

LIVESTOCK INFRASTRUCTURE SUPPORT PROGRAMME (LISP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN SUMMARY

Project Number: P-RW-AAE-004
Department: OSAN

Country: Rwanda
Division: OSAN.1

1. Programme description and key environmental and social components

1.1 **The Government of Rwanda (GoR) through the Ministry of Agriculture and Animal Resources (MINAGRI) has requested the Bank to support the Livestock Infrastructure Support Programme (LISP)** which seeks to reduce poverty and strengthen food security in Rwanda by improving rural infrastructure (feeder roads, markets and milk collection centres) that will significantly increase productivity of livestock farmers, and their competitiveness and ultimately contribute to the technological transformation of the livestock and dairy industry in Rwanda.

1.2 **The financing mechanism used for the Programme is a sector budget support** to the Ministry of Agriculture and Animal Resources (MINAGRI) for implementation of the Strategic Plan for the Transformation of Agriculture in Rwanda. Although the target sector had been identified and the government has broadly indicated the type of activities to be supported through the sector budget support, the sub-project sites are yet to be identified and it is not feasible to identify activities financed by LISP funding, separately and distinguishable from other sources of budget financing. Therefore, site specific adverse and social impacts specifically associated with the LISP are not presented. In complying with AfDB's Environmental and Social Assessment Procedures and Rwanda Organic Law, a Strategic Environment and Social Assessment (SESA) has been prepared to assist the GoR in identifying and eventually establishing the regulatory, administrative and technical capacity within Rwanda to ensure that for each development sub-project undertaken in the country, environmental and social impacts are identified, mitigated, and monitored as part of the sustainable use and management of Rwanda's natural resources and the environment.

1.3 **The goal of the Programme is to create an enabling environment that will stimulate the development of a modern livestock industry in Rwanda through value addition and access to markets** in order to encourage diversification of the economy, sustain growth, create jobs and reduce poverty. Its operational objective is to build the necessary infrastructure and services (livestock markers, Milk Collection Centers, Feeder Roads and Slaughter facilities) that will contribute to the development of a sustainable and profitable livestock market as well as stimulate dairy production and overall improvement of the livestock industry in Rwanda. This is aimed at supporting the implementation of the Government development agenda of improving the livestock sub-sector and the livestock business environment for active private sector participation. The medium term objective of the LISP is to sustain the growth of the livestock sector by: (i) improving the marketing system in a sustainable manner through the provision of critical infrastructure; (ii) improving the business environment for active private sector participation; and, (iii) contributing to ensuring macroeconomic stability.

1.4 **The Programme is classified as Environment Category 2 according to the Bank's Environmental and Social Assessment Procedures (ESAP).** The design-stage environmental and social analysis for the Livestock Water Supply Systems component is currently being carried out as part

of the design-stage feasibility studies under the Project Preparation Facility which will result into an Environmental and Social Impact Assessment report with its associated ESMP.

2. Major environmental and social impacts

2.1 The Programme is likely to generate **positive social and economic impacts** that could lead to reduced poverty levels, improved food security through better livestock yields, creation of jobs for the local population and the youth during the construction phase of the programme, and improved household income. The Programme will also result in (i) increased production and marketing of livestock and dairy products, (ii) easy access to water points will minimize overgrazing and soil degradation by livestock especially during the dry seasons, (iii) construction of water supply systems will increase the availability of water resources for livestock and Milk Collection Centers, and consequently, reduce the excessive withdrawal from existing water points and improve milk hygiene. Drainage facilities for water supply systems will protect underground water from pollution.

3. Summary of negative impacts

Potential Positive Impacts

3.1 The Sector Budget support is likely to generate **positive social and economic impacts** that could lead to reduced poverty levels, improved food security through better livestock yields, creation of jobs for the local population and the youth during the construction phase of the programme, and improved household income. The support will also result in (i) increased production and marketing of livestock and dairy products, (ii) easy access to water points will minimize overgrazing and soil degradation by livestock especially during the dry seasons, (iii) construction of water supply systems will increase the availability of water resources for livestock and Milk Collection Centres, and consequently, reduce the excessive withdrawal from existing water points and improve milk hygiene and livestock production. Drainage facilities for water supply systems will protect underground water from pollution. The potential to develop a Clean Development Mechanism by installing biodigesters to capture gas that can be used for energy will reduce the potential of greenhouse gas emissions.

Potential Negative Impacts

3.2 Environmental risks should be considered could be:

- (i) **High water and soil pollution** from waste livestock waste and wastewater from the Milk Collection Centers and slaughterhouses which tend to contain high contents of organic matter,
- (ii) **Emission of Greenhouse Gases (GHG)** due to increase in the number of livestock and hence livestock production,
- (iii) **Clearance of vegetation covers** during the construction phase. Limited vegetation clearance may occur at water supply system: at the water intake/water sources, along the transmission/distribution pipes and at treatment facilities. Road upgrade - at the borrow pits, along the roads. Removal of vegetation cover removal would increase erosion potentials and dusts generation into the air. The level of impacts depends on: land area to be cleared and density of existing vegetation cover, which associated with the amount of waste to be generated and physical characteristics of the soil,

- (iv) **Increase in erosion related to the construction/rehabilitation of roads.** With the exception of the national parks, there is virtually no untouched habitat left in Rwanda and the risk of an impact on habitat through the construction of local infrastructure such as roads is low. However, there exists a risk that the construction of roads could lead to erosion, in particular when road design insufficiently takes into account the substantial erosion risk in a high rainfall country such as Rwanda,
- (v) **Reduced localized air quality due to dust from construction sites and surrounding areas,** include the areas along materials transportation route affect localized air quality. Increased dust level along the road used for transportation of as granular construction materials drop, dust from temporary loading of granular construction materials such as sand or stockpile from excavation works, dusts from construction waste dumping sites. The impacts usually last in a relative short time, are of low magnitude but can causes nuisances to local people, and disturb local daily life. The scope of impacts depends on, (i) the number and frequency of vehicles in use, (ii) the quantity of granular materials to be temporarily loaded at a time, (iii) the size of the granular materials, and (iv) weather conditions,
- (vi) **Increased localized noise level and vibration coming from engines of running vehicles,** construction plants and construction activities such as piling, excavation or installation of equipment, loading of construction materials, concrete pouring, drilling. Increased localized noise levels usually occur in short term. The scope of impacts depends on, (i) number, frequency and working durations of noise sources, and (ii) time of the day (night time),
- (vii) **Water pollution.** The most typical impacts on water quality from civil works construction is increased turbidity in water as wastewater or runoff containing high content of suspended solids from construction sites entering water sources. The other sources of pollution are accidental spillage of fuel, lubricants and other chemicals used in the construction process. Wastewater from workers' camp is also a source of water contamination. The magnitude of impacts depends on the amount of contaminants wastewater / runoff entering water bodies, dilution capacity of receptor, as well as the type of water use at affected source, including tolerant range of aquatic species. For water supply using ground water, improper casing of the well or sealing of the cases from other water sources would lead to groundwater contamination due to infiltration of polluted surface water or groundwater of lower quality from upper layer into the production layer,
- (viii) **Solid waste generation.** Excavation may result generation of earth and rock materials. Wastes will also be generated from construction camps/sites. These need to be disposed of off-site. The level of impacts related to solid waste generation depends on the extend of construction works

3.3 **Socio-economic impact.** Overall, the LISP would have positive socioeconomic impact on the beneficiaries as it would increase income earning opportunities, improve food security, and the possibilities of local people to manage their natural resources, and contribute to capacity building, in particular at the local level. There are no major negative socioeconomic impacts foreseen, however, a number of risks are identified that may influence project implementation..

4. Enhancement and mitigation measures

4.1 For the planned roads and other infrastructure works whose detailed engineering design will be carried out during Programme implementation, environmental and social assessment will be obligatorily conducted in compliance with Rwanda EIA Clearance Procedures and AfDB Environmental and Social Assessment Procedures. The impact studies and the corresponding environmental licenses for each sub-project intervention will be submitted to the Bank as implementation advances, in terms of the Loan Agreement, prior to the corresponding civil works being put out to tender. The same approach will be applied with regard to the Resettlement Action Plans (RAPs) should there be any Program intervention entailing involuntary resettlement. The RAPs will be Alternatives will be considered on the decision of location of the facilities, choice of the construction materials, choice of the waste water and solid wastes technology to be adopted especially for the slaughter facilities and the veterinary clinic and quarantine stations. Detailed design stage environmental and social impacts analysis for the slaughter facilities and livestock watering systems are currently being carried out as part of the recently approve PPF.

4.1 In order to mitigate the potential negative environmental and social impacts of the sector budget support, the general mitigation measures include the following:

Wastewater Management

4.2 During the site specific design stage of the sub-projects, MINAGRI will ensure that the following is incorporated into the design. Wastewater discharges generated from slaughterhouses and milk collection centres are collected in closed on-site drainage systems and discharged to on-site simple receiving ponds to ensure protection of surface and ground waters from potential contamination. The primary sources of contamination of the wastewater from the slaughterhouse are blood and solid waste (faeces) with smaller quantities of animal fat, skin, bone and hair, and cleaning detergents (organic waste). The slaughterhouses will have isolated drainage system. The treated wastewater is thereafter discharged to receiving ponds. Environmental officers will monitor the quality of effluents discharged to ensure that it meets the Rwanda wastewater discharge standard.

Waste Management

4.3 During the site specific detail design, MINAGRI will develop Waste Management Plans (incorporated into the market architectural and engineering designs) to include proper methods for collection and appropriate disposal of waste generated from the livestock markets including management responsibilities and proper staff training programs.

Greenhouse Gas Emission (GHG)

4.4 Slaughterhouses produce air emissions and odours, as well as wastewater discharges that may contain high concentrations of organic material. However, air emissions generated from the LISP are not significant. However, the Project Team is working with the Bank's African Carbon Support Program to develop a Clean Development Mechanism (CDM) component which might include construction of sludge digestors/biodigeters in the slaughterhouse wastewater treatment facility to reduce waste load and produce biogas to supplement the energy requirements in the project areas.

Environmental Screening Procedures.

4.5 The Programme would adopt stringent environmental screening procedures fully integrated into the review process of the activities submitted for financing. In the LISP subproject cycle, sub-

project would be proposed by local organizations supported by local NGOs or MINAGRI extension officers. The subprojects would be appraised and approved by the Project Implementation Team (PIT) located in the MINAGRI. In order to facilitate the environmental appraisal of subprojects, the PIT would employ a national environmental specialist. As part of the subproject appraisal, the project environmental specialist would be required to examine the potential environmental impact of the project. Although the environmental specialist is expected to be familiar with EA, if needed, he would receive additional training in the subject matter. The environmental screening procedure is shown in Annex I. In the environmental screening procedure, the PIT environment and social specialist would make sure that the proposed activities comply with the Bank's Safeguard Policies as well as Rwanda Organic Law.

5. Monitoring program and complementary initiatives

5.1 MINAGRI as the executing agency will be required to prepare site-specific design stage ESIA studies during implementation of the Program in compliance with the Rwanda Organic Law No. 04/2005 and the Bank's Environmental and Social Assessment Procedures. Annual Audits on the implementation of ESMPs should also be prepared by the MINAGRI, and submitted to REMA. The LISP/Project Implementation Team within MINAGRI will the full responsibility in the preparation of the studies.

5.2 During project implementation, monitoring will be very crucial to ensure that the proposed mitigation measures are implemented. The PIT together with REMA will responsible for monitoring of the environmental and social aspects of the Programme.

5.3 Indicators for monitoring changes in the physical, biological and socio-economic environments should be developed during the preparation of the design stage site specific ESIA and ESMPs, and the monitoring component fully elaborated as part of the detailed site specific assessments.

5.4 Existing studies' should be used to establish the needed baseline for monitoring. The following studies are recommended:

- i. Vegetation studies to establish a baseline on key vegetation types and human use and requirements for the conservation and provide a list of sensitive plants that require special protection;
- ii. Ecological surveys to determine the extent to which different activities could impact on the ecosystems and identify ecologically sensitive areas, which should be excluded from project activities. These studies will also identify economically viable alternative uses and activities.

Monitoring the Physico-Chemical Environment

5.5 The monitoring programme for the physical environment should cover *inter alia*:

- i. Land use outside the project area to determine changes in land use patterns resulting from implementation of project activities. This could be done annually using the baseline maps prepared during the resource survey at the beginning of the project;
- ii. Soil erosion - qualitative observations of soil erosion occurring in clearing areas should be recording signs of sheet and gully erosion especially after heavy rains. Results should be reported to the PIT, and
- iii. Changes in water quantity and quality including flow levels and nutrient levels

6. Institutional arrangements and capacity building requirements

6.1 Borrower capacity for both environmental and social safeguards implementation is moderately effective, with some weaknesses that the project will address. Rwanda has a dynamic and professionally staffed environmental regulatory agency (REMA) with politically astute leadership and instances of demonstrated effective enforcement of environmental regulations. REMA works closely with the decentralized Environmental Officers who are responsible for site level environmental management of project activities, along with the MINAGRI environmental specialist.

6.2 However, while the environmental regulatory framework is modern, it is also young and some elements of it are yet to be developed. REMA has been in existence only since 2003, the Organic Law (*No 4/2005*) on environmental protection since 2005, and the general EIA guidelines since 2006. Sector specific environmental guidelines, e.g. for agriculture, are not yet in place. Demand for REMA services outstrips its staffing, and both REMA and District level environmental staff lack robust implementation experience. Logistical support for adequate implementation and monitoring of environmental safeguards measures also requires strengthening. It is important to note that REMA has been only recently (early 2009) reorganized in conjunction with the establishment of the Rwanda Development Board (RDB) which took over the EA function (and human and technical resources) from REMA. The World Bank is currently financing a Project on institutional environmental capacity at MINAGRI, and potential implications of this institutional arrangement at REMA, has recently been concluded. In charting a way forward, this environmental institutional capacity assessment has provided recommendations to strengthen institutional capacity at the local and national levels related to implementation of ESMPs. This assessment will complement the site specific ESMPs as an instrument to strengthen long-term institutional and organizational capacity of relevant agencies - REMA, RDB and MINAGRI while identifying ways to strengthen capacity of local government level officers and extension workers to address environmental and social risks pertinent to LISP activities.

6.3 Recommendations have been made in two areas: (i) to fill institutional gaps that will facilitate effective implementation of site specific ESMPs; and, (ii) to strengthen the institutional capacity as part of the Programmes' institutional strengthening component. These recommendations have been made in the context of a very recent re-organization of decentralized environmental management away from multi-tasking District Environmental Officers, towards the appointment of sector-level environmental officers. The assessment also identified for the Programme the specific capacity needs of decentralized environmental officers and the assignation of a strong Environmental Officer at the LISP/Program Implementation Team of MINAGRI.

Environmental and Social Safeguards' Supervision Plan

6.4 Given the Borrower's limited (but growing) experience with implementation of environmental and social safeguards instruments, close safeguards supervision and implementation support will be carried out during the early stage of programme implementation until adequate safeguards experience is developed. MINAGRI technical staff in cooperation with REMA/RDB, sector-level Environmental Officers and other relevant local government staff will supervise the implementation of the safeguards instruments discussed above. The Bank's supervision will focus on (i) providing regular implementation support and (ii) carrying out field reviews of safeguards implementation, and (iii) monitoring safeguards implementation based on periodic progress reports. Bank's supervision will be carried out by field-based Bank technical staff and complemented by specialist consultants together with MINAGRI and REMNRBD technical staff not only during regular biannual supervision missions but also during

interim technical safeguards missions that will respond to emerging issued or MINAGRI requests for assistance.

7. Public consultations and disclosure requirements

7.1 During pre-appraisal and appraisal stages of the program design, consultations were carried out with all significant stakeholder groups in all the Districts where the project will be implemented. These stakeholder groups include: Government and regulatory agencies, Non-government organizations, and local stakeholders i.e. district councils and committees, and local population. Their views have been incorporated in the design of the programme. The ESMP will be publicly released through the AfDB Public Information Center and made available to the AfDB Board 30 days prior to project submission.

8. Estimated costs

8.1 The costs for incorporating environmental and social mitigation and monitoring measures are estimated at US\$ 400,000 over the five-year programme implementation period.

9. Implementation schedule and reporting

9.1 Given the nature of the financing mechanism, annual environmental and social progress reports will be prepared by MINAGRI u. Effective implementation of the Environmental and Social Management Plans Framework will require that adequate capacity enhancement within institutions and other stakeholders are undertaken. There will be training for the yet to be recruited LWH Environmental and Social Specialists and REMA. The training will cover implementation of the ESMF including project screening, impact identification and analysis, Environmental Assessment procedures and requirements (EA and EIA), Design and implementation of mitigation measures at sub project level, monitoring and review of environmental performance and reporting.

10. Recourse in Case of Harm Caused by Non-Compliance with the Bank Policies

10.1 The Bank Group's Independent Review Mechanism (IRM) impartially responds to complaints by people and communities who suffer harm or whose rights or interests have been or are likely to be adversely affected by a Bank-financed programme due to the Bank's non-compliance with its policies and procedures.

10.2 A complaint may relate to public or private sector programmes. The IRM handles the complaint through problem-solving (mediation) and/or compliance review. The problem-solving aims at restoring effective dialogue between the requestors, the Bank Group and other interested parties to reach an agreeable solution to the problems suffered by the complainants. The compliance review, which is conducted by Panels of independent experts investigate whether the alleged harm is a result of non-compliance with the Bank Group's policies and procedures.

10.3 The complaint must be submitted by at least two individuals, an organization, association, a community or other group of individuals in the country or countries where the Bank Group financed programme is located. Before submitting the complaint to the IRM, the requestors should try to resolve their problems with the programme sponsor or the responsible Bank staff for the programme. When submitting the complaint to the IRM, the requestors must describe the harm caused to them by the programme or how their rights or interests have been, or are likely to be adversely affected, and to the extent possible provide which of the Bank Group's policies or procedures have not been complied with.

The complaint should be in writing and can be submitted by any means at the disposal of the complainants.

10. Recommendations

10.1 Because of the nature of the financing mechanism (sector budget support) project activities have not yet been defined in enough detail to implement a comprehensive environmental analysis, it is recommended that during the detail design on the program activities, a full Environmental and Social Impact Assessment be carried out in compliance with the Bank's Environmental and Social Assessment Procedures and the Rwanda Organic Law