Liberian Industrial Agriculture Livelihood Impact and Economic Value Study

Sync Consult Limited October 2016

With a Foreword by Global Witness





For a copy of the complete study, visit: www.globalwitness.org/liberianplantationstudy

This study was undertaken by: Sync Consult Limited
P. O. Box CT 2802
Cantonments, Accra Ghana
Tel/Fax 233-(0)302-783523
Website: www.syncconsult.com
Email: syncconsult@myzipnet.com

The views presented in this study are those of Sync Consult Limited and are not necessarily shared by Global Witness or the funders that have generously supported this work. The views presented in this Foreword are those of Global Witness.

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1. FOREWORD

Personally, I do not believe that working with GVL alone can bring about the kind of change and development we want to see in our community. Our land is fertile and very good for swamp farming. So rather than depend on [Golden Veroleum] for a meagre salary and a 50 kg bag of rice every month which is not sustainable, we need capacity building.

-- Sinoe County Community Member interviewed by Sync Consult, 2015

Large agriculture plantations are supposed to be one of Liberia's main drivers of development, featuring heavily in the Government's Poverty Reduction Strategy and agriculture plans. To this end, since the end of the country's civil war in 2003, the Liberian Government has awarded some of the world's largest plantations and set aside almost 10% of the country for conversion, an area three times the size of Beijing.

These plantations are now growing rapidly, and thousands of rural Liberians are being asked to hand over the land that they rely on for their food and livelihoods to multinational companies. But will these plantations help the people? Will they provide the jobs, money, and services that have been promised? These are critical questions not only because the plantations will affect people over such large areas, but because they will affect people for so long. With plantation contracts lasting as long as 98 years, the lives of at least five generations of rural Liberians will be irrevocably changed.

Answers to these questions cannot be found in Liberia. As such, in 2015 Global Witness commissioned a study to provide the Government of Liberia and affected communities much-needed data about who might win and who might lose as a result of a plantation. This study was undertaken by Sync Consult Limited, a Ghanaian economic consultancyⁱⁱ, and focused on the Golden Veroleum Liberia (GVL) oil palm plantation in South-East Liberia. Awarded in 2010, the GVL plantation will be immense, covering 2,600km² – the size of London and Barcelona combined – and affect the livelihoods of over 41,000 people.ⁱⁱⁱ The plantation has also been the subject of multiple reports documenting how the company rapidly expanded during the Ebola crisis,^{iv} is pressing for logging permits,^v and is paying Liberia's armed police for protection.^{vi}

Sync Consult's main finding is that far more people may lose as a result of the GVL plantation than will win. And they may lose a great deal. Approximately 14,000 people live in the area covered by the study, and these community members depend upon their land for farming, hunting, and building supplies. Sync Consult valued these assets as being worth US\$ 11.1 million per year. This income is at considerable risk of being lost if community lands are converted into an oil palm plantation.

The other side of the balance sheet doesn't look nearly as impressive. The study found that the main benefits of the GVL concession would be experienced only by the company's workers, of whom only 1,650 – 12% of the community – are actually employed by GVL. Sync Consult calculated that values brought by GVL to these workers, and to a much lesser extent the larger community, would be approximately US\$ 3.8 million per year.

When presented with these findings in September 2016 GVL declined to provide a substantive response. Instead, the company stated it believed the findings were flawed, although provided little detail as to what such flaws may be. GVL did contend that it continues to believe its plantation would improve the lives of affected community members.^{vii}

The results of this study are not, however, altogether surprising. Oil palm plantations in Malaysia and Indonesia have a track record of forest destruction and forcible evictions of local communities. They also do not have a good record of helping local communities improve their livelihoods. A 2015 study commissioned by leading community economics organization Rights and Resources Initiative (RRI) surveyed the benefits and drawbacks of Indonesian palm oil plantations. Such plantations, RRI found, have led to increased inequality and have been far less economically productive than other land uses. Summarizing such plantations' impacts on local landowners, the study concluded that:

The biggest losers in this process were locals who lost their lands and livelihoods but have not been incorporated in the new economy on advantageous terms. Indigenous Peoples, subsistence farmers, and women were the most vulnerable groups.^{ix}

The Liberian Government needs to take immediate action. As pointed out by Sync Consult, and backed up by RRI, alternative agriculture schemes such as production by smallholders instead of a centralized plantation generate more benefits for local communities. On the back of a landmark 2014 agreement with Norway, the Liberian Government is promoting community-focused management schemes in the forest sector, and in September 2016 Global Witness published a brief outlining the next steps the Government can take to ensure communities benefit from their forests.* Similarly, the Government should promote community-focused management of the agriculture sector, ensuring that smallholders are central to any new plantations, and pressing existing companies such as GVL (and the equally large Sime Darby) to switch to smallholder schemes. The Government should also immediately approve the country's Land Rights Law, which has been sitting dormant in the Liberian legislature since early 2015 and would recognize that rural people, not companies, own the land.

I am not ready to give [my farm] up for any company's operations. It was given to me by my father and I am keeping it for my children.

-- Sinoe County Community Member interviewed by Sync Consult, 2015

To date the Government of Liberian and its international donor partners have shown little interest in regulating the country's many plantations, persuaded that they will drive development. As the Sync Consult study demonstrates, this assumption may not be correct, and that for local people giving up their land forever Liberia's new plantations are an economic drain, and not a driver of development. Armed with this data, we hope a change is possible.

Global Witness

Patrick Alley

Director, Global Witness

October 2016

Government of Liberia, Poverty Reduction Strategy, 2008. See http://bit.ly/2bCnjxS; Government of Liberia, Liberia Agriculture Sector Investment Program Report, 2010, available at http://bit.ly/2bApFvX.

For more information on Sync Consult, see http://www.syncconsult.com/sd_services.html

iii Population estimate calculation based upon portion of districts covered by concession and district population data drawn from Liberian Institute of Statistics and Geo-Information Services, 2008 National Population and Housing Census, May 2009, available at http://bit.ly/2bRecJZ.

iv Global Witness, The New Snake Oil, July 2015, available at www.globalwitness.org/newsnakeoil.

v Sustainable Development Institute, Stopping Illegal Logging in Sinoe County, 15 April 2016, available at http://bit.ly/2bKCy5s.

vi Global Witness, The Temple and the Gun, October 2016, available at globalwitness.org/templeandgun.

vii Letter from Andrew Kluth to Global Witness, 28 September 2016.

viii Reuters, Indonesia palm oil battle pits farmers against big plantations – TRFN, 12 March 2015, available at http://reut.rs/1AjeACk; Forest Peoples Programe, TuK Indonesia, Rainforest Action Network, Bruno Manser Fonds, Friends of the Earth US, Banktrack, Friends of Siberian Forests, FERN, Facing Finance, Urgewald, Briefing to Banks and Potential Investors on the ongoing risks and outstanding social conflicts in the palm oil agribusiness sector: Golden Agri-Resources (GAR) bond offering, 15 April 2015, available at a http://bit.ly/1E64o5o.

x Rhein, Matthais, Industrial Oil Palm Development Liberia's Path to Sustained Economic Development and Shared Prosperity? Lessons from the East, Rights and Resources Initiative, February 2015, p. 20, available at http://bit.ly/2bdk8LT.

^{*} Global Witness, Making Community Forest Management Work for Liberia, September 2016, available at https://www.globalwitness.org/en/reports/making-community-forest-management-work-liberia/.

2. EXECUTIVE SUMMARY

In 2015, Sync Consult undertook a study of community livelihoods in and around the large Liberian oil palm plantation managed by Golden Veroleum Liberia (GVL), assessing who might benefit and who might be disadvantaged as a result of the plantation. This study found that of the nearly 14,000 people estimated to live in the section of plantation under analysis, the direct benefits will be felt by only a small number of people, the 1,650 people who get jobs with the company. In contrast, the plantation poses economic risks to the wider community, which obtains significant values from its lands, including through farming, hunting and building supplies. These values are much higher than those gained by the smaller employed group.

Based upon the data we have collected, we recommend that the Government of Liberia consider alternative, community-led smallholder agriculture models over centralized, company-controlled models when considering new agriculture projects or authorizing the expansion of existing plantations.

2.1 Background and Methodology

Over the past ten years, the Liberian Government has issued a number of new large oil palm plantations, including to multinational companies such as GVL. Sync Consult was commissioned by Global Witness to study those values that would be gained or lost by people living in these new company-controlled plantations, who would benefit and who would lose out.

To conduct this study Sync Consult focused on the GVL plantation, having identified that well-established community organizations and networks in the plantation could provide the needed data. The GVL plantation is located in the South-East of Liberia, and will eventually cover 260,000 hectares (ha) within the counties of Sinoe, Grand Kru, and possibly River Gee and Rivercess. The plantation's Concession Agreement was signed in 2010 and under this contract the company is obligated to provide staff with education facilities and medical clinics as well as to provide the wider community with annual contributions to a Community Development Fund. GVL has also signed separate agreements with communities in the plantation describing services the company will provide. As discussed in our study, however, those interviewed were unclear about the terms of both the company's contract with the Government and the company's agreements with communities.

The plantation has not reached its full size yet, but is expanding quickly. We focused on one 33,000 ha section of the plantation, located in the Butaw and Kpayan Districts of Sinoe County. It is estimated that 13,935 people live in the study area. The plantation will last for between 65 and 98 years. During our study we interviewed 1,422 community members, or 10% of the estimated population. Of those interviewed, 597 live in areas where GVL has already begun operations, clearing land to make way for its plantation. The other 825 people interviewed live in areas where GVL has not yet started work, but is expected to do so.

The team employed a research method that included a standardized questionnaire, in-depth interviews and focus-group discussions, including with representatives from institutions, opinion leaders, and youths. Female respondents accounted for 46% of those interviewed.

2.2 Findings

2.2.1 The values of the plantation

The study examined the values that GVL will bring to the people of Butaw and Kpayan. Those who are by far the most likely to benefit from the GVL plantation are the small percentage of community members who are employed by the company and their families. Most benefits provided by the plantation are not shared with the wider community. Salaries are, understandably, available only to those who are employed, but so too is schooling for staff and their dependents and access to medical facilities. GVL does contribute to the wider community in one concrete way, paying into a Community Development Fund for development projects benefitting the people of Butaw and Kpayan.

But the number of those employed by GVL and thus benefitting from the plantation is not large. Based on a GVL's own estimates, community interviews, and evidence from plantations elsewhere in the world we determine that – when GVL covers all 33,000 ha of the study area – the company will employ approximately 1,650 people from the affected community. This is only 12% of the total population of Butaw and Kpayan. It is also only 30% of workforce employed in the Butaw and Kpayan section of the plantation because, according to those interviewed, 70% of GVL staff is not drawn from local communities but has travelled from elsewhere in Liberia.

Our study allowed us to estimate the economic value that these workers, their dependents and – in part – the wider community obtain from GVL. This estimate included salaries, the value of schooling to workers' children and money given by GVL to the social fund. All together, these values total almost US\$ 3.8 million per year.

We identified some additional values that the wider community should obtain as a result of the GVL plantation. These include the use of roads or bridges maintained by the company and – if the company so chooses in the future – access by the wider community to GVL schools and clinics. However, the study was not able to quantify these possible values at this stage. We were also not able to calculate the value of GVL healthcare provided to staff and their dependents, although as we found that such clinics are currently under-stocked, it is unlikely that such values would be substantial.

2.2.2 The values of no plantation

The study also examined the values that the people of get from their land without the GVL plantation. These are, of course, values enjoyed by the entire community and not just by community members in one or another form of occupation. These are also values that are at risk of being lost as the land is converted to plantation.

Based upon interviews with Butaw and Kpayan community members who maintain traditional livelihoods, we were able to calculate the values people obtain from their forests and land when it is not converted to plantation. People farm cassava and rice, hunt, harvest fruit, and obtain building supplies and fuel from their local environment. Together, these goods and services amount to an annual income of US\$11.1 million per year. This income is spread throughout the entire community.

A number of values communities obtain from the land could not be quantified. These include the religious importance communities place in specific natural features like hills, rivers or forests. The study was also not able to quantify the value community members obtain from fishing in the rivers or the medicines that people collect from the forests.

It is certainly possible that some of these values could be maintained by communities after the GVL plantation is developed over their lands. GVL has set aside some areas for communities to continue growing food and has preserved some religious sites such as cemeteries. However, the process by which GVL works with communities to identify what land the company can take and what communities need for farming, hunting, or other uses has been criticised by community members and NGOs. It is thus reasonable to assume that values communities currently obtain from their lands risk being lost as a result of the plantation.

In addition, the GVL plantation may bring substantial costs to communities in Butaw and Kpayan. The researchers found an increased risk of food insecurity and of water source pollution as a result of the concession. There is also a higher risk of social tension resulting from an influx of outside labourers, changes in livelihoods, and disagreements between the community and GVL over promises the community believes the company has made which are not being fulfilled. Many community members stated that they understood that GVL would provide them with medical clinics and schools, although the company is not obligated to provide such items and is not doing so, causing considerable frustration.

2.3 Conclusions and Recommendations

Based on evidence collected, it is highly questionable whether the GVL plantation model is in the best interests of people living in the concession. At the same time, evidence from Indonesia and Malaysia suggests that alternative models, in which community members are encouraged to grow oil palm themselves – a smallholder scheme – better reduces poverty and speeds development in rural areas. A full list of recommendations is included in Section 8 of the study, but key among these are:

- The Liberian Government should consider agriculture models that favour smallholder, communityowned schemes rather than centralized, company-controlled plantations. Such alternative models should be employed instead of any new plantations and should be considered when discussing further expansion with GVL and Liberia's other current plantation companies.
- Obligations held by GVL under its Concession Agreement with the Government of Liberia and agreements it has signed with affected communities should be fulfilled. The Government should improve its public duty to monitor the delivery of company commitments to its people, and should hold the company accountable if such obligations are not fulfilled.
- The Government should pass the Land Rights Law, currently sitting in Liberia's legislature, to ensure the land ownership rights of communities affected by plantations are secured and protected.

4. LIST OF ABBREVIATIONS

СРО	Crude Palm Oil
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
GVL	Golden Veroleum Liberia
НА	Hectare
MOU	Memorandum of Understanding
NGO	Non-Governmental Organisation
NTFP	Non Timber Forest Products
RSPO	Roundtable on Sustainable Palm Oil

5. INTRODUCTION

5.1 Background

Development is high on the agenda of the Liberian Government following the negative effects of 14 years of civil war that destroyed lives, infrastructure and virtually devastated the economic and socio-cultural systems of the entire country. In fulfilling its developmental agenda to speed up the recovery process, the Government of Liberia signed agreements with investors from several developed and middle developing countries to offer economic opportunities and improve the quality of life of its citizens.

As of 2008, when Liberia last conducted a census, Liberia had a population of about 3.47 million people (Population Census Report, 2008). The country remains today one of the poorest countries in the West African Sub-region with about 83% of the population living below the poverty line (WFP, 2015). Despite the prevalence of poverty, Liberia is the Sub Saharan African country with the largest forest cover, about 6.6 million hectares (ha) of primary and degraded forests (Metria Geoville, 2015). The exploitation and export of the country's natural resources such as iron ore, rubber, timber, petroleum and oil palm were some of the strategies of the Government to generate substantial income to help the country achieve an appreciable and sustainable level of development. In furtherance of the development strategies, the Government of Liberia granted concessions of land to oil palm companies with the expectation that the communities within the concession's operational areas will experience considerable levels of development. One of these companies, Golden Veroleum Liberia (GVL), was granted a concession in 2010 which covers a total area of 260,000 ha (2,600 kmsq). The agreement is for an initial 65 years and a possible extension to 98 years. Because the eventual location of the full GVL plantation is not yet known, it is not possible to estimate a total number of people who live in the plantation area, but as of 2015 it was estimated that 41,000 Liberians live in the 210,000 ha for which GVL has provided plantation location maps.

With the pending possibility that the Liberian Government will give more land to investors as concessions, it has become necessary to engage stakeholders in the oil palm value chain, especially communities that are direct participants to ascertain the extent to which the activities of the oil palm companies are impacting their lives and environment. This will help in exploring opportunities for sustained livelihoods and holistic development especially for people in communities with forests and lands continuously being depleted through expansion of the operations of the plantations.

Sinoe County, which lies about 150 miles to the South-East of Monrovia and is one of the main areas with large oil palm concessions, was selected for an industrial agriculture livelihood impact and economic value study. It is one of the biggest and oldest counties in Liberia, covering an area of about 10,137 kmsq. (the third largest area in Liberia) and in 2008 had a population of 104,932 people. Sinoe County has 17 districts. The climate of the study area has seven months of heavy rain and five months of dry weather. The land is very fertile with subsistence farming serving as the main occupation of the people. This assignment entailed having meetings and discussions with cross sections of stakeholders at the district, community and institutional levels to collate their views on issues such as land and forest ownership and use, impact of oil palm companies' operations on the livelihoods of people, coping strategies for survival and recommendations for sustainable improved livelihoods for inhabitants of lands taken for concessions and prospective concession dwellers.

5.2 Objectives of the study

The study was guided by the following objectives and themes:

- 'Tangible values': Determine the current commercial and domestic uses and values of land and forests and estimate their possible replacements costs in cases of damage and pollution. The study should also seek to examine issues relating to basic infrastructure and services and their accessibility to the communities.
- 2. 'Intangible values': Ascertain other natural and communal uses of the land and forests and attempt to assign economic values to these uses especially regarding eventualities of providing substitutes.
- 3. Determine the impact of expanding oil palm concessions on communities' livelihoods, and their response strategies and compare findings with what pertains in communities living outside the concession areas considering also the extent of long term sustainability of concession communities' livelihoods and development when the plantations have matured and palm oil is produced in commercial quantities.
- 4. Determine what strategy or safeguards the Government or and/or an oil palm company should adopt to ensure communities enjoy sustainable livelihoods and develop recommendations on how to mitigate potential worsening conditions of communities that have given their lands and forests to be used for palm plantations. These would include protection laws and safeguards for future concession dwellers to be adopted by the Government and the companies and viable projects that could be implemented to support affected communities.

6. LITERATURE REVIEW AND OIL PALM OPERATING MODELS

6.1 Overview

Oil palm plantations have a track record of economic and environmental impacts. As oil palm plantations of the magnitude of GVL are new to Liberia and data for the country is scarce, this study will draw lessons mainly from Southeast Asia where the industry has been well documented for decades now. There are enough similarities to both Malaysia and Indonesia, where over 85% of all palm oil is currently produced (Oil World, 2015) which can provide insights into the possible social, economic and environmental impacts for the local communities of Liberia as expansion increases.

To begin, the climatic and socio-economic make-up of Malaysia and Indonesia mirror those found in Sinoe County. "[A] warm, continuously wet climate that supports luxuriant rainforest vegetation; extensive areas of undulating uplands suitable for tree crops like rubber and oil palm; relatively low population densities; remoteness from major urban and industrial centres" (McCarthy, 2009). These "frontiers" have long been considered by companies as ideal areas for expansion and where new oil palm estates will be placed as the climate provides the hot and tropical conditions under which the palm tree flourishes. Indeed, GVL reiterates why it selected Sinoe County for the plantations on its website.

South eastern Liberia can be characterized as having the best soil and climactic conditions in Liberia for agriculture and Oil Palm, yet it is also considered the forgotten part of Liberia. Currently, there is minimal economic activity in the Southeast region. Citizens have historically been dependent on finding income burning forests into charcoal to sell to towns, short-term jobs with the few logging companies that have been there from time-to-time, or following precarious subsistence existences with shifting agriculture and bush meat hunting. (Golden Veroleum, 2015).

6.2 Economic Impacts

6.2.1 Impacts on affected communities

Forests continue today to provide the high levels of commercial benefits to households, companies, and Governments that formed the initial impetus for protective statutes and policies. The Food and Agriculture Organization (FAO) estimated that forest industries contribute more than US\$ 450 billion to national incomes, nearly 1% of the global GDP in 2008 and provided formal employment to 0.4% of the global labour force (FAO, 2012). Forests also provided other sources of incomes and subsistence benefits, generate informal work opportunities, and constitute reservoirs of economic values that help ameliorate shocks to household incomes – particularly in rural areas in poor countries (Chomitz, et. al., 1998).

In particular, non-timber forest products (NTFP) underpin local livelihoods. They are not just for hard times, but are of value daily for men as well as women; for richer people as well as poorer people. For all rural women and for most rural men apart from the very wealthiest, the livelihood needs drawn from forests are far more important than their timber values. But this is the very reason why the contribution of forests to national GDP has been so invisible. A much greater proportion of forest income goes to support the household through direct consumption rather than through cash sales. Thus the forests' chief role for rural

households is to provide energy security, a house and its furnishings, to contribute to food and nutritional security and health. All of these aspects of forest income reduce the vulnerability of the household to the unforeseen. They increase livelihood resilience, in a phrase, and help to provide a household with a secure basis from which to take some risk as it seeks income-generating opportunities through agriculture, employment, investment in livestock or tree-planting. In their own way, households make their plans for an exit from poverty, often over more than one generation in remoter places. Women use forest NTFPs to generate cash for school fees and school uniforms for their primary school children among other things (Shepherd, et. al., 2012). The forest also has a role in helping some families survive tough times at home.

Forests are key elements of terrestrial ecosystem that help in maintaining ecological balance, biodiversity conservation, protection of watersheds, and control of soil erosion and providing various other ecosystem services. In recent times however, forests have been adversely affected by tremendous pressure on account of numerous developmental and social needs such as diversion of forest land for non-forest purposes, timber, palm plantations and other goods and services. The sector is further aggravated by the insufficient allocation of resources and infrastructure (Gera, et. al., 2012). This is currently the case of Liberia which has allocated vast amounts of land and forest areas to investors for similar purposes, especially oil palm plantations.

Evidence from countries like Indonesia, Malaysia and now Liberia raises many questions about the long-term viability, the environmental footprint, and the welfare impact of the transnational oil palm industry. Indonesia's massive oil palm development has not led to equitable economic development as was envisaged. Inequality, both within the rural sector and between the rural and urban sectors, has risen sharply. Data gathered and analysis made so far point to the fact that the business model of the transnational oil palm industry is designed to deliver on capital, not on shared economic development. The main winners are usually the owners of oil palm companies and evidence from the impacts in Indonesia and Malaysia suggests that the development of industrial oil palm estates can make positive contributions to the rural economy by generating opportunities for smallholder oil palm growers and offering higher pay jobs compared to other seasonal plantation type employment. It is therefore important for the companies and Liberia's economy as a whole, as well as the affected communities to learn if similar issues are at play and implement measures to mitigate any possible negative outcomes.

As found by Colchester (2010), serious conflicts can arise when oil palm companies disregard the rights of local communities. Because communities may consider the forests as their own, most indigenous people see themselves as inseparable from forests, especially in relation to their beliefs, culture and way of life. Therefore, deforestation can be detrimental to many aspects of their forest-dependent lives.

Deforestation-related conflict reflects the power relations between forest users. It is an area where the legitimate power and interests of different forest stakeholders like the Government, investors, concession holders, local communities, and NGOs interplay. The way in which one of these parties uses its power can be a cause of conflict when it impedes and is unacceptable to other parties. Southeast Asia's forest policy and governance has a long history of 'state knows best' mentality, which is reflected in top-down decision making and in the authority to the Government given by laws and regulations, and a history of strong influence of corporations and other businesses in forest management (Dhiaulhaq, 2013).

The impacts of these schemes in Southeast Asia have been mixed, at least from an economic perspective for the local farmers. As Obidzinski summarised "Oil palm plantations generate uneven economic benefits...the economic livelihood gains for some stakeholders can be substantial, although not equitably

distributed." In particular, "the groups most negatively affected by land use change are former landowners and customary land users. They have to walk farther to collect forest products or to open new fields for shifting cultivation. Households relying on forests resources for income and food had to shift to other sources of livelihood" (Obidzinski et. al., 2012).

Typically, this reliance came in the form of swidden agriculture and the ability to allow large plots of land to remain fallow for several years in order to regenerate nutrients for upland rice farming. This means less land for subsistence farming but also "the loss of valuable non-food items that support a range of livelihood activities. These uses include fuelwood, construction materials, materials for making tools and weapons, mats, baskets, containers, medicines, and ritual and decorative uses" (Cramb, et. al., 2013).

Further problems arise when families become reliant on just one crop; increased dependence on cash crops makes households vulnerable to price downturns (Ellis, 2000) and this is evident in the recent decline in the prices of oil palm over the last couple of years in Malaysia. It is not difficult to find examples of other high-value commodities that have also significantly and suddenly decreased in worth and have impacted negatively on farmers who dedicated all of their land to that crop. For instance "Farmers who became overcommitted to coffee production in the Central Highlands of Vietnam were plunged into poverty and debt when the market collapsed." (Cramb et. al., 2009). "Most of the initial positive impacts were attributed to higher income, as well as more regular income flows" (Obidzinski, et. al., 2012).

Additionally, the oil palm companies are often required to provide social services in the forms of roads, schools and clinics as part of Concession Agreements, something that is also occurring in Liberia. Ellis found that, "infrastructure (roads, power and communications) has a powerful effect on mobility and choice" (Ellis, 2000). This goes towards allowing for a more diverse income portfolio, one that can help off-set some of the vulnerability associated with reduced agricultural land. When companies fulfil these promises and

engage the community appropriately, livelihood options and incomes are expected to improve.

The oil palm industry has not been successful in increasing the number of rural jobs available in Indonesia compared to 1990 levels, with jobs on oil palm plantations being mostly casual and seasonal, triggering huge in-migrations to the detriment of local populations. On a jobs/ha measure, industrial oil palm produces relatively few jobs, when compared to smallholder cocoa, rubber, rice and agroforestry (Rhein, 2015).

When we confronted the GVL officials on their promise to train us in the operation of the heavy duty machines, the Community Affairs Manager simply told us that they do not care if we can even use our teeth to operate bulldozers. They will still bring in people from outside the community to work

-- Youth of Kabada

Liberia is one of the poorest countries in the world, having emerged in 2003 from 14 years of civil war. Despite ample natural resources Liberia is also food insecure, importing up to 60% of its food (UN, 2009). Additionally, large-scale palm oil investments such as that of GVL are still following a business model that in Indonesia's experience has been shown to contribute very little to GDP and has also failed to increase the number of rural jobs, increases reliance on food imports, and relies on cheap land and cheap labour.

In 2010, 41% of Liberians were food insecure, and 13% were severely food insecure. Liberians rely heavily on markets for their basic food needs, where rural households purchase 74% of their food and urban households purchase 94% of their food (WFP, 2010). Communities cite access to markets as the main food security concern, particularly in Lofa, Margibi, Maryland, River Kru, River Gee and Rivercess. These communities are most vulnerable during the rainy season (May-October) (WFP, 2010). 30% of children in

Monrovia are said to be suffering from chronic malnutrition, although 50% of the population in the metropolitan region of Monrovia have a plot of their own or tend a small kitchen garden (UN, 2014).

6.2.2 Impacts on national economy

It is very important for the Government of Liberia and GVL to be guided by the following considerations (Rhein, 2015):

- Even though the oil palm industry is often credited as having underpinned Indonesia's economic success, statistics dictate otherwise. For example, the oil palm industry added lower value to Indonesia's GDP in 2012 than food crops. The average contribution of estate crops, including palm oil and rubber to GDP was only 2.2% per year during the peak of boom cycle. Value added dropped to below 2% in 2012 as the global commodity market entered a down cycle. Food crops generated significantly more value to the economy and higher economic multipliers and welfare impacts in Indonesia's economy compared to estate crops.
- The export earnings from oil palm play only a minor role in Indonesia's export portfolio. In 2011, the
 export of low-tech manufactured goods, led by leather shoes, exceeded the export earnings of
 Crude Palm Oil (CPO) by more than eight times.
- Palm oil is susceptive to price fluctuation from oversupply, low prices, and "boom and bust" price
 volatility. As a tree crop that takes around four years to be productive and seven years to reach
 peak production, farmers are 'locked in' to a single market for a significant amount of time, and
 correspondingly less able to respond to demand changes. This has the effect of creating
 oversupply, lower prices, and 'boom and bust' price volatility.
- CPO prices have fallen by more than 40% since their peak in early 2011 and are set to remain low, due to oversupply and weak demand, with prices likely to remain low and less competitive as other vegetable oils show signs of overtaking palm oil with lower production costs and greater productivity increases.
- The oil palm industry relies heavily on cheap land and cheap (often migrant) labour to maintain palm oil's market share relative to other vegetable oils. Companies also need to recoup the extra risk premiums paid to raise capital investment for projects in tropical countries perceived by investors as risky. This suggests Liberia is likely to gain minimal revenue from oil palm through land rents, taxes or wages. Malaysian small-holders are starting to remove oil palm plantations and replace them with rubber.
- Growing more oil palm results in importing more food. Since 2012, Indonesia now spends more
 importing food than it earns from both palm oil and rubber exports. Even before the recent upsurge
 in industrial oil palm development in Liberia it was importing over two-thirds of its food, suggesting
 it can little afford to risk food security (let alone the hoped for export income) from becoming even
 more reliant on exporting food.

6.3 Environmental impacts

The environmental impacts of such estates leave little room for interpretation. Numerous conservation NGOs have compiled reports on such effects in Malaysia and Indonesia and how they relate to climate change on a global scale. The World Wildlife Fund lists large-scale forest conversion and loss of habitat for endangered species as the two most critical issues to arise from oil palm expansion (WWF, 2016). Green Palm, one of four organizations to supply the Roundtable on Sustainable Palm Oil (RSPO) with certification options, details the harmful effects of large-scale deforestation, which releases carbon into the atmosphere, speeding up global warming (Green Palm, 2016).

This also affects soil structure allowing heavy rains to wash away nutrient-rich soil. Crop yields begin to decline and farmers then have to use expensive fertilizers, which eat into their profits and further damage the environment. On the ground case studies have confirmed this, with the effects being felt by local communities.

Respondents living near an oil palm plantation site in Papua for instance experienced air pollution because of burning of the oil palm waste, while employees and out growers saw soil erosion and sedimentation of rivers as an important environmental problem. Removing original land cover in and around oil palm cultivation areas has eroded soil, particularly in riparian areas where increased water flows during the rainy season causing abrasion. Flash floods also damaged the oil estate significantly, making parts of it inaccessible, and thus delaying and reducing harvest (Obidzinski, et. al., 2012).

Economic growth as a result of expansion of the oil palm industry comes at a high cost to the environment and society as experienced by some countries with well-established oil palm estates (Fitzherbert, et. al., 2008; Danielson, et. al., 2009). Koh (2010) showed that critical habitat for endangered and other animal species have been destroyed in the establishment of oil palm plantations. For communities that largely depend on land and forests for their livelihoods, deforestation is one negative consequence of the establishment of oil palm plantations (Colchester, 2010).

Much of this environmental damage is due to the way in which development of oil palm estates has occurred. Large swaths of land have been clear-cut and replanted with a mono-culture. Not only does the deforestation result in the above mentioned effects, but planting of mono-cultures then views the "once local and natural plants and animals as weeds or pests. This upsets the local ecological balance, causing outbreaks of illnesses and negative feedback cycles. In the monoculture system, locally and naturally occurring plants and animals are merely seen as pests that have to be destroyed" (Carbon Trade Watch, 2016).

3.4 Possible plantation models

There are various models used in operating oil palm plantations in different parts of the world which all have some advantages and disadvantages. Common among them are the large scale model which entails a company controlling most of the plantation and processes of production, the alliances or nuclear estate and smallholder model where there are regulations to ensure that the farmers and companies work together with the farmers being partners and shareholders in the mills and the smallholder model where the

Government or oil palm companies provide support for the farmers who in turn cultivate the palm and sell to the companies for their production purposes.

From the signed Concession Agreement with GVL, the Liberian Government opted for the single company, large scale model where GVL controls almost the entire plantation. Even though there seems to be an appreciation of the importance of the involvement of smallholder farmers in making the industry viable, (and this is cited in the agreement), there are no details as to how the Liberian Government and GVL intended to integrate smallholder farmers into the industry.

Evidence from South-East Asia (Indonesia, Malaysia, Cambodia etc.) demonstrates that smallholder models work best in the oil palm industry as it works more in favour of the ordinary farmers and the communities. This model is also practiced in other countries such as Cameroon, Nigeria, Benin, Ghana and Brazil. Apart from country specific strengths and weaknesses of this model, there are some advantages and disadvantages generic to all the countries.

3.4.1. Advantages of the smallholder model

Smallholder farmers are able to practice intercropping of the oil palm with some other food and cash crops at the early plantation stages which minimises the negative environmental changes such as soil erosion and optimises the utilisation of different soil nutrients thereby enhancing food security. According to Nkongho (2014), oil palm producers can achieve better profit margins from palm oil fresh fruit bunches through the artisanal extraction of oil. Generally, the non-industrial oil palm sector causes little threat to the primary forests as compared to the large-scale palm plantation (Feintrenie, 2013).

3.4.2. Disadvantages of the smallholder model

Despite the benefits the smallholder model presents, there are some disadvantages associated with the model. The use of rudimentary working tools limits the productivity of the smallholder farmers compared to progress made by individuals or groups using modern agricultural tools and equipment. Another cause of the low productivity in the oil palm industry is the migration of the youth to the cities resulting in an ageing population in the sector. Poor technical know-how and the planting of poor seedlings contribute to the low productivity observed in the sector as well.

Smallholder farmers also lack financial resources due to the reluctance of financial institutions to lend money to smallholder producers at low interests and in instances when the banks lend, the loans are without adequate moratorium (period of three to four years required for the palm to yield fruits) as posited by Bakoume (2002). Working capital usually comes from personal savings or other informal sources which is not adequate for sustainable production.

If the oil palm industry is to curb rural poverty, the industry requires effective management and provision of appropriate infrastructure and loans to ensure economic sustainability. Malaysia offers an example in the oil palm industry at the time when people did not own land and were only settlers in the newly opened land schemes. The Government provided the settlers with housing and infrastructure including community halls, schools, health centres, shops and roads. They were initially supported by Government with their livelihoods until the oil palm matured when the income from the crop was sufficient to sustain them and pay off some loans. In doing so, the Government was able to alleviate poverty among the people by using oil palm as a channel (Basiron, 2000). This example offers an opportunity for the oil palm industry in Liberia.

The current expansion of oil palm estates in Liberia presents a unique situation, one that has not necessarily been previously employed by Liberian Government or oil palm companies as a business or development model.

3.5. Malaysian and Indonesian models

Experience from different oil palm plantation models shows that smallholder plantations have advantages over large-scale plantations. As part of the concession programme in Malaysia, for example, the plantations established smallholder nucleus three acre plots called 'plasma', the management of which was transferred to individual smallholders after three or four years (Arantxa, 2013). About 900,000 ha of oil palm smallholdings were established by the oil palm plantations in Malaysia. The smallholder farmers allocated two acres to oil palm and one acre to other mixed crops to meet household needs. There were also independent smallholder oil palm farmers who sold their products to the plantations. One main observation is that the smallholder plots established by the plantations were more productive than the independent smallholder farms, the main cause being lack of technical advice and the planting of poor seedling by the independent smallholder farmers. The successful smallholder farms are those supported by the plantations. Among the benefits of the smallholder model, it significantly reduced the incidence of poverty among the smallholder farmers in Malaysia and Indonesia. The smallholder model also addressed the issue of food insecurity which often characterised oil palm plantations (Arantxa, 2013).

Smallholder producers (both scheme and independent smallholders) were essential components of the oil palm industry in the leading producer countries such as Indonesia, Malaysia, Cambodia and Guatemala. In Malaysia and Indonesia, smallholders represent approximately 35% and 45% of national production respectively (National Economic Advisory Council, 2009; RSPO, 2011). The Malaysian and Indonesian Governments have promoted the smallholder oil palm industry as a strategy for poverty alleviation. Most large-scale plantations also rely on smallholder farmers for supplies to maintain full utilisation of their plants. All the large-scale oil palm firms in Indonesia and Malaysia rely on smallholders for a portion of their fresh fruit bunches. The unique smallholder farming arrangements in Malaysia also help address the risk of single crop farming when world prices collapsed. The one acre dedicated to food crops sustained food supplies to families even when the income from oil palm fell (National Economic Advisory Council, 2009).

Policy shifts in Indonesia during the 1980s and Malaysia during the 1990s led to private companies becoming the largest investors in oil palm, whereas the state had led such activities, typically through 'nucleus estate farms', in the previous four decades. (McCarthy, 2010) This helped increase production from "an average of 1.26 million metric tonnes during 1958 to 1962 to about 17.9 million metric tonnes during the period 1996 to 2000 and then to 45 million metric tonnes in 2009." (Abdullah, 2010).

As McCarthy (2010) summarises, "the likelihood of inclusion/exclusion or adverse incorporation depends on the terms under which smallholders engage with the oil palm industry: how oil palm is introduced, how it is taken up, and how local institutions and social relations shape the way subsequent changes play out."

Basiron (2000) noted in Indonesia and Malaysia that it is imperative for the oil palm industry and other investors operate within a framework which ensures that economic, environmental and social strategies are effectively turned into mutually beneficial undertakings that maximise value for the operators, owners, employees, shareholders and stakeholders.

7. APPROACH AND METHODOLOGY

The mixed research method was applied in this study. This involved the use of both quantitative and qualitative analysis arising from the need for complex multi-dimensional, patterns and causal relationships which are likely to be missed when using single methods. Questionnaires, discussion guides and in-depth interview guides were applied in engaging the different target groups including representatives of relevant institutions, community opinion leaders, men, women, youth groups and children from selected communities in selected districts.

The study focused on communities living in a 33,000 ha section of the GVL plantation in Sinoe County (as above, the GVL plantation will eventually cover 260,000 ha). Within this 33,000 ha area, GVL has converted some areas to oil palm cultivation, but has yet to reach other areas, leaving it a patchwork of current and future operational areas. An estimated 13,935 people live in the 33,000 ha area of study (in Butaw and Kpayan Districts) (Wright, et. al 2012), of which the study covered a sample of 1,422 people. 597 of these people interviewed live within the current operational area and 825 people currently outside the current operational area, but within future operational areas. Participants in the study comprised 824 adults, 273 youth and 325 children from 17 communities; 7 communities within the current operational area and 10 communities outside the current operational area. The choice of communities was randomly selected. Some of the communities were as far as two-and-a half hours drive from Greenville, the capital of Sinoe where the research team was stationed.

The breakdown of respondents in communities within the operational areas of the concession as well as operating areas outside the concession areas is represented in Tables 1 and 2 below.

Table 1: Breakdown of respondents in communities within / near current operational areas

Community	Male	Female	Total
Butaw	123	95	218
Johnny Town	72	53	125
Kabada	58	37	95
Nyemfueh	24	19	43
Twehville	16	1	17
Unification City	16	23	39
Bioh Town	42	18	60
Total	351	246	597

The field team of eight comprised three Senior Consultants from Sync Consult Ghana, one Independent Consultant from the USA and four enumerators from Liberia with backgrounds in sociology, economics and agriculture.

After the initial briefing on commencement of the assignment, there were constant consultations among the team members and debriefing sessions at the end of every day's work to share experiences, learn lessons and modify strategies for the subsequent days whenever necessary. Team members all worked in one community at a time and were assigned different roles taking into account their areas of expertise and experience in undertaking similar work.

At the end of the 30-day field work, debriefing sessions were held following which each team member was tasked to submit an independent report of their experiences and lessons during the community engagement process.

Conflicting meeting times in some communities, unfavourable weather, deplorable road conditions, travel time and conflict in one key community were among limitations that slowed down the progress of the team's work.

Details of the approach and methodology are provided in the Appendix.

Table 2: Breakdown of respondents in communities outside current operational areas

Community	Male	Female	Total
Congo Town	20	17	37
David Town	16	11	27
Greenville City	52	48	100
Karmoh	57	39	96
Kwitatuzon	27	31	58
Panama Town	58	40	98
Seebeh	118	135	253
Baffu Bay	9	3	12
Paris	40	38	78
Signboard Town	25	41	66
Total	422	403	825

8. SOCIAL DEMOGRAPHY

8.1 Educational attainment

About 70% of respondents from the communities within or near the current operational areas had some level of education with the remaining 30% having no education at all. Out of the number of respondents with some level of education, 28% truncated their education at the primary level. The level of education was slightly lower in communities outside the concession areas. Nearly 64% of adult community members had attained education levels between primary and high school education and 36% had received no education at all.

The poor education and the high illiteracy levels were attributed to the 14-year war. In addition, the unavailability of educational institutions beyond the elementary level in the communities truncates education of most community members at the primary level. The secondary schools are sited in the county capital or a few other major towns far from the communities, and the high associated cost of accommodation and subsistence being beyond the means of most of the community members. As a result, the majority of pupils in the primary school are unlikely to continue their education unless high schools are

established within or in nearby communities. This will perpetuate the low cycles of educational qualifications and deprive youth in the communities' access to well-paid jobs.

8.2 Marital status

About 64% of the 824 adults interviewed were married, with the remaining 25% being single. The divorced, widowed and separated accounted for 11%. This high percentage is attributed to a new directive by the President which considered a man and woman who cohabit for more than two years as married couples. Therefore even though many had not performed formal state marital rites, they are considered married to their partners by virtue of the law.

8.3 Family sizes and number of children

From the analysis, 65% of the adult respondents within the concession communities had between two and five children while the remaining 35% had more than five children. The families lived with siblings and older relatives as part of their dependants. In the case of communities outside the concession areas 68% of adult respondents had between two and five children and other dependants and 32% had more than five children.

9. CURRENT COMMUNITY LIVELIHOOD VALUES

9.1 Socio-economic infrastructure baseline indicators

In analysing the totality of the pre-concession baseline indicators for a relevant cost-benefit analysis and comparison with the post-concession era, it is important to include the state of socio-economic infrastructure, part of which will be impacted with the granting of the concession. The conditions of socio-economic infrastructure in the communities during the pre-concession are as follows:

- Road infrastructure: The main road linking the county to Monrovia and feeder roads leading to
 most of the communities in the county are in a very poor state. As a result farmers have poor
 access to markets outside the immediate communities and consequently economic opportunities
 and general growth of the entire economy in the county are limited. The deplorable state of the
 roads has also resulted in high transportation costs which leaves community members with little or
 no profits after they have transported their produce to market centres outside the communities to
 sell.
- Health facilities and services: Some of the communities lack clinics / health centres, and where
 they are available they are not adequately resourced to meet the health needs of the people. The
 facilities have deteriorated, essential drugs not in stock and most lack qualified personnel.
- Educational facilities: There are very limited educational facilities; most have dilapidated structures.
 Most schools are only at the primary and elementary levels with secondary schools located in the
 County Capital, Greenville, or other major towns. As a result, the education of most youth truncate
 at the primary level limiting their employment opportunities to low-paying jobs (if they are to find
 jobs) with unattractive career prospects.

9.2 Land ownership and land use

Customary laws and norms govern land ownership rights in most parts of Liberia. The customary laws guiding land ownership in communities in Sinoe (as in most parts of Liberia) assert collective ownership and management rights over their customary lands and resources. If a 'stranger' (outsider) makes a formal request for farmland or for a place to build a house, the community will make a collective decision whether to let that stranger use the land but the stranger cannot own it. Communities normally have a defined boundary that is recognised by neighbouring communities. These boundaries are usually marked by rivers, soup trees or a particular rock. If disputes arise, the communities concerned will generally refer to those natural boundary markers for verification of where one community's land stops and its neighbour's land starts.

The most striking development in land ownership in Liberia is the Land Rights Policy (2013) which seeks to secure customary land rights in the country. The key principle guiding the Government's Land Commission policy recommendations is ensuring that all communities, families, individuals, and legal entities enjoy secure land rights free of fear that their land will be taken from them, except in accordance with legal due process. By creating secure land rights people expect those rights to be stable and secure in the future, which promotes long-term decision making. The commencement of implementation of this policy and enforcement of compliance will streamline land ownership and support communities in the granting of future concessions. Liberia is also currently debating a land rights law which would make customary land ownership legally-secure.

In the communities surveyed outside the current operational areas, each member of the community had access to land which is divided into quartos with clans as custodians. The entire community had access to the forests resources, land for farming and other uses such as construction. However, about 40% of people living outside the current operational area own land as an individuals, whilst the remaining 60% do not own land as individuals. About 39% of people who own land individually have 1 acre of land or below. 54% of people who own land individually have plot size between one and five acres. Only 6% of the people who own land individually have plot sizes above five acres.

According to respondents, 100% of migrant workers in these communities do not own land. Land has a gender dimension skewed in favour of men. About 43% of men owned land, which is higher than the 32% of the women who own land.

Land and forest resources were the main sources of livelihoods for the communities prior to the granting of the concessions. 81% out of the 825 respondents living outside current operational areas rely on farming and forest resources as their main source of livelihoods.

Farming is subsistence though excess food crops are sold. The main crops grown are cassava, rice, potatoes, plantain, bitter ball and corn. Other food items such as bitter root, wild palm and fruits are harvested from the forests.

Hunting and fishing in creeks are other main activities for men in the communities. Hunting served two main purposes. Firstly, it was a source of protein for the community members and secondly, a source of economic activity where hunters sold their game on the market. The black deer, ground hog, antelope and

rabbit are the main game hunted in the forests before the concessions were given out. Meat is dried and smoked to preserve it.

Besides providing food and game, the forest also provided a wide range of materials for everyday living of the community members. Non-food items gathered in forests include poles and thatch for housing and wood for fuel and charcoal, (with charcoal used both for domestic and commercial purposes). Community sacred forest areas are used to hold meetings among elders to discuss important issues, hold other traditional practices and imbibe customs and traditions in the people. Traditional leaders perform most of the rituals during different ceremonies. Some areas of forests are preserved for age-old rituals and for the burial of prominent personalities.

The communities also gather medicinal plants from the forest to treat variety of common ailments as well as conditions such as snakebites. These are easily accessible and at no cost compared to treatment at the clinics which people consider very expensive. As a result, forest-derived medicines are prevalent due to relatively high cost of care at the hospitals and clinics.

9.3 Pre-concession community livelihood values

This section seeks to estimate the values communities gain from their land prior to the entry of GVL. The total sample covered for communities living outside GVL's current operational area was 825 people, representing 6% of the 13,935 people affected in the 33,000 ha area of study. Land and forest resources were the main sources of livelihoods for the communities prior to the granting of the concessions. 81% of respondents living outside the concession's current operational area rely on land and forest resources for their livelihoods.

The pre-concession economic activities and annual incomes (from land and forest resources) of the population sampled were computed to establish the livelihood values that could be affected following the granting of the concessions to GVL. The livelihood values were computed from estimated earnings of community members engaging from various economic activities. From the analysis, the pre-concession incomes of the people in communities affected by the GVL concession in Sinoe County are broken down in Table 3.

Table 3: Pre-concession community livelihood values

No	Occupation	Number of responses	Extrapolated population	Annual income (US\$)	Estimated total income (US\$)
1	Farming (Cassava)	172	3,949	613.64	2,423,264
2	Farming (Rice)	151	3,467	90.91	315,185
3	Hunting	201	4,614	818.18	3,775,082
4	Picking fruits	26	597	795.45	474,884
5	Thatch	43	987	818.18	807,544
6	Poles	26	597	1,090.91	651,273
7	Ropes	15	344	1,090.91	375,663
8	Fuelwood / charcoal	36	826	215.00	177,590
9	Building materials (thatch, roles and poles combined) *	32	735	3,000.00	2,205,000
10	Herbs and medicinal	13	298	NA	NA
11	Fishing (creeks)	25	574	NA	NA
12	Fishing (Atlantic ocean)	54	1,240	NA	NA
13	Other non-forest based employment	211	4,844	NA	NA
14	Unemployed	61	1,400	NA	NA
TOTAL		US\$ 11,145,485			

^{*} Note, Item 9 represents people who reported drawing multiple building materials from their land. Items 5, and 7 represent people who reported drawing only one building material from their land.

Most community members who rely on land and forest resources for their livelihoods usually engage in more than one economic activity. For instance, some rice farmers are also engaged in cassava farming or picking of wild fruits or building materials. Another combination of economic activity is hunting and producing fuel wood which is often done for commercial gains. As such, they may earn substantial incomes from multiple activities annually as depicted in Table 3 above. The engagement in multiple activities makes it difficult to assign totals to the number of responses and extrapolated population. However, the analysis made during the study with the estimated individual earnings suggest that economic activities from the land and forests contribute over US\$11.1 million annually to the communities.

Beyond the tangible financial benefits are intangible non-quantifiable benefits including spiritual gains from dedicated sacred areas of the forests, cultural values, cultural heritage, improved biodiversity and environmental preservative benefits. When values are assigned to these intangible benefits, the economic benefits that the communities generate from the land and forest resources will be much higher.

By reason of the fact that these values inure to the benefit of all community members, a loss as a result of the plantations will affect larger groups and not just individuals.

The indicators presented in Table 3 are the baseline against which the benefits of GVL's concession to the communities are evaluated in later stages of this study.

10. POTENTIAL VALUES AND COSTS OF CONCESSION

In this section the potential direct and indirect values derived from the plantations as well as costs of the company's operations to the communities in relation to employment, education, healthcare, provision of infrastructure and social amenities will be estimated. In addition, community opinions of the plantation will also be discussed. There is some evidence of failure of GVL to fulfil its obligations under the Concession Agreement. It is important to consider not only values that the company is obligated to provide, but also evidence that these values have so far not been provided. Also, the plantation will have costs which may be undervalued as these are more difficult to quantify. And whereas the costs of the plantation will be experienced by many people in the communities, values may be enjoyed by only a few; who are most likely to be the GVL workers and their dependents.

10.1 Potential direct values

The analysis of the impact of the concession seeks to assess the extent to which some community members will be better or worse off by comparing the benefits that the concession will bring to the communities with the pre-concession baseline.

The estimated direct financial benefits from GVL under the Concession Agreement cover are analysed below.

10.1.1 Community Development Fund

GVL, under the Concession Agreement is to contribute US\$5.00 per year for each hectare of land granted. This translates to US\$165,000 for the 33,000 ha of land.

10.1.2 Employment and related incomes

At the time of the study, GVL had established three camps with a total of about 3,800 workers (Front Page Africa, 2015). According to communities interviewed, about 70% of these workers are from communities not within or near the current operational areas, while 30% (calculated to be 1,140) of the workers were from Sinoe communities in the current operational areas.

Because of the low educational backgrounds of the people from the communities covered, (32% of the people in the communities have no education and 72% have a maximum of Middle School Leaving Certificate), they are mostly hired as wage labourers who assist in the clearing of the sites, nursing and planting of seedlings, brushing the palms and cleaning around the planting areas. In addition, most of the low wage jobs are hired as temporary workers.

Figures regarding the number of people oil palm companies, and GVL, employ vary widely. According to Opion (2012):

In 2009, American owned SG Sustainable Oils Cameroon PLC (SGSOC – a subsidiary of American agribusiness corporation Herakles Farms) signed a 99-year contract with Cameroon's Government for around 70,000 hectares for the development of a large industrial palm oil plantation and refinery to produce palm oil and other products. SGSOC

insisted that the plan will create 7,500 jobs (approximately one worker for every nine hectares), as well as generate revenues for Cameroon's Government, improve road infrastructure and deliver other social services. The New York-based venture finance firm specializes in investments in developing countries and is especially focused on large-scale sustainable agricultural projects in sub-Saharan Africa.

However, Colchester (2010) states that palm oil seed cultivation and harvesting are predominantly performed by manual labour, thereby creating one job for every 2.3 ha. Agropalmer, Brazil's largest oil palm producer employs one worker for every eight hectares.

"Palm oil production is labour intensive," says Joseph Tek, general manager of IJM plantations (Malaysia). The company has 4,700 employees, from corporate management to migrant workers. The rule of thumb is that one worker is needed for every 10 ha (22 acres) if the land is relatively flat; and one worker per six ha (13 acres) if the terrain is more difficult. Levin (2012) agrees that palm oil plantation is a labour-intensive industry and therefore requires a global average of five workers per ha.

In Malaysia for instance, as the planted area grew from 1.2 million ha in 1980 to 4.69 million ha in 2009 (a 3.9-fold increase), the industry generated a 4.9-fold increase in employment. Therefore based on an estimated 5-persons per household, the total number of people in Malaysia dependent on the oil palm industry could well be around 2.26 million (Palmoilworld.org, 2011).

In a report for GVL prepared by Wright et. al. (2013), the company's target is to recruit 35,000 workers on an estimated 220,000 ha of oil palm plantation over 15 years. This is equivalent to about one worker per every six ha as practiced in Malaysia and close to what pertains in Brazil. Therefore going by GVL RSPO figures, GVL should hire 5,500 workers on the 33,000 ha in the Sinoe County out of which we estimate approximately 1,650 (30%) will be from affected communities.

While, when estimating those values GVL should bring to affected communities, we use the above 1,650 jobs figure, it should be noted that as at March 2016, GVL had employed about 3,800 workers in the Sinoe County with an estimated 30% (1,140 people) from the affected communities.

10.1.3 Education to dependants of employees

Under the Concession Agreement, GVL offers free education to dependants of employees. GVL has so far developed schools in three camps accessed by only dependants of GVL workers. Tuition is free. At the time of this study, there were about 1,575 students in schools established by GVL in three camps (GVL, 2015). This comprised Butaw (700 students), Tanjuwon (550 students) and Kpayan (525 students).

The total estimated support was a little over US\$135,000 per annum. This cost excludes cost of buildings, facilities, teachers, etc. that GVL is renovating in the affected communities.

Whilst the school in the community is to the ninth grade (junior high school level), the GVL schools at the camps for dependents of employees are up to the sixth grade. On completion the children come back to the community school to continue to the ninth grade at their parents' cost. GVL is yet to upgrade the schools at the camps to ninth grade and possibly beyond.

It must be noted that for now there are three GVL schools in their camps which provide tuition for employees' children. It is not yet known how many more will be built and therefore it is difficult to estimate potential education costs for employees children in the total 33,000 ha concession.

10.1.4 Scholarship to dependants of employees

Under the Concession Agreement, GVL offers university scholarship to dependants of employees. The total support is equivalent to US\$100,000 per annum.

10.1.5 Healthcare to staff and their dependents

Generally, healthcare is free in Sinoe. To enhance the wellbeing of workers and their dependants, GVL has developed health centres which are providing healthcare to employees and their dependents. It is difficult to estimate the cost borne by GVL for their employees from Sinoe County and their dependents because we do not know the average cost of healthcare provided by the company.

The GVL health centres are however perceived to be well equipped and provide better services than existing health facilities in the communities. The GVL health facilities are not accessible to community members not hired by GVL.

There is, however, evidence to suggest that the GVL health facilities are not heavily stocked so sometimes prescriptions are given to patients to buy medications from pharmacies / drug stores at their own cost. The patients also rely on herbs from the forest to treat themselves.

From the analysis, the direct income and related benefits was about US\$ 3.76 million annually as shown in Table 4.

"There is a clinic at the camp for workers and their families where we are supposed to get free medical care. The doctors are there to diagnose alright by sometimes do not have the medicine to treat us. They give us the prescription for us to buy it at the local drugstores in the community and they don't give us back the money. It will be better if they stock the clinic in the community so that everyone can benefit"

-- Community member in Butaw working with GVL

Table 4: Potential annual direct values provided by concession

	Component	Estimate
1	Contribution to Community Development Fund	
	Total size of land (ha)	33,000
	Compensation/hectare of land (US\$)	5
	Total per year into Community Development Fund	US\$ 165,000
2	Income	
	Income through Employment at GVL (US\$)	135
	Rice allocation (US\$)	40
	Total Monthly Income (US\$)	175
	Total Annual Income (US\$)	2,100
	No of employees from operational area	1,650
	Total income from GVL	US\$ 3,465,000
3	Education	
	No of camps schools	3
	Total enrollment	1,575
	Estimated no of children of employees from affected	
	communities	473
	Average fee/pupil/year (US\$)	75
	Total school support for pupils/year	US\$ 35,475
4	Annual scholarship	US\$100,000
TOTA	AL .	US\$ 3,765,475

10.2 Other values

10.2.1 Other income sources

Dependents of GVL employees have an opportunity to engage in farming and forest resources to support the family income. However, because they cannot farm within the operational area where the forests have been cleared for oil palm plantation, they commute three to four hours beyond the operational area to farm and harvest forest resources. The long travel time has reduced their productivity on their new farms by about 50%. This still gives the family better overall income albeit with difficulties due to the long distances they have to trek daily.

If yield were 50% of the pre-concession levels, then its equivalent will be about US\$5.6 million supplementary family incomes to the people affected by the development for 33,000 ha. The direct cost will however be higher due to the long commuting time to the farmlands in the outskirts.

It is likely that some affected communities will still gain income from the land as GVL has promised to reserve some of the land for community members to continue engaging in farming. Currently, some community members are engaged in farming. This is however on a smaller scale as their farms are farther

away from the communities and they take a longer time commuting to and fro thereby reducing productivity. Over time, incomes from the land may reduce altogether as the company cultivates the plantations to cover the area acquired for that purpose and available land for farming will be too far away for community as they would not be able to farm on the concession reserves.

10.2.2 Access of community to GVL schools

Part of GVL's obligations to the communities under the Concession Agreement is the provision of socioeconomic infrastructure to enhance the lives of the community members. GVL is required to provide modern schools in the communities. Schools provided by GVL in the camps are currently only accessible to children of their employees. These children enjoy free tuition even though their parents have to provide their uniforms. Children of non-employees cannot attend the GVL schools and so remain in the community schools. However, as the GVL schools are mostly up to grade six, the children return to the community school on completion of their primary education to continue their elementary education from grade seven with poor infrastructure, inadequate learning materials and few staff.

The GVL schools are discriminatory as the main criterion for admission besides meeting entry requirements is based on the student's parents being hired by GVL. Children are excluded mainly because their parents have not been hired by GVL.

This may improve in the future when GVL schools are upgraded to elementary schools. Also, it is likely that if GVL is able to make a lot of income from the oil palm estates, it would be easier for them to provide a lot more basic infrastructure and amenities to the communities and possibly grant access to children of non GVL staff to attend their schools (if even at a subsidized rate) or even provide the communities with high schools such as the GVL operated schools.

10.2.3 Access of community to GVL hospitals

GVL has developed healthcare facilities. These are however currently limited to employees of GVL and their dependents. This seems discriminatory as the entire community is bearing the negative consequence of the plantations while only employees of GVL and their dependants can gain access to the healthcare facilities. It is possible that with time this service may be extended to non-GVL working community members as the plantations yield higher earnings for the company. This is however not happening yet as community members not working with the company have to access healthcare at the community clinics or health centres in other communities.

10.2.4 Construction of roads and bridges

GVL has scheduled the construction and rehabilitation of over 250 km of community roads in Sinoe. GVL undertook road rehabilitation works on the Jacksonville-Sonuhn Town road which links several communities in Sinoe County. Among road construction projects undertaken, GVL undertook 20 km of road rehabilitation works linking Johnny Town, the Panama Highway and surrounding communities in Kpayan, Sinoe County to connect 2,500 residents and commuters.

Some community members argued that the construction of the road network is for the benefit of GVL. Even if that were the case, the entire community will use the new road network to improve their lot and all areas. These roads however get deplorable during the rainy season.

Even though some community members argued that the development and improvement of road infrastructure and bridges is first to the benefit of the company, there are expectations that the economies of the communities will be opened up to other regions. The infrastructure will also facilitate access to market for their farm produce and eventually bring improvement in the living standards of the community members.

10.3 Negative impact of concessions

10.3.1 Food insecurity

A food security assessment found that Liberian communities affected by such large-scale oil palm plantations have poorer diets, greater debts, and are less able to invest in education and agricultural development, when compared with unaffected communities (Balachandran, et. al., 2012). Most Liberians (83%) live below the poverty line of US\$1.25/day (UNDP, 2015) and in 2010 54% of the population were considered food insecure (WFP, 2010).

Food diversity among the most vulnerable households is extremely poor, and few have access to adequate drinking water and sanitation facilities. Though the country has ample land, rainfall, good quality soil, coastal access, and mineral resources, few of these assets are used optimally. The country relies on imported food due to low agricultural production output caused by poor farming practices, high post-harvest losses, and substandard road access. The Ebola epidemic severely affected agricultural production since farmers were unable to hire laborers during the height of the epidemic (August - October 2014), which coincided with the harvest period. Quarantine measures to stem the spread of Ebola, such as the closure of international borders and proliferation of numerous road blocks within the country, contributed to a massive increase in food prices.

Currently, no clear impacts of GVL on food security in Liberia have been established. However, with large parcels of fertile and productive land given out to be used as palm plantations, there is the likely risk of the food insecurity situation worsening. Further research study may have to be undertaken to specifically study the relationship between the plantations and food insecurity and ascertain what the actual risk is.

10.3.2 Pollution of water sources

The study found evidence that GVL operations had resulted in pollution of drinking water sources and even though the company had agreed to replace them, the communities had not yet been compensated for this pollution through the building of alternative water sources.

In Butaw for instance, GVL reported the contamination of local creeks by its operations and constructed wells for the community to compensate for this loss of water sources. GVL claimed to study the condition of the water bodies scientifically and decontaminate any pollutants, thus remediating it to a useful state for consumption and recreation.

However, evidence from Butaw community members revealed that the company had failed to provide alternatives to the polluted water sources with adequate boreholes. A community mapping exercise pointed to the fact that even though there are three boreholes in the community only two of them were functioning

and serving the community members. Out of the three, only one was provided by GVL. The other two were provided by the Government and a non-governmental organization respectively. These are inadequate for the over 500 people in the community. Because of low yield, community members spend about 45 minutes just to get a bucket of water. This long waiting time consequently affects productivity. Women have little time to engage in other income generating activities.

The above situation repeated itself in other communities within or near the oil palm operational area where the company has either just provided one or two boreholes to compensate communities for their lost creeks destroyed by chemicals used by GVL.

10.3.3 Potential impacts on sacred sites

GVL has erected fences and other enclosures to protect some identifiable historic grave/burial sites. When community members have stated that their sacred sites have been encroached upon, GVL agreed to provide appropriate financial compensation to the claimants.

However, the fulfilment of these obligations has been impaired by implementation challenges. Additionally, to preserve the memories of those sites encroached upon but not located, GVL has expressed willingness, with the consent of the community, to build memorial sites.

10.3.4 Social tension from breaching of contract

There are cases and evidence to suggest that GVL has not been fulfilling its obligations fully under the agreements it signed with communities, termed Memoranda of Understanding (MOU). There is general mistrust of GVL because the company has failed in fulfilling its obligations under MOUs to provide adequate social amenities, schools, clinics, repair water sources, etc, The company has built a camp in the concession area with amenities only accessible to workers and their dependents. These include accommodation, constant supply of electricity, potable water, health services at the clinic and basic education for their children at the primary school on the camp. The main facility which is open to all community members is the church at the camp constructed by GVL.

Other communities such as Panama Town, Kabada, Unification City and Johnny Town expressed concern that GVL breached their MOUs by not providing them with adequate social amenities such as boreholes, clinics, schools, market places and capacity building programmes like training of the youth in the use of machinery used on the plantation and functional literacy. GVL is said to be constantly bringing machine operators from other communities instead of training the youth to do the job. In addition to depriving them of their livelihoods through the forests; they have not received the requisite training to make them employable by the company as promised. The communities may agitate for the company to fulfil its social contract with them.

As a result of the above breaches, there have been social tensions between the communities and GVL. Some communities have decided to reserve large tracts of land and forests for agricultural purposes and forest reserves rather than leasing the lands to GVL. As oil palm plantations cannot employ all those in the working age group, the youth are taking steps to make provision for alternative economic livelihoods through agricultural activities and other benefits of the forest for their sustenance. One such social tension occurred in May 2015 in Butaw.

To redress the situation of those unable to farm due to GVL's operations, as is enshrined in the Concession Agreement, GVL promised to support out-grower farms. GVL has agreed to provide training, advice, seeding, tools and fertilizers to the out growers. There is, however, no concrete evidence of how these promises will be fulfilled.

10.3.5 Changes in livelihood

Most of the forest-dependent locals have lived on their lands for several years. The land and the forests are their most important economic resource, providing them with food, building materials, medicinal plants and other products to meet their subsistence needs. Their relationship with the land has formed the cornerstone of many of their societies and cultures and has a deep significance in their spiritual lives, often representing the past and the future as well as the present. Because forests are so central to their lives, most people have devised ways of forest management which ensure that their needs are met and that the forest ecosystem is protected. Thus, the establishment of the plantations could lead to a loss or reduction in the values community members are benefiting so far from the forest and consequently affect their livelihoods negatively.

10.3.6 Changes in social stability

The granting of the concession is changing and undermining community values and the fabric and integrity of forest communities disrupted and by the subsequent reliance on the cash economy for essential daily products such as food and shelter. Social tensions within and between communities can potentially be exacerbated as a result of this. On the other hand, the livelihoods of some community members will improve through stable income, education and healthcare, as well as economic improvement from the development of infrastructure. The plantations may however widen the gap between the 'haves' and 'havenots' based on an increased cash economy which will emerge. As local forested areas and forest food decline, many local people may have little choice than to move to the company in search of work, to move into company shelter – or to resist and struggle to protect their way of life and to regain their rights.

Review of evaluations of the Liberian Government – GVL Concession Agreement by Forest People's Programme also suggested reasons to be concerned about future tensions in the GVL plantation:

- The Liberian Government purported GVL's lease is on land free of encumbrance. However, much of
 the land, forests and wetlands granted under the concession are occupied, used and owned by rural
 communities over several generations. This provides ample scope for the GVL project to place the
 company in conflict with the communities.
- In addition, the requirement for free prior and informed consent is already a central tenet of Liberia's Community Rights Law with Respect to Forest Lands (2009). This is reinforced by the provision, and stated policy commitments in section 6 of Liberia's new (2013) Land Policy (communities may define themselves and determine how their land is managed, used, and allocated). The evidence from the communities suggested limited consultation from Government and their views and expectations not considered in granting the concessions. This is one of the main sources of mistrust and conflict between the communities and the Government and GVL.

• The Liberian Government – GVL Concession Agreement does not set out how the communities are to be integrated into the concession programme through smallholder and out-grower arrangements even though the agreement makes such reference. In the absence of direct involvement of the communities in production, they will remain on the periphery of the oil palm industry to which will worsen their livelihood opportunities and economic advancement. This will be the source of social tensions and conflict between the communities and GVL.

7.3.7 Migrant workforce

From the analysis, 70% of the recruited workforce is from outside the county due to the low-skilled labour pool of the area. Although the concession programme may help reduce out-migration of the existing population, it is also expected to lure labour from outside the area. The size and type of in-migration can bring negative social consequences. For example, construction labour force tends to be young, single men with few local connections. Generally, they are transient, moving from one site to another. The main demand of such individuals is likely to be for accommodation, sewage treatment, medical, and recreation provision. Immigrant workers may be associated with a series of social ailments – increase in crime rates, proliferation of the drug-trade and use, increase incidence of sexually transmitted diseases, squatter problems, etc., all of which create an atmosphere of fear and distrust with the local communities.

10.4 Evaluation of impact

Opinions differed during the entry of GVL into the communities. Some community members were unhappy with the granting of their farmlands as concessions to GVL, especially without their consent. There are others with positive expectations that GVL can help develop the communities especially with regards to social amenities (if the company delivers on its promise) and possible employment opportunities for stabilised income.

There is a near split in terms of support for and against the granting of the concessions to GVL. From the analysis, 58% of respondents in the communities within the operational areas expressed the view that communities outside the concessions are better off with better livelihoods than those working in the plantations as GVL paid low wages for the demanding workload of plantation workers. Also 61% of community members within or near the operational area confirmed that prior to the activities of the companies, their income, though low, were adequate for the upkeep of their families. One gets the sense from the respondents that the communities are expecting GVL to provide the totality of their needs (income, social amenities, etc.) which is not the case even if it meets obligations under its contract with the Liberian Government or its agreements with communities. What this confirms is the inadequate engagement and stakeholder consultations with the communities prior to the granting of the concession to GVL by the Liberian Government.

11. CONCLUSION, RECOMMENDATIONS AND NEXT STEPS

11.1 Conclusion

This study found that those with the most to lose from the GVL plantation will be communities and local farmers who have lost their lands and livelihoods to the plantation. These community members may be hoping to be absorbed into the new economy on advantageous terms, but if they have not been able to adjust then they have become very vulnerable. Those with the most to win are the comparatively small number of people (and their dependents), the majority of whom are so far not from communities in operational areas, who are employed with GVL.

The cost-benefit analysis of tangible values from the baseline and GVL shows that people in Sinoe County communities who are not yet affected by the GVL plantation – those with essentially pre-concession livelihoods – obtain greater values from their existing livelihoods than the values GVL will to employees and their dependents. Additionally, when the non-quantifiable intangible values of land and forests are included in the computation, a strong case emerges for the discontinuation of the concession programme unless alternative arrangements are put in place to address the negative effects of the concession programme on the communities and the environment.

Finally, it should be noted that communities affected by the GVL plantation may even be in a worse situation if GVL fails in meeting its obligations under its contract with the Government or MOUs with communities. Indeed, GVL has already failed in fulfilling its obligations in providing socio-economic infrastructure in areas such as Butaw which resulted in a conflict with the communities in May 2015.

11.2 Recommendations and next steps

In working towards achieving greater impacts and benefits for the people in Liberia who have either had their lands given to oil palm companies or are prospective beneficiaries of these operations, the following recommendations should be considered:

- a. Laws which the Government can adopt in order to protect people living in existing plantations and people who live in any plantations established in the future
- There is already a Land Rights Policy detailing the kinds of land and ownership and modalities for the
 usage or acquisition of the lands in Liberia for various purposes. The Government should pass the
 Land Rights Law to make the Policy enforceable currently before the legislature and strengthen the
 monitoring system to ensure that the law is properly implemented.
- Ensure that the compensation discussions are transparent and coordinated in collaboration with representatives at the grassroots and that people get the right and realistic compensation for land lost.

b. Safeguards or expansion strategies to be adopted by companies to protect people living in the plantations

- As is already being done in some communities, adequate lands and forests should be reserved for community members to continue engaging in their farming and forestry activities to sustain their livelihoods.
- In addition, community members, especially the youth should be trained to take up well paid positions with the oil palm companies as has been spelt out in the agreements.
- Community members should be engaged in every aspect of negotiations with regards to giving out their lands and forests.
- Community members who would want to continue farming should be assisted with inputs such as high
 yielding seeds so they can continue to produce good quality agricultural products in large quantities on
 the amount of land that will be left for their use after the concessions have been given to the
 companies.
- Community assessments of enhanced livelihood strategies are conducted for communities and appropriate interventions planned and executed prior to handing over some of their lands to be used as oil palm concessions. There should be consultations with community members, right from the beginning of the process.
- The Government of Liberia should consider alternative economic opportunities before expanding the oil palm concessions.

c. Feasible projects to be supported to supplement and support communities affected by the plantation

- Drawing from lessons learnt in Malaysia, Indonesia and Cambodia where oil palm is no longer increasing jobs for rural communities, prices are low and not contributing significantly to GDP and where there is more importation of food, the Government of Liberia should concentrate more on inviting investors whose activities will not deprive communities of their livelihoods whilst helping to enhance their level of wellbeing and development.
- The Government and the companies should provide the basic social amenities and infrastructure needed in the communities to enhance the quality of lives of the community members. These include upgraded schools, water pumps, sanitation facilities, improved health facilities, vocational skills training opportunities.
- The Government should promote more of the activities of smallholder farmers and less of the transnational companies' activities. This would promote increased benefits for indigenous people and other vulnerable groups and more sustained livelihoods for the people, preservation of cultural heritage for future generations and reduce exploitation of labour hands as is being reported in some communities. The smallholder farmers should have their capacities built in palm oil production and given the necessary support, especially with regards to market linkages.

d. Introduce and implement smallholder models into the concession programme

- To ensure sustainability of the concession programme and address the negative effects of the concession on the communities, the Liberian Government should integrate the smallholder model. This should enable the community members to become an integral part of the programme through sustenance of employment and income levels. To address the issue of low productivity, support should be provided to the smallholder farmers by the plantations through technical advice, improved seedlings, etc to guarantee high yields. By adding the smallholder business model, the poverty levels can be reduced through the oil palm concession programme as has been the case for Indonesia, Malaysia, Cambodia and Guatemala. The Malaysian model, which included one-hectare land for growing crops to address food insecurity, should be adopted considering the local context. The Liberian Government should learn from these countries to ensure a win-win situation for the communities, large-scale plantations and the country as a whole (Arantxa & Ricardo, 2013).
- In looking at the models, the Liberian Government should consider options that fully support smallholder production on community owned lands mostly through community cooperatives as well as those that allow the communities to freely seed their land to large companies through a lease that adequately recognises customary land ownership rights with commensurate rent paid to communities. Communities should additionally request material benefits or some form of equity arrangement in the plantations for which they will accrue dividends as shareholders. Alternative crops or a mix of crops offer another option (As in the Malaysian case) for consideration to avoid excessive vulnerability of rural communities to volatility and global shocks from international markets inherent in relying on a single export-orientated commodity.

e. Consideration to expand concessions

- To consider expanding oil palm concessions, the Government of Liberia must first put in place a
 monitoring system to compel the companies to fulfil their social contract with communities. Some of the
 MOUs have clearly spelled out procedures for the acquisition of the lands and forests, the companies'
 obligations to the communities and their members, some timelines for the replacement and provision of
 social amenities and capacity building programmes for community members and signatures of
 representatives of communities.
- It will be necessary to ensure that all these agreements are enforced with stringent penalties for failing to meet obligations and the social contracts.
- Civil Society Organisations should be a made a major part of the negotiation, monitoring and evaluation
 of performance of companies to meet their obligations to communities.

f. Further research

 It would be necessary to consider further research in smallholder models to identify possible preferred oil palm plantation models that will ensure a win-win for the communities, plantation companies and the economy of Liberia at large.

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APPENDICES

12.1 Table 5: Uses, values and livelihoods both inside and outside of the concessions

	USES							
Communi	ity Type	Now	Near term: once the concession had matured and has started producing palm oil	Next generation: in a generation's time, once the concession has been fully established				
Outside the concession's operational area: people who do not live inside the operational area		The main economic activities are farming with cassava and rice being the main crops farmed. The communities will continue to harvest wild fruits and food items such as bitter ball. Other activities from the forest resources include hunting game, harvesting construction materials (wood, ropes and thatch), burning charcoal and harvesting wood fuel. The intangible benefits of the forests include preservation of cultural/religious traditions, herbs and medicines for the sick. The main activity in the water bodies is fishing. The forests protect water sources, land from soil erosion, preservation of soil nutrients, etc	The youth will migrate to seek employment in the concessions. Most will seek low-paying jobs due to low educational credentials. As the influx of migrant workers creates higher demand for food items and consumables, some of the citizens will move into the concession areas to undertake trading. Farming activities in the communities outside the concession areas will diminish.	Future generations are at risk of losing their heritage as they may be displaced with expanding concessions and therefore migrate to work in other areas.				
Inside the concession's operational area: people who live inside the concession's operational area and have had land taken from them by the concessionaire	People who lost most of their land to a concession.	Some will be working for the oil palm company as labourers due to low educational levels. Dependents will seek land outside the concessions for farming as well as explore forest resources outside the plantation boundaries. Because of long trekking time (3-4 hours daily) to farmlands outside the concession, productivity will be low and reduce to about 50% of the preconcession era.	Those working in the plantations will receive some level of training. This will improve their employability to higher supervisory positions. The influx of migrant workers will create higher demand for food items and consumables. Most people will take to trading. Those who farm will have new markets for farm produce. Cost of living is likely to go up if supply does not meet demand. Some community members will participate in the oil palm economy as smallholder farmers and with it increase in incomes.	Most of the youth will be working on the plantations. Those who do not find work on the plantations will migrate as they would not have land for farming.				
	People who lost and retained more or less equal	Some family members are working with the oil palm company. People who only gave portions of their land are still using the rest as forest reserves, for farming,	Those working in the plantations will receive some level of training. This will improve their employability to higher supervisory positions. The influx of migrant workers will create higher	Most of the youth will be working on the plantations. Those who do not find work on the				

proportions	fishing, hunting and sources of water, herbs for treatment of common ailments, acquisition of building materials and construction purposes.	demand for food items and consumables. Most people will take to trading. Those who farm will have new markets for farm produce. Some community members will participate in the oil palm economy as smallholder farmers and with it increase incomes.	plantations will migrate as they would not have land for farming.
People who retained most of their land	Some will leave farming and seek employment on the plantations. Some will be farming their lands and continue with pre-concession livelihoods.	As a result of possible expansion of the plantations, community members may lose their lands. Some community members will participate in the oil palm economy as smallholder farmers and with it increase incomes.	Most of the youth will be working on the plantations and in the factory. Those who do not find work on the plantations will migrate as they would not have land for farming.

CULTURAL VALUES						
Community Type		Now	Near term: once the concession had matured and has started producing palm oil	Next generation: in a generation's time, once the concession has been fully established		
Outside the concession area: people who do not live inside the concession		Strong social cohesion. Sustainability of land forest resources. Respect for tradition and cultural practices. Preservation of cultural heritage. Protection of water bodies.	Will continue to observe key values. Strong social cohesion. Sustainability of land forest resources. Respect for tradition and cultural practices. Preservation of cultural heritage. Protection of water bodies.	Will continue to observe key values. Strong social cohesion. Sustainability of land forest resources. Respect for tradition and cultural practices. Preservation of cultural heritage. Protection of water bodies.		
Concession dwellers: people who live inside the concession boundaries and	People who lost most of their land to a concession.	Strong social cohesion. Sustainability of land forest resources. Respect for tradition and cultural practices. Preservation of cultural heritage. Protection of water bodies.	With increased emigrant population, most of the values will breakdown. Cannot protect land and water bodies. Will however protect traditional practices and cultural heritage.	The economy will open up and with it diffusion of the strongly held values. The youth will emigrate to seek jobs in the plantations.		
have had land taken from them by the concessionaire	People who lost and retained more or less equal proportions	Strong social cohesion. Sustainability of land forest resources. Respect for tradition and cultural practices. Preservation of cultural heritage. Protection of water bodies.	Will continue to observe key values. Strong social cohesion will be partially preserved. Sustainability of land forest resources (partially on the land they own).	The economy will open up and with it diffusion of the strongly held values. The youth will emigrate to seek jobs in the plantations.		
	People who retained most of their land	Strong social cohesion. Sustainability of land forest resources. Respect for tradition and cultural practices. Preservation of cultural heritage. Protection of water bodies.	Continue to observe key values. Strong social cohesion will be partially preserved. Sustainability of land forest resources (partially on the land they own).	Continue to observe key values. Strong social cohesion will be partially preserved. Sustainability of land forest resources (partially on the land they own).		

	LIVELIHOODS						
Community	у Туре	Now	Near term: once the concession had matured and has started producing palm oil	Next generation: in a generation's time, once the concession has been fully established			
Outside the concession area: people who do not live inside the concession		The main economic activities are farming and fishing. Cassava and rice are the main crops farmed. The communities harvest wild fruits and food items such as bitter ball. Other activities from the forest resources include hunting game, harvesting construction materials (wood, ropes and thatch), burning charcoal and harvesting wood fuel.	Most people will be farming and fishing The youth will migrate to areas where the concessions are to work if only they get employed. Some will seek employment with the company. Others will migrate to the concessions to undertake trading.	New opportunities will arise for them to participate in the oil palm economy as Sinoe's economy transforms. Livelihood sources would move away from farming and dependence on forest resources to trading and providing services to people employed in the oil palm industry. The youth would be seeking jobs in the intermediary services supporting the oil palm industry. The citizens will however be working as labourers and in low-paying jobs due to low educational levels.			
Concession dwellers: people who live inside the concession boundaries and have had land taken from them by the concessionaire	People who lost most of their land to a concession.	Some are working with GVL Some are still seeking employment with GVL. Some of the citizens have taken to petty trading. Some have become unemployed as their farming and other forest dependent activities were the sources of livelihood.	Most of the youth will be working on the plantations. Those who do not find work on the plantations will migrate as they would not have land for farming.	New opportunities will arise for them to participate in the oil palm economy as Sinoe's economy transforms. Livelihood sources would move away from farming and dependence on forest resources to trading and providing services to people employed in the oil palm industry. The youth would be seeking jobs in the intermediary services supporting the oil palm industry. The citizens will however be working as labourers and in low-paying jobs due to low educational levels.			
	People who lost and retained more or less equal proportions	Some are still engaged in smaller scale farming, hunting, fishing and petty trading. Others are working with the company.	Most of the youth will be working on the plantations. Those who do not find work on the plantations will migrate as they would not have land for farming.	New opportunities will arise for them to participate in the oil palm economy as Sinoe's economy transforms. Livelihood sources would move away from farming and dependence on forest resources to trading and providing services to people employed in the oil palm industry. The youth would be seeking jobs in the intermediary services supporting the oil palm industry. The citizens will however be working as labourers and in low-paying jobs due to low educational.			
	People who retained most of their land.	They are still engaging in agricultural activities.	Most of the youth will be working on the plantations. Those who do not find work on the plantations will migrate as they would not have land for farming.	Farming activities will dwindle and most citizens will be seeking job in ancillary services servicing the oil palm industry.			

12.2 Voices from the communities

Voice of a 62 year old man

"I am a 62 year old farmer with 13 children whom I've provided for and educated at least to the high school level with proceeds from my farm produce. I have a hundred acre farm from which I get sugarcane, plantain, eddoes, pepper, corn, bitterball, potatoes, garden eggs, cassava and rice. I have engaged in farming for over 40 years and still provide for about 10% of my community members.

Personally, I do not believe that working with GVL alone can bring about the kind of change and development we want to see in our community. Our land is fertile and very good for swamp farming. So rather than depend on GVL for a meagre salary and a 50kg bag of rice every month which is not sustainable, we need capacity building. We need training in especially enhance swamp farming and quality seed to be provided at the right time for planting. With this kind of support, we can harvest rice three times a year. This will be more than enough to feed the entire community and also earn some income with which we can undertake some development projects as a community. "

Voice of a 68 year old woman

"My farm provides me with rice, bitter ball, cassava and other produce with which I feed my family. I am not ready to give it up for any company's operations. It was given to me by my father and I am keeping it for my children. My children are in Monrovia and Greenville and this is where I get food to feed them when they visit. I keep some of the rice as seed for the next planting season. There is even a small creek behind my farm where I am able to trap some fish. We eat some and sell some for an income.

I am very old and cannot work with the company. Even if I have the opportunity, I would still engage in farming. I am ready to fight anyone who would want to take my land away from me."

12.3 Study area

Sinoe County is one of the biggest and oldest counties in Liberia. The County lies about 150 miles to the South-East of Monrovia and covers an area of about 10,137 kmsq. (the third largest area in Liberia) and has a population of about 104,932 people. Sinoe County has 17 districts. The climate of the study area has seven months of heavy rain and five months of dry weather. The land is very fertile land with subsistence farming being the main occupation of the people. The Government has given concessions to timber, mining and oil palm companies to operate in this county and so far, there are two main oil palm companies cultivating palm plantations in the County; Equatorial Palm Oil Company (EPO) and Golden Veroleum Limited (GVL).

Seventeen (17) communities were randomly selected and visited for the research. These were a mix of communities within / near GVL's current operational area (7) and communities outside the current operational areas (10). The choice of communities was informed by easy access / road network, proximity to GVL concession, distance and time available as the team spent 30 days on the field.

12.4 Populations surveyed

A total of 1,422 individuals were interviewed. They comprised 824 adults, 273 youth and 325 children interviewed as individuals and in groups from communities within / near and without concession's operational areas, the county office and one of GVL estates.

Table 6: Sample population

	Adult	Youth	Children	Total	%
Male	445	157	171	773	54%
Female	379	116	154	649	46%
Total	824	273	325	1,422	100%
%	58%	19%	23%	100%	

At the community levels the research team interviewed groups of men, women, children and youth. Opinion leaders were also key informants in the study. Individuals (men and women) working within and outside the plantations were also interviewed to provide a mix of objective and independent pieces of information in their safe spaces without the fear of being penalized for sharing their realistic views on the issues raised.

At the district and institutional levels, officials who were involved in agricultural services and the general management of affairs in the county were also engaged in discussions. These included the County Representative, District Superintendents, the Coordinator of the Agricultural Ministry for the Sinoe County, district and city Mayors, town and clan chiefs and officials of GVL, (one of the oil palm companies operating in the county).

Table 7: Sample size from communities within or near concession areas

Community	Male	Female	You	uth	Child	ren	Tot	al	Total
			M	F	М	F	M	F	M+F
Butaw	68	40	24	31	31	24	123	95	218
Johnny Town	28	14	25	22	19	17	72	53	125
Kabada	32	33	26	4			58	37	95
Nyemfueh	24	19					24	19	43
Twehville	16	1					16	1	17
Unification City	16	23					16	23	39
Bioh Town	36	8	·		6	10	42	18	60
Total	220	138	75	57	56	51	351	246	597

Table 8: Sample size from communities outside the concessions

Community	Men	Female	Total
Congo town	20	17	37
David town	16	11	27
Greenville city	52	48	100
Karmoh	57	39	96
Kwitatuzon	27	31	58
Panama town	58	40	98
Seebeh	118	135	253
Baffu Bay	9	3	12
Paris	40	38	78
Signboard town	25	41	66
Total	422	403	825

12.5 Specific methodology

The mixed research method was applied which involved the use of both quantitative and qualitative analysis arising from the need for complex multi-dimensional, patterns and causal relationships which are likely to be missed when using single methods. Questionnaires, discussion guides and in-depth interview guides were applied in engaging the different target groups including representatives of relevant institutions, community opinion leaders, men, women, youth groups and children from selected communities in selected districts.

12.6 Data collection instruments

The research team used different data collection instruments to capture relevant information from the various target groups. Discussion guides were designed for use in the focus group discussions with the various community groups of men, women, youth and children. Interview guides were designed for discussions with community leaders and institutional heads and representatives. Questionnaires with a mix of open and close ended questions were designed and used for interviews with individuals in the communities. Even though there were a lot of similarities in the different questionnaires and guides used, each instrument was purposely designed to capture information needed from the different categories of respondents in the different broad locations. For instance questions for individuals within the concession areas were slightly different from those for respondents outside the concession areas. This was especially relevant in capturing the benefits and impacts of the palm oil companies in the lives of the people and the situation of people outside these concessions.

Guided by the terms of reference, the questions in the instruments were centred around the broad themes of demographics of participants, land / forest ownership and use and livelihoods, the level of community engagements and participation in decision making with regards to the land /forest, impact / benefits from operations of palm oil companies' operations, possible expansion and implications for communities and future generations and recommendations from the people to the Government and companies towards development and alternative and sustainable livelihoods.

12.7 Field work

The research team stayed in the communities for 30 days to engage with the community members as well as conduct the one-on-one interviews and focus group discussions. Reception in the communities was very positive and welcoming. The community chiefs always summoned their elders to listen to the team and help schedule dates and times for the engagements with the people. They always assured the team of their support and were very instrumental in disseminating the information to their members and assembling the groups for the discussions. The community leaders also arranged suitable venues for the meetings and contributed meaningfully to the group discussions.

12.8 Research team

The eight-member field team facilitated the discussions and the interviews. They comprised three Senior Consultants from Sync Consult Ghana, one independent consultant from the USA and four enumerators from Liberia with backgrounds in sociology, economics and agriculture.

After the initial briefing on commencement of the assignment, there were constant consultations among the team members and debriefing sessions at the end of every day's work to share experiences, learn lessons and modify strategies for the subsequent days whenever necessary. Team members were assigned different roles taking into account their areas of expertise and experience in undertaking similar work. Members of the team all worked in one community at a time and mostly as individuals.

There were some instances where one Liberian enumerator was attached to each of the consultants, to help with especially the language.

During the 30-day field visit, debriefing sessions were held daily to share experiences and lessons during the community engagement process.

12.9 Limitations

Engagements with the community members took place mainly in the afternoon, early evenings and weekends as most community members leave home early in the morning for various economic activities.

The weather was unfavourable during the field work. The field work coincided with the rainy season and as a result restricted movement of the research team. The deplorable road conditions, worsened by the torrential rains, prolonged travel time between communities and significantly slowed down the process.

There were also issues with initial entry into one of the key communities as a result of skirmishes between that community and the plantation firm a couple of months preceding the arrival of the research team. Because of mistrust, following the arrest of some community members for instigating violence, the community members were unwilling to engage the research team. The team therefore spent a longer time in that community gathering information.

12.10 Guide to Table 3: Estimated earnings from resources not inside concession operational areas

Name of Items	e of Items Quantity/Supply Average Weekly		Average	Total Cost per
		Earning	Monthly Earning	Year
GVL Workers' Rice	50 kg	Not applicable	US\$40	US\$480
Farmers' Rice Sale	Unknown	LD\$500	LD\$2,000	LD\$8,000
Cassava	Unknown	LD\$1,125	LD\$4,500	LD\$54,000
Meat	Unknown	LD\$1,500	LD\$6,000	LD\$72,000
Fruits	Unknown	LD\$3,500	LD\$14,000	LD\$70,000
Thatch	Bundles/piles	LD\$1,500	LD\$6,000	LD\$72,000,00
Ropes	Bundles/Piles	LD\$2,000	LD\$8,000	LD\$96,000
Poles/Sticks	100 Poles	LD\$2,000	LD\$8,000	LD\$96,000
Health Care		Not applicable		
Exchange rate:				
LD\$88 – US\$1				

Notes:

- Source: Focus group discussions 2015
- Rice is sold either by cup or by bucket, and last only for 4 months (Oct.-Jan.)
- Cassava is sold in three different categories (fufu, gari, and the tuba).
- Meat: the price of the animal depends on the size, and the qtv. of meat killed in a week.
- Fruits planted vary, but pepper gives them higher income than the others. These fruits are planted through mix- cropping and the life span is short, while sale last only 5 months.
- Thatch and Ropes in this table were measured by a 3 bed room house. A bundle of thatch cost LD\$150; while a bundle of rope is LD\$50.
- Clinic and hospital in Sinoe are free of charge. Drugs/medicines are purchases from stores or a street vender when not available at the health centre.

12.11 Guide to Table 4: Explanation for GVL estimated contribution towards education

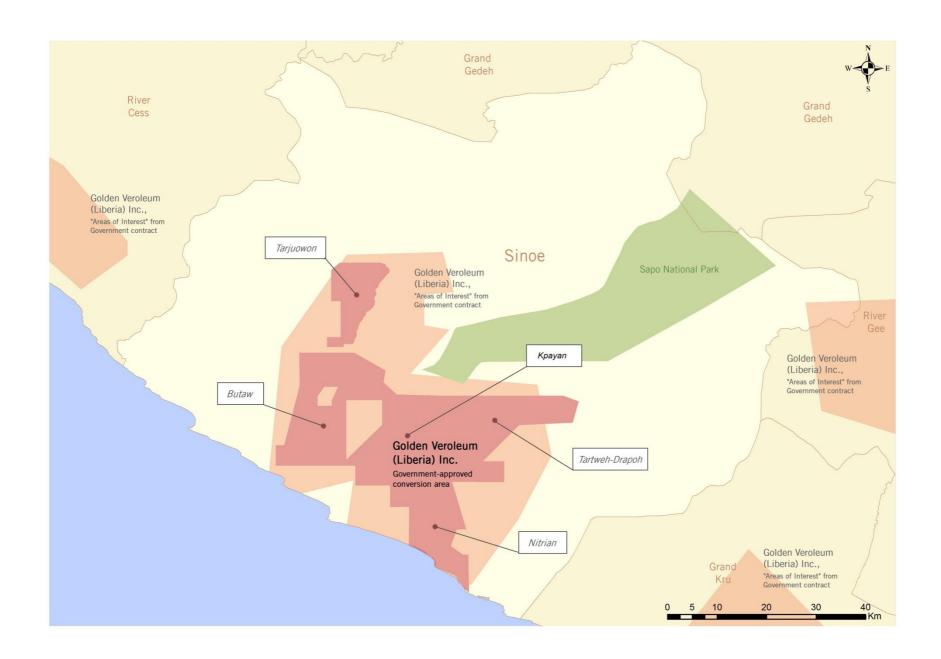
Component	Estimate
Number of GVL employees	5,500
30% of GVL workers (from concession operational areas)	1,650
Total no of students in GVL schools	1,575
Estimated number of children of workers from operational area	
being supported in GVL schools (30% of total number of	
children in GVL schools)	473
Average education costs per year for children in public schools	
in Liberia (IRIN, 2006)	US\$8.00 - US\$25.00
Therefore education support for these children (using the higher	
scale (\$25) as tuition in GVL schools is perceived to be better	
quality)	US\$25.00 * 3 terms * 473 students

12.12 Maps



Sources

- a) Location and area drawn from Hardman & Co., Equatorial Palm Oil plc., 28 February 2012.
- b) Location and area drawn from Hardman & Co., Equatorial Palm Oil plc., 28 February 2012
- c) Location and area calculated by geo-referencing shape files of plantation boundaries drawn from Government of Liberia, Map: Draft Agro-Industrial Plantations of Liberia, 2009.
- d) Location and area drawn from Government of Liberia, Concession Agreement between the Republic of Liberia and Golden Veroleum (Liberia) Inc., 16 August 2010. e) Location drawn from company
- e) Location drawn from company Environmental and Social Impact Assessments and area calculated using geo-referenced shape files drawn from the same.
- f) Location and area calculated by geo-referencing shape files of plantation boundaries drawn from Government of Liberia, Map: Draft Agro-Industrial Plantations of Liberia, 2009.
- g) Location and area drawn from Government of Liberia, Amended and Restated Concession Agreement between the Republic of Liberia and Sime Darby Plantation (Liberia) Inc., 30 April 2009.
 h) Number and area drawn from Government of Liberia Liberian Extractive Industries Transparency Initiative, 5th EITI Report, 19 June 2014, p.60; Joint Government of Liberia-United Nations Rubber Plantations Task Force, Report, 23 May 2006.



12.13 Photos



Means of transport for GVL workers



Focus group discussion and mapping in Butaw with youth.



Meeting with Opinion leaders in Bafu Bay



Local rice farmer in Butaw



Interview with elderly woman in Butaw



Focus group discussion with women in Paris Town



Validation meeting in Kabada Town



Land under clearance for palm plantation

Sync Consult Limited
P. O. Box CT 2802
Cantonments, Accra Ghana
Tel/Fax 233-(0)302-783523
Website: www.syncconsult.com
Email: syncconsult@myzipnet.com