A. Project Description

MIGA has been asked to provide reinsurance to the Overseas Private Investment Corporation (OPIC) through a Master Reinsurance Contract (MRC) in support of agricultural investments made by SilverStreet Private Equity Strategies SICAR – Silverlands Fund (the Fund) in up to thirteen countries in Sub-Saharan Africa. One of the investments under this MRC is the acquisition of four neighboring farms (Vundu, Venturas, Sichilima and Green Forestry Development/GFD) from private owners in the Luwombwa Farm Block in the Serenje District of Zambia. Silverlands Zambia Limited (SZL) is consolidating these farms into a single large-scale commercial farm (approximately 5,862 ha) to expand, professionalize and invest in further irrigation infrastructure and build a cattle herd. SZL’s operations are located about 70 km northwest of Serenje and 100 km northeast of Mkushi, close to the border with the Democratic Republic of Congo. The Luwombwa Farm Block was designated for agricultural development by the Zambian Government.

SZL will primarily grow maize, soya beans, wheat and barley and is also exploring rearing up to 800 head of cattle on the non-arable land and setting up a conservation area for protected antelope species (the “Project”). MIGA’s current support is to cover the acquisition of the four farms and up to approximately 2,100 ha of irrigated lands (through river withdrawal only) and cattle rearing. This investment involves land preparations (clearing, tilling and leveling) and construction of irrigation systems (including pumping stations) to provide the necessary water required for crop production using water abstracted from the Luwombwa River. Areas closest to the river will be irrigated first to reduce piping and pumping costs. A portion of the investment will also be used to purchase cattle and to construct other related infrastructure including staff housing, grain silos, workshops and storage sheds, cattle pens, fencing, access roads, and an airstrip. The Luwombwa Farm Block has fair access to roads, power, water, strong soils, and good agro-climatic conditions for row-cropping.
In the longer term, the Fund may acquire additional land and may construct an irrigation dam; as these investments are not yet decided or funded, they will be reviewed as separate investments by MIGA should MIGA support be requested.

SZL is owned by the Fund, through its subsidiary Silverlands Ireland Holdings (Z) Limited. SZL is the third investment reinsured under the Master Reinsurance Contract: see Silverlands Tanzania Ltd. and Silverlands Ranching Ltd for additional information.

B. Environmental and Social Categorization

The Project is a Category B under MIGA’s Policy on Environmental and Social Sustainability (2013). Key potential environmental and social risks and impacts include soil conservation and management; nutrient management; water management (usage and quality); chemical and hazardous materials management; liquid and solid waste management (including crop residue, manure and carcasses); livestock diseases; biodiversity and ecosystems; and worker and community health and safety. Impacts are site specific, largely reversible and readily addressed through mitigation measures.

C. Applicable Standards

While all Performance Standards are applicable to this investment, our current information indicates that the investment will have impacts which must be managed in a manner consistent with the following Performance Standards:

- PS1: Assessment and Management of Environmental and Social Risks and Impacts
- PS2: Labor and Working Conditions
- PS3: Resource Efficiency and Pollution Prevention
- PS4: Community Health, Safety and Security
- PS5: Land Acquisition and Involuntary Resettlement
- PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

As no Indigenous Peoples were identified to reside in the Project area, PS 7: Indigenous Peoples does not apply. PS 8: Cultural Heritage is not triggered except for the need to implement a “chance finds” procedure consistent with the requirements of PS 8 as part of the project’s environmental and social management system. Four grave sites located within the project boundaries will not be disturbed.

In addition, the following World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines are applicable to this project:

- WBG General EHS Guidelines
- WBG EHS Guidelines for Annual Crop Production
- WBG EHS Guidelines for Mammalian Livestock Production.

Furthermore, IFC’s Good Practice Note on Improving Animal Welfare in Livestock Operations (2014) is applicable to SZL’s operations.
D. Key Documents and Scope of MIGA Review

The following documents were reviewed by MIGA:

- Internal Summary of Resettlement Process for One Family, prepared by Silverlands, undated (c. March 17, 2016);
- Environmental and Social Risk Assessment and Management Plan (including supporting policies and procedures), prepared by Silverlands, December 2015;
- Silverlands Zambia Limited Environmental and Social Action Plan (December 2015) prepared by SZL;
- Initial Environmental Assessment of Impacts of Luwombwa Block Development: Luwombwa Basin Hydrology, Biodiversity and Fruit Bat Colony, Kasanka National Park, prepared by F.P.D. Cotterill, October 2015;
- Zambia Environmental Management Agency (ZEMA) approvals for ESIA submissions;
- Environmental and Social Impact Assessment for the Proposed Conversion of Usage from Forestry to Row Cropping Luwombwa Block, Serenje District, Central Province, Zambia, prepared by Kasumwa Enviroconsult & General Supplies Limited, March 2015;
- Final Environmental and Social Impact Assessment (ESIA) for the Silverlands Zambia Limited Luwombwa Block Agriculture Project: Serenje District, Central Province, Zambia, prepared by Kasumwa Enviroconsult & General Supplies Limited, August 2014;
- Silverlands Zambia – Serenje Development Plan 2015-2016 prepared by SZL, undated;
- Water Availability Assessment for the Proposed Serenje Farm Development in Central Province, Zambia, prepared by Imagen Consulting, July 2014 (Version 1);
- ESG Action Plan – Luwombwa Block Phase I, prepared by SilverStreet, June 2014;
- Luwombwa Block Phase 1 ESG (Environment, Social and Governance) Due Diligence Report, SilverStreet Capital, June 2014;
- SilverStreet Investment Committee papers for Vundu, Venturas, Sichilima and GFD;
- Responsible Investment Code Annex (RIC), SilverStreet Capital, January, 2012;

A MIGA environmental and social specialist undertook a site visit in May 2015 to tour the project and to meet with project management and workers. MIGA’s due diligence is also coordinated with that of OPIC. An Environmental and Social Action Plan (ESAP, to be attached to this ESRS) will be developed to address gaps between the current project documentation and the requirements of the PSs.
E. Key Issues and Mitigation

PS1: Assessment and Management of Environmental and Social Risks and Impacts

Environment and Social Assessment: SilverStreet recently expanded its management team at the Fund level to include a dedicated manager solely for Environmental, Social and Governance (ESG) matters. At the country level, Silverlands management team includes a dedicated resource to oversee E&S matters at each of its investments. The Fund maintains a Responsible Investment Code (RIC) applicable to each investment. Prior to making investments, the Fund prepares an ESG due diligence report as part of its investment commitment process based on its RIC. This report assigns scores based on the following criteria: human rights, labor rights, environment/climate, health and safety, animal welfare and community development. The scoring allows for the Fund to assess, monitor improve, and track compliance over time. The Fund is focused on promoting continuous improvement in the E&S management of each of its portfolio investments. Each portfolio investment is responsible to the Fund to report quarterly on its ESG performance and the status of its ESG Action Plan. The Fund’s ESG due diligence reports for Vundu, Venturas, Sichilima and GFD farms recognized informal management systems and thus could not assign ratings at the time because activities were limited.

Two Environmental and Social Impact Assessments (ESIAs) (one that covers the project on Vundu, Venturas, and Sichilima farms and one that covers the conversions of usage from forestry to row cropping on GFD) were completed and approved. Both ESIAs include an environmental and social management framework. Since carrying out these ESIAs, the project’s development plan has become more specific both in location (based on the farms which were acquired) and in activities being carried out. Since the ESIAs were approved, an independent E&S review of SZL’s operations has been conducted by EBS Advisory and SZL’s Environmental and Social Action Plan (comprising of the management plan actions from the ESIAs the findings from the EBS review and OPIC’s Consent Notice ESAP) was updated accordingly. Detailed assessment was carried out to determine potential downstream impacts to the Kasanka National Park (see PS 6 section).

Management Program and Monitoring: SZL was established in 2012 and a management team was appointed to operate the farms as a single unit in 2014. This team maintains responsibility to implement action plans in order to bring the Project into ESG compliance and have been allocated the necessary budgets and resources to do so. As a condition of financing, SZL committed to operate according to good industry practices and comply with the national environmental laws and regulations, MIGA’s 2013 Performance Standards, the ILO Fundamental Conventions on Freedom of Association and Collective Bargaining; Forced Labour; Child Labour; and Non-Discrimination, 1994 United Nation Framework Convention on Climate Change and the associated 2005 Kyoto Protocol (“UN Framework Convention”), 2004 Organization for Economic Cooperation and Development (“OECD”) Principles of Corporate Governance, the UN Convention on Biological Diversity, and international good practice to address animal welfare.

Silverlands developed an environmental and social management system (ESMS) for its first investment in Zambia (Silverlands Ranching Limited.) and used this ESMS as a template to develop an ESMS for SZL. Policies and procedures for the Environmental and Social Management Plan (ESMP) are being modified to be specific to the SZL project and to be in line with MIGA’s PS requirements (e.g., include descriptions of roles and responsibilities and reporting structures, include waste management procedures, etc.). The ESMP details the company’s plan to meet environmental and social commitments and includes measures to manage, for example, the following identified activities: storage and disposal of hazardous chemicals, water resources
management, community consultation process, human resources management, health and safety, animal welfare and veterinary practices. SZL will oversee contractors and ensure E&S commitments are followed. Monitoring is detailed in the ESMP and will be carried out for surface and groundwater ambient quality, potable water sources, biological parameters (in consultation with regulatory authorities), and noise. SZL will also monitor influx and traffic movements within the project boundaries. The ESMP, along with procedures and systems for reporting against key E&S aspects, will be implemented at the project and training on the procedures will be provided to employees. E&S performance monitoring will be submitted to MIGA.

Organizational Capacity: Since the initial investment, SZL put in place a skilled and experienced management team to implement the project. At the investment-level, a management team has been established, comprised of a manager with diverse agricultural experience in Southern Africa who is supported by external consultants and internal Fund-level expertise on E&S matters. Currently, roles and responsibilities related to E&S management are formalized at the SZL board level but are informal within the operations of the company. Roles and responsibilities are being formalized and included as part of the project’s ESMS. Adequate financial resources will be allocated on an ongoing basis to achieve effective environmental and social performance. SZL E&S requirements will be included in contractor legal agreements. The Fund has experience with MIGA’s Performance Standards for earlier investments and has shown commitment to E&S management and generally, continuous improvement on E&S matters.

SZL is in discussions with the Ministry of Health to improve access to health resources in the project area. Additional community development programs such as working with other partners to provide capacity building of small-scale farmers will be considered.

PS2: Labor and Working Conditions

Human Resources: Currently the Project employs approximately 270 employees, all local except 4 expatriates. Under the Fund’s RIC, all employees are required to have a contract. SZL reports that all employees at the Project have written contracts which are compliant with the Collective Agreement. SZL is bound by the Collective Agreement between the Zambia Farm Employers Association and the National Union of Plantation, Agricultural and Allied Workers; however there is no local membership for the national Farm Workers Union. Under SZL management, all employees have the right to join any union, as well as the ability to bargain collectively. The Collective Agreement covers job classifications, wages and wage structure, hours of work, overtime, public holidays, leave, termination, benefits, subsistence allowance, housing, protective clothing, retirement, redundancy, and disciplinary code and Union grievance procedures. The Project has developed a Human Resources (HR) policy and handbook consistent with PS 2, which is available to every employee of SZL and summarizes Zambian laws and workers’ rights, including the grievance mechanism (GM). New workers are made aware of the GM during induction and anonymous grievances can be lodged in writing in the suggestion box on site or via a dedicated phone line soon to be established.

Additionally, a workers’ committee has been set up to ensure employees have access to management to express their concerns and ideas for improving the welfare of workers and the business. The mechanics of a worker’s grievance mechanism has been initiated and will be refined as part of the current action plan. The Project does not employ minors, and this commitment is incorporated into the HR Policy by requiring workers to have National Registration Cards. SZL will ensure that all employees are paid at least if not better than the minimum wage. SZL will also oversee their supply chains as per PS 2.
Housing: The full-time staff and their families are provided with onsite housing or an allowance for off-site housing. Water is provided to onsite housing from boreholes through a communal standpipe which is not always close to the houses. The Project continues to undertake improvements to the housing as part of the expansion plans, to standards which are consistent with the IFC and EBRD Guidance Note Workers’ accommodation: processes and standards (2009).

Worker Health and Safety: As part of the ESMP, an emergency preparedness and response plan was developed and workers will be trained on it. There is currently no formal provision at SZL for health matters generally. Mobile government clinics provide testing for HIV and malaria, and the health department distributes mosquito nets annually. SZL is implementing a health program that includes first aid training and provision of first aid kits. SZL established a formal policy on HIV/AIDS which is being rolled out. This policy covers awareness training, prevention, testing, anti-discrimination, provision for collection of medication; and carrying out a health survey amongst the workforce to understand better what needs to be addressed. SZL will comply with local and national health laws in Zambia and will produce a clear formal policy with regard to healthcare and will allocate some funds for basic healthcare resources.

SZL is developing a system to record all accidents/incidents and to include root cause analysis. The project is also improving its practices for the storing, transporting, and disposing of hazardous materials. The project will undertake the following measures to ensure EHS standards are met: carry out job hazard assessment, provide adequate personal protective equipment (“PPE”) and monitor its use, ensure that staff receive regular re-training with the chemical supplying companies, carry out monitoring for compliance, and keep records of all chemicals used on the farms.

Training: The Project has brought substantial employment opportunities to an area where very few existed previously. Many of the workers have limited experience of having a formal job, so training is a vital component for SZL. As part of the ESMP, the Project has committed to provide EHS training to workers and training records are kept. Training for workers and contractors covers occupational health and safety aspects as well as environmental and social topics such as spill clean-up, prevention of water contamination, first aid, waste management, emergency response, chance finds procedures, etc. SZL’s current manager is participating in the African Training and Management Services initiative to train locals to take on management positions.

SilverStreet and SZL’s senior management have formalized a whole suite of governance policies and procedures, the ESMS, to ensure that the Project adheres to the RIC. As part of their terms of employment, SZL management have committed to the SilverStreet Capital RIC.

PS3: Resource Efficiency and Pollution Prevention

Key risks and impacts for both the existing operations and expansion have been identified in the Fund’s ESG Due Diligence Reports, in the framework environmental management plan presented in the ESIsAs, and SZL’s risk assessment and environmental and social management plan (ESMP). The ESMP for the project addresses the following:

Soil conservation and management: Soil erosion related to agriculture and future livestock activities will be minimized by using contouring, zero tillage cultivation and conservation farming techniques, and avoiding overgrazing. As the ground will be continually covered by crops and/or mulch, the loss of soil during rainfall and irrigation will be minimized. A veld management plan will be implemented based on soil and terrain mapping, and will include soil loss prevention. Soil
testing will be carried out to monitor structure and properties. A nutrient management plan will be developed in consultation with suppliers to ensure fertilizer applications are minimized.

**Surface and groundwater water quality:** Fuel storage and vehicle fueling, vehicle washing and maintenance, and storage of hazardous materials (e.g., diesel, used oil, chemicals) will be located away from water courses and will be located in a management hub which is under construction. Hazardous materials will be stored on concrete pads with secondary containment. Bunding will be constructed under diesel tanks and access to diesel will be controlled.

**Liquid and solid waste management:** Proper waste management plans are being developed and implemented for the project. These plans have included installing biodegradable toilets at worker housing. Should they be needed, future cattle dips on the farms will contain toxic effluents from the chemicals used to dip the cattle. As part of the ESMP, the Project will develop clear procedures with regards to disposing of this waste. SZL plans to construct sumps as part of the cattle dipping program and these will be located in strategic areas on the project site which are not in close proximity to underground water supplies, rivers or boreholes. Waste management plans will also address run-off, crop residue, waste feed, animal waste, and carcasses.

**Loss of vegetation:** Minimum access roads for the farming activities will be constructed and will be confined to already disturbed sites where possible. Disturbed areas will be re-vegetated with appropriate species.

**Hazardous Materials Storage:** SZL continues to improve practices to properly store and dispose of hazardous chemicals and diesel; it is constructing chemical storage facilities that will be implemented in the near future at a new management hub, and will incorporate adequate ventilation, lockable doors, appropriate chemical separation, bunded entrance, and signage. Fire extinguishers and spill kits will be housed nearby. Procedures for proper handling, storage, and disposal of veterinary medicines and waste will be included in the ESMP.

Major chemical suppliers are located far from the project, and thus SZL will have a policy of maintaining only necessary supplies of stocks for the intended use period. This approach will prevent the excessive build-up of potentially harmful supplies of stocks. Empty chemical containers will be flattened and punctured as part of SRL’s provisions for safe disposal. All engine oil that is used by SZL is sent back to the supplier for recycling. Fuel storage tanks have bund walls to contain spillage in excess of 110% of total capacity.

**Integrated pest management:** The project will develop an integrated pest management procedure committing to only using World Health Organization (WHO) approved chemicals. The use of zero tillage cultivation techniques, integrated pest management, crop rotation systems and the use of pest-resistant crop varieties (as allowed under Zambian imports) should reduce the need to use excessive amounts of agrochemicals and hence reduce the risk of potential pollution. Storage facilities for animal feed and supplements will be protected by pest traps as needed.

**Resource efficiency:** SZL is employing centre pivot irrigation systems which will have circular fields across the project site with varying areas covering about 40-100 ha. Irrigation will contribute to increased yields and each field will have a central pivot system that irrigates the crop at given times and duration according to the irrigation schedule. Water usage will be monitored to assess potential leakages and irrigation requirements will be calculated to minimize overwatering. Water usage plans will be kept to develop an understanding of long-term trends. Energy efficiency will
be assessed and areas of improvement will be identified once baseline energy usage data is collected and basic improvements at the project are carried out.

*Climate change considerations:* SZL has committed to carrying out a flow assessment of the river to determine sustainable water withdrawal rates and volumes to calculate hectares that can be cropped. SZL has indicated that the Luwombwa Farm Block is in an area of Zambia which is impacted very little by drought due to the action of the Inter-Tropical Convergence Zone and receives reasonably consistent rainfall from one year to the next. SZL has committed to not disturb dambos within the project boundary and to avoid disturbing the miombo woodland on the quartzite hills.

*Greenhouse gas emissions:* The project is connected to the national electricity grid but will have emissions related to fuel usage for farm equipment and land clearing activities. As part of its monitoring, the project will calculate GHG emissions using internationally accepted protocol. Should emissions be more than 25,000 tCO2e, GHG emission will be reported annually. The project is also committed to minimize clearing of mature forests and other vegetation types with high carbon stock.

**PS4: Community Health, Safety and Security**

SZL will ensure that other infrastructure elements on the farming unit are designed, constructed, operated, and decommissioned in accordance with good international industry practice (GIIP), taking into consideration safety risks to third parties or affected communities. The project is located within the area designated for farm block development. Potential community health and safety impacts have been identified in ESG Due Diligence Reports, the ESIA, and other E&S documentation:

*Uncontrolled bush fires:* In order to minimize uncontrolled fires on the property, especially during the dry season, firebreaks have been cut on the properties and are being maintained. The project has purchased mobile bowsers to manage fires. Reducing the build-up of ground cover is also carried out to promote a healthy mix of trees and grasses.

*Health impacts:* To complement national programs, SZL is developing plans to enhance accessibility to health services for its workers and nearby communities. Awareness and education on sexually transmitted diseases will be provided to workers and to local communities. SZL is committed to working with the Ministry of Health to develop measures to manage malaria and control vectors. SZL is also implementing HIV/AIDS policies as well as raising awareness within its workforce.

*Influx management:* SZL will collaborate together with the Provincial and District Authorities, the Chiefs and the Village Heads to address informal settlements within the project boundaries and influx which may occur in the area.

*Airstrip:* The airstrip will be maintained as required by Zambia Aviation authorities. Emergency response equipment will be onsite during airstrip use. Use will primarily be project related.

*Security Arrangements:* Fully fencing the property is not practical given its size; however the management hub, housing and grain storage areas are (or will be) fenced with controlled access points. Watchmen patrol the property perimeter on a regular basis. Training on human rights and
security is planned for the near future. SZL will formalize their security risk assessment and
security management plan in line with PS 4 requirements.

PS5: Land Acquisition and Involuntary Resettlement

Although, all four farms were acquired through willing lessee-willing lessor agreements for a 99
year period, with remaining lease period ranging from 92 to 98 years small groups (approximately
13 households / 102 people) were living or continue to live within the farm boundaries who will
require resettlement when future development activities occur within the project boundary. One
household has been resettled outside the project boundary on an agreed plot of land and replacement
housing was constructed. Compensation was carried out in line with PS 5 requirements and SZL
is actively following up on monitoring the resettlement process and outcome. SZL has committed
to prepare a Resettlement Action Plan which aligns with the requirements of PS 5 to cover future
physical resettlement and economic displacement.

PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resource

Habitat conversion: Clearing of Miombo and Chitimene (regenerating forests) is required to
prepare the land for cropping. Vegetation clearance will be confined to the circular center pivot
areas and dry land field areas, with the existing vegetation left in place in the spaces between the
pivots. The value of miombo vegetation is fairly homogenous throughout the region such that the
net impact from the vegetation clearance is likely to be minimal. The diverse riparian forest will
be left in place and the vegetation surrounding and between the pivot areas will also provide refuge
for wildlife. The presence of large patches of undisturbed miombo left within the farm area will
provide a continuous ecological corridor running between fields and links the rest to the riparian
forests that occur along the banks of the Luwombwa River. Other measures will include eradication
of alien plants as they appear, putting in place environmentally acceptable procedures for waste
management and monitoring the farm area for any new invasive plants. Natural vegetation and
rehabilitation practices will be encouraged in areas that will not be cultivated. Under previous
ownership, the GFD property was being developed as a eucalyptus plantation; SZL has commenced
converting this farm into row cropping of wheat, barley, soya beans and groundnuts whilst retaining
some of the eucalyptus. A farm management plan will be developed to identify landscape
connectivity and areas of higher biodiversity value, buffer zones (100 m from the Luwombwa
River), wildlife movement, and ecosystem services. Active management (e.g., access control,
poaching reduction, etc.) and monitoring will be carried out to maintain biodiversity values.

SZL has committed to liaise with the Provincial Forestry Officer in the Zambian Forest Department
to have commercial timber (if any) in the area surveyed and valued. SZL will engage a local timber
merchant to selectively fell and remove all commercial timber from the areas that will be designated
for clearing. Communities within the project boundaries can continue to harvest forest resources
(e.g., caterpillars and fruits) for medicinal and food purposes.

Road networks within the project will be planned in advance to minimize the project footprint. A
small single span bridge, which can accommodate heavy farm equipment, has been constructed
over the Luwombwa River within the project boundary. According to SZL construction has been
carried out using good international construction practices to avoid or minimize adverse impacts.

The Luwombwa River is part of the Upper Luapula catchment within the Serenje District of Central
Province in Zambia. The Luwombwa along with other rivers feed into the Kasanka National Park,
in which wetlands are a significant ecosystem. From the Kasanka National Park, the Luapula is
the only drainage outlet for the Bangweulu basin, and a major tributary of the Congo River (classified as an International Waterway). The catchment area for the project forms approximately 35% of the total Luwombwa River catchment (1,648 km² catchment area), which in turn is approximately 0.04% of the Congo River catchment (3.73 million km²). Given that hydrological and climatic records for the project area are very limited, SZL hired consultants to determine likely surface water resources in the area. Remote sensing data was used to study the stream and river network in the project area, and to evaluate elevation, slope and land cover. SZL has committed to carry out a water availability assessment in the next six months to determine carrying capacity and minimum flow requirements for the river (especially during the late dry season where ecosystems are vulnerable to interim flow reduction) and water requirements for the project, and will coordinate this study with the appropriate government agencies. The findings and recommendations from this study will be incorporated into the operational and monitoring plans for the project.

Kasanka National Park experiences the largest annual mammalian migration in the world, comprising of fruit bats migrating from the Democratic Republic of Congo to this National Park during the early rainy season. Taking into consideration that this protected area is about 100 km downstream from SZL, the project also commissioned a detailed study to determine if suitable bat habitat existed within the project area and to determine if water withdraw for annual cropping would adversely affect the Kasanka National Park. The findings of this study suggest that the project activities for the current phase would not have adverse downstream impacts; however, further third party agricultural development in the area could have adverse downstream effects such as changes in volume and quality of water flow or reduction in foraging habitats. SZL has committed to work with the Kasanka Trust (the body overseeing the management of Kasanka National Park), Zambia Environmental Management Agency, and other relevant government agencies on potential cumulative downstream impacts which are related to its project activities.

Loss of the primarily Chitemene woodlands and their fruiting trees to cropping areas in the project area are unlikely to have any effect on the bats as the project is outside their foraging range. SZL has committed to minimize development on the dambos and fringing riparian habitats of the Luwombwa Basin rivers and feeder tributaries within the project area. As part of the ESAP, SZL will prepare a Biodiversity and Hydrology Study which develops an overarching biodiversity conservation plan and incorporates mitigation and monitoring measures from the ESMP and downstream biodiversity study. SZL will monitor volume and quality of the Luwombwa River near the project.

Living Natural Resources (Animal Welfare): SZL is in the preliminary stages of considering plans to establish a conservation area within the project boundaries for antelope species under threat in the Kasanka National Park. A detailed plan will be submitted to MIGA prior to the establishment of such initiative and consultations with the appropriate governmental agencies and conservation NGOs will be required.

Ultimately, one of the project activities at SZL will be raising cattle for beef, a herd of approximately 800 head. It is anticipated that the stocking density on the property will be low although the available fodder and water could support higher numbers. It is anticipated that cattle will be dipped weekly for ticks, flies and other biting insects and wormed regularly. There are no poaching problems and no predatory animals in the area.

SZL will comply with Zambian legislation on animal welfare, and appropriate international standards will be applied. The project will contract a qualified local veterinarian who will visit on a regular and frequent basis, for example once a month. At a minimum, each visit will cover an
inspection of all animal housing units, and the results of any autopsies, laboratory check-ups and relevant production data must be checked.

Fluoroquinolones for veterinary use will not be used at SZL, unless an investigation from an approved laboratory has proven that another kind of treatment is not possible. If the authorities of Zambia require that special vaccinations are made, then such requirements will be complied with by SZL. Only sick animals will be treated with antibiotics, and no antibiotics will be administered as standard practice. Diseased animals are incinerated. Bio-safety of the herd will be maintained by ensuring separation of the herd from other cattle, and controlling unauthorized access.

F. Environmental Permitting Process and Community Engagement

An ESIA for large scale agriculture projects is required under Zambian Law. The ESIA for the Luwombwa Block Agriculture Project was submitted to the Zambian Environmental Management Authorities (ZEMA) in December 2014 and approval was granted on March 4, 2015. The ESIA for the proposed Conversion of Usage from Forestry to Row Cropping was submitted to the ZEMA and approval was granted on August 17, 2015. Conditions in the ZEMA approvals include undertaking an environmental audit within twelve months and not more than thirty six months after completion of the project or commencement of operations. A copy of this audit will also be submitted to MIGA. Emergency response plans are also required.

Permits have been issued by the Zambia Water Board totaling 56,600 m³/day, which is equivalent to approximately 920 ha of irrigation. An additional 34,800 m³/day (equivalent to about 566 ha of irrigation) have been requested and are waiting for review by Zambia Water Board.

Stakeholder consultation was undertaken as part of the ESIA process in August 2014 and March 2015. Meetings were held with people living near the project, employees at the project and representatives from government departments. Issues raised focused on employment opportunities, community participation, assistance providing basic services (electricity and water) to local communities, potential impacts from pesticide use, fish population impacts in the river, relocation of households and community economic activity in the project area, ongoing community access and use to the project area, and management of climate change by SZL. SZL also consulted with the Kasanka Trust, the body managing the Kasanka National Park, to share SZL’s development plans, and to discuss possible areas of cooperation to protect unique ecosystems in this area.

Consultations are ongoing with communities and a stakeholder mapping exercise has been carried out. A Stakeholder Consultation and Disclosure Plan will be developed to ensure an ongoing process and will include a grievance mechanism. A Stakeholder Committee will also be established to assist with Project information exchange among the key stakeholder groups. This Committee will include representations from SZL, villages, and NGOs, and will meet every three months. Minutes will be kept for all meetings. The grievance mechanism enables stakeholders to easily report grievances and for SZL to respond to such grievances.

G. Availability of Documentation

The documentation below is available electronically as PDF attachments to this ESRS at www.miga.org. It is also available for viewing at the following locations:
- Environmental and Social Impact Assessment for the Proposed Conversion of Usage from Forestry to Row Cropping Luwombwa Block, Serenje District, Central Province, Zambia, prepared by Kasumwa Enviroconsult & General Supplies Limited, March 2015; and


The documents listed above are available upon request by contacting Sharon Mwelwa, Silverlands Zambia Limited, HR & ESG Manager via hr@silverlandszambia.com.