);
  - iv) the legitimate requirements of surface water users on the affected watercourse;
  - v) In the case of river or stream flow diversions, the EMP should indicate how the significant impacts identified in parts 3 and 4 will be managed paying particular attention to erosion control, structural stability and surface drainage into and out of the diverted section.
9. **Ground water:** the EMP should: i) indicate the strategies to be undertaken for:
  - i) Optimising surface rehabilitation in order to minimise adverse groundwater impacts;

ii) Meeting the requirements of legitimate ground water users in the affected zone.

iii) In case of river or stream diversions, the control of seepage into and out of the diverted sections of the river or streams should be highlighted;

**10. Air quality:** Include an air pollution control plan if the assessment reveals significant impacts on air quality at potential impact sites (e.g. where the road passes through a busy commercial centre).

**11. Noise:** Include a noise reduction plan if significant impacts are expected at any parts of the road (e.g. junctions), highways may require noise screen, etc.

11. Sensitive landscapes;

12. Visual aspects;

13. Regional socioeconomic structure

14. Who and where are interested and affected parties

15. Submission of information: The proponent will determine which information is required by statutory instruments before submission.

**16. Maintenance:** some of the measures described in this part will require maintenance after they have been implemented and up to the decommissioning period. Again, this will be site-specific but the proponent should consider where appropriate, the maintenance of at least the following:

a. Rehabilitated land by planting trees, stabilising vegetation on slopes and exposed surfaces. Ensure that use of herbicides and other polluting substances is prohibited.

b. Water pollution control structures - maintaining flow-speed-reduction devices in drains, and remove waste materials;

c. Rehabilitated residue deposits;

d. Bridges and destroyed infrastructure along the road;

17. Climate- including temperature, precipitation, humidity;

In general, the most critical project elements to be monitored include:

- Implementation and effectiveness of erosion and sedimentation control measures (e.g. re-planting of vegetation in disturbed areas or erodible areas);
- Water management issues (e.g., water logging, flooding, and drainage issues);
- Waste disposal issues (e.g., used oil, old tyres, and scrap metal, and the management of liquid and solid wastes from construction camps);
- Management and reclamation of excavation pits and quarries;
- Social impacts (e.g., related to compensation issues, resource use conflicts, and communicable diseases);
- Site safety (e.g., accidents and accident risks during construction);
- Occupational health and safety (e.g., the safe handling, and storage of materials and safe operating procedures). Occupational health and safety risks could be minimized by defining procedures for handling materials, conducting tests, paving, operating heavy equipment, and constructing trenches.
- Timely maintenance to prevent/ minimize road degradation, flooding, road accidents, traffic noise, and landscape degradation;

**Monitoring** by the Authority and the Roads Agency during construction is important, to ensure strict compliance with contract specifications. The construction site should receive the most attention, but other sites and associated activities must also be considered, such as: Source of water supply; Construction

base camp; Quarry and mineral extraction sites; Spoil deposit sites; Asphalt mixing plant and cement batching plant; Construction traffic between all sites; and Occupational health and safety.

**Decommissioning phase:** This part should briefly describe when and how the road will be decommissioned. Every effort should be made during the life of the road to minimise the cost and amount of work required in this phase. And for a particular road project, what decommissioning means (is it complete and permanent closure; temporary closure for reconstruction or part closure/ limited use for rehabilitation).

The proponent or their ESIA experts should address the management of potentially significant impacts identified in earlier project phases. The outline should include:

- a) What are the closure objectives? In the rare situation, a road could be closed or redesigned due to developments e.g. population density suddenly increases and a highway is considered risky and unsuitable in an area. Indicate if this was/ wasn't anticipated;
- b) Infrastructures areas – demolition or disposal of structures, buildings and bridges, removal of foundations and debris and rehabilitation of the surface subject to the Environmental Law and other relevant legislations at the time.
- c) Mines, oils and other material residues deposited in the area
- d) Rehabilitation of access roads, bridges, ramps, and restoration of water ways, opening of barricades, etc.
- e) Submission of information
- f) Maintenance – of aspects of the decommissioned site requires maintenance up to the time that closure is approved, these should be described as well.

## **Annex 7: GUIDELINES FOR PREPARATION OF ESMPs**

1. The minimum requirements for ESMP were set out in OP4.01 Annex C of the World Bank and the following are important elements constituting an ESMP:

### **a. Description of Mitigation Measure**

2. Feasible and cost-effective measures to minimize adverse impacts to acceptable levels should be specified with reference to each impact identified. Further, the ESMP should provide details on the conditions under which the mitigation measure should be implemented. The ESMP should also distinguish between the type of solution proposed (structural and non-structural) and the phase in which it should become operable (design, construction and/or operation). Efforts should also be made to mainstream environmental and social aspects wherever possible.

### **b. Monitoring program**

3. In order to ensure that the proposed mitigation measures have the intended results and comply with national standards and World Bank requirements, an environmental performance monitoring program should be included in the ESMP. The monitoring program should give details of the following:

- Monitoring indicators to be measured for evaluating the performance of each mitigation measure (for example: national standards, engineering structures, extent of area replanted, etc).
- Monitoring mechanisms and methodologies
- Monitoring frequency
- Monitoring locations

### **c. Institutional arrangements**

4. Institutions/parties responsible for implementing mitigation measures and for monitoring their performance should be clearly identified. Where necessary, mechanisms for institutional coordination should be identified, as often, monitoring tends to involve more than one institution.

### **d. Capacity Development and Training**

5. To support timely and effective implementation of environmental project components and mitigation measures, the ESMP draws on the EA's assessment of the existence, role, and capability of environmental units on site or at the agency and ministry level. If necessary, the ESMP recommends the establishment or expansion of such units, and the training of staff, to allow implementation of EA recommendations. Specifically, the ESMP provides a specific description of institutional arrangements--who is responsible for carrying out the mitigatory and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training). To strengthen environmental management capability in the agencies responsible for implementation, most ESMPs cover one or more of the following additional topics: (a) technical assistance programs, (b) procurement of equipment and supplies, and (c) organizational changes.

#### **e. Implementing schedules**

6. Timing, frequency and duration of mitigation measures with links to the overall implementation schedule of the project should be specified.

#### **f. Reporting procedures**

7. Feedback mechanisms to inform the relevant parties on the progress and effectiveness of the mitigation measures and monitoring itself should be specified. Guidelines on the type of information wanted and the presentation of feedback information should also be highlighted.

#### **g. Cost estimates and sources of funds**

8. Implementation of mitigation measures mentioned in the EMP will involve an initial investment cost as well as recurrent costs. The EMP should include cost estimates into the sub-project design, bidding and contract documents to ensure that the contractors will comply with the mitigation measures. The costs for implementing the EMP will be included in the sub-project design, as well as in the bidding and contract documents.

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## **Annex 8: Sub-Project EA Screening guidance and Categorization**

### **Category A.**

In general, certain types of subprojects are likely to have adverse impacts of a Category A nature. Category A includes subprojects which have one or more of the following attributes that make the potential impacts “significant”: direct pollutant discharges that are large enough to cause degradation of air, water or soil; large-scale physical disturbance of the site and/or surroundings; extraction, consumption, or conversion of substantial amounts of forest and other natural resources; measurable modification of hydrologic cycle; hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances.

### **Category B.**

Projects in Category B often differ from A projects of the same type only in scale. Large irrigation and drainage projects are usually Category A; however, small-scale projects of the same type may fall into Category B. Construction of a 50-km expressway would also require Category A due to scale, while rural road rehabilitation will tend to raise only minor environmental issues (Category B). Projects entailing rehabilitation, maintenance or upgrading rather than new construction will usually be in Category B. A project with any of these characteristics may have impacts, but they are less likely to be “significant”. However, each case must be judged on its own merits. Many rehabilitation, maintenance and upgrading projects may require attention to existing environmental problems at the site rather than potential new impacts. Therefore, an environmental audit may be more useful than an impact assessment in fulfilling the EA needs for such projects.

### **Category C.**

These projects are likely to have negligible or no environmental impacts. EA is normally not required. Before classifying a project in this category it is important to consider potential issues, some of which may not immediately spring to mind. For example, disposal of medical wastes may be an issue in many health projects.

## Annex 9: LIST OF CONSULTED PERSONS DURING ESMF preparation

No	Names	Institution
1	GATSINZI Justine	LODA - Division Manager, Social Protection
2	KALIGIRWA Ernestine	LODA
3	AYEBARE Crispus	LODA
4	MACUMI Jean de Dieu	LODA
5	COANTIC Antonin	LODA – Consultant
6.	NYAMIHANA Camille	MINALOC
7	BARRETT Stephen	LODA – CPDF
8	KETTLEWELL Andrew	LODA – CPDF
9	KABERA Juliet	REMA
10	RUZIBIZA Emile	MINAGRI – FEEDER ROADS PROGRAM
11	NKEZABO Jean Pierre	MINAGRI – FEEDER ROADS PROGRAM
12	INGABIRE Aurore Regine	MINAGRI – LAND HUSBANDRY WATER HARVESTING AND HILLSIDE IRRIGATION PROJECT
13	AMAHE Arthur	NYARUGURU DISTRICT – DIRECTOR SOCIAL DEVELOPMENT UNIT
14	ABURORABO Vedaste	NYARUGURU DISTRICT – ONE STOP CENTER
15	HABIMANA Vedaste	NYARUGURU DISTRICT, CYAHINDA SECTOR EXECUTIVE SECRETARY
16	NYANDWI Vital	NYARUGURU DISTRICT, CYAHINDA SECTOR AGRONOMIST
17	MUKAYIBANDA Prisca	MUHANGA DISTRICT - DIRECTOR SOCIAL DEVELOPMENT UNIT
18	BIZIMANA Eric	MUHANGA – Director of Planning Unit
19	NGUMYEMBAREBE Thacien	MUHANGA – Director of Agriculture
20	RURANGWA Laurent	MUHANGA, MUHANGA SECTOR EXECUTIVE SECRETARY

## ANNEX 10: PUBLIC CONSULTATIONS GUIDING QUESTIONS DURING ESMF PREPARATION

### 10.1 Guiding questions during public/community consultations

#### General Information

District: ..... Sector:.....  
Cell:..... Village: .....  
Religious Group: .....  
Social Group/categories: .....  
Categories of PAPs: titleholders, tenants, ...  
Nationality.....  
Size of families.....  
Occupation.....  
Source of income (and average income).....  
Frequent expenditures.....

#### Awareness of the project/program

Awareness of the project and source of information  
Are they consulted when doing site selection?  
How people were they selected (labor)? How did you get the information?  
Are the most vulnerable, like elderlies or disabled also considered? What do they do if hired?  
Comparison of their livelihoods before and after in their own views  
What was the done well, what was the best achievement?  
What could be done well?

#### Information on affected property

Potential affected assets:.....  
Compensation preferences: (in kind or financial compensation; eg: land for land; house for a house in a resettlement site, etc)  
Preferences of relocation distance, in case of physical resettlement  
Factors to be considered during relocation: access to family/friends, source of income, etc

## **10.2 Guiding questions during consultations with District and Sectors representatives**

### **General Information**

District: .....

Social Group/categories (statistics): .....

Size of families.....

Occupation.....

### **Sites selection for Social Protection Activities**

How sites are selected? What is the process?

### **Monitoring and reporting of social protection activities**

Once projects have started, how is the monitoring done? How do you report (different levels up to LODA)

### **Awareness of the project/program**

Awareness of the project and source of information

Expectations

How people were they selected (labor)? How did you get the information?

Are the most vulnerable, like elderlies or disabled also considered? What do they do if hired?

Comparison of their livelihoods before and after in their own views

What was the done well, what was the best achievement?

What could be done well?

### **Implementation of Environmental and Social Safeguards**

Institutional framework for the implementation of safeguards for Social Protection activities

Procedure for Preparation of safeguards documents (if any)

Implementation and monitoring of safeguards recommendations by the guiding documents

How do you plan for compensation? How do you prepare it? When do you compensate? What happens if there is no enough money for compensation?

Safeguards Budgeting and Budget execution

Reporting system

## **10.3 Guiding questions during consultations with LODA management and specialists**

### **Sites selection for Social Protection Activities**

Preparation and approval of projects

What kind of projects are eligible?

### **Monitoring and reporting of social protection activities**

Monitoring of ongoing projects, reporting system from Districts.

### **Social Protection Investment Project Financing Operation**

Description of proposed activities

Institutional Arrangements for the proposed project

### **Implementation of Environmental and Social Safeguards**

Institutional framework for the implementation of safeguards for Social Protection activities

Procedure for Preparation of safeguards documents (if any) and role of LODA

Implementation and monitoring of safeguards recommendations by the guiding documents  
Is there any guidance given to Districts in management of compensation process  
Is there any monitoring system to ensure the right people are hired?  
Safeguards Budgeting and Budget execution  
Reporting system

## **10.4 Guiding questions for consultations with MINALOC Environmentalist and REMA**

### **Implementation of Environmental and Social Safeguards**

Linkages with Districts

Institutional framework for the implementation of safeguards for Social Protection activities

Procedure for Preparation of safeguards documents (if any)

Implementation and monitoring of safeguards recommendations by the guiding documents

Safeguards Budgeting and Budget execution

Reporting system

## **10.5: Guiding questions for consultation with MINAGRI Feeder Roads and Land Husbandry safeguards team**

### **Implementation of Environmental and Social Safeguards**

Institutional framework for the implementation of safeguards for activities

Procedure for Preparation of safeguards documents (if any)

Implementation and monitoring of safeguards recommendations by the guiding documents

Safeguards Budgeting and Budget execution

Reporting system

### **Information on affected property**

Frequently affected assets for terracing and feeder roads projects:.....

Compensation preferences by projects affected people: (in kind or financial compensation; eg: land for land; house for a house in a resettlement site, etc)

Preferences of relocation distance, in case of physical resettlement

Factors to be considered during relocation: access to family/friends, source of income, etc

## ANNEX 11: MINUTES OF CONSULTATION MEETINGS

### **Minutes for the consultation meetings done on VUP works in Nyaruguru District – 17 & 18 July 2017**

The Director of social development unit in Nyaruguru District Mr Amahe Arthur in the meeting that we had with him shared with us how the community is aware of the project even before its implementation. Communities suggest project sites. This was confirmed by the communities.

Communities were also able to share how the site selection is done, they said it is during the community general assembly/meetings that they come up with a list of Projects or areas in their sector that they would want to improve. At the same time it helps to change their livelihood for the better. Projects are often either rehabilitating a road, rehabilitating a marshland or construct a school. They submit their proposal to the cell leader, the cell approves it then it goes to the sector the sector shares in with the District, and it is that the District works with LODA to agree on which one to finance depending on the budget available.

Mr Macumi Jean de Dieu, LODA staff in charge of Labor intensive public works specialist (LIPW) also explained that LODA guides the District on preparing on the labor intensive Project Profile Document and reviews the document before submitting it to MINICOFIN. After confirming which projects will be done, it is upon the District to communicate to the community again informing them which Project is going to be done and reasons why it was selected.

The community in Nyaruguru shared how the labor selection list is done, during their general assembly a targeting list is done with all the households in VUP category one, a list per village is prepared and the whole community during their meeting they agree on the lists provided. The executive sector leader of Cyahinda sector explained to us that the Labor intensive public work officer and the District department of VUP and M&E work closely with the village leaders, sector officials and cell officials to monitor the activity of selecting the eligible beneficiaries. He added on that the category one households are eligible for the public works.

We asked the Executive secretary of cyahinda sector how the vulnerable people in his sector are involved in these public works activities. He said the elderly and the disabled ones will be hired to work in the tree nurseries to prepare the trees that will be planted alongside the rehabilitated road. The vulnerable people together with other people in public works are all into savings groups this helps them save more and be able to take care of all their basic needs. When the community was consulted about the involvement of the vulnerable people and they all told us that most of them, those willing to work are hired in the nurseries owned by the cells. The vulnerable people are also part of different cooperatives mainly agriculture cooperatives.

The Director of Social development unit shared with us how the community's livelihood in Cyahinda sector has changed compared to before. He said people can now afford to pay for their health insurance, new bank accounts were open, and the community is now into doing savings, put their children in school in general afford all the basic needs.

Community members shared how they were involved in the public works and what their achievements were:

- One of the community members told us that he was able to do savings and built a house for herself and her family.
- People bought livestock like cows, pigs, goats e.t.c out of their savings
- People were able to pay for their health insurance

- They were able to put their kids in school.

The Executive secretary of Cyahinda Sector explained how expropriation and compensation is done right before the Project works get started. The engineers of one stop centre and the District land valuer are in charge of expropriating all the affected assets and make sure they are compensated for.

The beneficiaries said during their general assemblies, a cut-off date is set and they are all aware of the dates and therefore they are not allowed to plant anything after that date, if they do then they all know it will not be compensated for. All this is communicated to them before the Project works.

The executive secretary of Cyahinda sector Mr Habimana Vedaste said there is a team that is selected to do the monitoring of all the activities that are going on during the public works, this team is made of a community representative per village, a site supervisor and the engineer from one stop center

The Executive secretary of Cyahinda sector said these public works being done have managed to get the community out of the extreme poverty that they were in, you can tell there has been a great positive impact in the community's livelihood. Roads were rehabilitated hence improvement on the transport facilities. Terraces were constructed in different areas of the District, this helped in fighting against soil erosion and farmers were now able to grow crops without any erosion interference.

What could be improved: The Director of Social Development Unit in Nyaruguru District said the budget for public works is not enough, not all the projects they submit to MINICOFIN are financed, out of 10 proposed projects only four go through yet there is need for all the submitted projects to be covered.

### **Minutes for the consultation meetings done on VUP works in Muhanga District – 19 July 2017**

The Director of social development unit in Muhanga District Madam Prisca Mukayibanda explained to us that all the Project being done under public works, are projects that the community themselves came up with. The roads that were rehabilitated were roads selected by the community during their general Assembly meetings.

During the site visits on the road that was done by the community (kabeza-Ecole primary- Adepr-Nyiraruli-Kumusalaba 12km) we met some of the community, and they shared with us how they are the ones that do the site or Project selection and how informed they are on each activity that is going to be done. The community also told us how close they work with the District, the community said incas they said when there any changes the District of Muhanga calls for a meeting and informs them on what has changed and what has been selected and why.

#### Site selection

The Director of planning Mr Eric Bizimana told us that the community together with the sector officials sit together and come up with a list of sites that should be done, once they all agree on this list then they submit it to the District for its review. Once the Projects are approved the District communicated to the community on what Projects are going to be done.

#### Labor

The community in Muhanga sector when asked about labour selection, they explained to how the selection is done, all the people in category one are given the first priority to do the public works, during the general assembly meetings the list is done of all the people to work and the community agrees on the list and it is then submitted to the District.

#### Vulnerable people (elderly and disabled)

The District of Muhanga has a program for the vulnerable people, they are put into cooperatives where they do some activities that help them earn an income and be able to take care of their basic needs and they are also encouraged to do some savings.

#### Community's livelihood after being involved in public works.

The Director of Social development unit shared with us how the livelihood of the community in category 1 has changed so much, she said the people can now afford to pay for their family health insurance, their

children are all in school, each home has a kitchen garden and at least they can now afford to buy small livestock

When we discussed with the community and asked them to share with us what they benefitted from the Project after working for 6 months.

Below are some quotes from the community members on the achievements they were able to achieve from the public works activities they achieved:

- I was able to pay for my health insurance.
- I got 3 goats out of the savings I did with the money I got from public works.
- I was able to put electricity in my house and renovate my home.
- I can now afford to put my children in school.

### Compensation

The Executive secretary of Muhanga sector together with the community that worked on the roads that compensation of affected assets was done way before the Project works started. The people who were claiming to having not been compensated for their affected assets, the District land valuer would follow up and make sure they are fully compensated by the District. Those with seasonal crops they were given enough time to harvest their crops before the works could get started.

### Monitoring of Project works.

The Director in charge of Planning at Muhanga District, told us the District M&E team is in charge of monitoring all the Public works project during and after works, they prepare a Project profile Document which works as their guideline to monitor all the Project activities.

### Project achievement.

The Executive secretary of Muhanga sector explained to us how the Project was of great impact to the community in general and to the District and sector, he said the transport means were improved, the community can now easily transport their harvest to the markets for sell, the community has easy access to the health centres and to schools, The people's livelihood has changed compared to before. The Public works Project led to a greater change in development in their sector.

ATTENDANCE LISTS - CONSULTATION MEETINGS

July 18, 2017

UBUTUNDI RW ABITABIKIYE INAMA MU GISHANGA CYA URWAJUNJA

N.O.	AMAZINA	ICYO AKORA	TELEPHONE	UMUKONO
1	Umulinga Chantl	CPPT Gashanga	0788662274	Handwritten mark
2	BENIHARWE Jaco	U.N.M.D	0783048017	Handwritten mark
3	Uwari Kazi	U.N.M.D	0785748699	Handwritten mark
4	Mugisha	U.N.M.D	078346592	Handwritten mark
5	Muramba	U.N.M.D	0783022675	Handwritten mark
6	Muramba	U.N.M.D	0783022675	Handwritten mark
7	Muramba	U.N.M.D	0783022675	Handwritten mark
8	Muramba	U.N.M.D	0784224221	Handwritten mark
9	Muramba	U.N.M.D	0784986791	Handwritten mark
10	Muramba	U.N.M.D	0785644087	Handwritten mark
11	Muramba	U.N.M.D		Handwritten mark
12	Muramba	U.N.M.D		Handwritten mark
13	Muramba	U.N.M.D		Handwritten mark
14	Muramba	U.N.M.D		Handwritten mark
15	Muramba	U.N.M.D		Handwritten mark
16	Muramba	U.N.M.D		Handwritten mark
17	Muramba	U.N.M.D		Handwritten mark
18	Muramba	U.N.M.D	0785333333	Handwritten mark
19	Muramba	U.N.M.D		Handwritten mark
20	Muramba	U.N.M.D		Handwritten mark
21	Muramba	U.N.M.D		Handwritten mark
22	Muramba	U.N.M.D		Handwritten mark
23	Muramba	U.N.M.D	07609775	Handwritten mark
24	Muramba	U.N.M.D		Handwritten mark
25	Muramba	U.N.M.D		Handwritten mark
26	Muramba	U.N.M.D		Handwritten mark



July 18, 2017

UBUTONDE BW'ABITABIRIYE INAMA MU GISHANGA CYA UKUJUGUZA

NO.	AMAZINA	ICYO AKORA	TELEFONE	UMUKONO
1	Mukamukiza Fidele umuhungu		0784787300 0795865500	
2	Dashyamba Francis umuhungu		0786660025	
3	Muhirwa Jean Paul umuhungu			
4	Mugisha Bernard umuhungu		-	
5	Mukamukiza Etienne umuhungu		078922286	
6	Mugisha Jean Paul umuhungu		-	
7	Mugisha Jean Paul umuhungu		078922286	
8	Mugisha Jean Paul umuhungu			
9	Mukamukiza umuhungu		072200251	
10	MUKAMUKIZA umuhungu		0784669877	
11	Mugisha Jean Paul umuhungu		078922286	
12	Mugisha Jean Paul umuhungu			
13	Mugisha Jean Paul umuhungu		0727389800	
14	Mugisha Jean Paul umuhungu			
15	Mugisha Jean Paul umuhungu			
16	Mugisha Jean Paul umuhungu			
17	Mugisha Jean Paul umuhungu			
18	Mugisha Jean Paul umuhungu			
19	Mugisha Jean Paul umuhungu			
20	Mugisha Jean Paul umuhungu		072699332	
21	Mugisha Jean Paul umuhungu		0782584776	
22	Mugisha Jean Paul umuhungu			

July 18, 2017

URUTONDE KW'ABITABIRIYE INAMA MU GISHANGA CYA LIRUKUNDA

NO.	AMAZENA	ICYO AKORA	TELEFONE	UMUKONO
1	Ryantari Vital	Ecole Apro	0787441029	<i>[Signature]</i>
2	Mukabimana Eugène	Munyonyonyo	0787441029	<i>[Signature]</i>
3	Mugiraneza Stasile	Munyonyonyo	0787441029	<i>[Signature]</i>
4	Mukabanzamba Yvonne	Munyonyonyo		<i>[Signature]</i>
5	Dabankwira J. J. J.	Munyonyonyo	0787441029	<i>[Signature]</i>
6	Mukabanzamba Yvonne	Munyonyonyo	0787441029	<i>[Signature]</i>
7	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
8	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
9	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
10	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
11	Mugiraneza Stasile	Munyonyonyo	0787441029	<i>[Signature]</i>
12	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
13	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
14	Mugiraneza Stasile	Munyonyonyo	0787441029	<i>[Signature]</i>
15	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
16	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
17	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
18	Mugiraneza Stasile	Munyonyonyo	0787441029	<i>[Signature]</i>
19	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
20	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
21	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
22	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
23	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
24	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
25	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
26	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
27	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
28	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>
29	Mugiraneza Stasile	Munyonyonyo		<i>[Signature]</i>

19<sup>th</sup> July 2017

ABITABIRIYE INAMA Y'USUZUMA YI BIKORWA  
BTAKOZWE NA YUP

NR	AMAZINA	SIGNATURO
1.	Kuzana Iddesmond	
2.	NYANDALI Justin	
3.	MUKABAZI PASICASIE	
4.	MUNYANEZA <del>LEONARDO</del>	
5.	<del>MUNYANEZA</del>	
6.	AYIRWANDA Kasper	
7.	BUCAMUPFHA <del>Gregoire</del> Kiyasi	
8.	ICYANDUKUSE Greste	
9.	NYIRABOYWA Wabore Virijimya	
10.	HAKI ZIRUKA S. Paul	
11.	UWANYAGASANI Wicasta	
12.	MUKIMBA BAHAMBI S. Claude	
13.	MURATUTSA Fellen	
14.	SINDIMIRWE Paul	
15.	TWAGURIMANA Leonard	

Abita biriya inama y'abagenurwaho kwica bazakera  
 ku mushinga w' gukora Umukanda muri gashyamba VUP  
 abagali ku NYAMIRAMA ku wa 19/07/2017

	<u>Amazina</u>	<u>Umukoro</u>
1.	KAMANYANA Savelo	<del>...</del>
2.	MUKASINE Berthinda	<del>...</del>
3.	HAGUYINKA Isabelle	<del>...</del>
4.	MURKASERE Madeline	<del>...</del>
5.	NSABIMANA Boniface	<del>...</del>
6.	NSABAMENYE Laodilas	<del>...</del>
7.	MURKATETE Brigitte	<del>...</del>
8.	MUKANYAMIBWA Alexie	<del>...</del>
9.	KAMUYENGA Aimable	<del>...</del>
10.	MURAGIJEMARIZA Rachel	<del>...</del>
11.	MUKABERA Emeliana	<del>...</del>
12.	NSHIMYIMANA Levoant	<del>...</del>
13.	NTAKIRUTIMANA Clementine	<del>...</del>
14.	MINANI Thigene	<del>...</del>
15.	BRANGIRANA Am Zayan'	<del>...</del>
16.	NTAKUNGA Aminadabu	<del>...</del>
17.	RUTAKAMIRE Alphonse	<del>...</del>
18.	KABANO Eugene	<del>...</del>
19.	NTUYAHARA J. paul	<del>...</del>
20.	HATEGEKIMANA Vedade	<del>...</del>
21.	NISHYIRENGERE Eric	<del>...</del>
22.	NYANDWI Fidel	<del>...</del>
23.	NGENZI Onosphere	<del>...</del>
24.	MUSABIMANA Edouard	<del>...</del>
25.	UMWABAZI Mair claire	<del>...</del>
26.	NYIRABURINDWI belphine	<del>...</del>
27.	NYIRANDABARORA Bernadette	<del>...</del>
28.	KALIBIRWA Olive	<del>...</del>
29.	MUSENDE ...	<del>...</del>

31. MUKARUKUKA Appolinaire
32. MUKAMUSANA Abdou Sina
33. NYIRASHYIPAMBERE Savronia
34. UWIMANA Chantal
35. MUKABONDA Vennantia
36. MUREKATETE Froline
37. NYANDWI J. Nepo
38. HAKIZIMANA Emmanuel
39. TWAGIRAMARIYA Florence
40. MUKAKUNBYE Esperance
41. BAKINANE Martin
42. MUSHIMIRE Théobald

## ANNEX 12: RWANDA DEVELOPMENT BOARD (RDB) PROJECT SCREENING CRITERIA FORM

Once a Project Brief has been received and reviewed by the Authority, a proposed project is exempted from further compliance with EIA requirements if all of the following conditions are satisfied:

1. The project will not substantially use natural resources in a way that pre-empts use, or potential use of that resource for any other purpose.
2. Potential residual impacts on the environment are likely to be minor, of little significance and easily mitigated.
3. The type of project, its environmental impacts and mitigation measures are evident and well understood.
4. Reliable means exist for ensuring that impact management measures can and will be adequately planned and implemented.
5. The project will not displace significant number of people, families or communities.
6. The project is not located in, and will not affect, environmentally-sensitive areas such as:
  - (a) National parks
  - (b) Wetlands
  - (c) Productive agricultural land
  - (d) Important archaeological, historical and cultural sites
  - (e) Areas protected under legislation
  - (f) Areas containing rare or endangered flora or fauna
  - (g) Areas containing unique or outstanding scenery
  - (h) Mountains or developments on or near steep hillslopes
  - (i) Forests
  - (j) Lakes or their shores
  - (k) Areas important for vulnerable groups such as fishing communities
  - (l) Areas near high population concentrations or industrial activities where further development could create significant cumulative environmental problems
  - (m) Groundwater recharge areas or drainage basins
7. The project will not result in and/or:
  - (a) Policy initiatives which may affect the environment
  - (b) Major changes in land tenure
  - (c) Changes in water use through irrigation, drainage promotion or dams, changes in fishing practices.

8. The project will not cause:
- (a) Adverse socioeconomic impact
  - (b) Land degradation
  - (c) Water pollution
  - (d) Air pollution
  - (e) Damage to wildlife and habitats
  - (f) Adverse impact on climate and hydrological cycle
  - (g) Creation of by-products, residual or waste materials which require handling and disposal in a manner that is not regulated by existing authorities.
9. The project will not cause significant public concern because of potential environmental changes. The following are guiding principles:
- (a) Is the impact positive, or harmful?
  - (b) What is the scale of the impact in terms of area, numbers of people or wildlife affected?
  - (c) What is the intensity of the impact?
  - (d) What will be the duration of the impact?
  - (e) Will there be cumulative effects from the impact?
  - (f) Are the effects politically controversial?
  - (g) Have the main economic, ecological and social costs been quantified?
  - (h) Will the impact vary by social group or gender?
  - (i) Is there any international impact due to the proposed projects?
10. The project will not necessitate further development activity, which is likely to have a significant impact on the environment.