



Environmental and Social Review Summary

Chobe Agrivision Company Ltd.

This Environmental and Social Review Summary (ESRS) is prepared by MIGA staff and disclosed in advance of the MIGA Board consideration of 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 the MIGA Board of Directors. Board dates are estimates only.

Any documentation which 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:	Zambia
Sector:	Agribusiness
Project Enterprise:	Chobe Agrivision Company Ltd (Amasenga Farm)
Environmental Category:	B
Date ESRS Disclosed:	May 11, 2012
Status:	Due Diligence

A. Project Description

MIGA entered into a Master Contract (MC) in May 2010 with Chayton Atlas Investments of Mauritius (“Chayton Atlas”), to support planned agribusiness investments into existing farming operations in Zambia and Botswana. Chayton Atlas has recently made an equity investment in Chobe Agrivision Company Ltd (“Chobe”) to acquire four farms (Amasenga Farms) which are adjacent to its existing investment project in the Mkushi farm block in the Central Province of Zambia. Capital expenditures are planned for operations and improvements, including the expansion of irrigation systems. The acquisition of Amasenga Farms represents the second investment project to be underwritten under the MC, the first being the farms of Whispering Hope and Parklands. Please see [ESRS for first investment](#).

The four existing farms of Amasenga, have a combined land area of 1,590 hectares (Ha) of which 765 Ha will be irrigated once central pivot irrigation systems are installed. Immediate irrigation water requirements will be supplied from existing water rights of the Masebe Dam on the Munshiwemba River. This dam is located on Whispering Hope and Parklands farms (which comprise of the first investment under the Chayton Master contract. The dam is owned by the Munshiwemba River Investment Company (MRIC), a joint venture between Chobe Agrivision and four other separately owned adjacent farms. A night storage dam will be constructed on Amasenga farm for irrigation purposes. Water will be transferred from the Masebe dam to the night holding dam of 1,837.5 M³ via underground pipes. Future water supply will be sourced from the proposed



Munishiwemba Intermediate dam.¹ The farm intends to crop wheat and soya. A contract farming business acquired with the first two farms in 2011 will provide machinery and equipment services to this new farm. The farms and the land to be used for staff housing (8km from farm) were acquired through willing buyer and seller negotiations within a voluntary land market. No dwellings exist on the acquired land and there was no economic displacement.

B. Environmental and Social Categorization

This project is categorized B under MIGA's Policy on Social and Environmental Sustainability, because the potential social and environmental impacts are limited, few in number, site-specific, largely reversible and readily addressed through mitigation measures. The expected risks and impacts are related to liquid and solid wastes, soil compaction and erosion due to the use of heavy machinery; agro chemical storage and use; and social issues related to workers health and safety and community health and safety related to increased traffic and the use of security guards. Water user rights will also be assessed as the farm intends to expand its crops under irrigation.

C. Applicable Standards

While all Performance Standards are applicable, based on our current information it is expected that the investment will have impacts which must be managed in a manner consistent with the following Performance Standards:

- Performance Standard 1: Social and Environmental Assessment and Management System
- Performance Standard 2: Labor and Working Conditions
- Performance Standard 3: Pollution Prevention and Abatement
- Performance Standard 4: Community Health, Safety and Security

The project is not expected to trigger PS 5, PS 6 and PS 7. PS8: Cultural Heritage is not triggered except for the need to implement "chance finds" procedures.

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

- World Bank Group General EHS Guidelines
- World Bank Group Industry Sector EHS Guidelines for Annual Crop Production

¹ Two other larger dams will be constructed on Whispering Hope and Parklands farms once water rights are granted. Separate ESIA's have been developed for these two new dams, Munshiwemba Intermediate dam and Whispering Hope II dam and a separate ESRS will be written to explain the impacts of the new dams. Water user rights will also be assessed as the farm intends to expand its crops under irrigation through the ESRS.



D. Key Documents and Scope of MIGA Review

A MIGA Social and Environmental (S&E) specialist visited the project site in February 2012 and met with project staff and management. In addition to the site visit, the Definitive Application for a MIGA Guarantee and other communication with the project and sponsor, MIGA has reviewed the following documents:

- Environmental Impact Statement, September 2011, Whydah Consulting Ltd
- Workplace Health and Safety Policy Statement, February 2011
- Environmental Policy Statement, March 2011
- Chayton Atlas Agricultural Company: Response to Questions on EIS December 2011
- Chobe Agrivision Ltd Recruitment Policy and Procedure, April 2011
- Chobe Agrivision Ltd Human Resources Policy and Procedures Manual (3rd January 2012)
- Chobe Agrivision Ltd Conservation Activity Manual, including: Nutrient Management Plan; Woodland Management Plan; Irrigation Water Management Plan and Pest Management Plan, March 2011
- Chobe Agrivision Ltd Traffic Management Plan, March 2011
- Chobe Agrivision Ltd Occupational Health and Safety Procedures, March 2011
- Chobe Agrivision Ltd Emergency Preparedness and Response Plan, March 2011

E. Key Issues and Mitigation

PS1: Social and Environmental Assessment and Management Systems

Chobe has developed an environmental policy and a worker health and safety policy to guide its agricultural investments in Zambia. As part of its Social and Environmental Management System (SEMS), Chobe developed the following manuals/plans.

- Conservation Activity Manual, including: Nutrient Management Plan; Woodland Management Plan; Irrigation Water Management Plan and Pest Management Plan
- Traffic Management Plan
- Human Resources Policy and Procedures Manual including Employee Grievance Mechanism 3rd January, 2012
- Occupational Health and Safety Procedures
- Emergency Preparedness and Response plan (EPR)
- Community Grievance Mechanism

For this specific project an Environmental Impact Statement (EIS) including an Environmental and Social Management and Monitoring plan (ESMMP) was completed and submitted to ZEMA for approval in September 2011. The approval notice is still outstanding. An EIS is required for land clearing for large agricultural developments and



for irrigation developments exceeding 50ha in order to comply with host country requirements².

A set of key indicators to monitor and evaluate potential adverse social and environmental project impacts has been developed. Annual monitoring reports will be submitted to MIGA, ZEMA and Chayton Atlas. Quarterly lender reports are prepared by the Chayton Africa office with input by the farm managers

The on-site farm managers and Human Resources officer are familiar with the provisions of the ESMMP, committed to its implementation and will receive clear guidance and training as necessary from Chobe and Chayton senior management. An Environmental Health and Safety officer will be recruited shortly.

Chobe has a strategy for building capacity in agriculture and the policy is to source, recruit and develop a pool of the best trained Zambian agriculture professionals. The company intends to develop talented Zambian graduates to take over key management positions by year 5 of the investment. An extensive training program is in place in the following areas: irrigation; chemical handling and spraying; electrics; health and safety; HR; driving and management. Further training programs will be developed as the company continues to expand operations.

PS2: Labor and Working Conditions

During the construction phase the farm is expected to employ approximately 100 staff from contractors, 50 to 100 fixed-term contract employees and up to 30 Chobe Agrivision permanent staff. During operations the farm will directly employ approximately 15-20 people in keeping with an increasingly mechanized and computer-driven agricultural industry. International senior management staff already employed on Whispering Hope and Parklands farms will also manage Amasenga farm. It is anticipated that wages and benefits will be above the national minimum and no lower than sector or countrywide commercial standards. A human resources manual consistent with the national law and PS2 has been developed and submitted to MIGA and covers areas such as recruitment and selection policy; retrenchment policy and procedure and the grievance procedure. Contractors will also be obliged to comply with Chobe's HR manual and OHS policy.

During construction and operation, the farm will be operated according to international good practice in terms of safety, working conditions and other relevant aspects. Appropriate Personal Protective Equipment (PPE) is provided to all staff including contractors. Training is provided prior to each spray season to train staff on chemical handling, application and disposal. An Emergency Preparedness and Response (EPR) plan has been developed and implemented for life and fire safety, and hazardous spills or

² The Second Schedule, Section 6 of the Environmental Impact Assessment Regulations of 1997, as recently reformulated under the Environmental Management Act of 2011 to replace the Environmental Protection and Pollution Control Act of 1990 and 1999 demands an environmental impact assessment (EIA)



accidents. Occupational Health and Safety (OHS) guidelines have been developed to include all operations on the farm and address risks related to pesticide and fertilizer handling (including chronic exposure), heavy machinery operations, confined spaces such as grain silos, etc. The company has also implemented an accident and incident reporting system which is managed by the administration office and senior managers. Along with these, the ESMMP includes measures to mitigate potential health and safety impacts during operations and construction of the new night storage dam and other construction activities.

PS3: Pollution Prevention and Abatement

The ESMMP includes measures to mitigate potential pollution of soil, surface water and ground water related to liquid waste, pesticides, fertilizer usage and irrigation. All support services for the new acquisition will be provided from the central location on Whispering Hope farm including refueling vehicles, fuel storage, vehicle washing site, vehicle maintenance, etc. The designated vehicle washing area is in a suitable location with an adequate collection, separation and drainage system. The used oil storage requires upgrading including secondary containment in case of leaks and spillages. The lubricants store requires additional ventilation. Spill kits have been ordered. Sewage is collected in septic tanks that adequately soak away from the farm and staff accommodations use pit latrines which will be improved in line with international good practice.

The current solid waste management arrangements at the Whispering Hope are inadequate and a more suitable location for solid waste disposal will be found away from farm buildings and houses. Glass bottles will be recycled and medical waste from the on farm clinic will be collected and transferred to a registered medical waste disposal facility. Chemical containers will be carefully washed and buried where this does not present risks to people or the environment and in line with EHS and Food and Agriculture Organisation guidelines. Chobe is investigating if it is possible to return empty containers to the supplier. Consumables such as used fertilizer sacks, oil filters and used protective clothing will be incinerated in a ZEMA approved incinerator with the remains transferred to a designated refuse pit. A designated site is available as a storage area for scrap parts.

An integrated pest management plan has been developed. Only World Health Organisation (WHO), approved chemicals will be used. Agro-chemicals are stored in a central location, which is locked and has adequate signage, and inventory is tracked. Some improvements will be made in the coming months, including extra ventilation, and the introduction of pallets to lift the chemicals off the floor. Staff will be trained before each spraying season and will be provided appropriate protective clothing. Regular bore hole testing is carried out to ensure there are no signs of pollutants and water filters are being installed along with ultra violet lights where necessary to ensure the water meets WHO standards for potable water. The use of zero tillage cultivation techniques,



integrated pest management, crop rotation systems and the use of pest-resistant crop varieties, should reduce the need to use excessive amounts of agrochemicals and hence reduce the risk of potential pollution.

Fuel is delivered to the farm by a licensed third party. Diesel fuel is stored in a tank located in a designated fuel store room with secondary containment. Kerosene is stored in a tank at the Whispering Hope farm and a bund will be constructed to ensure that the storage area has secondary containment in case of spillage. Used oil is collected by a licensed third party. A backup generator is housed in a separate facility with appropriate ventilation in place and access is restricted to dedicated personnel. Emissions from farm machinery will be managed in line with the EHS Guidelines. The EPR plan provides details of how to respond to an accident, spillage and emergency situation and spill kits are being purchased.

Soil erosion will be minimized with the use of the zero tillage cultivation technique which involves maintaining ground cover, no ploughing and the use of direct drilling and targeted fertilizer applications. As the ground is continuously covered, the loss of soil during rain fall and irrigation is minimized.

Water availability in the dry season will be managed through the use of a series of dams. One night storage dam will be constructed on the farm in line with international good practices for EHS and OHS. Estimated water needs for anticipated crop yields are in line with EHS guidelines.

PS4: Community Health, Safety & Security

The site is located within the Mkushi farming block and away from any towns or villages. There are no communities living on Amasenga farm. The impacted surrounding communities in the Mkushi farming block are commercial farmers who access water for irrigation from the Munshiwemba River as well as staff who work on these farms and their families.

A Traffic Management Plan guides staff on safety and security when operating machinery in order to avoid accidents on site. Fencing will be erected around the perimeter of the property, and unarmed security guards will be stationed at the main entrances. Signage will be placed around the dams to advise of deep water and that no swimming is allowed. The dam has been designed in line with international standards and considering a catastrophic flood event. No communities are living in direct path of the dam in case the wall breaches.

A limited supply of first aid is available on the Whispering Hope farm clinic managed by a qualified health worker and which the staff working on the Amasenga farm can access. Malaria testing can be carried out here and drugs provided. Data will be collected on



diseases and if an increase in water borne diseases is noted as a result of the increase in water bodies on the farms, appropriate action will be taken to reduce these diseases.

F. Environmental Permitting Process and Community Engagement

For this specific project an EIS was completed and submitted to ZEMA for approval in September 2011. An EIS is required for land clearing for large agricultural developments and for irrigation developments exceeding 50ha in order to comply with host country requirements³.

Public consultation and community engagement has taken place in order to discuss the details of the project and the impacts on the local community through the EIS process. A meeting was held on 20th October 2011 with 10 people from the immediate farming community whose farms could be impacted by the increase in irrigation needs on Amasenga farm. The community raised concerns regarding the following:

- i. The need to consider Munshiwemba river users, including the power utility company ZESCO and the impacts the increased irrigation will have on their farming activities
- ii. The need to quantify the baseline figures for the usage of pesticides, catastrophic flood impacts and land clearing in order to clearly determine the possible impacts of the farm on the environment
- iii. The need to do more exhaustive catastrophic failure assessment for the proposed night storage dam on the Misenga stream

In response to concerns under (i) above, Chobe has obtained water flow statistics from various entities including the members of the Ishiba Dam syndicate, as well as the Water Board. This data indicated that on average there was sufficient water in the catchment to serve the needs of this farm and other users in the area; however, at the request of the Water Board it has been decided to form a steering committee to undergo further studies. Chobe, along with other affected farmers within the community will be members of the committee. The role of the committee is to facilitate the water board consultant who will undergo the studies; however, the water board has responsibility for interpreting the results and allocating water rights accordingly. Community consultations will be ongoing where information will be shared regarding the results of the studies.

In response to the concerns under (ii), a dedicated person within the Chobe team has been appointed to oversee the quantification of these issues including quantifying the baseline figures. In response to (iii), a representative from the water board visited the farm and verified the catastrophic failure response and deemed it satisfactory. Training has been provided to staff and families on what to do in case of dam failure.

³ The Second Schedule, Section 6 of the Environmental Impact Assessment Regulations of 1997, as recently reformulated under the Environmental Management Act of 2011 to replace the Environmental Protection and Pollution Control Act of 1990 and 1999 demands an environmental impact assessment (EIA)



A grievance mechanism is in place for community members to discuss issues with management. This is done via a formal process whereby a grievance application form can be completed and items are dealt with at Chobe's monthly executive meetings which includes Chobe and Chayton senior management. If the grievance is sent to Chobe's attorney's they will respond directly following consultation with Chobe.

G. Availability of Documentation

The following documentation is available electronically as PDF attachments to this ESRS at www.MIGA.org, <http://www.chaytonafrica.com>, local administrative offices and Chobe farm offices.

- [Environmental Impact Statement](#) (including Environmental and Social Management and Monitoring plan – ESMMP), September, 2011

The Corporate Social Responsibility policies of Chobe can be made available upon request to Zaida Adams at Chayton Capital, Zaida.Adams@Chaytonafrica.com