



## **Environmental and Social Review Summary**

### **Silverlands Tanzania Limited**

*This Environmental and Social Review Summary (ESRS) is prepared by MIGA staff and disclosed prior to the date on which MIGA's Board of Directors considers the proposed issuance of a Contract of Guarantee. Its purpose is to enhance the transparency of MIGA's activities. This document should not be construed as presuming the outcome of the decision by MIGA's Board of Directors. Board dates are estimates only.*

*Any documentation that is attached to this ESRS has been prepared by the project sponsor, and authorization has been given for public release. MIGA has reviewed the attached documentation as provided by the applicant, and considers it of adequate quality to be released to the public, but does not endorse the content.*

Country:	Tanzania
Sector:	Agriculture
Project Enterprise:	Silverlands Tanzania Limited
Environmental Category:	B (Provisional)
Date ESRS Disclosed:	April 11, 2014
Status:	Due Diligence

#### **A. Project Description**

MIGA proposes to issue a Master Reinsurance Contract to the Overseas Private Investment Corporation (“OPIC”) in support of agricultural investments made by SilverStreet Private Equity Strategies SICAR – Silverlands Sub-Fund (the “Fund”) in up to thirteen countries in Sub-Saharan Africa. The project entails the Fund’s investment in Silverlands Tanzania Limited (“STL”), which consists of the acquisition of assets and expansion of two production centers: (i) the Selous Farms Cropping and Livestock Division (“Selous”); and (ii) the Makota Farm Poultry Division (“Makota”).

**Selous.** The Selous Farms Cropping and Livestock Division entails the acquisition in December 2013 of two contiguous farms Ifunda and Iganga, (collectively the “Ifunda Farm”) totaling approximately 1,483 hectares in Iringa, and the approximately 1,410 hectare Makete Farm, located approximately 252 km southwest of the Ifunda Farm. Prior to acquisition by the Fund, the Ifunda Farm was operated to produce annual crops, plantation crops, livestock and butchered meats; and the Makete Farm had been inactive due to a devastating fire prior to which it was used to produce annual crops. The investment will focus on improving Selous through: (i) increasing hectares under irrigation for crops; (ii) improving the infrastructure and mechanization of the farms; (iii) potentially increasing the size of the cattle herd; (iv) potentially constructing a new poultry facility; and (v) improving staff conditions, facilities, and training programs. The crop mix will include barley, potatoes, seed barley, seed maize, seed soya and seed beans.

The Ifunda Farm currently has 93 hectares of pivot irrigation which is used to grow high value seed crops. STL estimates that there is sufficient water to irrigate an additional 150 hectares. The farm also has about 300 ha of dry land which is used to grow maize and soya beans. In addition,

the farm has 4 ha of macadamia trees and 1 ha of avocados, about 130 ha of planted pastures and about 800 ha of grazing land that were home to a herd of around 200 beef cattle and 200 ewes. In addition, the farm has a dormant poultry layer operation consisting of 10 chicken houses with a total capacity of 12,000 hens. A basic abattoir and butchery are also located on the premises. The abattoir is not part of the project and was previously used by the prior farm owner and a former joint-venture partner of the prior farm owner. STL are actively working with the former farm owner's joint-venture partner to determine whether to enter into a business relationship. The current cattle operations on the Ifunda Farm are based on proof of concept work and market testing.

Makete Farm currently has 500 hectares of dryland which have been cleared and previously used to crop malting barley which is sold to Tanzania Breweries. There is the potential to increase the dryland area to 700 ha. The farm has 900 ha of grazing land, on which it has run a herd of 100 beef breeding cows and 100 ewes. The cattle and ewes were retained by the previous owner and have now been removed. Subject to the satisfactory outcome of a beef fattening trial at Makete Farm, STL may invest in a beef fattening operation which will source cattle from traditional cattle farmers within the region. STL has purchased 115 local "Masai" cattle from traditional cattle farmers within the region and is running a trial to test whether they grow and fatten well on the pastures. Currently 330 ha are planted to a variety of different types of barley, 15ha are planted with oats. Approximately 14 ha are planted to test different varieties of grass (cattle fodder) and 8 ha are being trialed with canola.

**Makota.** The Makota Farm Poultry Division is a greenfield integrated poultry project consisting of three separate business units: (i) stockfeed; (ii) day-old-chicks ("DOC"); and (iii) table eggs, with the target of building annual production over a ten year period to 120,000 tonnes of high quality poultry feed (e.g. including soya), 15.6 million DOC and 48.2 million table eggs.

The development of the stockfeed business involves the establishment of a feedmill, grain storage facilities and a weighbridge. The initial feedmill, installed in Q4 2013, has a pelleting and mixing capacity of 5 tonnes per hour. Locally grown soya beans are also processed to supply mechanically expelled soya cake as a protein source. Subject to the satisfactory growth of the stockfeed business, the initial feedmill will be replaced by a 20 tonne per hour feedmill that is expected to be operational by Q3 2015. Initial grain storage facilities will be comprised of two 2,200 tonne steel silos, with planning for an additional 10 such silos in the future. To support the feedmill and grain storage facilities, an 18m long, 80 tonne, above-ground weighbridge has been installed.

The development of the DOC business involves the establishment of a poultry breeder operation consisting of a rearing farm, layer farm and hatching facilities with the capacity to produce 300,000 DOCs per week. This involves the establishment of 9 rearing houses at three sites and 21 laying houses at seven sites. Each breeder site will have an electric fence, ablution facilities, standby generator and water tanks. The dimensions of the rearing and layer houses will be exactly the same to ensure uniformity.

The development of the Commercial Layer business involves the establishment of a commercial table egg operation consisting of a rearing farm, layer farm and packing station with the capacity to produce 30,000 trays of eggs per week. This involves the establishment of 6 rearing houses and 18 laying houses at three sites.

It is intended that the poultry operations will be split among two locations, the Makota Farm and a planned secondary site in or near Dar es Salaam (the “Dar Site”), that has not yet been identified, as hatchery and distribution center.

The approximately 313 hectare Makota Farm is located at Ihemi Village, approximately 30 km west of Iringa and 420 km southwest of Dar es Salaam. Prior to acquisition by the Fund in February 2013, the Makota Farm operated to produce flowers for export. The Makota Farm will house grain silos, feedmill, layer breeder farm, broiler breeder farm and hatchery. It is intended that the future Dar Site, at a location to be determined, will house a hatchery and feed distribution depot. Makota may also utilize some of the Ifunda Farm land on which to house a rearing farm for breeding and layer operations.

## **B. Environmental and Social Categorization**

The project is Category B under MIGA’s Policy on Social and Environmental Sustainability because the potential risks and impacts of this project are limited, few in number, site specific, and readily addressed through mitigation measures. Key social and environmental risks and impacts include disposal of carcasses, manure and wastewater management, contamination of surface and ground water, soil erosion, pesticide use and management, hazardous materials management, energy and water use and resource conservation, air emissions, transmission of communicable disease, odor and pest nuisance, occupational health and safety, workers accommodations, labor practices, security, and conversion of natural habitat. These risks and impacts are expected to be avoided, reduced or managed in compliance with local legal and regulatory requirements, applicable Performance Standards and World Bank Group (“WBG”) General and Industry Sector Environmental, Health and Safety (“EHS”) Guidelines. The E&S Category of the project is provisional and potentially subject to change upon review of additional requested information.

## **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
- PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resource

PS5: Land Acquisition and Involuntary Resettlement does not apply as all land acquired for STL’s operations was conducted through willing seller-willing buyer arrangement and the project has not been assessed to result in involuntary resettlement and/or economic displacement. The

Fund has committed that the proposed Dar site will be acquired under willing seller-willing buyer arrangement. PS7: Indigenous Peoples does not apply as the presence of indigenous territories and/or communities were not identified within the existing footprint of STL's operations. PS8: Cultural Heritage does not apply as no known archeological, cultural heritage or paleontological sites were identified within the existing footprint of STL's operations, however the Ismillia Paleolithic site is located approximately 4km from the Makota Farm. Ismillia is a Stone Age Acheulean site that includes bifacial tools, other stone artifacts and fossilized bones of mammals relating to the modern giraffe and hippopotamus. A chance find procedure consistent with PS8 will be required as part of STL's environmental and social management system ("ESMS").

In addition, the following WBG 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
- WBG EHS Guidelines for Poultry Production

#### **D. Key Documents and Scope of MIGA Review**

The following documents were reviewed by MIGA:

- *Environmental and Social Impact Assessment (ESIA) Study, Final Report, Proposed Integrated Poultry Production at Makota Farm at Ihemi Village, Mgama Ward in Iringa District, Iringa Region* (February 2014), Silverlands Tanzania Limited.
- *ESG Due Diligence Report: Selous Farming Limited* (September 2013), SilverStreet Capital;
- *Silverlands Tanzania Limited, Business Strategy* (July 2013), SilverStreet Capital;
- *Investment Plan: Selous Project – Cropping and Livestock Division* (October 2013), Silverlands Tanzania Limited;
- *Final Investment Committee Paper: Selous Farming Limited* (November 2013), SilverStreet Capital;
- *Investment Committee Approval Paper: Makota* (January 2013), SilverStreet Capital;

IFC's *Good Practice Note on Animal Welfare in Livestock Operations* and its applications to STL's operations has also been assessed during MIGA's E&S review.

A site visit will also be conducted for this project and findings will be incorporated into the ESRS. If impacts or risks not currently identified in this ESRS would be found during the site visit, or through forthcoming due diligence documentation, the ESRS will be revised; if differences are material, MIGA may re-commence the disclosure period.

#### **E. Key Issues and Mitigation**

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

*Social and Environmental Assessment:* The Fund maintains a Responsible Investment Code (“RIC”) mandating that Environmental, Social and Governance (“ESG”) due diligence, including identification and evaluation of environmental and social impacts, is carried out on each of its investments in respect of the Principles of the Funds RIC and the Performance Standards.

**Selous.** SilverStreet Capital prepared an ESG due diligence report to review compliance of Selous with the Fund’s RIC together with relevant Performance Standards PS1 – 6. PS7 and PS8 were not assessed because the land was reported to have been farmed for several decades with no permanent inhabitants or identified cultural heritage sites. The review included a site visit to the Ifunda Farm in September 2013, however the Makete Farm was not visited due to its inactive status and reported recent damage resulting from a devastating fire. The ESG report included review of the following documents: Staff and Payroll List (September 2013), Veterinary Vaccination Schedule (2013), IFC Good Practice Note on Animal Welfare in Livestock Operations (October 2006), WBG Industry Sector EHS Guidelines for Meat Processing (April 2007), UK Department for Environment, Food and Rural Affairs (“DEFRA”) Code of Recommendations for the Welfare of Animals at the Time of Killing, European Council Regulation No. 1099/2009 Protection of Animals at the time of Killing (September 2009), and List of Chemicals used on farms (October 2013). The ESG report also included an assessment of Selous against the “Five Freedoms” of animal welfare (1. Freedom from hunger and thirst, 2. Freedom from discomfort, 3. Freedom from pain, injury or disease, 4. Freedom to express normal behavior, 5. Freedom from fear and distress) provided in the IFC Good Practice Note on Animal Welfare in Livestock Operations.

Key issues identified in the ESG report included: no ESMS in place (including formal environmental, health and safety risk assessment and mitigation planning), non-compliant chemical and diesel storage facilities, no system for disposing of spent hazardous chemical containers, no testing of drinking water, no regular testing and monitoring of run-off and surface water, no formal emergency response plan, management discouraging workers from joining the union, no routine medical monitoring and blood testing of workers handling hazardous chemicals and operating spraying equipment, no personal protective equipment (“PPE”) available during cattle dipping/spraying, abattoir non-compliant with international standards, armed security guards that are not formally trained, and no formal community grievance mechanism. The ESG report includes an ESG Action Plan for Selous with recommended corrective measures to fill gaps within a reasonable period of time to comply with the Performance Standards, the RIC and good international industry practice.

**Makota.** SilverStreet Capital had an environmental and social impact assessment (“ESIA”) prepared of the proposed construction and operation of the integrated poultry operation at the Makota Farm. The ESIA was prepared to meet requirements under national laws and regulations and fulfill the Fund’s RIC mandate. The ESIA included presentation of physical, biological and social baseline information, assessment of impacts across all phases of the project, analysis of alternatives, proposed impact mitigation, and stakeholder engagement and community consultation. Major significant impacts assessed in the ESIA include: loss or disturbance to biodiversity, potential for environmental contamination, potential for contamination of surface water and groundwater resources, concerns regarding greenhouse gas emissions and climate change, increased chance of transmission of HIV/AIDS and other STDs, local disturbances, and health and safety issues to project workers.

*Management Program and Monitoring:* The Fund maintains a RIC and Corporate Social Responsibility (“CSR”) policy which it applies to each of its investments. As part of the ESG review for new investments, the Fund uses a questionnaire based on separate elements of the RIC to assign scores based on the following five criteria: Environment, Social Matters, Health and Safety, Other Social Matters, Governance, and Animal Welfare. The scoring allows for the Fund to assess, monitor improvement and track compliance over time. The Fund is focused on promoting continuous improvement in the environmental and social management of each of its portfolio company investments. Each portfolio company is responsible to the Fund to report annually on its ESG progress, including status of ESG Action Plans and implementation of community impact projects. An integrated ESG Action Plan will be prepared by the Fund to mitigate, remedy or otherwise correct the environmental and social management of STL. An environmental and social management system (“ESMS”) for STL will be developed consistent with PS1.

**Selous.** The ESG report concludes that Selous has no formalized system for assessing and monitoring environmental, health and safety risks. The Selous ESG Action Plan recommends establishing an ESMS which includes the following elements: annual ESG reporting, hazardous materials and chemicals management, hazardous waste management, pesticide use protocols, environmental monitoring, animal welfare policy, security, occupational health and safety assessment, health and safety procedures and management plans (including a communications and training plan), human resources policy and handbook, community consultation and engagement, community grievance mechanism. The Fund is committed to implementing the Selous ESG Action Plan and will develop and implement an ESMS consistent with the recommendations of the ESG Action Plan, requirements of PS1, applicable WBG EHS Guidelines and good international industry practice (evidenced through either the IFC Good Practice Note on Animal Welfare in Livestock Operations or DEFRA Guidelines for Animal Welfare).

**Makota.** The ESIA included development of an environmental and social management plan (“ESMP”) covering construction, operations and decommissioning phases which establishes measures to avoid or reduce major significant risks or impacts assessed in the ESIA. During the construction phase, the ESMP provides for specific measures to avoid or reduce risks or impacts. During the operations phase, the ESMP includes provisions requiring the establishment of specific procedures, protocols and systems for key adverse risks and impacts, particularly biosafety, veterinary health, occupational health and safety and community exposure to disease. STL will develop and integrate these procedures, protocols and systems into STL’s ESMS, in compliance with PS1.

*Organizational Capacity:* An ESMS management team has been established by STL, made up of managers with diverse experience in a variety of agricultural sectors across Southern Africa and supported by outsourced experienced technical experts in ESMS. Adequate financial resources will be provided for on an ongoing basis to achieve effective and continuous environmental and social performance.

#### PS2: Labor and Working Conditions

**Selous.** Selous employs 78 direct hire workers. Nine senior foreign (Kenyan) workers are housed at Ifunda Farm who work on a rotation of 3 months on and two weeks off. No family members

live on the farm and each resident at Ifunda Farm is provided a masonry cottage on concrete slab with a tin roof comprised of a single room and adjacent kitchen. Each cottage is supplied with electricity. The residents use shared long-drop toilets of similar masonry construction to the cottages, with ash used to control flies, and shared shower facilities. Drinking water is supplied to the cottages directly from the river, which the Selous ESG report identifies as a risk because the water is not tested and is potentially contaminated by livestock.

Eight (1 foreign and 7 local) workers are housed at Makete Farm who are provided housing constructed of tin sheeting on concrete slab. The Selous ESG report finds the housing at Makete Farm to not be suitable for the climate and recommends replacing the housing with masonry cottages. The remaining 61 workers live in the local communities. The Fund is committed to implementing the recommendations of the Selous ESG report to ensure that workers' accommodation is consistent with standards of good international industry practice, as provided the IFC/EBRD Workers' Accommodation: Processes and Standards (August 2009) guidance note.

All direct hire workers are issued contracts, are paid above minimum wage, pay 10% of salary with Selous paying 10% to match into the state run pension scheme, are covered by personal accident liability insurance in addition to workers compensation fund, are provided lunch and no child or forced labor is directly employed by Selous. No workers have been retrenched since the acquisition by the Fund and no retrenchments are planned.

Gaps in Selous' labor practices with the requirements of PS2 were identified in the ESG report with regard to: task/piece paid contract labor which may not meet minimum wage requirements, workers not issued terms of employment or a human resources ("HR") handbook, no written disciplinary process, no formal workers grievance procedure, task/piece paid contract workers accompanied by children, no formal recruitment policies with respect to non-discrimination, and active discouragement on behalf of Selous management from joining a union. The Fund is committed to implementing the Selous ESG Action Plan to develop a HR policy and staff handbook consistent with requirements of PS2, including ensuring that terms of employment (wages, benefits, hours, rest days, overtime, signed contracts, and age verification procedures) are consistent with the requirements of local legal and regulatory requirements and PS2.

All direct hire workers are provided two sets of overalls and gumboots each year. Protective gloves and masks are kept in storage rooms with hazardous chemicals. Occupational health and safety ("OHS") risk assessment is conducted informally by Selous management. Gaps in Selous' OHS practices with PS2, applicable WBG EHS Guidelines and good international industry practice were identified in the ESG report with regard to: the lack of an OHS management system (register of application laws and requirements, formal procedures to assess health and safety risks), no accident log to monitor and report on injuries, no formal emergency procedures, inadequate or lack of Personal Protective Equipment ("PPE") use during cattle dipping and pesticide spraying, lack of periodic medical monitoring for workers handling hazardous chemicals, and no HIV/AIDS policy. The Fund is committed to implementing the ESG Action Plan to ensure that Selous complies with the requirements of PS2 and applicable WBG EHS Guidelines, including: developing an ESMS inclusive of OHS risk assessment and mitigation plans, acquiring appropriate PPE for staff exposed to hazards particularly working with hazardous chemicals, implementing worker training on OHS and emergency procedures, developing an accident log, establishing written procedures and schedules for worker training in the safe

handling and use of hazardous chemicals, acquiring and locating aid kits at high risk locations and providing supervisors first aid training, and developing an emergency response plan.

**Makota.** Makota will employ approximately 40 workers during operation. Prior to the Fund's acquisition of Makota, workers reported during ESIA consultations to not being provided formal work contracts and payment schemes, clear job descriptions, or specified daily work load requirements. Makota was purchased out of receivership by the Fund. No workers have been retrenched since the acquisition by the Fund and no retrenchments are planned. All direct hire workers under STL will be issued contracts, paid above minimum wage, pay 10% of salary with STL paying 10% to match into the state run pension scheme, are covered by personal accident liability insurance in addition to workers compensation fund, are provided lunch daily, and no child or forced labor will be directly employed. The Fund is committed to implementing the ESG Action Plan to develop a HR policy and staff handbook consistent with requirements of PS2, including ensuring that terms of employment (wages, benefits, hours, rest days, overtime, signed contracts, and age verification procedures) are consistent with the requirements of local legal and regulatory requirements and PS2.

Prior to the Fund's acquisition of Makota, workers reported during ESIA consultations to not being provided PPE. Occupational health and safety risks and impacts were assessed with high significance during the construction and operations phase as part of the ESIA. These risks and impacts included accidental injuries from falls, injuries from hand tools and equipment, and collapse of building sections during construction and exposure to physical hazards, hazardous materials, and pathogens during operations. The Fund is committed to implementing the ESG Action Plan to ensure that Makota complies with the requirements of PS2 and applicable WBG EHS Guidelines, including: developing an ESMS inclusive of OHS risk assessment and mitigation plans, acquiring appropriate PPE for staff exposed to hazards particularly exposure to disease and biosafety, implementing worker training on OHS and emergency procedures, developing an accident log, establishing written procedures and schedules for worker training, acquiring and locating first aid kits at high risk locations and providing supervisors first aid training, and developing an emergency response plan.

### PS3: Resource Efficiency and Pollution Prevention

**Selous.** Key risks and impacts identified in the ESG report include: solid waste disposal, storage and management of hazardous materials, and manure and wastewater management.

Waste streams identified include empty chemical containers, used tires, used oil and animal carcasses. There is no current provision for disposing of empty chemical containers other than storage, reuse on the farm or giving away to the local community. Used tires are sold for local reuse in carts as shoes or burned. Small quantities of used oil are generated from farm vehicles which is sold locally for reuse. Diseased animals are disposed through burning in an incineration pit. Approximately 5-7 cattle per week were butchered at the abattoir. While operational, all animal remnants and waste were disposed of by the abattoir operator.

Hazardous materials stored and used include: diesel oil and agrichemicals which contain chemical agents including glyphosate, mesotrione, atrazine, azoxystrobin, tryfloxitrobin, chlorpyrifos, amitraz, deltamethrin. Chlorpyrifos (Dursban) is a toxic organophosphate pesticide which has



been scheduled for phase out by the U.S. EPA. Diesel oil is stored in a large tank sunk into concrete and housed in a roofed and locked building to deter theft. The pump is designed to capture accidental spills, however the ESG report identified risks related to underground leaking. The storage facility for hazardous chemicals is a converted and locked shipping container, with the chemicals inside not stored to prevent liquid and dry chemical mixing, no fire extinguishers, no signage or formal register of chemicals being used. The ESG report concluded that the storage facility is non-compliant. STL will develop an integrated pest management plan.

Manure generated by livestock was identified in the ESG report as a minor risk to surface water contamination due to the low stocking density of the cattle. Sheep are brought into pens at night which are designed to let dung fall below where it is collected monthly for use on the fields. Remaining liquid waste generated from livestock dipping is disposed of through short, concrete drainage channels into rock filled sumps away from surface water. Liquid waste (blood, remnants of fat and wastewater) generated by abattoir operations are washed into open pits.

The farm is not currently connected to the national grid, with electricity provided by diesel generators for housing, workshops, and irrigation pumps. Diesel oil use for electricity generation is approximately 600 litres per day. Expansion plans are expected to increase electricity use by connecting to the national grid. New equipment will be purchased once electricity is connected to the national grid with consideration for energy efficiency. Current permitted water use is estimated to be 5,000 litres per day for domestic and livestock purposes and 2,995,200 litres per day from May to December for crop irrigation purposes from the Ndembera River. Expansion is expected to increase water use to 4,450,000 litres per day for crop irrigation purposes via application to the Rufiji Basin Water Board. Increased efficiency of pivot irrigation systems is expected to increase efficiency of water needs per hectare under cultivation.

The Fund is committed to implementing the ESG Action Plan to ensure that Selous complies with the requirements of PS2 and applicable WBG EHS Guidelines, including: arranging disposal of chemical containers with suppliers, establishing a register of all chemicals used and a system of regulating and monitoring issuance, replace use of chlorpyrifos, establishing compliant storage facilities for hazardous chemicals and diesel oil, testing the diesel storage tank for leakage, monitoring surface water run-off from fields after spraying, annual monitoring of drinking water and suspension of abattoir operations until corrective measures can be implemented including installation of separators for wastewater.

**Makota.** Key risks and impacts of high significance identified in the ESIA include: soil pollution and surface and ground water pollution. Impacts to soil pollution were assessed from poultry carcasses and manure. Impacts to surface and ground water were assessed from improper disposal of carcasses and effluents generated from: runoff from poultry housing, feeding, and watering; waste storage and management facilities; and poultry processing (ammonia, sediment, pesticides, pathogens, feed additives, antibiotics, and excreta). Mitigation of these risks and impacts are provided in the ESMP and through implementation of the ESMS. Impacts resulting from the generation of wastes (poultry carcasses and manure) to soil pollution will be mitigated through use of a deep litter system that is most common with breeding operations with birds walking on the floor, cleaning and removal of manure to adequately constructed storage facilities for composting and reuse; and increased animal care to reduce poultry mortality, and the prompt collection and proper disposal of carcasses based on cause of fatality. Impacts resulting from the generation of wastewater with resultant risk of soil and ground water pollution will be mitigated

through implementation procedures to reduce and manage risks of accidental spills, storm water control, management of hazardous materials, sanitary wastewater disposal to a conservancy tank for collection and disposal, and construction and operation of an industrial process wastewater treatment system.

Current water use is estimated to be ~10,000 litres per day for domestic and building purposes. The project is expected to increase water use to ~70,000 litres per day. Water use will be reduced through implementing measures to prevent overflow of watering devices and using calibrated, well-maintained self-watering devices.

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

**Selous.** Key issues identified in the ESG report include: emergency preparedness and response, exposure to communicable disease (HIV/AIDS), community grievance mechanism and security. An emergency preparedness and response plan has not been developed and no formal procedures are in place. Selous relies on assistance from government sponsored programs and has not developed an HIV/AIDS policy. There is no formal community grievance mechanism. Security guards were armed and lacked requisite training. The Fund is committed to implementing the ESG Action Plan to ensure that Selous complies with the requirements of PS4 and applicable WBG EHS Guidelines, including: conducting a risk assessment and developing an emergency response plan including procedures for impacts occurring or migrating off-site, developing an HIV/AIDS policy and training program for staff, developing a formal community grievance mechanism, and disarming security guards.

**Makota.** Key risks and impacts of high significance identified in the ESIA include: security, increased risk of STDs and HIV/AIDS, and spread of poultry ailment and pathogens. Biosecurity risks, including the transmission of disease from poultry to humans could be a risk factor. The ESIA identifies the main zoonotic diseases associated with poultry as caused by campylobacter and salmonella species, which are bacteria found in poultry manure. Viruses such as H5N1 strain of avian influenza is also a risk, as well as respiratory hazards with potential disease transmission and infection through the lungs. The ESMP proposes to mitigate these risks through mandated use of proper PPE, regular medical testing of employees, establishment of biosafety protocols, control of animals, equipment and personnel entering the facility (including quarantine periods), and establishment of a laboratory health program supported by veterinary and laboratory capability. STL will incorporate these biosafety mitigants into integrated ESG Action Plan STL will develop and integrate into STL's ESMS consistent with the requirements of the Performance Standards and relevant EHS Guidelines. The presence of increased staffing, high value equipment and other materials is assessed to attract thieves to area. The ESMP recommends mitigation that includes provision of 24 hour security services and appropriate fencing facilities and vulnerable areas. The Fund is committed to ensure that no security guards will be armed with fire arms.

#### PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resource

**Selous.** Ifunda Farm and Makete Farm comprise a total area of approximately 2,900 hectares, which contain the following natural and modified:

- Annual crops (~780 hectares)

- Plantation crops (~25 hectares)
- Pasture (~425 hectares)
- Grazing lands (~1,470 hectares)
- Wetlands (~200 hectares)

Habitat conservation efforts include retention of approx. 150 Ha of wetland in two patches, preservation of indigenous water berry trees, and retention of bush cover on a ridge. The ESG report finds that the wetlands provide habitat to many species of waterfowl. The Fund is committed to conducting a biodiversity assessment.

**Makota.** Makota Farm comprises an area of approximately 313 hectares, surrounded by villages, containing the following natural and modified habitats: woodland (scattered trees and shrubs), grassland, farmland, structures, pond and riverine vegetation. All vegetation identified on the farm, regardless of habitat group, was found to be common, widespread and recorded as Least Concern by the IUCN. Uncultivated parts of the farm have been used for livestock grazing by area villagers. No species of large mammals were recorded on the farm, and among the 11 species of small mammals (dominated by rodents), 50 species of birds, eight species of reptiles, and three species of amphibians identified, all are recorded as Least Concern by the IUCN. 30 species of invertebrates were identified, however conservation statuses for most trapped species are not well documented. An analysis of alternatives was conducted as part of the ESIA. Where impacts could not be avoided with regard to site selection for construction of new rearing, laying, hatchery and feedmill complexes, impacts will be mitigated through implementation of the ESMP, including minimizing clearing and replanting, using indigenous species.

#### **F. Environmental Permitting Process and Community Engagement**

**Selous.** Two water permits in the name of STL for Selous operations, (i) 5,000 l/day for livestock and domestic use from unnamed swamp, and (ii) 2,995,200 l/day from two points from Ndembera river from May to December for crop irrigation purposes.

Selous has maintained a budget to spend on community projects. On an annual basis, Selous has provided 4.5 tonnes of maize and beans to a local orphanage, construction material to build classrooms at local schools and installed water pumps in neighboring communities. STL plans to establish an annual budget which will be used for social responsibilities in the community. Once a budget is known, STL will then engage community leadership on their priority needs, rather than impose something on the community e.g. assistance in health facilities, schooling needs, roads, etc. On the agricultural side, outgrower schemes are planned for producing crops that are required by chicken feed processing plant. STL plan to utilize the government extension service, and support training of farmers, by identifying lead farmers to demonstrate good agricultural practices perhaps by using demo plots on identified lead farmer fields.

**Makota.** A working committee has been established to assist the local community to provide domestic water to the nearest village where water is scarce during the dry season, there is a spring which is maintained below the storage dam which flows perennially to supply water to another village that is further away. The development of the project at Makota has already had an

impact on the local community as the farm has been purchasing soya from growers around the farm during current harvesting season (June-August). The management at Makota have worked with the local NGO's who have been trying to encourage small-scale farmers to grow soya alongside maize.

#### **G. Availability of Documentation**

The documentation listed below is available electronically as PDF attachments to this ESRS at [www.miga.org](http://www.miga.org).

- [\*Environmental and Social Impact Assessment \(ESIA\) Study, Final Report, Proposed Integrated Poultry Production at Makota Farm at Ihemi Village, Mgama Ward in Iringa District, Iringa Region\*](#) (February 2014), Silverlands Tanzania Limited.

It is also available for viewing at the following location:

Silverlands Tanzania Limited  
Farm Number 960  
Ihemi Village  
Iringa  
Tanzania