

## ADDAX BIOENERGY<sup>1</sup>

**Region:** Africa

**Country:** Sierra Leone

**Crop/Feedstock:** Sugarcane

**Practices:** Consultation (CO); Mapping of customary land rights (MR); Fair compensation to landowners/users (FC); Contracts with local goods and service providers (CN); Subsistence plots (SP); Trainings on good agricultural practices (TR); Development or improvement of energy infrastructure (DE); Provision of energy for local or domestic use (PE); Training and education programmes (TE); Gender-sensitive corporate conduct (GC); Gender-related corporate policies and programmes (GP)

**Issues:** Access to Land; Income Generation and Inclusion of Smallholders; Local Food Security; Energy Security and Local Access to Energy; Community Development; Gender Equity

Addax Bioenergy<sup>2</sup>, a subsidiary of the diversified energy group of companies, the Addax and Oryx Group, is developing a greenfield integrated agricultural and renewable energy project in Makeni in central Sierra Leone, which will produce anhydrous fuel ethanol from sugarcane (ethanol or bioethanol) and electric power. The project builds on the opportunity presented by a growing market for biofuels in Europe and Africa as well as preferential trade agreements and suitable climate and lands in Sierra Leone. The project will be a ground-breaking initiative in that it integrates environmental and social criteria at all levels of its business model, combining a profitable financial investment with a truly sustainable operation.

Addax Bioenergy has conducted an extensive analysis of the environmental, social and health impacts of the project (ESHIA) including fourteen specialist studies. The ESHIA process is compliant with the Performance Standards of the International Finance Corporation (IFC), as well as the Roundtable on Sustainable Biofuels (RSB) and Bonsucro standards. In addition, through this process Addax Bioenergy has introduced a new standard regarding specialist studies on fish and greenhouse gases in line with the European Union Renewable Energy Directive (EU RED).

<sup>1</sup> The information included in this document is based on information provided directly by the producer, which was not verified by the Food and Agriculture Organization of the United Nations (FAO)

<sup>2</sup> [www.addaxbioenergy.com](http://www.addaxbioenergy.com)



Stakeholder engagement and public disclosure have been very important features during the execution of the ESHIA and project development. In accordance with international standards, all draft reports were released for public review, and the key findings were presented to all interested and affected parties at the national, provincial and local levels.

In support of the ESHIA analysis, Addax Bioenergy undertook satellite, aerial and ground surveys and made use of geographic information systems (GIS) and digitized mapping. The plantation fields and factory layouts were designed in parallel with the ESHIA process to minimize impacts on biodiversity, population centres and food-producing areas. The use of GIS has greatly improved the precision of Addax design and engineering as well as assisted in socio-economic assessments.

Based on the ESHIA, Addax Bioenergy Sierra Leone (ABSL) has developed a Social and Environmental Management Programme (SEMP), with the following objectives:

- Ensuring the project is compliant with applicable national environmental and social legal requirements;
- Ensuring the project is compliant with applicable environmental and social policies of its lenders;
- Outlining the different types of measures required to prevent, minimize, mitigate or compensate for adverse environmental and social impacts and/or to enhance project related beneficial impacts; and
- Addressing capacity building requirements to strengthen its environmental and social capacities if necessary.

The ABSL commercial roll-out schedule will take place over a five-year period, and the SEMP has been aligned to this schedule. The fundamental principle of the SEMP is to ensure that various individual Environmental and Social Management Plans (ESMPs) are established to deal with various impacts and aspects of the project. The SEMP, and the documents prepared in support of it, represent the company's commitment to address and manage the potential negative and positive impacts associated with the project, and define the standards and guidelines to be achieved in terms of environmental legislation, policy and standards. They also outline management structures to be implemented for all phases of the project, and management actions or design interventions that may be required to allow significant negative impacts to be "designed out".

**Issue:** [Access to Land](#)

**Practices:** [Consultation \(CO\)](#); [Mapping of customary land rights \(MR\)](#); [Fair compensation to landowners/users \(FC\)](#);

In parallel with the ESHIA process, ABSL commenced a public land lease process consisting of two layers of documentation (Land lease and Acknowledgment Agreements). The invention of Acknowledgment

Agreements including direct payments to traditional landowners is a novelty in Sierra Leone.

A draft land lease agreement was developed by Sierra Leone attorneys. To ensure a fair and transparent process two law firms were engaged, one to represent Addax Bioenergy and one selected by the communities and Chiefdom Councils to represent their interests and to ensure that the lease agreements were well understood by all affected. Later two law firms representing the project's lenders also reviewed the lease documents and the lease process.

The land lease draft was discussed and negotiated in several meetings over a period of eleven months. It was first introduced to the Districts and Chiefdom officials and traditional landowners, who in turn were tasked with discussing the document further with their communities. Meetings were subsequently held with affected villages. Invitations to meetings were sent out to landowners and transport costs were provided to attend meetings. During the period following the meetings, stakeholders were encouraged to send their questions and comments relating to the lease agreement to their lawyer for further discussion with Addax Bioenergy.

The land lease documents were also disclosed as part of the public disclosure of the Addax Bioenergy ESHIA documentation. A last round of meetings at District and Chiefdom level was held before the final signing of the lease. The land leases were officially registered in the Office of the Administrator & Registrar-General. Land lease payments were made to the District Administrator and are split accordingly between landowners, Chiefdom Councils, District Administrations and the Government of Sierra Leone. ABSL has ensured public authorization given by landowners to Chiefdom Council to sign on their behalf. The direct payments to landowners are public and transparent and their share in the land lease is fifty percent.

As part of the land lease process ABSL has introduced Acknowledgment Agreements (AA), which are signed directly with traditional landowners who

acknowledge Addax Bioenergy’s rights under the land leases. In return they receive an annual direct rent payment. This is the first time that landowners’ rights are contractually confirmed by a company in Sierra Leone. ABSL is conducting a survey of village boundaries for fair compensation to the traditional landowners by mapping of customary land title and land tenure. 100 percent of the annual AA monies go to the landowner bringing their total share in the lease monies to sixty-four percent (land lease plus AA monies).

Addax Bioenergy has established a formal grievance mechanism procedure to receive and facilitate resolution of the affected communities’ concerns and grievances about the proponent’s environmental and social performance. Furthermore, Addax Bioenergy has established Community Liaison Offices to ensure local people have the opportunity to make suggestions or lodge complaints. This allows Addax Bioenergy to react to issues as they arise. Addax Bioenergy will address concerns promptly, using a transparent process that is culturally appropriate and readily accessible to all segments of the community at no cost. The mechanism will not impede access to judicial or administrative remedies.

**Main challenges encountered:**

- No country maps available.
- Lack of documentation on traditional landownership.
- Lack of documentation on traditional landowners’ rights.
- High illiteracy rate among Sierra Leoneans.

**Issue:** Income Generation and Inclusion of Smallholders

**Practice:** Contracts with local goods and service providers (CN);

- People or households affected by the project are prioritized for job opportunities.
- Addax Bioenergy seeks to create lasting opportunities for local farmers by implementing contract farming schemes and exhorting farmer cooperatives to grow more food crops also on fallow land. The long term goal is to foster the

development of Farmer Based Organisations and Agricultural Business Centres which is in line with the Government of Sierra Leone’s Smallholder Commercialisation Programme which is the prioritized agricultural programme in the country.

**Main challenges encountered:**

- Lack of capacity;
- Low levels of education at all levels;
- High levels of illiteracy;
- No skilled labour;
- Low tech in agriculture; and
- Limited resources available.

**Issue:** Local Food Security

**Practices:** Subsistence plots (SP); Trainings on good agricultural practices (TR)

As a part of its SEMP, Addax Bioenergy has created a Farmer Development Programme (FDP). The FDP is the largest food producing project in Sierra Leone preparing more than 2 000 ha of community fields for directly affected communities in the project area. For this programme Addax cooperates with the Food and Agriculture Organization (FAO) of the UN, the International Institute of Tropical Agriculture (IITA) and the Ministry of Agriculture and Food Security (MAFFS).

The FDP includes a Farmer Field and Life Schools (FFLS) training programme, the primary objective of which is twofold:

1. Ensuring that households affected by the project have sufficient land and agricultural knowledge to mitigate potential economic displacement; and
2. Enhancing food and livelihood security. In particular, the FFLS farmer training programme will enable about 2 000 local farmers to improve productivity of their food crops (e.g. one out of six persons affected by the project).

Specific objectives of the FDP include:

- Introducing improved planting and crop management methods;
- Using local materials for soil improvement and crop protection;

- Sensitization on basic health and sanitation issues;
- Mobilizing local funding and generating income; and
- Providing improved planting materials.

The FDP is regarded as a priority for Addax Bioenergy's project and will be used to support households and communities who are directly affected by the project, including the landowners leasing land to Addax Bioenergy and others using these lands. All community members residing within the boundaries of the development area of the project are eligible to participate in the FDP. The FFLS has already been implemented and the first one hundred and twenty participants graduated in February 2011.

The FDP consists of several components:

- I. Firstly, there is a farmer training component. The FFLS groups will consist of about twenty-five to thirty persons per farmer school. One participant per hectare of each affected community will be invited to participate. Addax Bioenergy expects to organize between seventy and eighty FFLS groups. Each FFLS will have a Chairperson, Treasurer, Secretary and Women's Representative elected by the group. During the wet season, inputs to the FFLS will include lowland rice seed, cassava planting materials, fertilizer and some tools. Each FFLS group will also have access to a motorized thresher. Vegetable seeds may be made available for home gardens in the wet and dry season subsidized by the project. During the dry season, the groups will continue the FFLS and have support that could include sweet potato stems and other dry season planting materials. Apart from mechanical land preparation, farmers will be in charge of the management of the FFLS plots, with the Master Trainer providing backstopping.
- II. Secondly, the FDP has a livelihood component. This component will focus on building livelihood skills for community members through FFLS activities such as trainings on malaria, HIV/AIDS, nutrition, literacy and organizational management.
- III. Thirdly, the FDP has a land access and land

preparation component. Addax Bioenergy endeavours to ensure that the FDP programme provides access to sufficient land and increased farming skills for the people affected by the project. Depending on the size of the affected community, the project will prepare a piece of land that has been identified and delineated by the village. The precise amount of land to be prepared will be based on the needs of the village and this will be determined during a household survey to be conducted in each village. The amount of land will vary from village to village since it will be dependent on the extent to which each individual household is affected by the project. It is estimated that the project will need to prepare about 2 000 ha of community fields for directly affected communities in the project area.

- IV. Finally, a fourth component consists of inputs for the FDP and FFLS to be provided by the project.

#### *Main challenges encountered:*

- Lack of education at all levels;
- Limited awareness of the importance of nutrition;
- Low technologies in agriculture;
- Limited resources available (seeds, fertilizer, etc.);
- Lack of agricultural diversification;
- Minimal use of agricultural potential by local farmers; and
- Lack of interest in improving their own farming situation.

**Issue:** Energy Security and Local Access to Energy

**Practices:** Development or improvement of energy infrastructure (DE); Provision of energy for local or domestic use (PE);

Until the recent commissioning of the Bumbuna dam, only the capital Freetown benefited from public power supply whereas the rest of the country had to rely on generators. Most of the energy produced by Addax from bagasse will be produced during the harvesting period, supplementing the lower hydropower capacity in the dry season. The waste product from the

sugarcane, known as “bagasse”, will be used to fuel steam turbines, generating up to 30 megawatts (MW) of electricity, of which up to 15MW will be sold into the domestic power grid through a Power Purchase Agreement (PPA) with the National Power Authority (NPA), backed by the Government of Sierra Leone (GoSL). Addax Bioenergy will feed its excess power into the main high voltage line that crosses the plantation area. The distribution network is managed by the National Power Authority who will purchase the power on behalf of its end users.

**Main challenges encountered:**

- Lack of electrical infrastructure; and
- Unstable power supply, with frequent electricity shortages.

**Issue: Community development**

**Practice: Training and education programmes (TE)**

- The Stakeholder Engagement Plan (SEP), is an inclusive and continuous process between ABSL, the people affected by the project and other stakeholders and encompasses a range of activities and approaches, including a formal Grievance Mechanism spanning the entire life cycle of the project.
- One of the goals is to ensure that proposed development programmes lead to income generating activities which can be sustained without long term support from the project.
- Special programmes and plans such as the Community and Skills Development Plan and Community Health and Safety Management Plan are under development and will target community development and skills, as well as health and sanitation. Both plans will be implemented together with the communities affected by the project, local authorities and NGOs. Apart from health and sanitation, the following key themes are likely to be included: early stage funding (micro funding) and training in entrepreneurship, literacy, basic accounting and the establishment of Community Trusts; enterprise development services for rural companies and local economic

growth; environmental protection and environmental education; provision of clean renewable energy such as ethanol or biogas stoves; water resource management and drinking-water supply; and household livelihood diversification strategies.

- ABSL is building roads and infrastructure in the project area also for public usage.

**Main challenges encountered:**

- Lack of infrastructure in general. Infrastructure deteriorated significantly during the civil war;
- Post-war reconstruction has been limited due to lack of capacity;
- Transport infrastructure has been neglected; the few existing roads are in very bad condition;
- Low levels of education at all levels;
- Limited knowledge of health and sanitation issues;
- Lack of access to water;
- Lack of skilled labour;
- High unemployment especially youth unemployment; and
- Rural impoverishment.

**Issue: Gender equity**

**Practices: Gender-sensitive corporate conduct (GC); Gender-related corporate policies and programmes (GP)**

Addax Bioenergy is sensitive to the marginalisation of women and to their lack of effective participation in the economic, social and political life. Inequalities continue to exist between women and men and they represent a cost to development. Addax is relying on managing all gender issues in the SEMP programme and through its human resources policies and management practices.

Addax is actively seeking to hire women in all positions, especially prominent leadership positions, and applications from women and minorities are strongly encouraged. Addax is an Equal Opportunity Employer and does not discriminate on the basis of race, age, sex, sexual orientation, colour, religion, ethnic origin, or disability when considering admission

to any form of application for employment.

- Addax has ensured that all age and gender groups in the communities affected by the project are represented during stakeholder engagement meetings and project presentations;
- Addax Bioenergy will implement a Gender Policy for the project;
- All management plans and training programmes have a gender component;
- A women's representative is elected for each FFLS group;
- Women are prioritised for participation in the

FDP and FFLS; and

- Project promotes the fair treatment, non-discrimination and equal opportunity of workers, and compliance with national labour and employment laws.

*Main challenges encountered:*

- Low levels of education at all levels;
- Limited knowledge regarding health and sanitation; and
- Limited knowledge regarding access to health and sanitation.