

SOCIAL & ENVIRONMENTAL ASSESSMENT: BALMED HOLDINGS BLOCKFARMING OPERATIONS IN SIERRA LEONE



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DRAFT REPORT

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ACRONYMS

AATIF	Africa Agriculture and Trade and Investment Fund
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CSR	Corporate Social Responsibility
DFI	Development Financing Institution
EIA	Environmental Impact Assessment
FPIC	Free, Prior and Informed Consent
GOSL	Government of Sierra Leone
ha	Hectares
HCVF	High Conservation Value Forest
HR	Human Resource
IBA	Birdlife International Important Bird Area
IFC	International Finance Corporation
IPM	Integrated Pest Management
ILO	International Labour Organisation
KPA	Key Performance Area
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
mamsl	Metres above mean sea level
MCGC	Millennium Cocoa Growers Cooperative
MIGA	Multilateral Investment Guarantee Agency
mt	Metric ton
NGO	Non-Government Organisation
PI	Partner Institution
PPE	Personal Protective Equipment
PS	Performance Standard
S&E	Social & Environmental
SAP	Systems, Applications, and Products – an information technology company
SEA	Social and Environmental Assessment
SEMS	Social and Environmental Management System
SEP	Stakeholder Engagement Plan
SOP	Standard Operational Procedure
SSC	Species of Special Concern
STI	Sexually Transmitted Infection
STD	Sexually Transmitted Diseases
TFA	Trade Finance Agreement
UTZ	Utz Kapeh - label and program for sustainable farming of agricultural products launched in 2002, for coffee, tea, cocoa, and other products
VCS	Voluntary Certification Scheme



1. INTRODUCTION

1.1. Background

Balmed Holdings Limited (Balmed) is a Sierra Leone based agricultural commodities trader, focussing on cocoa, coffee and cashew nut products. Aside from purchasing produce from established farmers, a large focus of Balmed business activity is contracting local smallholder farmers under a “Blockfarmer” outgrower business model. In terms of this contractual agreement, cocoa plant seedlings and initial training are provided to the farmers; ongoing training and monitoring undertaken by Balmed personnel, and on sale of their harvest a fixed income for the farmer and cooperative participants is guaranteed (60% of daily commodity price) for the cocoa pod or dry nut product.

According to Balmed, the majority of the farmers they trade with (and all of those subject to the Blockfarmer agreements) are UTZ and Fairtrade International certified, with Balmed personnel actively assisting in the development and the monitoring of most of the participating Blockfarmer cooperatives in adherence to these Voluntary Certification Scheme (VCS) standards and ongoing certification requirements.

Balmed has applied for project financing from the Africa Agriculture and Trade and Investment Fund (AATIF), and the AATIF has recently announced the signature of its Trade Finance Agreement (TFA) with Balmed during the course of May 2014. Balmed (or the Partner Institution - PI) has appointed Coastal and Environmental Services (CES), a South African based environmental consultancy to conduct a Social and Environmental Assessment (SEA) in accordance with AATIF Social and Environmental (S&E) Safeguard Guidelines. This is a standard requirement for Category B project investment projects, such as the Balmed application at hand, in order to meet Fund’s investment criteria.

1.2. Objective of this assessment

CES is required to assess the potential social and environmental impacts of Balmed operations on its receiving environment against the AATIF S&E Safeguard Guidelines (which are closely aligned to the Multilateral Investment Guarantee Agency’s Policy on Social & Environmental Sustainability requirements, as well as the International Finance Corporation’s Performance Standards). The stated objective of the S&E Guidelines is to ensure that potential impacts (harmful and beneficial) on people and the environment are identified, mitigated and monitored through an appropriate management system employed by the PI (Balmed), throughout the lifecycle of its operations and activities. Accordingly, this SEA/Action Plan Reporting will entail:

1. Assessing the social and environmental impacts of Balmed’s activities, particularly critical areas of non-conformance with AATIF Guidelines, and develop an initial Action Plan to address any deficiencies or outstanding requirements. Importantly, this assessment will also serve to highlight any best practice or beneficial impacts that Balmed operations clearly demonstrate. The relevant aspects to be addressed by this assessment are:
 - Social and Environmental Assessment and Management System
 - Labour and Working Conditions
 - Pollution Prevention and Abatement
 - Community Health, Safety and Security
 - Land Acquisition and Involuntary Resettlement
 - Biodiversity Conservation and Sustainable Natural Resource Management
 - Indigenous Peoples
 - Cultural Heritage

2. Compile an SEA Report and Action Plan from observable findings and discussions held with key stakeholders on site, along with additional information collected on site.
3. Provide a Framework Stakeholder Engagement Plan (SEP – Annexure E of this report), Framework Monitoring Programme (see Annexure F), as well as a Framework Social and Environmental Management System (SEMS – Annexure G) document that structures all existing and required mitigation, monitoring and evaluation protocols to be developed (or refined) and implemented by Balmed.

This report contains the required SEA, as well as the abovementioned Framework SEMS and management plans/programmes that will have to be further refined by Balmed personnel as per the Action Plan recommendations contained in Chapter 7 of this report.

1.3. Methodology and approach

Prior to departure for the site visit CES conducted a desk top review of all documents, policies and reporting made available by Balmed. A checklist containing the AATIF S&E Guidelines requirements and specifications was also compiled (see Annexure I) in order to facilitate the review of Balmed operations and Monitoring and Reporting protocols currently in existence. This checklist review process was conducted by the authors of this report post site survey.

A physical inspection was undertaken of Balmed facilities and Blockfarmer operations over the period 18-23 May 2014. Marc Hardy of CES initially met with senior management at the Balmed head office in Freetown to discuss operational activities, systems and challenges, followed up with a field visit to the Kenema field office and two participating Blockfarms. The purpose of these visits was to similarly discuss routine operational activities and challenges experienced by field staff. Limited discussion with participating Blockfarmers in the Mobai area was possible owing to farm visits being conducted on one day only. Discussions with the latter were therefore unstructured and guided by questions around their daily farming activities, experiences with Balmed to date, and general discussion around livelihood strategies and subsistence income. The insights gained from these discussions are anecdotal in nature, and are not therefore documented or referenced as qualitative research for this report.

The assessment and impact significance rating methodology employed for this report is detailed in Annexure A. Aside from utilising a conventional Environmental Impact Assessment (EIA) significance rating system that assesses potential project induced impacts in terms of their spatial and temporal extents, along with the likelihood and severity of these impacts occurring (see Annexure A), CES has included a Residual Risk assessment component that provides an indication as to what the assessor perceived risks are for successful implementation of recommended mitigation measures, and the successful ongoing management of these measures and monitoring and evaluation thereof. It is noted that this residual risk can apply after the successful mitigation or enhancement of both detrimental and potentially beneficial impacts arising from project activities.

1.4. Documents under review

All available supporting documentation made available for review to CES by Balmed, as well as additional reference material consulted, are listed in Chapter 8. This was largely focused on existing Balmed policy documentation and management systems, including VCS monitoring and evaluation requirements.

1.5. Assumptions and limitations

In compiling this report the authors have been limited by the following factors:

- Site survey activity was limited to the Freetown and Kenema offices, Mobai nursery and two participating farms in the Mobai area. As such, this assessment has not covered the cashew nut project participating Blockfarmers in the Makeni area, or was able to visit farms in the Kailahun District, some of which border on the Gola Forest National Park which is deemed critical habitat in terms of the AATIF S&E Safeguard Guidelines.
- No existing, if any, ecological or social baseline studies pertinent to communities and the physical environment in Balmed's area of influence were provide, referred to, or generated for the purposes of this assessment. Similarly, no specialist ecological or social specialist experts' opinions have been commissioned or solicited for the purposes of drafting this report. As such, the normative judgements and value assumptions contained in his assessment are those of the authors only and based on their experience with EIA processes.
- The AATIF reporting format limitation of 25 pages does inhibit the level of descriptive detail the reporting can offer, however, generalised descriptions of the physical and social receiving environments affected by Balmed operations are reflective of the larger project area of influence that is under assessment.

The authors of this report have assumed that:

- All information provided by Balmed personnel, (including all documentation and verbal evidence provided to the assessor on site) is truthful and correct.
- The authors' interpretations of what constitute pertinent or applicable national legislation and regulation, and Balmed's adherence thereto, is understood to be that of legal layperson's and cannot be considered as a full legal compliance review, or deemed as a legal register for the company under assessment in this report.

1.6. Structure of this report

This report is structured as follows:

- Chapter 1:** Provides an introduction to this report, detailing the study Objectives and Methodology employed.
- Chapter 2:** Details the scope of Balmed's operational activities within their area of influence, and provides a general description of the social and environmental contexts in which these activities occur. Balmed's organisational structure and compliance with national legislation is also discussed. The requirements of the voluntary certification schemes to which Balmed adheres to also covered.
- Chapter 3:** Provides a description of the relevant social and environmental issues that are pertinent to Balmed's operational activities.
- Chapter 4:** Presents a social and environmental assessment of all impacts identified as being relevant to project activities, along with what the assessors deem to be the residual risks posed by these impacts.
- Chapter 5:** Details the existing Social and Environmental Management System. It highlights some the linkages between the AATIF S&E Guideline standards and requirements, and those of the voluntary certification schemes that Balmed is accredited with.
- Chapter 6:** Provides a concluding section to this SEA report that summarises the findings and remaining issues of importance.
- Chapter 7:** Presents an Environmental and Social Action Plan detailing the required corrective or close out actions deemed necessary by the assessors to ensure full compliance to the AATIF S&E Guidelines.
- Chapter 8:** Contains the Reference list of all material reviewed in generating this report.
- Annexures:** Annexures A-I containing the information relevant to generating this report, as well as the Framework SEP, SEMS and Monitoring Programme documents.

2. BALMED'S OPERATIONAL CONTEXT AND ORGANISATIONAL STRUCTURE

2.1. Area of influence

Balmed's operations are largely based in the Kenema and Kailahun Districts of the Eastern Province of Sierra Leone (the majority its cocoa Blockfarming operations), with its cashew nut Blockfarming projects located in proximity to the city of Makeni in the Bombali District of the Northern Province (Refer to Figure 2.1 below and additional inset maps contained in Annexure C). As noted below, the cocoa blockfarming and trading activities are the major focus of Balmed's activities, with this occurring mostly in the Kenema and Kailahun districts which is the focus of this report.

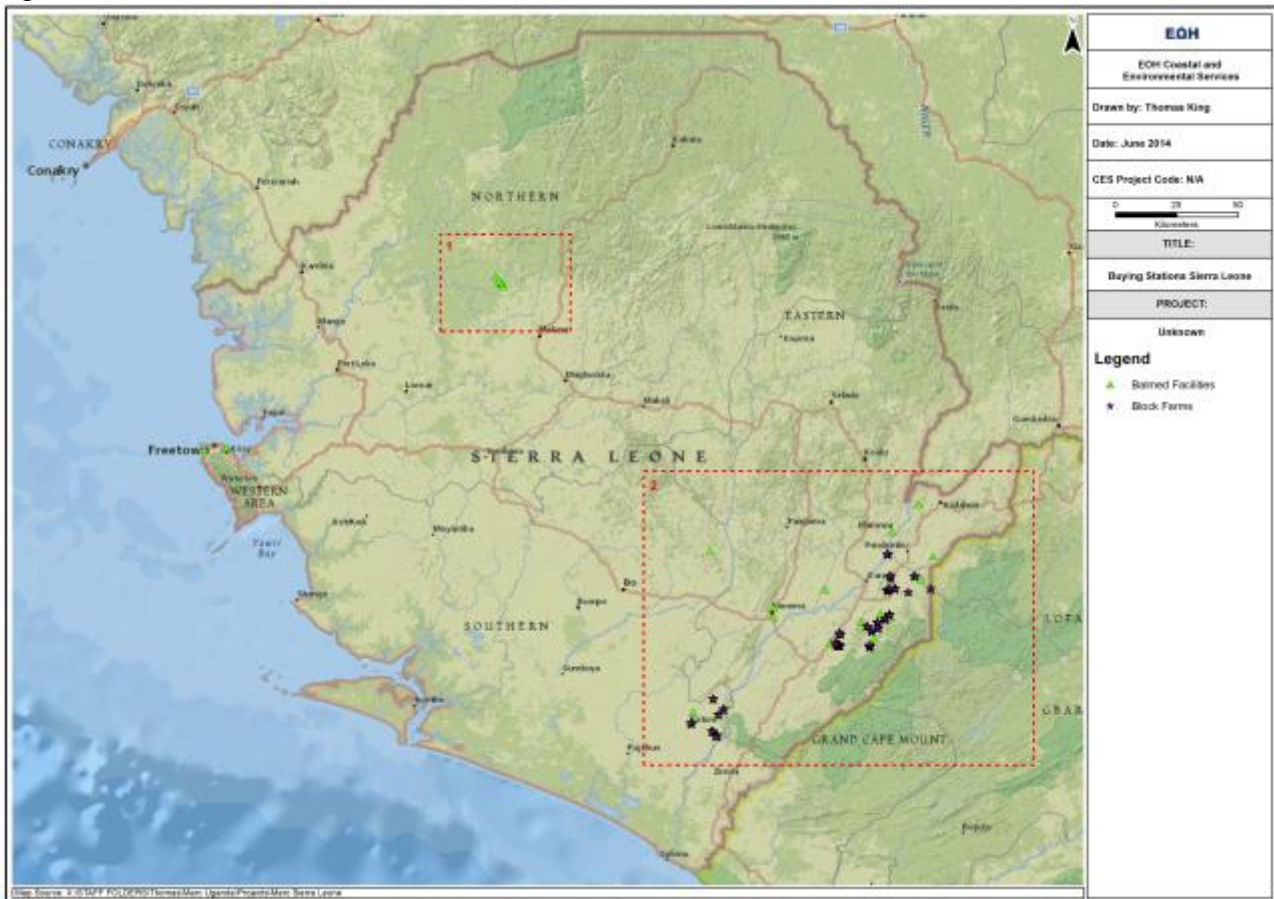


Figure 2.1: Balmed Holdings area of influence – Makeni, Kenema and Kailahun Districts of Sierra Leone

Balmed purchases its agricultural products from 14,000 farmers, which are Fairtrade and UTZ, certified (Balmed, 2012). These deliver to one of the 11 processing centres, owned by communities, and managed by Balmed or the Millennium Cocoa Growers Cooperative (MCGC). Balmed pays a fee to a community development committee for each ton of cocoa traded from the processing centres. Aside from access to these producers, Balmed managed cocoa Blockfarmer cooperatives currently comprise of 32 farming groups (in turn comprised of 164 landowners and 927 individual farmers) spread over 436 hectares of Balmed surveyed and contracted land portions (refer to Annexure B for Blockfarmer group composition). It bears mentioning here that participant landowner estimations of their land portion sizes to be contracted significantly over-estimate the extent of these in Metric (or Imperial as is the case) measurement terms. Given that individual notional perceptions as to what constitutes an acre, or even 100 acres, vary significantly the demarcation and surveying process undertaken by Balmed during the Land Agreement phase serves to ensure accurate records of the contracted land parcel area, and location, are adequately registered.

2.1.1. *Physical environment*

Seven vegetation types are distinguishable in the study area, with the abrupt boundaries between them being the result of vegetation clearing and fire. The vegetation types are consistent in structure and species composition throughout the project area, with minor variations observed in different successional stages. The seven vegetation types identified in the project area are:

- Riparian and swamp forest (including bolilands)
- Village/terrestrial forest (in close proximity to settlements and frequently left largely undisturbed by communities)
- Wetlands/bolilands
- *Lophira/Heritiera* forest (primary forest pockets but largely characterised by secondary forest as a result of historical anthropogenic activity)
- Palm plantations (indigenous or improved cultivars, active or neglected)
- Grasslands

The Kenema and Kailahun District landscapes are typified by tropical moist evergreen forests, a forest type that occurs across the southern third of Sierra Leone (EFO, 2012). Also characteristic are the riverine valleys and forests, swamps and extensive wetland systems, as well as the higher lying grassland and forest areas that are found throughout the study area. These systems and habitats are subject to, and largely formed by, the high levels of annual rainfall the study area experiences. This is typically between 2300-2500 mm per annum, with the bulk of the rain falling during the months of July-October. The study area topography can be classified as undulating in nature, interspersed with mountainous ridges and granite hilly outcrops that are dominated by forest canopy, generally at a height of between 200-450 mamsl.

These indigenous forests are more specifically described as a *Lophira/Heritiera* mixed rainforest (EFO, 2012). Common tree species found within the forests include *Lophira alata*, *Heritiera utilis*, *Piptadeniastrum africanum*, *Parkia bicolor*, *Parinari excelsa*, *Brachystegia leonensis*, and *Uapaca guineensis*, which prior to its extensive exploitation by logging operations during the late colonial and early independence eras, are recorded as having contained over 120 tree species, with about ninety of these in excess of 60 cm in diameter. About 40 of the latter were heavily targeted by logging operations, with logging remaining a present day challenge to the integrity of these forest habitats. Agricultural activity, and a widespread charcoal industry that many rural communities rely on as a livelihood strategy, continue in large measure to contribute to primary forest loss.

Aside from secondary forest (and the occasional remnant primary forest patches) the landscape is hilly and undulating, interspersed with lower lying perennial streams and watercourses. These seasonally inundated lowland features – locally known as *bolilands* - have been described as one of the major agro-ecological zones in Sierra Leone (CES, 2010), where rice staples and other vegetables are largely cultivated. These depressions or *bolilands* are interspersed with higher well-drained upland areas and some granite hills. Bolilands have been transformed almost entirely from their natural state due to the planting and cultivation of rice. During the dry season, these water drainage lines (inland valley swamps) are mounded and planted with cassava, legumes and other vegetable crops. Few bolilands and wetlands remain undisturbed, except for limited areas along riparian corridors and isolated pockets that are generally located in steep upslope or hilly areas.

The landscape has been dramatically transformed by people and their need for food, resulting in considerable loss of tropical forest, woodlands, savannah and what once would have been pristine wetlands. The ‘natural’ state of the vegetation types, before such widespread disturbance took place, has not been widely researched, but some authors have suggested that the whole country was covered by tropical forest, but existing elements of savannah grasslands, woodlands and open wetlands indicate that these vegetation types may have existed in the area (CES, 2010).

The upland areas are generally of low soil fertility and often subject to laterisation, particularly once the soil surfaces have been exposed to weathering after the natural forest vegetation has been removed under the traditional ‘slash-and-burn’ farming techniques prevalent in the study area, and the country as a whole. The lower lying swamps and bolilands, are inherently more fertile than the upland areas, with the latter generally being utilised for agricultural production during the wetter periods of the year (the rainy season July –October).

Balmed Blockfarmer cooperatives tend to utilise the shadier canopy areas in the riverine valleys for cocoa planting. These areas are not utilised as intensively as the bolilands and lower lying grassland areas for crop cultivation. It is a general rule of thumb that the area under cocoa is identified by the landowners, and is invariably located on the valley bottoms of these riverine valleys. Intercropping in the newly established cocoa plantations is promoted for the first 3-4 years with the majority of the earnings from these crops accruing to women and youth participants in the Blockfarmer cooperative. The landowner derives the major cash benefit from mature and productive cocoa trees.

Wild animal presence is limited in the general study area. Hunting for bush meat and agricultural encroachment on remaining refugia for large mammal (antelope and primates) species, has unfortunately lead to sharp and rapid decline in species numbers in the post-colonial era. Anecdotal evidence (discussions with farmers and Balmed personnel) suggest that little, if nothing, of large mammal species sightings are a regular occurrence in the study area.

Birdlife remains prolific in the area, although deforestation has invariably resulted in significant habitat loss for many species in the study area. Birdlife International designated Important Bird Areas (IBA) are the Kambui Hills Forest Reserve (in close proximity to Kenema) and Gola Forest National Park on the Liberian border (Okoni-Williams et al, 2002). These IBA’s both fall in Balmed’s area of influence, but do not appear to be subject to Blockfarmer activities. The main threat to these reserves is illegal, unsustainable timber exploitation. Subsistence hunting of bushmeat is intensive and occurs in all areas. All primates, other large mammals and some bird species, including hornbills, are hunted. With particular reference to the Blockfarmer cooperatives and their area of influence, there appears to be very little in the way of High Conservation Value Forest (HCVF) that characterises general study area – but would have to be confirmed by appropriate specialist assessment. Any HCVF of critical significance is anticipated to be located in the vicinity of the Gola Forest National Park.

The riverine valleys also hold a variety of freshwater fish species that are actively fished by most communities, fish being an essential source of protein for them. Fishing is done by both men and women. Women often go out in groups and use small nets, while men use large net or lines, or constructed fish traps. Men set out their nets at night and collect the catch in the morning. Fishing is done all year round, but fishing methods differ between the rainy and the dry season.

Plants of ethnobotanical importance (food or medicinal) which are considered abundant are found in most habitats, including highly disturbed areas such as field edges and less disturbed areas such as remnant patches of forest. The availability of useful plants is greater during the rainy season than the dry season, with both males and females harvesting plants, while children collect fruit.

2.1.2. The social environment

Agriculture is essential to Sierra Leone’s economic and social development as two-thirds of the population are estimated to live in rural areas, and are mostly engaged in the farming sector. Rice (the staple food of the population), and cocoa and coffee (export commodities) are therefore of national strategic importance as rice production is expected to comply with food security objectives while coffee and cocoa are high value export commodities which can propel economic growth (Gomez et al, 2012). Consequently, both types of crops are considered relevant in contributing to

the country's development. The majority of households and inhabitants of the study area practice a mixed economy, including crop cultivation, animal husbandry, charcoal production, fishing, and to a more limited degree hunting. The major crops grown by inhabitants are maize, rice and cassava, followed by groundnuts and sweet potatoes. For most of the crops there is a large range in acres cultivated and yields obtained. Shifting cultivation is practiced extensively in the PI's area of influence.

Mixed farming is practiced in both the uplands and the lowlands. The lowlands are predominantly used for the main (cash) crops (mainly rice), whilst the uplands are used for the cultivation of a variety of secondary crops (as well as the main crops). Lentils, cassava, sorghum, maize, sweet potato and beniseed are mixed with rice and groundnuts in the uplands. Cultivated fields and bolilands are usually located within a radius of about 1-5km from the village centre. Tree crops are generally grown near the homesteads, with the exception of palm plantations and pineapples that can be grown further away.

Lack of mechanisation and fertiliser application (due to cost and availability) forces the regular cutting of new fields, although lowland rice fields are generally not shifted. Bush fallowing (the period for which the land is left fallow/unplanted) ranges generally from 3 to 15 years, with an average of 5 years. The duration of the fallow/rest period is however highly dependent on population pressure, crops and soil fertility. According to the Food and Agricultural Organisation (FAO) an average household of 6 people cultivates 2 acres - or 0.8 ha (CES, 2010).

Agricultural activity is more intense during the rainy season (June to November) than the dry season. Almost everybody cultivates during the rainy season while less than half of the population cultivates during the dry season. Those who cultivate during the dry season generally cultivate smaller areas. Consequently, it can be argued that although land and water resources are relatively abundant, the majority of farmers operate smallholdings of 0.5 to 2 cropped hectares while keeping potential arable land fallow (Gomez et al, 2012).

Rice is the main cash crop as noted above. However, all surplus crops are sold when households need cash. Tree crops are generally subsistence crops, with the exception of palm oil, mangoes and pineapples, which are often also sold. Local farmers do not have easy access to markets for their produce (lack of affordable transport and bad roads). Produce is therefore mainly sold from the homestead or in nearby road stalls or markets. Often food crops are bartered for other daily necessities. Produce is sold to middle men as well as directly to the consumers. It is mainly the women who sell the goods at town markets. Market prices are generally negotiated between buyers and sellers and fluctuate considerably between the seasons.

Consequently, farm households are generally constrained by the unavailability of necessary resources. The area they can cultivate is severely limited first by the need to keep idle land and second by the amount and quality of available capital and labour for the area under cultivation. The widespread use of unimproved crop varieties and animal breeds, limited use of fertilizer, coupled with unimproved cultural practices adversely affect agricultural production. Essentially, food production in Sierra Leone is in the hands of small scale farmers who produce barely enough for home consumption, with little or none left over for the market (Gomez et al, 2012). Food security remains a daily challenge for most rural households in the study area.

Aside from slash and burn agricultural practices, legal and illegal timber harvesting, and charcoal production has led to extensive deforestation in the study area. Charcoal is usually harvested from the forest, but also occasionally for the by-products of farm clearing. The production thereof has grown considerably in the study area last few years, with some villages known for being major charcoal producers, while most of the others conduct it as a secondary activity to farming and other

livelihood activities. Each charcoal pit produces between 10 and 30 bags of charcoal, while the whole charcoal production process takes about 4 or 5 days as a result it has become a significant contributor to many rural household's livelihood strategy (EFO, 2012).

People live predominantly in villages or small settlements. However, there is some scattered housing in the study area, with people building basic structures near their fields for use during the agricultural season. Most houses in the project area consist of mud or mud plastered with cement, with roofs made from straw or from corrugated iron. There is little no electricity in the project area aside from theta which is generated by portable generators. The energy source for lighting in non-electrified settlements is palm nut oil or paraffin lamp or torch, with energy for heating and cooking consists primarily wood and charcoal.

Water provision consists of wells, boreholes or in most cases the river, often a long distance from the village. Sanitation is limited to pit latrines and bush ablutions by for these village communities.

The provision of health care in the study area is poor. There are only primary health care units (clinics) in rural areas outside of the main centres like Kenema and Daru that have hospitals. These primary clinics are generally hampered by a lack of trained staff, equipment and medication. Generally these clinics are run by one nurse, assisted by one vaccinator and several traditional birth attendants. Typical health concerns and diseases relating to lack of basic sanitation and potable water are prevalent, along with parasitic infections, malaria and HIV being dominant health concerns in these communities.

Education is generally limited to primary school level in rural villages with young people having to attend high school in larger towns. Most if not all villages have primary school, usually staffed by one teacher only.

The main access into the project area is along paved highway, which is in good condition. The feeder roads, leading into Blockfarmer areas are, however, unpaved and difficult to negotiate by vehicle, especially during the rainy season, which hampers communication between the rural villages and the urban centres. Taxis, which are largely restricted to the paved road, are the main mode of transport for long distance transport in the project area. Bicycles and motorbikes are the typical means of local transport of people as well as goods. People often walk long distances on foot to access larger towns.

Vulnerable persons are important to identify in order to attempt to prioritise these individuals for a share of potential project induced benefits. Vulnerability is defined as the inability to generate sufficient resources to feed the household and meet basic human needs (i.e. sanitation, health services, education and shelter). In the study area the vast majority of the population can be regarded as vulnerable due to their level of poverty. However in terms of identifying the most vulnerable groups, these include those who cannot work the land, have no other means of income generation and no family support. These may include:

- Widows
- The elderly
- The disabled
- Those with no secure access to land such as the youth in the study area – they also tend to leave the area when they lose or have no access to land.

It is require therefore that this assessment address the potential for Balmed Blockfarmer cooperatives to identify, and assist, vulnerable persons in gaining benefit from these farming activities.

2.2. Land acquisition and the Blockfarming Model

For a comprehensive overview on how the Balmed Blockfarmer operates the reader is advised to read the Rust (2012) report titled *Balmed Holdings Ltd. Cocoa-Blockfarming-Model: An example of investments in agriculture and access to land in the cocoa sector in Sierra Leone*. According to Rust (2012) “Besides agreements with the land owners willing to provide sites for the cocoa production under this model, youth groups are formed committing themselves as partners for managing the plantations. Both groups are mainly rewarded through a share in the cocoa harvest, which they are obliged to sell to the company. The plantations are managed under an agro-forestry system and the land owners and youths are provided with the main part of the intercrops planted (plantain and pineapple). The approach therefore not only aims at securing the company's cocoa supply but also invests in the local population by creating employment opportunities and supporting capacity building in the agricultural sector ... from the beginning, the model is set up like a shareholder model where the youth farmers, the elder land owners and Balmed Holdings receive each 1/3 of the harvest. The company's share is handed over to the youth farmers after eight years, who then earn 2/3 of the revenue from the cocoa farms. An average youth group consists of about 25 members and cultivates a total of about 100 acres (4 acres per member). All cocoa produced on these areas is sold to the company.

Please refer to Annexure I for a redacted version of what the Balmed Blockfarming Model entails.

The authors of this report believe that the Balmed Blockfarming Model, land acquisition and contracting process fulfils the Free, Prior and Informed Consent (FPIC) requirements specified by Development Financing Institution's (DFI's) as being a standard requirement for affected community consent for, and participation in, development projects. Typically, Balmed and Blockfarmer activities include:

- Nursery: Growing young seedlings for outplanting, irrigation and transport of seedlings to farms
- Eventual establishment of narrow access roads to more remote farms (>2 km from major access roads)
- Pruning established overgrown trees, to improve yields and avoid diseases
- Preparing soil for organic fertilization
- Preparing grafted seedlings for single-variety in our plantations
- Removing farm waste (diseased cocoa pods and polyethylene sleeve seedling containers) from the fields
- Harvesting ripe pods
- Fermentation of fresh beans in the processing centres
- Drying to 6% moisture
- Preparing standardized bags for export
- Transport to warehouse in Freetown
- Export to international buyers and companies

Ultimately, Balmed hopes to purchase fresh fruit from Blockfarmers for processing at its centres, but at this time it mostly buys wet or dry seeds from the participating Blockfarmers during the harvesting and selling periods.

2.3. Balmed's organisational structure

2.3.1. Senior management

Senior management is located in the Freetown head office. Executive management and decision making powers reside with the CEO (Medgar Brown), and he is supported in this capacity by the

Chief Financial officer (CFO) also resident in the Freetown head office. Various support staff are also employed in the Freetown head office tasked with administrative support functions. The product warehousing and export logistics facilities are also located in Freetown.

2.3.2. *Satellite management and operations*

The Kenema office, workshop and surrounding facilities (nurseries, trading and processing centres) are the places of employment for operational field staff. An expatriate manages the Kenema office and oversees all of Balmed's operational activity, quality control and monitoring and evaluation processes/requirements pertinent to the Voluntary Certification Scheme (VCS) standards and accreditation criteria to which they adhere to. Administrative support staff in the Kenema office supports the manager and field staff in satellite locations from this location. Field staff in the various Blockfarm areas (Mobai village being the main nursery for Balmed) is responsible for training and monitoring of Blockfarms. The main workshop and stores are in Kenema and is staffed by personnel who oversee company stores, as well maintain vehicles and equipment.

Document control and reporting processes are deemed to be satisfactory by the assessors, with all VCS certification Monitoring and Evaluation (M&E) requirements being addressed and appropriately captured. Kenema personnel display a clear understanding and benefits of the document control system requirements, and appear to be well versed in what their individual responsibilities in this regard are. Accordingly, there is sound human resources platform available for these personnel to undertake the required development or revision of the SEMS and its constituent management plans and reporting requirements.

2.3.3. *Compliance with national legislation*

An analysis of Balmed's compliance with relevant national legislation, policies or regulations that may govern their operational activities is required for this assessment. Annexure D contains the laws and policies subject to assessment by the authors of this report. No transgressions of these requirements and specifications as they relate to Balmed operational activities are apparent from this review.

2.4. Certification scheme requirements and synergies

Balmed is certified under the following Voluntary Certification Schemes (VCS):

2.4.1. *Fairtrade International*

Fairtrade is an alternative approach to conventional trade and is based on a partnership between producers and consumers. When a product carries the Fairtrade Mark it means the producers and traders have met Fairtrade Standards. The Standards are designed to "*address the imbalance of power in trading relationships, unstable markets and the injustices of conventional trade*" (<http://www.fairtrade.net>).

There are two distinct sets of Fairtrade Standards, which acknowledge different types of disadvantaged producers. One set of standards applies to smallholders that are working together in co-operatives or other organizations with a democratic structure (such as the Balmed Blockfarming Model). The other set applies to workers, whose employers pay decent wages, guarantee the right to join trade unions, ensure health and safety standards and provide adequate housing where relevant.

Fairtrade Standards also cover terms of trade. Most products have a Fairtrade Price, which is the minimum that must be paid to the producers. In addition producers get an additional sum, the Fairtrade Premium, to invest in their communities (<http://www.fairtrade.net>).

2.4.2. UTZ

UTZ Certified is a label and program for sustainable farming of agricultural products launched in 2002, for coffee, tea, cocoa, and other products. It was formerly known as *Utz Kapeh*, meaning 'Good Coffee' in the Mayan language Quiché (<https://www.utzcertified.org/>). The UTZ program is portrayed as assisting farmers to learn better farming methods, improve working conditions and take better care of their children and the environment.

To achieve UTZ certification, producers must comply with the economic, social and environmental criteria set out in the Codes of Conduct. According to UTZ, this results in environmentally and socially responsible agricultural production, providing companies and consumers with the assurance of sustainable quality products.

Traceability is one of the foundations on which the UTZ Certified program is based on the assumption that tracking the origin and flow of commodities provides reassurance that crops have been produced according to Fairtrade standards and that buyers contribute to better farming. Balmed is currently implementing this SAP-based system and anticipates this to be finalised during the course of 2015.

The UTZ Certified Codes of Conduct are based on a model of continuous improvement. From year one the producer has to fulfil the core criteria concerning safety, farm management and record keeping, employees and environmental protection. In the subsequent years more detailed requirements are added to these points to allow the producer to develop and improve over the years (<https://www.utzcertified.org/>). To ensure compliance with the criteria of the Code of Conduct, producers are checked annually by independent auditors. Producers who do not fulfil the core criteria and additional requirements risk losing their certified status. UTZ takes a systematic approach and monitors changes at the level of farmers as well as the context they operate in. The Monitoring and Evaluation (M&E) programme that is an ongoing certification requirement aims to capture the most important changes brought about by farmers and chain actors that have adopted the UTZ standard. One important function of an M&E programme is to provide evidence of outcomes and impacts, as well as to learn from operational practice and improve on S&E performance by accredited operations or entities.

As for the UTZ ongoing certification requirements, Balmed has to annually demonstrate its adherence to this VCS standard through a rigorous M&E programme. The UTZ M&E programme is largely underpinned by its Internal Control System (ICS) policy, monitoring and reporting requirements that are required to demonstrate adherence to VCS principles and ongoing accreditation criteria.

The similarities and common objectives of the VCS M&E programme and the required SEP, SEMS and Monitoring Programme that are part deliverables of this report are discussed in Chapter 6.

3. ISSUES AND ASPECTS RELEVANT TO BALMED OPERATIONS

3.1. Project activities: S&E aspects and issues relevant to this assessment

The following S&E aspects considered as being relevant to this assessment are as follows:

3.1.1. *Terrestrial ecology*

The ecological issues and impacts subject to assessment in this report are detailed in Chapter 4. The identified ecological aspects requiring assessment are;

- Soils and topography
- Riparian corridors (including surface hydrology, fish, wetland and vegetation aspects)
- Flora and associated conservation issues
- Fauna and associated conservation issues

These are deemed to be self-evident by the authors of this report and are discussed in detail in Chapter 4 that follows. Issues of social significance are briefly discussed below for their relevance to the Balmed's operational activities.

3.1.2. *Livelihood strategies, food security, employment and training provision*

Integral to the Blockfarmer model success is the provision of alternative sources of eventual agricultural (cash crop) income, employment for individuals with no land tenure (particularly women and youth groupings that are deemed as vulnerable persons in this instance - see 3.1.3 below). However, the success of this model hinges on the appropriate levels of training and technical support provided to farmers being effective, and maintained throughout the crucial 3-4 years of initial plantation establishment. Should this be insufficient, or Blockfarmers renege on their plantation maintenance and monitoring requirements, the project is bound to be faced with the reality of low numbers of trees reaching maturity, or that the quality of the fruit from mature trees is low owing to poor plantation establishment and maintenance practices. Therefore, ongoing training and monitoring thereof is considered by the authors of this report to be integral to ensuring project success, and the accrual of benefits to participating Blockfarmers.

Food security at the household level, and how the project may impact on this key concern, is assessed later in conjunction with any potential existing land use impacts that may be project induced through plantation establishment.

3.1.3. *Vulnerable persons*

Women and youth, especially those with no customary title to land, are in the context of this project, designated as vulnerable. It is crucial therefore to assess what project induced benefits can accrue to vulnerable persons participating as Blockfarmers.

3.1.4. *Appropriate waste management and documentation system*

Polyethylene seedling containers and hydrocarbon wastes are deemed to be the only project induced waste throughputs of concern to the assessors. It is noted that the seedling containers are often reused as charcoal brazier fire starters for cooking and heating purposes. While not ideal, the burning of these is probably preferable to allowing these to pollute Blockfarmer fields. It is advisable that Balmed implement an effective monitoring system for polyethylene containers, and implement an appropriate disposal system for these containers. Hydrocarbon wastes (oils and lubricants) need to be subject to monitoring, and the final reuse, recycling or disposal mechanisms for these needs to be made clear in the required SEMS management plan specific to wastes.

3.1.5. Community health and safety

The provision of some clinical services support (a dentistry project in the study area) is noted as being part of Balmed's Corporate Social Responsibility (CSR) initiatives. The Development Fund contributions by Balmed allow communities the latitude to determine what development projects are desirable - more often than not these projects entail the provision of sanitation, water or medical service facilities. Although likely to be of low significance vehicle movements are likely to be safety risks for pedestrians and potentially Blockfarmers if being transported by company vehicles. The generation of dust and exhaust fumes by vehicles are likely to be of nuisance value to communities, but are unlikely to be significant at a cumulative scale. These are assessed, however, to ensure that appropriate mitigation measures are considered in this regard.

3.2. S&E Safeguard Guidelines aspects and specifications not considered further in this assessment

Key aspects for investigation and assessment contained in the AATIF S&E Safeguard Guidelines that are not considered applicable to this assessment are as follows:

3.2.1. Drinking water pollution

Owing to the lack of fertiliser, herbicide and pesticide application by Balmed or Blockfarmers - coupled with the low likelihood of plantation establishment and operations resulting in negative impacts on surface water flows or quality - potential impacts on community drinking water sources are considered to be negligible significance by the assessors.

3.2.2. Child labour

The prohibition on use of child labour is a common principle in the AATIF S&E safeguard guidelines, as well as the VCS (UTZ and Fairtrade) to which Balmed adheres to. The ages of participating farmers are reflected in the Land and Contractual Agreements (over 18 years old) and strictly specify the prohibition on child labour. This is regularly monitored by Balmed personnel as part of their ongoing in-field M&E activities, and is deemed by them not to be practised by participant Blockfarmer cooperatives.

3.2.3. Labour migrancy

Labour migrancy as a result of any project induced "pull" factors to the study area is not considered to be of relevance to this assessment owing to the fact that landowners and community residents are responsible for all farming activities. As such, there are no direct employment (or any other immediate benefits) that would entice job seekers to the area. It is noted that the provision of employment and income earning potential for the youth in the participating areas provides some incentive towards reducing out-migration to urban areas by young economic migrants that would usually arise in situations where no land title or tenure essentially denies them the ability to farm for themselves. It is accepted that the project has the potential to limit youth out-migration but it would be difficult to quantify or qualify the significance of this reduction in this assessment.

3.2.4. Herbicides and pesticides

Neither Balmed nor its Blockfarmers utilises pesticides or herbicides at any point in the nursery, plantation establishment or ongoing production period for its tree crops. Provided this remains standard procedure for Balmed operations it does require being factored into this SEA report.

3.2.5. Greenhouse Gas Emissions and air pollution considerations

Balmed's Green House Gas (GHG) emissions are limited to study area company vehicle particulate and GHG emissions, those incurred with bulk product transport to Freetown, and the associated

emissions implicit in shipping the product to international markets. The processing of product does not require external (or generated) heat sources or electricity, and overall project emissions are likely to be relatively insignificant in comparison to other agro - industries or extractive projects.

3.2.6. Infrastructure and Equipment Safety

No heavy processing equipment or ancillary infrastructure is utilised in Balmed's operations. Owing to the simple and low cost technologies associated with Balmed operations, (nursery establishment and irrigation, labour intensive drying/fermentation racks for wet cocoa beans etc) no infrastructure and equipment safety considerations are deemed to be of significance to this assessment, or Balmed operations in general. Basic maintenance and inspection checks and registers for all company vehicles will suffice as documentary evidence for ongoing monitoring and reporting in term of the required Framework SEMS and its specifications.

3.2.7. Hazardous Materials Safety.

No hazardous materials are utilised in Balmed operations or processing centres. Hydrocarbon fuels and lubricants that are utilised in limited quantities in workshop areas are the only materials of concern.

3.2.8. Project land acquisition, physical resettlement or economic displacement

Owing to the fact that there is no "land take" in terms of the land acquisition model and process, issues pertinent to resettlement or economic displacement are not considered in this assessment. Land owners retain full title and decision making powers (in accordance with the contractual agreement between Balmed and Blockfarmers) over their land portions. No physical resettlement is required and no land portions utilised that the landowners themselves don't designate and allocate for project use. Economic displacement is not considered an issue as land utilised for cocoa plantation establishment are rarely utilised by landowner farmers.

3.2.9. Security personnel requirements

The only security personnel employed by Balmed are those personnel utilised at their nursery, office or workshop facilities. As such, there is little or no interaction between these personnel and participating Blockfarmer cooperatives or surrounding communities. Personnel are not armed and only perform routine facility security patrols and access control functions.

3.2.10. Invasive alien species.

The project will not introduce any alien invasive species as the cocoa and cashew plants provided are endemic to the area. Hybrid varieties are being introduced but are still similar species to those endemic tree species found in the study area. Owing to its low tolerance sun and encroaching plants it is unlikely that cocoa trees would pose an invasive threat to any significant degree.

3.2.11. Community level health impacts arising from labour in-migration or irrigation activity

Owing to labour migrancy being deemed an insignificant issue on the project context, it is not anticipated that communicable diseases (Sexually Transmitted Infections / Diseases – STI's/D's, tuberculosis etc.) are likely to be subject to a project induced escalation in these transmission rates within the study area. Communicable (and non-communicable) diseases or illnesses are therefore not considered further in this assessment. Waterborne diseases or illnesses that could be spread through irrigation practices is also deemed to be insignificant as this is relevant to nursery requirements only, and all potential disease vectors potentially contained in the nursery water supply will be limited in spread to this area under irrigation. It is suggested, however, that appropriate bush ablution and sanitation practices are subject to Balmed training, particularly as it relates to potential surface and drinking water contamination.

4. SOCIAL AND ENVIRONMENTAL IMPACT ASSESSMENT

This chapter serves to assess the impacts identified as being potentially material and relevant to Balmed operations. Impacts that have been deemed to be insignificant or no relevance to the project's operations by the authors of this report are not presented here but have been discussed in the previous chapter. Following on from the previous chapter, S&E issues and themes identified there are subject to assessment of their individually constituent impacts.

4.1. Terrestrial environment

4.1.1. Soils and topography

Soil erosion due to vegetation clearing for plantation establishment and operation

Cause and comment: Clearing existing vegetation for cocoa seedlings is required to ensure there successful establishment. Small areas (1 m circumference around seedlings) are cleared for planting, and this clearance is maintained for a 3-4 period until the tree reaches maturity. Cleared vegetation remains in use as mulch in the plantain areas with the net result that little bare soil is left exposed during plantation establishment and maintenance procedures during this period. Potential for erosion and subsequent runoff is therefore very limited. No instances of erosion were visible during the farm visits, with the groundcover vegetal layer serving as an effective erosion protection measure.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Long term	Local	Moderate	May occur	MODERATE -
With Mitigation	Long term	Local	Slight	Unlikely	LOW -

Mitigation and Management: The following mitigation actions are suggested:

- The Balmed Standard Operational Procedure (SOP) in this regard is deemed to be sufficient.
- Potential erosion areas or events, if they occur, need to be monitored by Blockfarmers and Balmed personnel on their periodic inspections to identify areas of concern, and apply corrective action (erosion control, mulching of topsoil etc.) if required.

Degradation of soil structure (pH, fertility, micro-organisms etc.) as a result of plantation establishment and operation

Cause and comment: Mass planting of new seedlings in areas of relatively underutilised farmland, could lead to localised nutrient leaching from the soil, or impact on its constituent chemical or microorganism composition. Importantly, seedlings are not subject to fertiliser or herbicide application once planted in the Blockfarms so chemical additives will not be a factor in assessing this impact. The fact that cleared vegetation remains *in situ* as mulch of groundcover effectively prevents the leaching of soil nutrients, and the subsequent alteration of the soil's chemical characteristics is therefore unlikely. The returning of plant trimmings to the surrounding surface area for decomposition and transfer of nutrients to the soil effectively mimics the natural chemical cycling processes occurring between the soil and this organic mulch layer. Intercropping with pineapple and plantains also ensures that these different crop types do not leach nutrients as drastically as monoculture crop species would. This is unlikely to be an impact of significance given the current low densities at which the trees are planted and that the cumulative impact of these small excavations required for seedlings is negligible.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Long term	Local	Slight	May occur	LOW -
With Mitigation	Long term	Local	Slight	Unlikely	LOW -

Mitigation and Management: The establishment of a pre-plantation establishment baseline and ongoing monitoring programme over a reflective sample of farms would be the ideal type monitoring regime. However, this is very costly (laboratory analysis) and not easily accessible in Sierra Leone, most likely requiring analysis and foreign laboratories:

- Monitoring of Blockfarms for obvious deterioration in soil quality or fertility, or resulting poor quality trees that may be evident, need to be investigated should these occur. Standard reporting and close out action requirements to be demonstrated by Balmed.
- Maintain intercropping practices.

Impacts on landform or topography as a result of plantation establishment and operation

Cause and comment: Owing to cocoa trees requiring flat areas to be successfully established, the hill slope or embankment areas of riparian valleys are not utilised for planting. The shade cover in these flatter areas along watercourses or rivers is also more suited to cocoa trees. As such, it is unlikely that the physical landform in plantation areas will be altered (no trenching, contouring or drainage line establishment). This will largely prevent erosion that is more likely to occur on steeper areas that have been disturbed. Accordingly, the landform or topography in Blockfarms will remain mostly unaffected by project activities; and by extension any hydrological and ecological functions or habitats that the existing landform or topography supports should remain in stasis.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Local	Slight	May occur	LOW -
With Mitigation	Permanent	Local	Slight	Unlikely	LOW -

Mitigation and Management: The following mitigation actions are suggested:

- Balmed to ensure farmer training emphasises the need for limited excavations and planting on valley bottoms only.
- Balmed personnel to monitor potential landform impacts on a quarterly basis.

Access road establishment: soil erosion and change in landform

Cause and comment: This is higher order project risk activity that has potential to significantly impact on soil and landform characteristics; namely, potential erosion scarring and associated silt loaded runoff into watercourses and drainage lines if not designed and properly maintained. It is noted that these access roads would only be required for distances greater than 2-3 km from main access routes or roads and none have been established as yet. Some farms require 4 km plus access by foot with seedlings for plantation establishment, and the same applies to the eventually harvested produce which would be labour and time intensive. The width of these access roads would be limited (3 m) to accommodate a quad motorbike and trailer or narrow gauge agricultural tractor that is commonly utilised in the study area; however, badly designed, delineated or constructed roads could lead to erosion scarring, siltation of watercourses (particularly in the wet season) and sterilisation of land portions for agricultural activity. This is a worst case scenario, but can definitely eventuate if not managed appropriately.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Local	High	Definite	HIGH -
With Mitigation	Long term	Local	Moderate	May occur	MODERATE -

Mitigation and Management: Providing that the road construction is suitably contoured, utilises culverts and storm water runoff reduction measures where appropriate, and avoids watercourse crossings as far as possible it may be possible to reduce these impacts to low significance. It implies ongoing labour and material costs to ensure appropriate maintenance of these routes. It will be difficult to mitigate and manage correctly. The following mitigation actions are suggested:

- Risk assessments need to be conducted by management prior to any road construction, or utilisation of mechanical clearing methods (bulldozers, road scrapers etc.).
- Ideally any road design, construction and maintenance requirements or specifications should be informed by appropriately qualified engineering professionals.
- A Management Plan for road construction and maintenance (factoring in the risk assessment methods and criteria) needs to be developed by Balmed. The monitoring and varying seasonal maintenance requirements are to be made explicit in the required Monitoring Programme.

4.1.2. *Riparian corridors*

Altering of surface water quantity and quality by plantation establishment and operation

Cause and comment: The physical impacts of altering the river/watercourse bank structure or profile is limited by maintaining appropriate buffers between plantations and watercourses. Plantations will not abstract large amounts of water relative to existing vegetation types along these riparian corridors, and consequently stream flow reductions as a result of cocoa tree absorption are unlikely to be significant. Provided soil erosion is maintained at insignificant levels (as discussed above) it is unlikely that the farming activities will result in water quality impacts.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Medium term	Local	Moderate	May occur	LOW -
With Mitigation	Medium term	Local	Slight	Unlikely	LOW -

Mitigation and Management: Rigorous water quality monitoring at selected and indicative sample sites is, as for an appropriate soil monitoring programme, prohibitively expensive and ultimately not likely to provide to add value to the management of this impact owing to the low potential significance of these impacts. The following mitigation actions are suggested:

- Maintain 30m buffers from rivers and watercourses (including wetlands).
- Monitor major watercourses for signs of siltation or potential sediments that could arise from erosion in the farm area (Balmed and farmers).

Impacts on riparian corridor vegetation through plantation establishment and operation

Cause and comment: The potential for cocoa plantations to dominate indigenous vegetation (loss of species or reduced abundance) in riparian corridors requires consideration but is unlikely to be of significance. Cocoa plants are often outcompeted by the faster growing and more dominant vegetation types naturally occurring along these corridors. Plantation establishment requires the thinning of groundcover (and occasionally that of the canopy cover if the area is too shady). Owing to the low density cocoa planting patterns utilised by Blockfarmers, existing vegetation types are likely remain dominant in these plantation areas. The farms observed during the site visits clearly demonstrate the riverine vegetation to remain the dominant species types.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Long term	Local	Moderate	May occur	MODERATE -
With Mitigation	Long term	Local	Slight	Unlikely	LOW -

Mitigation and Management: The following mitigation actions are suggested:

- Ensure that areas of pristine riparian habitat, if any, are avoided during the land parcel identification process, and the appropriate use of buffer zones from rivers are imposed and maintained.
- Maintain Balmed SOP in this regard – ensure that only necessary clearing is undertaken and is subject to monitoring and reporting by Balmed.
- Where intercropping practices are used it must be ensured that this is not unnecessarily at the expense of additional natural vegetation clearing.

Access road establishment: erosion or siltation impacts on watercourses

Cause and comment: As noted above, access road construction is a higher order risk activity from an environmental perspective. However, provided all relevant mitigation, management and maintenance activities are consistently maintained throughout the lifespan of these roads soil erosion and subsequent siltation of watercourse will be avoided. If not appropriately constructed and manage these impacts will definitely occur and result in significant erosion and water quality impacts.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Medium term	Local	High	Definite	HIGH -
With Mitigation	Medium term	Local	Moderate	May occur	MODERATE -

Mitigation and Management: The following mitigation actions are suggested:

- Development of the required access road Management Plan.

Impacts on aquatic habitat (loss of fish and macroinvertebrate species) and community fisheries

Cause and comment: Fish species loss or reduction can be anticipated in agricultural projects from potential watercourse siltation or chemical runoff impacts. The project is unlikely to significantly impact on water quality and quantity if the issues and mitigation measures (as discussed above) are addressed and adhered to. Minimal, if any, sediment or silt laden discharges to watercourses, are likely to originate from plantation activities – this being the most likely potential mechanism for impacts on aquatic fauna and flora. Provided this is the case, impacts on fish species and community fishing sites will also be negligible.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Long term	Local	High	May occur	MODERATE -
With Mitigation	Long term	Local	Slight	Unlikely	LOW -

Mitigation and Management: The following mitigation actions are suggested:

- Implement an informal catch report system with community fishers. Although not a rigorous baseline sample or monitoring programme, unseasonal or unusual drops in catch rates, unexplained fish (or macroinvertebrate) mortalities or visible pollution of fishing areas can be reported by the community. Balmed will have to then ascertain if it is likely to be project related, and if so implement appropriate mitigation measures if the cause is deemed to be erosion, or water quality related and stemming from project activities.

4.1.3. Flora and associated conservation issues***Access road establishment: impacts on flora and increased charcoal extraction***

Cause and comment: Vegetation clearance is necessary to some degree for road establishment. Owing to the fact that existing tracks will be utilised as much as possible, it is anticipated that clearance will be kept to a minimum and that little in the way of floral SSC will be present along these existing and well established paths, but would have to be confirmed during the required access road risk assessment process that needs to be conducted prior to road establishment. Improved access roads could also facilitate increased access to forested areas by residents in the area, possibly including a potential rise in charcoal production and extraction along these improved access corridors and this is deemed to be an indirect impact of potentially greater significance that vegetation clearances for access roads. Although noted as a key livelihood strategy and a means of cash income for communities it is undesirable and probably lead to increased forest clearance.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Long term	Study Area	High	Definite	HIGH -
With Mitigation	Long term	Study Area	Moderate	Probable	MODERATE -

Mitigation and Management: It is noted that Balmed cannot bear responsibility for increased charcoal production that could potentially eventuate, but should discourage this practice as far as possible within their area of influence. Attempts by Balmed or Blockfarmers to prevent this are likely to lead to conflict with persons conducting these activities; however the following mitigation actions are suggested:

- Plan access routes to avoid sensitive floral or forested areas where relevant.
- Blockfarmers should be encouraged through ongoing training not to establish charcoal production sites, or transport charcoal along these routes, and where possible impress the need to discourage surrounding communities from doing the same.
- Balmed personnel to actively monitor for presence of charcoal pits as part of their periodic farm inspections and report back accordingly, however, it is not suggested they confront any persons engaging in this activity.

Floral habitat fragmentation (Gola Forest National Park only)

Cause and comment: The Gola Forest national Park is the only area of concern that is designated Critical Habitat in terms of the S&E Safeguard Guidelines. It is noted that no farms occur within the Park itself, but some are in close proximity to some of the western boundary portions thereof. Farm activities should not extend beyond the contracted boundaries of an individual Blockfarmers in this area; however, Balmed will need to ensure that Blockfarmers do not impinge on the Park boundaries through project or individual farmer natural resource utilisation activities.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	National	Moderate	May occur	MODERATE -
With Mitigation	Permanent	National	Slight	Unlikely	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Balmed needs to map these bordering Blockfarmers against the boundaries of the park to ascertain individual farm proximity. It is further recommended that these be subject to a detailed by Balmed staff (assisted by specialist input if deemed necessary) to ascertain whether individual farms do have the potential to impact on Park habitat, or result in subsequent floral habitat fragmentation.
- Provided the UTZ standards and criteria are diligently applied and monitored these potential habitat fragmentation impacts on the Park's extremities should be negligible.

4.1.4. Fauna and associated conservation issues

Fragmentation of faunal movement corridors

Cause and comment: This is not a major concern for the assessors given that the faunal species composition and numbers in the study area (with the exception of Gola Forest National Park) are limited owing to large scale deforestation and hunting activities. Although remnant species do migrate between more pristine or suitable habitats within the study area, the low density nature of the farming activities, coupled with the fact that they remain largely vegetated by indigenous plant species, it is expected that fauna can still freely move between any areas of preferred habitat that may be bisected or impinged upon by plantations. Provided the UTZ standards and management criteria in this regard are met it is likely to be of low overall significance.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Study Area	Moderate	May occur	MODERATE -
With Mitigation	Permanent	Study Area	Moderate	Unlikely	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Maintain UTZ ICS M&E procedures.

- Ensure recorded animal sightings are documented - ongoing requests for community reporting of these incidences and locations need to be communicated regularly.
- Ensure that areas of potential habitat and known movement corridors (as informed by Balmed personnel assessment and information provided by local communities in this regard) are avoided in plantation establishment.

Edge-effect pressures on sensitive faunal habitats and loss of species of special concern within the study area

Cause and comment: The potential for plantations to result in edge effect impacts on sensitive habitats, and subsequently result in the loss of species of special concern, is not deemed to be of significance provided identified sensitive habitats (as per the UTZ ICS assessment protocol) are avoided during plantation design and establishment. SSC are unlikely to be prevalent throughout the general study area, but this can only be positively confirmed through specialist study.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Long term	Study Area	Moderate	Probable	MODERATE -
With Mitigation	Long term	Study Area	Slight	May occur	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Maintain UTZ ICS protocols in this regard.

Edge-effect pressure on sensitive faunal habitats or loss of species of special concern - Gola Forest National Park

Cause and comment: This is an area of concern for the assessors. Owing to the anticipated prevalence of more sensitive habitats and potential SSC within the Park (and the potential for species to forage or migrate out of the Park confines) it is essential that new plantations do not adjoin the Park boundaries. There is in theory no reason that farming activities will impact on the Park confines provided these boundaries are known and communicated to participant farmers, if the proximity of the Park to Blockfarms is of relevance at all (as noted above this needs to be mapped by Balmed for confirmation purposes).

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	National	High	Probable	HIGH -
With Mitigation	Permanent	Study Area	Moderate	May occur	MODERATE-

Mitigation and Management: The following mitigation actions are suggested:

- New Blockfarms must be cognisant of this constraint and Balmed must ensure that Blockfarmers are not accessing the Park for any purposes whatsoever (fishing, hunting, wild food collection etc) that could impact on faunal species. UTZ ICS requires assessment of habitat prior to development and these checklist assessments will remain in place.
- All species sightings on farms by farmers and Balmed staff to be reported to and recorded.

4.2. Socio-economic environment

4.2.1. Existing land use

Reduced access to productive agricultural land

Cause and comment: There is potential for cocoa plantations to utilise land portions that could alternatively be utilised for seasonal subsistence or cash crop farming activity by participant farmers. However, owing to the fact these land portions (generally underutilised) are designated by landowners it is not anticipated to be of significance as it is assumed that they will not allocate currently productive land for plantation establishment purposes.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Moderate	Unlikely	LOW-
With Mitigation	Short term	Study Area	Slight	Unlikely	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Ensure that during contractual negotiations that plantation establishment areas do not encroach on other highly productive cropping areas such as bolilands or food fruit trees.
- A recommended monitoring measure would be to utilise a reflective sample to ascertain average area of land parcels utilised for food production as well as yields and earnings from these. It could be an effective M&E measure for demonstrating project induced changes to household incomes and livelihood strategies (see 4.2.2 below).

Reduced access to natural resources

Cause and comment: It is possible that plantation establishment may reduce communal access to natural goods and services if these impinge on areas of natural resource abundance (food, medicinal plants, bush meat, fishing sites etc.) if these are located in proximity to significant resources. However, on the assumption that these will be avoided by landowners in land acquisition processes it should be of low significance.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Moderate	Unlikely	LOW-
With Mitigation	Short term	Study Area	Slight	Unlikely	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- As part of the land acquisition process potential high natural resource use areas must be identified by landowners and excluded from plantation establishment.
- Balmed to ensure through ongoing consultation and engagement with communities whether this is indeed relevant to plantation establishment and operational activities.

4.2.2. Supplementing participating farmer livelihood strategies

Diversification of farmer livelihood strategies

Cause and comment: A common point argued against outgrower or smallholder schemes is that land (or agricultural input effort) better suited to meeting household level food subsistence needs is often utilised by landowners for these “cash crops” instead - potentially jeopardising household food security in the event of a failed or compromised cocoa harvest. Intercropping with pineapple and plantain is advocated by Balmed in the initial 3-4 year period to provide food and cash generating options for farm labour, however, if cash income is not generated during this period the labour expended on cocoa farming could in theory be better spent as labour inputs for subsistence food crops – with potentially negative impacts on individual livelihood strategies being the result. On the assumption that participant farmers and labour exercise and determine this balance of labour inputs through their own free will it is anticipated that subsistence cropping needs will not be jeopardised. Should no cash benefits accrue to farmers during the initial 3-4 year period (from intercrops) it is likely to be of low negative significance. If the potential for cash income is maximised during the initial period, and harvested cocoa produce result in significant cash contributions during the plantation operational lifespan these benefits will be substantially beneficial to participating farmers and cooperatives.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Slight	Probable	LOW-
With Mitigation	Long term	Study Area	Very Beneficial	Definite	HIGH+

Mitigation and Management: The following mitigation actions are suggested:

- Ensure the conditions and objectives of the Blockfarmer Model are met in their entirety.
- Implement and appropriate monitoring protocol to ascertain impacts on farmer livelihoods.

Training and upskilling initiatives

Cause and comment: it has been noted previously that the success or relative failure of the project hinges on ensuring that Balmed personnel and participating Blockfarmers are appropriately trained in applicable farming and product processing techniques. Existing training schemes appear to be robust; however, Balmed (2014b) internal reporting suggests that farmers are not readily absorbing, or demonstrating subsequent knowledge of, the training initiatives undertaken to date. Should these remain (or prove to be) ineffective the outcomes of these training sessions should be deemed as negative in that farmer expectations are raised, but subsequently removed by a poor retention of these necessary skills. Conversely, should the training measures be effective it is definitely anticipated to be of high beneficial significance in terms of the project, as well as allow for the skills retention by individuals in other farming ventures.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Moderate	Probable	LOW-
With Mitigation	Long term	Study Area	Very Beneficial	Definite	HIGH+

Mitigation and Management: The following mitigation actions are suggested:

- Balmed to review of the efficacy of initial training methods and subsequent refresher sessions to ensure that knowledge transfer is taking place accordingly. Blockfarms should be subject to a Balmed led analysis in this regard.

Employment for vulnerable persons - women and youth

Cause and comment: Women and youth have been identified as vulnerable persons in the project context. They are significantly represented on the contractual agreements made available to the assessors. Balmed's nurseries are almost elusively staffed by women employees. Should the Blockfarms be successful these sources of employment and income can make a significant difference to the livelihood strategies of these vulnerable persons.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Slightly Beneficial	May occur	LOW+
With Mitigation	Long term	Study Area	Very Beneficial	Definite	HIGH+

Mitigation and Management: The following mitigation actions are suggested:

- Balmed to actively monitor benefits accruing to vulnerable persons or groups participating in cooperatives. These division of benefits need to be demonstrated as equitable.

4.2.3. Community health, safety and security - transport impacts

Increased vehicular traffic and community safety risks

Cause and comment: Although traffic movements by Balmed operated vehicles are limited at this time it is anticipated that these will increase significantly once more of the plantations become productive. General safety risks posed by vehicles on pedestrians are highly significant if these result in serious injury or death. Although appropriate SOP's pertinent to basic road and vehicle operating safety can significantly reduce the likelihood of death or injury the potential for accidents cannot be discounted.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Study Area	Very high	Probable	HIGH-
With Mitigation	Permanent	Study Area	Very high	May occur	MODERATE-

Mitigation and Management: The following mitigation actions are suggested:

- Standard inspection and maintenance, road safety and vehicle operation procedures to be established (factoring in speed limits, not under the influence, driver training initiatives etc.) that can monitor and evaluate road safety.
- A Transport and Road Safety Plan is advisable.

Increased vehicle exhaust and dust emissions

Cause and comment: Dust entrainment by vehicles (particularly in the dry season) can be expected and will be of nuisance value to communities - if not posing a physical health risk. Similarly, exhaust emissions can impact on community health however provided.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Moderate	Definite	LOW-
With Mitigation	Short term	Study Area	Slight	May occur	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Speed limits in community settlements to not exceed 10 km/h to minimise dust entrainment.
- Vehicle movements to be kept to a minimum.

4.2.4. Wastes

Polyethylene bag disposal

Cause and comment: This is a fundamental concern on the assessors' part. The polyethylene seedling bags are numerous and are difficult to track in the absence of a rigorous monitoring programme. It is noted that they are used extensively for use as firelighters for charcoal stoves, although the burning option (reuse) is not ideal from an air pollution or health perspective.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Study Area	Moderate	Definite	HIGH-
With Mitigation	Permanent	Study Area	Moderate	Probable	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Container collection and disposal manifests and methods to be developed by Balmed.
- A Waste Management Plan is required. Baling and burial of these inert wastes by Balmed must be considered at suitable locations if volumes prove to be too large for reuse. It is not anticipated that recycling these containers is a viable option in Sierra Leone at this time so contained burial may be the preferable option.

Disposal of hydrocarbons and other hazardous waste items

Cause and comment: This is a higher order risk as it relates to project activities. Responsible disposal of hydrocarbon and other low order hazardous wastes (fluorescent light tubes, electronic equipment, batteries etc) needs to be demonstrated by Balmed. Irresponsible disposal of these items will pose significant ecological (and potentially community) risks either through ground or water contamination. As it is difficult to track what final disposal in this instance will entail, or what in fact occurs once this responsibility is handed over to third parties.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Study Area	Moderate	Definite	HIGH-
With Mitigation	Permanent	Study Area	Moderate	Probable	MODERATE-

Mitigation and Management: The following mitigation actions are suggested:

- Safe disposal certificates from an appropriate service provider need to be part of the monitoring and document control system, the mechanisms for this need to be investigated by Balmed to demonstrate this appropriately.

- All hydrocarbon waste to be stored in banded areas prior to safe disposal.
- Reuse or recycling of wastes needs to be demonstrated if possible.
- To be addressed in the required Waste Management Plan.

4.2.5. Heritage

Disturbance of graveyards/burial sites

Cause and comment: This is possibly of high negative significance should this eventuate during the course of plantation establishment as distance of gravesites is likely to be viewed as a major social or cultural transgression. The overall likelihood of this occurring is deemed to be low on the assumption that burial sites (and areas of cultural significance) will be known to landowners and communities and subsequently designated as “no-go” areas for plantation establishment.

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Permanent	Study Area	Severe	May occur	HIGH-
With Mitigation	Permanent	Study Area	Moderate	Unlikely	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- Ensure that burial sites or culturally significant areas are identified by landowners and Balmed in the land acquisition process. These must be designated as project “no-go” areas.
- Development of Chance Find Procedure is required for potential finds of archaeological significance only, unlikely to be required for contemporary cultural and burial sites.

Loss of sites used for cultural practices

Cause and comment: This is the

Impact	Effect			Risk or Likelihood	Overall Significance
	Temporal Scale	Spatial Scale	Severity of Impact		
Without Mitigation	Short term	Study Area	Moderate	May occur	MODERATE-
With Mitigation	Short term	Study Area	Moderate	Unlikely	LOW-

Mitigation and Management: The following mitigation actions are suggested:

- As for graveyards/ burial sites above.

4.3. Residual risk matrix

Table 4.1 below details the predicted residual risks as it relates to individual impacts subject to assessment. As noted previously, the risk of successfully implementing mitigation and management measures for beneficial impacts is also assessed owing to the possibility that if not managed appropriately these potential benefits could be significantly reduced, or even become harmful or detrimental to participating farmers. As such, the intention is to highlight those areas requiring additional or dedicated attention by Balmed staff, and to a lesser degree the Blockfarmers.

Table 4.1: Residual Risk Matrix (beneficial impacts are grey shaded)

Impact	Impact Significance	Mitigation Difficulty	Residual Risk
Terrestrial Ecology			
Soil erosion due to vegetation clearing for plantation establishment and operation	Low -	Easily achievable	Minor Risk
Degradation of soil structure as a result of plantation establishment and operation	Low -	Easily achievable	Minor Risk
Impacts on landform or topography as a result of plantation establishment and operation	Low -	Easily achievable	Minor Risk
Access road establishment: soil erosion and change in landform	Moderate -	Very difficult	Major Risk

Altering of surface water quantity and quality by plantation establishment and operation	Low -	Easily achievable	Minor Risk
Impacts on riparian corridor vegetation through plantation establishment and operation	Low -	Easily achievable	Minor Risk
Access road establishment: erosion or siltation impacts on watercourses	Moderate -	Difficult	Medium Risk
Impacts on aquatic habitat (fish and macroinvertebrate) and community fisheries	Low -	Achievable	Minor Risk
Access road establishment impact on flora and increased charcoal extraction	Moderate -	Very Difficult	Major Risk
Floral habitat fragmentation (Gola Forest National Park only)	Low -	Difficult	Medium Risk
Fragmentation of faunal movement corridors	Low -	Achievable	Minor Risk
Edge-effect pressures on sensitive faunal habitats and loss of species of special concern within the study area	Low -	Achievable	Minor Risk
Edge-effect pressure on sensitive faunal habitats or loss of species of special concern - Gola Forest National Park	Moderate -	Difficult	Medium Risk
Socio-economic Environment			
Reduced access to productive agricultural land	Low -	Easily achievable	Minor Risk
Reduced access to natural resources	Low -	Easily achievable	Minor Risk
Diversification of farmer livelihood strategies	High +	Achievable	Medium Risk
Training and upskilling initiatives	High +	Achievable	Medium Risk
Vulnerable persons - women and youth	High +	Achievable	Medium Risk
Increased vehicular traffic and community safety risks	Moderate -	Achievable	Minor Risk
Increased vehicle exhaust and dust emissions	Low -	Achievable	Minor Risk
Polyethylene bag disposal	Low -	Very Difficult	Medium Risk
Disposal of hydrocarbons and other hazardous waste items	Moderate -	Very Difficult	Major Risk
Disturbance of graveyards/burial sites	Low -	Easily achievable	Minor Risk
Loss of sites used for cultural practices	Low -	Easily achievable	Minor Risk

All impacts designated as having a Medium or Major residual risk designation are required to be addressed through the Chapter 7 Action Plan recommendations and associated SEMS and individual Management Plan development and revision processes that is required to be undertaken by Balmed within 6 months of the finalisation of this report.

The following chapter reviews the existing M&E processes currently being implemented by Balmed as well their capacity to enhance existing processes and protocols to allow for the development of an integrated SEMS that fulfils both AATIF and VCS requirements.

5. EXISTING MITIGATION AND MANAGEMENT PRACTICES

5.1. Balmed organisational SEMS

Although there is no stand-alone document or manual (with the expectation of the UTZ ICS Policy Documents manual) that prescribes the S&E impact mitigation, management and monitoring and evaluation activities undertaken by Balmed, it is evident that many of the constituent policies, or management plans and policies, are currently in place. Balmed has an extensive, and at face value, efficient document control system that is largely cognizant of the UTZ ICS and Fairtrade VCS performance monitoring requirements. It is also reflective of daily operational reporting requirements as it relates to business processes with personnel demonstrating a rigorous and diligent approach to maintaining this information control and reporting mechanism.

It is evident that Balmed personnel to have the inherent capacity to implement and manage the required SEMS and associated management plans as they have had extensive exposure to VCS accreditation requirements, more specifically those of the UTZ. It stands to reason therefore that additionally required plans (or revisions) and M&E considerations be adopted within this existing framework so as to avoid the duplication of effort in attempting to meet the AATIF requirements that in large part are synonymous with the VCS objectives and requirements.

The expatriate manager in the Kenema office and his immediate field supervisor staff demonstrate the required understanding and application of these M&E criteria, and the Plan, Do, Check, Act quality systems approach necessary to ensure that this is effective. It and it will largely be their responsibility to expedite the required SEMS development, revisions and amendments that factor in this report's recommendations and Action Plan requirements.

It is a concern that the detail and exactitude required to be adopted by field staff to ensure the correct implementing of these revised M&E measures may not be implicitly understood as the SEMS and associated management plan development process unfolds. It is crucial therefore that personnel who will be responsible for these M&E functions in the Blockfarms are actively involved in their development – specifically around the key issue of developing practicable KPA's/KPI's and the monitoring thereof. It is advisable that key personnel are identified for these purposes and subject to regular training and feedback sessions during this development process.

Provided that the UTZ ICS policy documents are substantially revised (refer to Action Plan comments) and incorporate all additional recommendations contained in this report, it is both practical and practicable to adopt this approach so as to allow Balmed personnel to develop these outstanding requirements within a familiar framework and M&E system.

5.2. VCS management, monitoring and reporting requirements

As noted previously, Balmed has achieved for the UTZ and Fairtrade accreditation status. The UTZ ICS Policies as they stand are grammatically flawed and are not entirely coherent and are not adequate enough in terms of the S&E Safeguard Guideline requirements. They lack specific detail on the individual plan (or policy) objectives, implementation responsibilities, KPA's and KPI's pertinent to a given policy, M&E reporting and managerial requirements, as well as the periodicity.

Subsequently, these need to take all identified requirements and shortcomings into account in their revision. This document needs to be reworked as per the Framework SEMS and Management Plan formats provided as Annexures to this report, but still maintained as the ICS Policy Documents in order to meet these VCS requirements. It is anticipated that this will require 9 months to finalise.

6. CONCLUSION

In conclusion, it is apparent that the bulk of the project induced detrimental impacts identified in this assessment are generally of low significance and residual risk, with the exception of access road establishment (and the facilitator role these may play in increased charcoal production in the study area), as well as the key aspect of appropriate waste management practices. As noted previously, these management plans and applicable M&E specifications require substantial revision and development by Balmed, but can in theory be met through the required revisions to existing M&E systems or frameworks currently utilised by Balmed. .

Similarly, potential benefits accruing to participant farmers and surrounding communities need to be maximised. Should the existing training and upskilling initiatives fail, so is the project likely to be unsuccessful. It is apparent that the project has a real ability to enhance livelihood strategies and increase household incomes for participants, and expectations by Blockfarmers in this regard are high. It is paramount that Balmed address these potential residual risks going forward in order to ensure these expectations are met.

In closing, it is apparent the Balmed's business model and activities have the potential to result in significant benefits for participating farmers in the medium to long term future, with relatively negligible harmful impacts on their receiving physical and social environments likely to eventuate as a result of these activities provided they are managed in accordance with the AATIF and VCS specifications and criteria.

7. ENVIRONMENTAL AND SOCIAL ACTION PLAN

The following Action Plan recommendations are required to fulfil the S&E Safeguard requirements.

Table 7.1: Action Plan

Action Plan Item	Requirements	Responsibility	Timeframe
UTZ ICS Policy Document	Rewrite ICS policies, grammatically incorrect, no responsibilities delegated, no KPAs/KPIs or general M&E requirements apparent. The revised or supplemented policies or Plans need to be able to populate the cross cutting Monitoring Programme that is required to be reflective of all these M&E considerations.	Balmed	3 months
Proximity to Gola Forest National Park	Although not anticipated to impinge on the Park's boundaries, Balmed needs to confirm this is not the case through an appropriate mapping exercise	Balmed	1 month
Training	Training appears to be problematic as per Balmed's internal reporting on this – a feedback mechanism or procedure that is predicated on quarterly inspections and engagements on all training issues and shortfalls identified in conjunction with Blockfarmers requires development. Feedback and corrective action mechanisms for where farmers to identify why farmers are not demonstrating full understanding of trainings supplied to date need to be developed as matter of urgency.	Balmed	3 months
Waste Management Plan	Polyethylene, hydrocarbon and general hazardous wastes (light tubes, electronics, batteries etc.) need to be subject to this stand-alone plan. As for all Policies or Plans pertinent to Balmed operations these need to be cognisant of all M&E requirements.	Balmed	3 months
Chance Find Procedure	A simple document that describes the steps to be followed in the event of accidental discovery of any items or features of archaeological significance (template to be provided by CES).	CES	1 month
Access Road and Transport Management Plans	A plan for road construction and maintenance (factoring in the risk assessment methods and criteria) needs to be developed by Balmed. Transport safety risks and management measures to be addressed as well	Balmed	3 months
Draft SEMS	As per the Framework SEMS stipulations and specifications	Balmed	6 months

Draft SEP	Will require contextualisation of the Framework SEP supplied only.	Balmed	3 months
Draft Monitoring Programme	This can be included as part of the SEMS or a stand-alone document. Dependent on the finalisation of the SEMS and Management Plan (including revised and updated UTZ ICS Policies), in theory the last document to be finalised as per the Framework Monitoring Programme stipulations and specifications	Balmed	6 months
Final SEMS	CES is available to assist in finalising these documents, provided an initial attempt is demonstrated by Balmed. It is a valuable capacity building exercise for Balmed staff to undertake, but CES will be available for <i>ad hoc</i> advice during this initial development period. As noted above it could be advisable to collapse all of these requirements into one document on issue of the Final versions of these.	Balmed/CES	9 months
Final SEP		Balmed/CES	6 months
Final Monitoring Programme		Balmed/CES	9 months

The point of departure for the required revisions and SEMS finalisation is the revision and additions to the UTZ ICS Policy Document. M&E requirements for each of these will need to be developed for each policy aspect or plan in order to coherently inform the subsequently produced Monitoring Programme that will consolidate all these M&E requirements.

The Framework SEMS document will inform the development of the Draft SEMS and associated Programmes, Plans and Policies once the above mentioned activities have been completed.

The finalisation of these documents will be an iterative process requiring review by AATIF, and where necessary, external consultants or VCS accredited auditor comment and input.

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ANNEXURE A: IMPACT SIGNIFICANCE & RISK RATING METHODOLOGY

CES has for the purposes of this report utilised both an Impact Assessment and a Risk Assessment scale to identify potentially significant environmental impacts, and determine significant residual risks, if any, Balmed's activities may pose to the respective receiving environments.

Once CES has estimated the potential significance of individual impacts as per the below categories (as presented in Tables A.1 and A2 below), the mitigation potential (degree of difficulty) of each is then identified. The degree of difficulty of mitigation measure implementation is interpreted in terms of potential effectiveness and practicality, and more crucially, congruency with existing certification scheme management, monitoring and reporting requirements that are currently being fulfilled by Balmed. Thereafter a risk matrix is applied to all assessed impacts to arrive at a final residual risk rating for each of these. The methodology employed for assessing impacts significance is described below:

Significance: The **environmental significance** scale evaluates the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can either be ecological or social, or both. In this instance ecological only. The evaluation of the significance of an impact relies heavily on the values of the assessor/s making the judgement. Four factors need to be considered when assessing the significance of impacts, namely:

1. Relationship of the impact to **temporal** scales - the temporal scale defines the significance of the impact at various time scales, as an indication of the duration of the impact.
2. Relationship of the impact to **spatial** scales - the spatial scale defines the physical extent of the impact.
3. The severity of the impact - the **severity/beneficial** scale is used in order to scientifically evaluate how severe negative impacts would be, or how beneficial positive impacts would be on a particular affected system (for ecological impacts) or a particular affected party. The severity of impacts can be evaluated with and without mitigation in order to demonstrate how serious the impact is when nothing is done about it. The word 'mitigation' means not just 'compensation', but also the ideas of containment and remedy. For beneficial impacts, optimization means anything that can enhance the benefits. However, mitigation or optimization must be practical, technically feasible and economically viable.
4. The **likelihood** of the impact occurring - the likelihood of impacts taking place as a result of project actions differs between potential impacts. There is no doubt that some impacts would occur (e.g. loss or clearance of vegetation), but other impacts are not as likely to occur (e.g. vehicle accidents), and may or may not result from the project operations. Although some impacts may have a severe effect, the likelihood of them occurring may affect their overall significance.

Table A1 below summarises the above described factors' categorical limits and criteria.

Table A1: Impact Significance Rating Criteria

Effect	Temporal scale	
	Short term	Less than 5 years
	Medium term	Between 5 and 20 years
	Long term	Between 20 and 40 years (a generation) and from a human perspective almost permanent.
	Permanent	Over 40 years and resulting in a permanent and lasting change that will always be there

	Spatial Scale		
	Localised	At localised scale and a few hectares in extent	
	Study area	The proposed site and its immediate environs	
	Regional	District and provincial level	
	National	Country	
	International	Internationally	
	Severity		Benefit
	Slight / Slightly Beneficial	Slight impacts on the affected system(s) or party(ies)	Slightly beneficial to the affected system(s) or party(ies)
	Moderate / Moderately Beneficial	Moderate impacts on the affected system(s) or party(ies)	An impact of real benefit to the affected system(s) or party(ies)
	Severe / Beneficial	Severe impacts on the affected system(s) or party(ies)	A substantial benefit to the affected system(s) or party(ies)
Likelihood	Very Severe / Very Beneficial	Very severe change to the affected system(s) or party(ies)	A very substantial benefit to the affected system(s) or party(ies)
	Temporal scale		
	Unlikely	The likelihood of these impacts occurring is slight	
	May Occur	The likelihood of these impacts occurring is possible	
	Probable	The likelihood of these impacts occurring is probable	
	Definite	The likelihood is that this impact will definitely occur	

A four-point impact significance scale is then applied to the project impacts (Table A.2 below).

Table A2: Environmental Significance Rating Scale

Significance rating	Description
Very High	VERY HIGH impacts would constitute a major and usually permanent change to the (natural and/or social) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.
High	These impacts will usually result in long term effects on the social and/or natural environment. Impacts rated as HIGH will need to be considered by the project decision makers as constituting an important and usually long term change to the (natural and/or social) environment. These would have to be viewed in a serious light.
Moderate	These impacts will usually result in medium to long term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by the project decision makers as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are real but not substantial.
Low	These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW are generally fairly unimportant and usually constitute a short term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

Mitigation Potential: The degree of difficulty of mitigating the various impacts ranges from very difficult to easily achievable. The four categories that are used are listed and explained in Table A.3 below.

Both the practical feasibility of the measures and their potential effectiveness are taken into consideration in deciding on the appropriate degree of difficulty. As noted above, utilising existing management and mitigation measures currently in evidence, and supplementing or refining these as is necessary, is the preferred mitigation and management option as it builds on existing knowledge and systems awareness (such as the UTZ ICS specifically) of Balmed personnel.

Table A3: Degree of Mitigation Difficulty Rating Scale

Degree of Difficulty	Description
Very difficult	The impact could be mitigated but it would be very difficult to ensure effectiveness and/or to technically/financially achieve
Difficult	The impact could be mitigated but there will be some difficulty in ensuring effectiveness and/or implementation
Achievable	This impact can be effectively mitigated without much difficulty or cost
Easily achievable	This impact can be easily and effectively mitigated

Residual Risk: The residual risk matrix determines the overall level of risk associated with an impact by comparing the significance of the impact with its mitigation potential, and the degree of difficulty the project proponent faces in successfully and consistently implementing these measures – this is largely based on the assessors normative perceptions of the potential efficacy of these measures and the proponents ability to execute these (Table A4 below). This would apply to both minimisation of harmful impacts and maximisation of beneficial impacts.

Table A4: Residual Risk Matrix - Significance of the Impact versus the Difficulty of Mitigation

Mitigation Potential	Impact Significance			
	Low	Moderate	High	Very High
Very difficult	Medium Risk	Major Risk	Extreme Risk	Extreme Risk
Difficult	Minor Risk	Medium Risk	Major Risk	Extreme Risk
Achievable	Minor Risk	Minor Risk	Medium Risk	Major Risk
Easily achievable	Minor Risk	Minor Risk	Minor Risk	Medium Risk

Impacts that are of High to Very High significance and Difficult to Very Difficult to mitigate are considered to be ‘Extreme’ environmental or social risks, or risks to the project. Those impacts that are less significant and easier to mitigate are rated as ‘Major’ to ‘Medium’ to ‘Minor’ i.e. generally impacts of Low to Moderate significance for which mitigation is Achievable to Easily Achievable. Impacts may potentially be of Very High significance, but if the mitigation is Easily Achievable they are rated as ‘Medium’ risks. The implications of the risk categories are explained in Table A5 below.

Table A5: Residual Risk Categories

Risk Weighting	Description
Extreme	Significant mitigatory actions would be required to reduce these risks. In some cases it may not be possible to reduce these extreme risks meaning they are likely to prevent the option from being used (raised as red flags in this assessment).
Major	These risks are of a serious nature, and without effective mitigation measures would be major hindrances to the project proceeding. These would need to be monitored and managed, and may necessitate the use of a different option.
Medium	These risks are of a less serious nature but still important, and need to be reduced to as low as reasonably possible for the benefit of the environment or communities affected. In isolation these risks are insufficient to prevent project commencement.
Minor	These risks are generally acceptable to the project and environment, and mitigation is desirable but not essential. Best practice, however, should be followed and the risks mitigated to prevent any cumulative effects of such impacts.

Where a given impact is considered to be of Extreme risk for any of the four impact criteria under consideration, the alternative is automatically assigned an Extreme risk rating.

ANNEXURE B: COMPOSITION OF EXISTING BLOCKFARMING GROUPS

	Dono	BHL-BFG-010	Gbaru	1,23	0.4	2.0	20	3	23	42.1
	3	4	3	365	47.8	19.3	101	25	126	2,492
	Lower Kuiva	BHL-BFG-002	Lowoma	100	included in Dukor		44	5	49	1,402
	Upper Kuiva	BHL-BFG-025	Dukor	180	23.3	9.4	29	3	32	1,612
	Upper Kuiva	BHL-BFG-021	Hotala 1	50	25.4	10.3	29	3	32	720
	Upper Kuiva	BHL-BFG-022	Hotala 2	50	included in Hotala 1		18	3	21	808
	Kower Kuiva	BHL-BFG-011	Kuiva	75	56.6	22.9	60	3	63	2,853
	Upper Kuiva	BHL-BFG-023	Duanhuyema	100	30.4	12.3	20	5	25	945
	2	6	5	555	135.7	54.9	200	22	222	8,340
	Pelegbankpima	BHL-BFG-026	Njabama	150	79.3	32.1	50	20	70	0
	Upper Sami	BHL-BFG-019	Jamma	200	38.6	15.6	29	7	36	1,267
	Upper Sami	BHL-BFG-018	Joioma	200	40.2	16.3	29	0	29	812
	Lower Sami	BHL-BFG-015	Taninawahun	200	38.1	15.4	46	4	50	3,704
	Lower Sami	BHL-BFG-009	Ngiehun	170	21.6	8.7	33	8	41	2,612
	Lower Sami	BHL-BFG-017	Njorpowahun	200	22.7	9.2	29	8	37	1,307
	Upper Sami	BHL-BFG-008	Kpangiema 1 (Bailuyama)	75	included in Faiyuan		31	5	36	708
	Upper Sami	BHL-BFG-001	Kpangiema 2 (Faiyuama)	75	43.6	17.6	30	8	38	1,182
	3	8	7	1,270	284.1	115.0	277	60	337	11,592
r Bambara	Maowoma	BHL-BFG-007	Kamao	50	49.2	19.9	35	0	35	1,197
ijawei	Nyema	BHL-BFG-014	Nyema	247	27.3	11.0	29	0	29	0
				247	27.3	11.0	29	0	29	0
	Mendekelma	HL-BFG-AMS-001	Mendekelma 1 (PSI)	833	239	96.7	25	22	47	797
aura	Mendekelma	HL-BFG-AMS-001	Mendekelma 2 (PSI)	833	19.9	8.1	25		25	309
				1,666	259	105	50	22	72	1,106
	Dakona	BHL-BFG-012	Taninahun	100	87.8	35.5	49	8	57	734
	Karjei	BHL-BFG-005	Boma	100	12.6	5.1	29	6	35	1,539
	Jorgba	BHL-BFG-004	Vamma	100	24.6	10.0	27	6	33	1,107
	Fallay	BHL-BFG-006	Pelewahun	100	67.5	27.3	42	5	47	820
	Karjei	BHL-BFG-003	Nyanyahun	100	34.9	14.1	32	7	39	720
	Limba	BHL-BFG-013	Konia	100	46	18.6	56	3	59	762
1	5	6	6	600	273.4	110.6	235	35	270	5,682
			32	4,753	1,076.4		927	164	1,091	30,409
re (ha)				1,923	436	435.6				

ANNEXURE C: MAPS OF BALMED OPERATIONAL AREAS

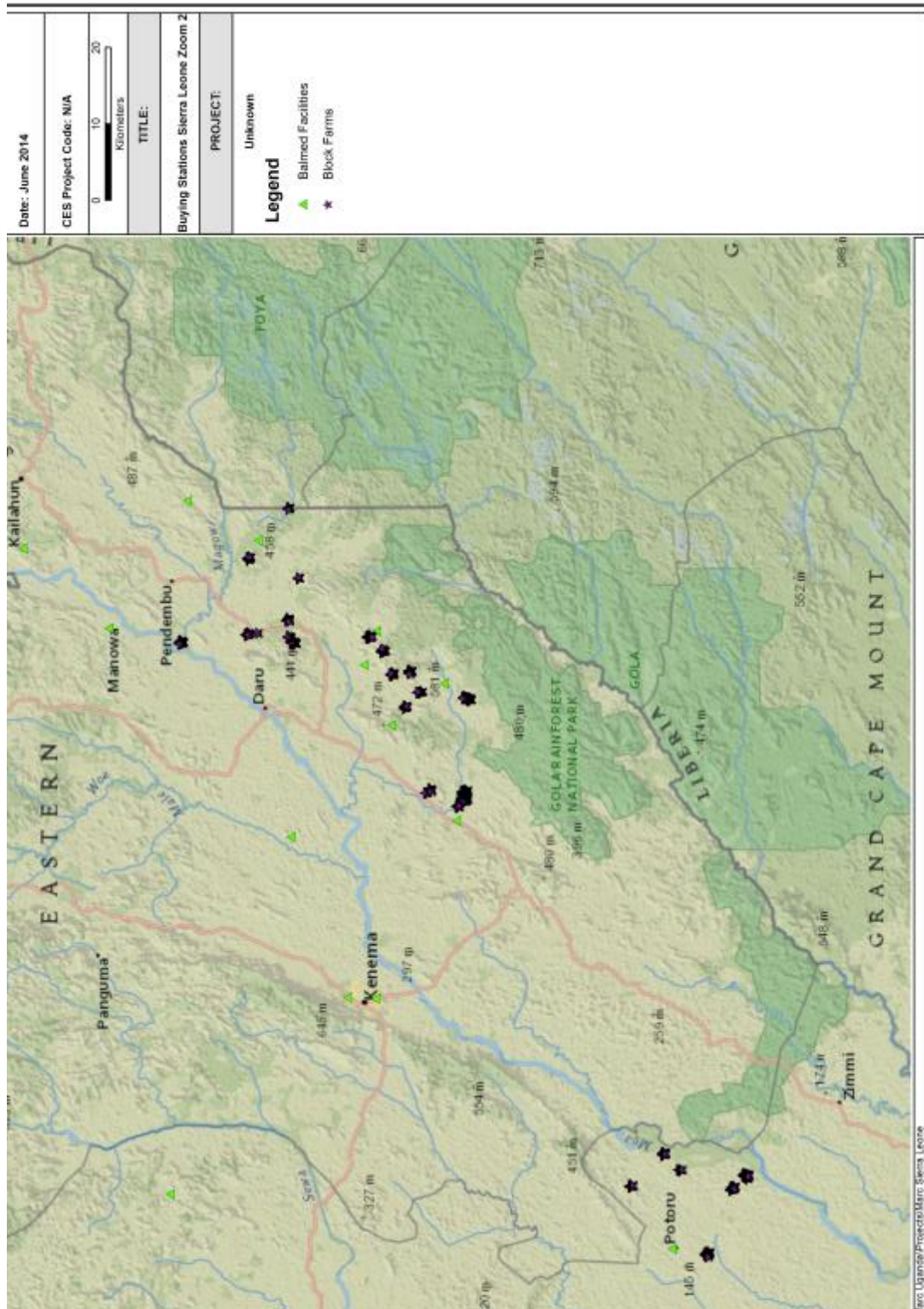


Figure C1: Balmed Blockfarmers and company facilities or buying stations in the Kenema area

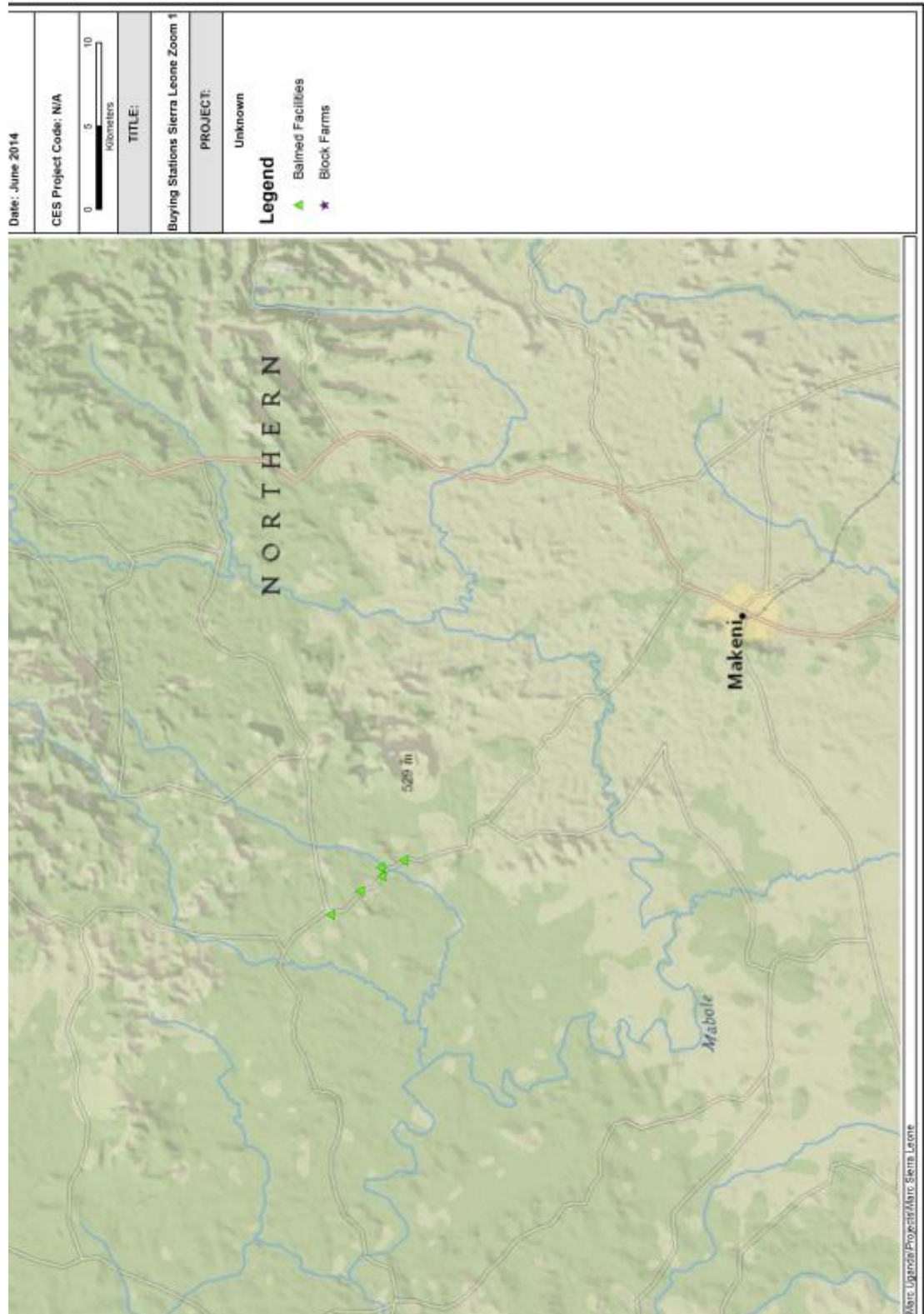


Figure C2: Balmed Cashew Nut Blockfarmers in the Makeni area

ANNEXURE D: COMPLIANCE WITH NATIONAL LAWS

The following statutes or policies dealing with S&E provisions are considered relevant to this assessment:

National Environment Protection Agency Act (2008)

The Environment Protection Agency Sierra Leone (EPA-SL) was created in 2008 by the Act to effectively carry out the function of implementing agent of the environmental legislation. It defines the powers of the agency and makes provision for an environmental impact assessment process from sections 23 through 39. *None of the listed activities or environmental authorisation requirements contained in this Act is relevant to Balmed operations in the opinion of the assessors.*

National Lands Policy (2005)

The policy addresses many of the lapses of the dual land tenure system in Sierra Leone (freehold in the Western Area and communal in the provinces). It mentions the need for a Lands Commission and seeks to address such issues as the general indiscipline in the land market, such as land encroachment, falsification of documents, multiple land sales and registrations, unauthorized use of the land, haphazard development, improper survey practices, indeterminate local authority and chiefdom boundaries, resulting from lack of reliable maps and plans, and rampant encroachment and illegal acquisition of large tracts of government land. The policy provides for the security of tenure and protection of land rights and pursues such actions as required to resolve or minimize land tenure disputes and their associated conflicts. All these are intended to ensure the coordinated and orderly use of land as a vital resource by present and future generations. *Owing to the fact that landowners retain title and effective decision making powers on their land use it is not deemed to be applicable to Balmed operations and land acquisition processes.*

Health and Safety Regulation (The Factories Act-1974)

The 1974 Factories Act caters for the registration and regulation of operations of various factories. The Act stipulates various enforcement powers of the Factories Inspectorate and outlines health and safety measures for the factory worker. It also stipulates responsibilities of factory owners and operators, offences, penalties and legal proceedings that are pertinent for any contravention of provisions of the Act and powers of the Factories Inspectorate. Notification and investigation of accidents and diseases are also covered in the Act. *Balmed actively ensures that appropriate H&S requirements are adhered to. Where necessary, Personal Protective Equipment (PPE) is issued to Balmed employees working in areas or situations requiring these. Balmed's trading and processing facilities are rudimentary and unlikely to fall under any specifications or prescriptions pertinent to this Act.*

Forestry Act (1998)

This Act governs the efficient and rational utilisation of the country's natural forest reserves. It specifies the permitting and permissible use processes applicable to any utilisation of these resources as well as making proviso for offences and enforcement measures on the part of the mandated authority. *Balmed does not have access to, or utilise resources from, any gazetted forests that the assessors are aware of. It is required that they map Blockfarms in close proximity to any critical forest habitat as recommended in this report. However, it is not apparent that Balmed's activities trigger any considerations of specification contained in this Act owing to its utilisation of existing agricultural land parcels and VCS prohibition on using primary or pristine*

forest habitat.

Hazardous Material Policies

The Environmental Protection Agency Act (2008) provides for the Agency to monitor, control and regulate the manufacture, sale, transportation, handling or disposal of toxic and hazardous substances. The Act prohibits the importation, introduction or discharge of toxic or hazardous substances into the air, land and waters of Sierra Leone. *As noted in this report the appropriate management of hazardous waste requires attention by Balmed. Although no transgressions to the EPA Act are in evidence this requires ongoing conformation thorough the required Plan and SEMS M&E processes.*

Labour Policy

There is no stand-alone Labour Act in Sierra Leone. Many of the important laws regulating the labour market in Sierra Leone date back to 1960, a year before independence from the United Kingdom. These include the Employers and Employed Ordinance and the Trade Unions Ordinance. The labour laws are presently being revised in Sierra Leone. The Government provides legislation for benefits including minimum wage and working hours in general (see Minimum Wage Act below). There is also provision for collective bargaining by various Trade Groups, which enter into collective agreements with employers. Employers are represented by an Employers' Federation and various collective groupings of employers as appropriate. A normal collective agreement addresses minimum conditions which shall tend to secure to the employees concerned, minimum wage and emoluments and all other conditions of service consistent with the prevailing cost of living in the country and fair and reasonable conditions of Employment, having regard for professional qualification, experience and length of service. Balmed will, as a minimum, need to subscribe to the labour policy regulations as stipulated in Public Utilities Trade Group Agreement that was published in the National Gazette in July, 2004, as until such time as the Labour Policy is finalised (the status of this needs to be confirmed). *There are no apparent transgressions by Balmed with respect to national labour policy or law - see below - or any outdated legislation pertinent thereto.*

Minimum Wage Act (1997)

This Act governs the minimum wage to be paid to workers in Sierra Leone. The minimum working age is 18, but this is not enforced and children routinely work as vendors and petty traders in urban areas and work seasonally on family subsistence farms in rural areas. The standard workweek is 38 hours but most workweeks exceed that amount. Health and safety regulations set by law are not enforced. The minimum wage is currently set at \$10.50 per month, with the minimum wage in the public sector has been rounded up to Le 480,000 (~\$120 per month). *All of Balmed's personnel receive rates of remuneration in excess of the minimum wage amount currently in effect.*

The Child Right Act (2007)

Sierra Leone signed and ratified the United Nations Convention on the Rights of the Child (CRC) in 1990. The Government of Sierra Leone has signed and ratified six of the International Labour Organisation Conventions, with the most relevant being:

- ILO 138 Minimum Age Convention (1973) ratified 20th January 2011
- ILO 182 Worst Forms of Child Labour Convention (1999) ratified 20th January 2011.

As part of its commitment, the government has produced periodic treaty reports to the Committee Monitoring the implementation of CRC treaty to ensure effective implementation and review

(<http://www.crin.org>). The GOSL has further, domesticated the Convention through the promulgation Child Rights Act of 2007. This Act forms the basis of a stronger framework for protecting child rights and sets out the minimum age for light work as 13 years and that of hazardous work as 18 years. The Act further provides for the registration of children and young persons in industrial undertakings. *As discussed in this report child labour is not considered to be a risk either in Balmed's activities or implicit in its supply chain. Accordingly they are deemed to be adhering to the provisions of this Act.*

Cultural Heritage

The National Environmental Policy (1994) provides for the collection of relevant data on biological diversity and cultural heritage. It seeks to promote socio-economic and cultural development through the preservation of biological diversity for the sustainable utilization of natural resources. There are references to the preservation and/or respectful removal (taking into consideration cultural sensitivities) of “society bushes” for utilisation/exploitation and other purposes in various regulations. *Balmed actively seeks to avoid impacts on cultural heritage as it is not evident how their operations can do so. A required Chance Find Procedure should assist in avoiding any transgressions of any relevant Acts or Policies provided the required procedure is adhered to if any archaeological artefacts of significance are ever encountered.*

ANNEXURE E: FRAMEWORK STAKEHOLDER ENGAGEMENT PLAN

ANNEXURE F: FRAMEWORK MONITORING PROGRAMME

ANNEXURE G: SOCIAL AND ENVIRONMENTAL MANAGEMENT SYSTEM

ANNEXURE H: BALMED BLOCKFARMER MODEL

Excerpts excised from Rust (2012):

The basic idea of the Blockfarming-Model by Balmed Holdings' approach is that the company leases un- and underexploited land from elder land owners for cocoa plantations on which youth groups carry out the work and receive trainings so they will be able to take over management of the plantations after eight years. If not laid fallow, prior land use of the leased sites has also been cocoa production.

From the beginning, the model is set up like a shareholder model where the youth farmers, the elder land owners and Balmed Holdings receive each 1/3 of the harvest. The company's share is handed over to the youth farmers after eight years, who then earn 2/3 of the revenue from the cocoa farms. An average youth group consists of about 25 members and cultivates a total of about 100 acres (4 acres per member). All cocoa produced on these areas is sold to the company.

The Block-Farming-Model uses the community owned processing centres, managed by Balmed, as a buying and training hub for the farmers involved in the farming. Besides offering agricultural training with a focus on certification, Functional Adult Literacy courses will be provided. The main features of the model are outlined in the following:

Process of land acquisition:

According to the Balmed Holdings' management the process of reaching the land agreements has included the following steps:

- The main idea and basic features of the Cocoa-Blockfarming-Model have been developed by the company.
- The company has carried out several brainstorming sessions in order to figure out from the beginning what issues will be most relevant for the land owners as well as the participating youths.
- Meetings have been held in the different Chiefdoms to explain the Cocoa-Blockfarming-Model and answer possible questions by the land owners. Balmed Holdings emphasized that carrying out these meetings has been highly important to build trust with the land owners.
- According to the company, approximately two to three meetings were held until the concept was fully understood and supported.
- Once the land owners had agreed and the suitability for cocoa production was confirmed on site, a GPS survey of the land was carried out in order to formally register each land. The land registering process is accompanied by a lawyer and the documents formally registered with the Sierra Leonean government. Formal Land Lease Agreements are created, also to be signed by a governmental representative such as the District Council (still in progress). The maps provided through the surveys are to be annexed to the respective land agreement. Through this, land owners who did not have their land registered before benefit from now having a legal document that proves their property.
- Signing of the land agreements by the Paramount Chief, Section Chief, Town Chief, respective land owner and the Balmed Holdings Management.

Agreements for land lease and provision of labour:

- Farm Management Agreements between Balmed Holdings Ltd. and the land owners (mainly individuals / families) are signed giving the company the right to use the respective

land for cocoa production for a (first) period of 20 years. An extension of the land lease for another 20 years is possible if agreed to by both parties (see Annex for exemplary agreement).

- The signing of a Memorandum of Understanding (MoU) between Balmed Holdings Ltd. and different youths groups willing to provide workforce for the cocoa plantations (see Annex). Incentives are provided with regards to training the youth groups in cocoa production and management of farms with the perspective to take over the farm's management after eight years.
- Through the contracts, both the land owners and the youth groups not only agree to provide their land and workforce but are also obliged to sell their share of the cocoa harvest to Balmed Holdings (see below) and do not interact with any other business partner regarding the cocoa plantations if not agreed upon with Balmed Holdings.
- Additionally to the Farm Management Agreements, another formal Land Lease Agreement (see Annex) is set up which documents the lease on governmental level and is additionally to be signed by the District Council.

Youth employment opportunities:

- The youths included in the Cocoa-Blockfarming-Model organize themselves into groups and make their own decisions on how many acres they are able and willing to manage (that includes a cocoa nursery, an area for out-planting and post-harvest operations etc.).¹³ The group members' names are included in the MoU and a spokesperson is elected for each group.
- The plantations are split up into “blocks” assigned to the different youth groups. The different blocks are then GPS plotted and maps are being drawn, which are provided to the land owners and involved youth groups (attachment to agreements).
- In order to guarantee solid maintenance of the plantations and professional management from the beginning, the youth groups are trained by either the company itself or by participating in Farmer Field Schools (FFS) that are provided by partnering NGOs such as Welthungerhilfe or PAGE (as contributions of a Public-Private-Partnership which builds the framework under which the development partners support the project). Balmed Holdings estimates that approximately 70% of their training is carried out by themselves, meaning their staff is being trained and passes on their knowledge to the youth groups. The frequency of the trainings is orientated on the cocoa production cycle (seasons) and is mainly provided on site.

Remuneration:

- For the first eight years, the cocoa harvest is split into three: the company, the land owners and the youth groups all receive a share of 1/3 of the harvest after directly attributed costs (share cropping method). For this time period, Balmed Holdings covers all management costs. After this period the management will be handed over to each youth groups' management committee, who is then fully responsible for the plantations' management. The youth groups will then hold a share of 2/3 of the harvest, leaving the other third to the land owners.
- For the first four years, that is as long as there is no cocoa harvested, the participating youths are also supported by receiving either Food for Work or also cash payments for their work. After four years, the company still covers the full management costs but as cocoa will be harvested the youths receive their share of the harvest as remuneration for their work.
- All harvested cocoa is sold to Balmed Holdings and will be 60% of Free-on-Board (FOB) price of the day. This amount is based on what is expected to be a “fair” price.

Current status of the project:

- Estimated total investment costs for Balmed Holdings 1000 acres within 3 years: 700'000 USD. The return rate depends on the international price as Balmed Holdings always receives 40% of the price as gross income. In an example this means that if the whole area of 1000 acres yielded 400mt x 40% of the daily price (e.g. USD2400/ton deducting a discount of approximately USD150/ton¹⁶), the company would receive USD600,000 (USD900/ton x 400mt) minus the running costs of approximately 15%, ending up with a final return of about USD306,000. Regarding the initial investment costs, the company would then be paid back their investment costs within the first two to three years.
- Balmed started the conceptual work in mid-2009 with discussions with the communities - chiefs, land owners and youth – regarding acceptable modalities. Contract preparations and staff trainings followed. The concept was also modified during further discussions with development partners willing to support through a Public-Private-Partnership (GIZ/ Welthungerhilfe, PAGE/USAID, WFP).
- Project implementation activities started in late 2010 when the first cocoa nurseries were established followed by out-planting in mid-2011. Therefore, a first harvest on an area of approximately 1000 ha is to be expected in the next three years.
- The formal Land Lease Agreements are in the process of being finalized.
- Land measurements by GPS are being finalized.
- The company has already registered 20 community youth groups, each of the groups accounting up to 20-25 members of which approximately 40% are women.
- The company has already received the Fairtrade as well as Utz Certified certification for cocoa. It is currently preparing to be audited for the Rainforest Alliance (RA) certification.
- The model is being supported with about 30% of overall costs by donors and development agencies such as World Food Programme (WFP), German International Cooperation (GIZ), USAID/PAGE, Welthungerhilfe (WHH), SANKOFA as well as Theobroma as a cocoa trader.

Agreements between Balmed Holdings Ltd., land owners and youth groups:

The Farm Management Agreements form the basis for the activities Balmed Holdings is pursuing in the Cocoa-Blockfarming-Model. In the following, the main contents of (1) the Farm Management Agreements with the land owners and (2) the Memorandum of Understanding with the youth groups are outlined. Furthermore, it is elaborated on the process of how these agreements were reached. In order to formalise the land lease, it is necessary to also sign formal Land Lease Agreements (signed not only by the company and chiefs / land owners, but also by the government representative in the districts, the district council). These formal Land Lease Agreements include the same aspects than the Farm Management Agreements, but are considered to be more official. Main features of the Farm Management Agreements are:

- Fixes time period of lease (20 years)
 - Hereby the company has the right to have the first option to renew the contract for another 20 years
- Fixes the profit share between all parties
 - 1/3 of the harvest for the first eight years (after management costs have been deducted)
- Fixes price for the cocoa
 - The company buys the harvested cocoa from the land owners / youth groups for 60% of FOB price of the day
- Agreements on formal procedures:
 - Possibility for the company to view original copy of land ownership
 - Necessity of written notice if the land lease will not be extended after the first period

- o Land owners agree to leave the full management of the land to the company and designated youth groups
 - o Land owners agree not to give, transfer or sell any of the produced cocoa/coffee to any other third party without written authorization by the company
- Agreements on ending the agreement
 - o The land owners agree to repay all investments made by the company if the contract ends before the agreed time period. In contrast, the company can withdraw from the agreement without any financial obligations if notice is given to the land owners 30 days in advance.
- Agreements on settling dispute
 - o Agreement that in case a dispute cannot be settled between the parties, an arbitrator (e.g. the Paramount Chief or if not possible a lawyer) shall be appointed to help solving the dispute.
- The Farm Management Agreements require the signature from Balmed Holdings Ltd., the Paramount Chief, the Town Chief and the land owners. For the formal Land Lease Agreements the District Council representative is also supposed to sign and agree to the lease.