

# Green Resources Human Rights Impact Assessment

Proposed CHP plant and  
Transition into Harvesting  
at Uchindile Forest

*Nomogaia*  
Global Human Rights Work

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## Accronyms

AIDS	Auto-Immune Deficiency Syndrome
ARV	Anti-retrovirals. Medication to treat the Human Immunodeficiency Virus (HIV)
CCBA	Climate Change Biodiversity Alliance
CDM	Clean Development Mechanism (within the UN Framework on Climate Change)
CHP	Combined Heat and Power
CHRR	Center for Human Rights and Rehabilitation
CIRI	Cingranelli-Richards – Human Rights Data Project
DHS	District Health Studies
DSS	Data Surveillance
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FSC	Forest Stewardship Council
HIA	Health Impact Assessment
HIV	Human Immunodeficiency Virus
HRIA	Human Rights Impact Assessment
IFC	International Finance Corporation
IOM	International Organization for Migration
NGO	Nongovernmental Organization
OHS	Operational Health & Safety
SIA	Social Impact Assessment
STI	Sexually Transmitted Infection
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCHR	United Nations High Commission on Human Rights
UNICEF	United Nations Children’s Fund
VCS	UN Voluntary Carbon Standards
WEF	World Economic Forum
WHO	World Health Organization

## **Executive Summary**

Green Resources has operated for over a decade now in Iringa Region, building a rapport with certain local communities while developing a sense of the underlying social, economic and political struggles facing locals. The Company is recognized as one of the more generous corporations in Mufindi District, but its reputation is less sterling in Kilombero District, where Uchindile is predominantly located. Negative perceptions of the Company stem from negative human rights impacts at this Project. Green Resources is poised to become a large player in international forestry and logging, and the Company has plans to set up operations in communities more hostile to foreign investment than Tanzania and Uganda (including southern Sudan, where a small nursery has been planted). To grow successfully as a rights-responsible Company, significant changes need to be implemented. The Rights to Favorable Working Conditions, Health, Nondiscrimination, Freedom of Association, Housing, Adequate Standard of Living, and Education are negatively impacted by the project. The Right to a Clean Environment will be positively impacted.

The Human Rights impacts of harvesting in Uchindile are often highly dissimilar to those of the CHP plant's development, but there is also significant overlap, owing to structural inequalities and inherent rights abuses built into south Tanzanian social and political systems.

### ***Right to Favorable Working Conditions***

The Company's Operational Health and Safety policies do not align with its performance. Safety gear is only issued free-of-charge to permanent employees, although many temporary workers also need protective gear. Workers that do have safety gear are not required to wear it, despite Operational Health & Safety guidelines. Workers remove gloves, goggles and helmets without consequence. This may be a contributing factor in SHI's high injury rates, which are double that of Australian sawmills. Similar disregard for safety precautions during harvesting and CHP plant construction and operation could be disastrous. Health and Safety training schedules exist but there are no records of the outcomes of these sessions, let alone whether they are conducted. At Uchindile, workers have no recollection of health and safety programs hosted by the Company. Worker safety is not prioritized in Uchindile transport, where workers are brought to job sites on a cart hitched to a tractor, which annually slides off the road and injures workers (company claims that the tractor is not in use are not accurate. Use of a Fuso Tipper is occasional, but workers are still regularly transported by tractor).

### ***Right to Health***

In both Uchindile and Sao Hill, government health facilities are inadequate to protect worker health, and company dispensaries are little more than first aid stands. Supplies are delayed, ambulances are in extremely short supply, and government facilities are under-equipped, -staffed, and -sanitized. Kitete has no dispensary or access to medicine.

The company only supplies its dispensaries with basic first aid, anti-malarial drugs, basic antibiotics and painkillers. These are not adequate to address the health and safety needs of local workers, let alone tree fellers and biofuel plant operators. In a Company where heavy machinery and sharp blades are often in use, employee health and safety is at significant risks and is not sufficiently mitigated.

Traffic accidents alone took the lives of four GRL employees in 2007. There is no evidence that mitigation plans are being enforced, and the lack of health facilities makes this rights risk all the more pressing.

Freedom from disease and right to health information are not respected in Iringa and Morogoro Regions, where HIV is high, but knowledge about the disease is extremely low, and promised training is

not being provided by the Company. HIV rates are likely to rise in Mafinga when construction workers come to the site. Construction crews have notoriously high HIV rates. Truck drivers, too, have extremely high HIV rates, and Green Resources' harvesting and CHP projects increase the frequency with which truck drivers criss-cross the Kilombero District border. Rates in Iringa region are already estimated at over 16 percent.

At Uchindile, the Company is likely to actually spark a local HIV epidemic, owing to increased road traffic, improved infrastructure, and a failure to educate the population. GRL is not operating by the Uchindile Forest Plan in regard to HIV, which commits GRL to implementing "health and safety practices ... in compliance with labor laws of the country and ILO conventions[,] through provision of safety equipment and training on safety issues, medication, and preventive [sic] Sexual Transmitted Diseases (STDs) including HIV/AIDS." The ILO's *Code of Practice on HIV/AIDS* (2001), adopted by the Company, includes requirements for prevention, care and support, gender-specific programs, and detailed training targeted for different sectors of the workforce.<sup>1</sup> This is a severe failure to respect the Human Right to Health.

### ***Nondiscrimination***

Misogyny is endemic in Tanzania's southern highlands. The company is responsible only for ensuring that its operations do not widen the gap between men's and women's empowerment. In Green Resources' operations, no women hold senior positions. Women rise no higher than junior management – secretaries and dispensary clinics. Structural inequality is powerful and overwhelms nondiscrimination policies that GRL has established. By failing to address contextual inequality, GRL appears to be deepening inequalities between men and women. Men hold five times more jobs than women and work more hours. Only four women are permanent employees out of the company's 60 hires. The situation is even more problematic among "temporary" workers. This **disparate impact**, enriching men and leaving women comparatively impoverished, worsens the economic and social position of women.

### ***Freedom of Association, Right to Unionize, Right to Strike***

Tanzanian labor law dictates that laborers, both "temporary" and permanent, may unionize, but unions remain rare in the country. Few contract laborers are familiar with Tanzanian labor law. Green Resources' two official unions, TUICO for Sao Hill workers and TPAWU for plantation workers, exclude "contract" workers, who represent 80 percent of the workforce. The TPAWU union itself is cripplingly flawed.

There are both legal and human rights issues associated with hiring laborers nine to 12 months a year, year after year, without providing them benefits and rights equal to those of full employees. The problems with the hiring system the Company has devised are fourfold, from a rights perspective:

1. Unions are too weak to successfully collectively bargain.
2. Contract workers are not entitled to the same benefits as full employees. Without sick leave, maternity leave, or pensions, workers' rights are not fulfilled.
3. Most workers in Kitete have never even heard of TPAWU, let alone bargained through it.
4. Union heads are elected at individual plantations, but management is entitled to relocate them, thereby obliterating unions as they grow. This was the case in Uchindile in 2009.

The Company has no data of improved standards of living among local communities, records of annual income, changes in housing material, shifts in disease profiles and improvements in school

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<sup>1</sup> <http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/normativeinstrument/kd00015.pdf>



retention rates. Without quantitative data, there is no reason to believe that temporary employment fulfills human rights standards, let alone Tanzanian labor law.

### ***Right to Housing***

The Company has argued that plantation salaries will result in improved housing for locals. In the 12 years that GRL has been in Uchindile this has not come to pass. Houses are still built from waste wood and mud. Even this may be palpably negatively impacted by the Project. Locals buy scrap wood from plantations at low rates. If scrap wood value increases with CHP demand, locals will suffer a palpable negative impact to their right to adequate housing.

The housing situation for workers living in dormitories is catastrophic. Men are sleeping three-to-a-bed, women share a two-bed room among eight people. CDM documents assuring that workers have clean water and solar electricity are wrong on both counts. Workers spend substantial portions of their wages on kerosene because there is no electricity, and the Company has not provided water since November 2008. Instead, workers get their water for drinking and washing from a trickling stream at the base of a perilous one-kilometer hill, which is impassable in the rain. The stream runs red with silt and causes frequent stomach ailments among workers. Sanitation is extremely poor in the housing units, between extremely close quarters for workers and the pit latrines with no water for flushing.

### ***Right to Adequate Standard of Living***

Food security has always been an issue in the communities surrounding Uchindile plantation. It is the Company's responsibility to ensure that it does not exacerbate hunger. In Uchindile lifestyle has been improved for some but worsened for others. The Right to Just Remuneration refers to a livable salary. This is not fulfilled. For detail on this, please see the price chart in section 5.1.7. Single mothers find they can support their children and work without being shunned from society; wives of workers have found their workloads increased while salaries from husbands have failed to return to the home. Women cannot tend as many crops alone as they could with their husbands' help. The result is less food for the family and greater strain on women. In Kitete food insecurity may actually be worse as a result of plantation work. Workers at the plantation are unable to guard their fields, leaving them unprotected against wild pigs that roam the valley. Home-grown food in Kitete runs out three months after harvest, leaving workers entirely dependent upon Green Resources salaries, which are not livable wages (see below).

Water in Uchindile and Kitete is fetched from neighboring streams. Sickness often causes absenteeism and lost income. The company is not fulfilling its commitment "to supporting local communities through investment in schools, health facilities and provision of safe water."

### ***Right to Education***

It is the government's responsibility to fulfill children's Right to Education. In Tanzania, the government commits itself to sending teachers and money for supplies. Communities provide additional support, with help from generous donors. Corporations often contribute to education in Project areas, and Green Resources at one point committed to supporting its local schools 100 percent. Those commitments have declined in the company's 12 years of operation in Uchindile. By promising classrooms, teacher houses and girls dormitories, the Company has left a gaping whole that otherwise the community might have filled, essentially causing the unfulfillment of the Right to Education. Company promises have been unfulfilled since 2001. School buildings that were supposed to be completed in 2005 (and were declared completed in 2009) were still not usable in September of 2009. The school promised to Kitete in 2005 is no more than a foundation. If the company cannot fulfill these promises, it is highly remiss in making them. Instead, the communities would be better served by the Company making small donations – pens and workbooks or chalk and desks – or incentivizing government teachers to work in remote locations.

That only five of eight required teachers have reported for duty in Uchindile suggests that teachers find these locations undesirable. Affordable recommendations to remedy this are mentioned in section 13.2.4.

### ***Right to Development, Right to Clean Air***

The benefits of a CHP plant are likely to improve environmental and economic rights nationwide, contributing to Tanzanian sustainable development in important and tangible ways. Regardless of who buys SHE's excess energy (corporation or government), the low capacity and weak infrastructure of Tanzania's energy supply will be improved. Additionally, the energy supply will be relatively clean, an issue relevant to Tanzania, whose CO<sub>2</sub> emissions have increased nearly twofold since 1996. Even within the project, the CHP plant will improve CO<sub>2</sub> emissions, displacing the diesel generators that the Company has used in the past. By increasing the available energy supply to Tanzania, more communities will have the opportunity to capitalize on the benefits of electricity, whether in homes, schools or dispensaries.

### ***Social License to Operate***

The Company, by overpromising benefits to communities, is jeopardizing its social license to operate. In the most recent (and for the CHP plant assessment, most pertinent) instance of this, GR predicted that the creation of the CHP Plant would bring economic benefits to thousands of workers, starting with the company's 50 permanent workers and expanding outward through a multiplier. The influx of cash and labor may cause some increase in people's ability to fulfill welfare rights, but the EIA vastly overestimates these benefits. A multiplier of 143 is extremely unreasonable. Caution should be used when community benefits are promised; GR has frequently disappointed local populations by promising that fails to materialize.

When the Company makes promises about employment, roads, dispensaries and schools, communities allocate resources to other projects rather than focus on one that has a promised donor. This is leaving them without vital elements of their communities. Road construction was so slow to Kitete that eight years after promised road construction community surveyors still had to walk the final distance to the community (that road was still equally impassable in September 2009). That Uchindile town leaders have boycotted Stakeholder Engagement meetings with the Company is illustrative. Green Resources has faced minimal international outrage in the past, but logging companies are subject to greater scrutiny than tree farmers, as are power plant operators. Heightened traffic accidents and HIV rates are well documented in the District Hospital, and the Company's understated policies on matters of community health will not protect it from human rights complaints going forward.



## User's Guide to HRIA

A Human Rights Impact Assessment is a detail-rich, broad-sweeping document. The data included in the extended catalogs is vital to establish a foundation for assessors' conclusions but can be difficult to follow, particularly for anyone with limited time. This user guide is intended to direct readers to the sections they will find most valuable.

Pages  
10 - 19

**Background information** explaining the purpose and structure of the HRIA, and an overview of the capital project assessed (the "Project"), the project proponent (the "Company") and relevant facts about the area and country in which the Project is being built (the "Context").

Pages  
20 - 61

**Catalogs** are the analytical core of the HRIA. In them, detailed information on the Project, Company and Context are organized by those issues which form the foundation of each internationally recognized Human Right.

Pages  
62 - 65

**Special Topics**, which present rights issues of particular interest to the Project under assessment, and **Human Rights Issues** of more general interest to the Project are explained and elaborated in this section.

Pages  
67 - 75

**Human Rights Ratings** are the heart of the impact assessment, where the negative and positive impacts of a Project are quantified

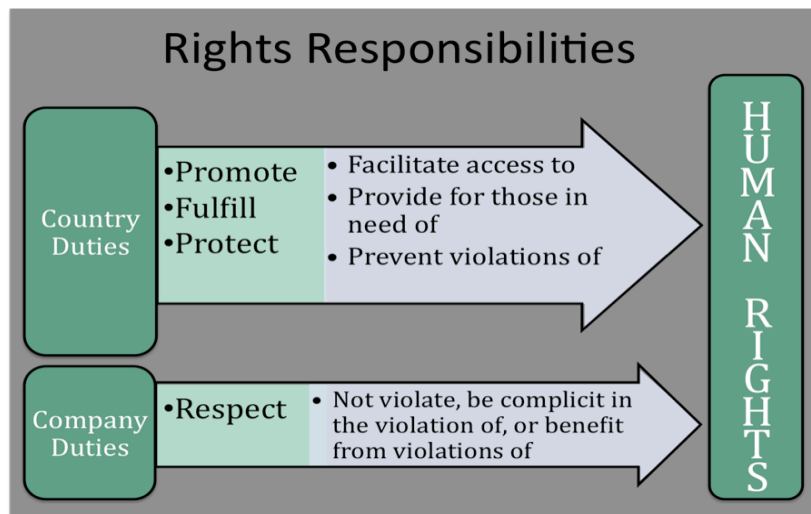
Pages  
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**Recommendations** are issued as proposed mitigating steps to protect human rights from negative impacts of the Project and to promote the positive impacts.

## 1. Introduction

### 1.1. Human Rights and Business

Although international agreements have endowed governments with the express duty to protect human rights, large transnational corporations often have undeniable influence on human rights in the countries where they operate. With this power, such companies have acquired responsibilities. Businesses are now held to human rights standards. In 2005, the Secretary-General of the United Nations appointed Professor John Ruggie to serve as Special Representative on Human Rights



and Transnational Corporations. His mandate, as dictated by the UN, is, “to identify and clarify standards of corporate responsibility and accountability for transnational corporations and other business enterprises with regard to human rights.”<sup>2</sup> Professor Ruggie issued a pivotal report in June of 2008, broadly defining a corporate role to “respect” human rights and requiring corporations to detect potential impacts in advance. Broad corporate support for Professor Ruggie’s recommendations has emerged. The International Council on Mining and Metals, speaking for some of the industry’s largest corporations, welcomed Professor Ruggie’s report and supported the entirety of his framework (ICMM News 6.12.08), as did, perhaps more significantly, a global alliance of socially responsible investors (ICRR 10.1.06).<sup>3</sup> Ruggie is currently working to “operationalize” his recommendations, and human rights impact assessment is a central focus.

### 1.2. Human Rights Impact Assessment

For large capital projects, impact assessment is now standard. Social, environmental, and health impacts are investigated using internationally accepted methodologies and are commissioned to anticipate multiple classes of challenges. Each impact assessment addresses a defined area or topic. Experience has shown that standard assessments cannot capture the full range of issues that might trigger or exacerbate human rights claims. A Human Rights Impact Assessment (HRIA) relies on traditional assessments when possible and does not duplicate them, but employs a different scope, methodology and perspective to foresee impacts.

<sup>2</sup> <http://www.un.org/News/Press/docs/2005/sga934.doc.htm>

<sup>3</sup> <http://www.icmm.com/page/8331/icmm-welcomes-ruggie-report>

**The Human Rights Perspective Enables a Project Proponent To:**

- Understand significant human rights at risk in the Project area
- Anticipate and mitigate negative impacts on human rights caused by the Project – through alterations in Project design, policies, procedures and involvement of third parties
- Anticipate and document positive impacts on human rights caused by the Project
- Understand risk from topics not covered by other impact and community assessments
- Consider the Project from the point of view of rightsholders
- Identify vulnerable groups – those at greatest risk and those who are most likely to spark controversy
- Prioritize local vulnerabilities and opportunities in rights protection
- Increase needed institutional sensitivity to high priority rights issues
- Create appropriate grievance procedures and mechanisms to allow orderly resolution of perceived rights infringements
- Establish a baseline of a community’s perspective on the potential impact of the Project’s presence, and document local perceptions of improving/diminishing human rights protections

### **1.3. Rights to be Considered**

HRIAs are conducted based on the rights enumerated in the United Nations’ Universal Declaration of Human Rights; the International Covenant on Civil and Political Rights; and the International Covenant on Economic, Social and Cultural Rights. In addition, depending on the Project and the specified goals of the HRIA, other internationally recognized human rights conventions may be considered.<sup>4</sup> Applicable laws are also taken into account as informative of human rights. Please see **Appendix 1** for a list of relevant rights drawn from these documents.

### **Potential Rights (limited and incomplete list)**

Labor	Environmental / Welfare	Social/Political
▪ Right to Work	▪ Right to Life	▪ Right to Liberty
▪ Right to Favorable Working Conditions	▪ Right to Health	▪ Freedom from Arbitrary Arrest
▪ Right to Just Remuneration	▪ Right to Adequate Supply of Water	▪ Freedom from Degrading Treatment and Torture
▪ Freedom from Exploitive Child	▪ Right to Clean Environment	▪ Freedom of Thought

<sup>4</sup> These may include such sources such as the Declaration of the Rights of Indigenous Peoples, the Convention on the Rights of the Child, as well as regional conventions such as the African Charter on Human and Peoples Rights.

<b>Labor</b>		
▪ <b>Freedom from Involuntary Labor</b>	▪ <b>Right to Adequate Standard of Living</b>	▪ <b>Freedom of Expression</b>
▪ <b>Equal Pay for Equal Work</b>	▪ <b>Right to Food</b>	▪ <b>Freedom of Assembly</b>
▪ <b>Nondiscrimination</b>	▪ <b>Right to Housing</b>	▪ <b>Freedom of Religion</b>
▪ <b>Right to Belong to a Trade Union</b>	▪ <b>Right to Security of Person</b>	▪ <b>Right to Participate in the Cultural Life of the Community</b>
▪ <b>Right to Strike</b>	▪ <b>Right to Privacy</b>	▪ <b>Right to Education</b>
▪ <b>Freedom of Association</b>	▪ <b>Freedom of Residence</b>	▪ <b>Right of Self-Determination</b>

### 1.3. Rightsholders

Human rights are held by individuals referred to as “rightsholders.” HRIAs necessarily employ this term, which is not used in other assessments, because rights analysis starts with the individuals whose human rights could be at risk. Traditional impact assessment, in contrast, focuses on groups that have a “stake” in the project – be it financial, social, environmental or otherwise. Most impact assessments categorize stakeholders by proximity, dividing them into host community, host country, and “wider community” (see, e.g. IFC p. 39). The rightsholders relevant to an HRIA are more exclusive – a subset<sup>5</sup> of the stakeholder group.

Rightsholders generally live within the project vicinity (there are exceptions, such as child laborers in the supply chain). They are integral to a Human Rights Impact Assessment, particularly if they are not well represented by government, trade unions, NGOs, or any other organization. Community leaders, traditional government leaders and NGO leaders may have positions and opinions reflective of rightsholder concerns, and so should be heard, but more vital are the voices of the “voiceless” – those whose interests are rarely taken into consideration, sometimes to the detriment of all. The goal of rightsholder analysis is to determine, as accurately as possible, the effect of the Project on rights, whether or not the rightsholders are in power.

### Potential Rightsholders

Labor Rightsholders	Environmental Rightsholders	Social / Political / Welfare Rightsholders
<b>Directly Impacted</b>		
▪ <b>Employees</b>	▪ <b>Project area inhabitants</b>	▪ <b>Communities whose health, education, water &amp; sanitation infrastructure are burden by the Project</b>
▪ <b>Contractors and subcontractors</b>	▪ <b>Residents whose wells are impacted and/or air quality</b>	▪ <b>Indigenous people with traditional uses for the Project area</b>
		▪ <b>Residents dwelling near to blast sites</b>
<b>Indirectly Impacted</b>		
▪ <b>Employees, business owners in</b>	▪ <b>Subsistence farmers with</b>	▪ <b>Food purchasers struggling</b>

<sup>5</sup> There is some debate over the definition of stakeholders. By “subset” we include all proximate stakeholders, even those who have no interaction with the project, for example villagers from communities with no marketable skills but who live proximate to the project.



the Project's supply / production chains	impacted lands	with inflated prices
<ul style="list-style-type: none"> <li>▪ Farmers or tradesmen who have lost livelihoods to the Project</li> </ul>	<ul style="list-style-type: none"> <li>▪ People who are likely to lose possession of their land</li> </ul>	<ul style="list-style-type: none"> <li>▪ Residents in communities that draw particularly large numbers of employees</li> </ul>
<ul style="list-style-type: none"> <li>▪ Minorities and disenfranchised groups not employed by the Project</li> </ul>	<ul style="list-style-type: none"> <li>▪ Residents dwelling near to roads whose use will increase</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Users of downstream water</li> </ul>	

## 2. Methodology

HRIAs are conducted to determine whether and to what extent the Project will interact with pre-existing social, economic, environmental or political conditions (the “Context”) to impact particular human rights positively or negatively. The status of rights protection before the project begins serves as a baseline; changes in that status constitute impacts. Rights can be impacted in complex ways – sometimes simultaneously positively and negatively, sometimes indeterminately, given currently available information and the rightsholders considered.

An HRIA is performed in the following steps:

Phase	Information	Rights	Rightsholders	Impacts
<i>Starting Tools</i>	Presumptive Catalog Topics / and Structure	Presumptive List of Impacted Rights	Presumptive List of Rightsholders	Presumptive Special Topics List
<i>Phase I: Overview (Steps 1-4)</i>	Gather Information on Project, Context and Company	Prepare Preliminary List of Impacted Rights	Prepare Preliminary List of Rightsholders	Determine Applicability of Special Topics
<i>Phase II: Catalogs (Steps 5-8)</i>	Prepare Catalogs	Prepare Working List of Impacted Rights	Rightsholder Engagement	Special Topics Analysis
<i>Phase III: Impacts (Steps 9-12)</i>	Finalize Catalogs – Identify all data gaps	Prepare Final List of Impacted Rights	Prepare Final List of Rightsholders	Rate Impacts

This is a rapid-response Human Rights Impact Assessment, meaning it was conducted on the heels of most other Project assessments and studies. It builds on preexisting data and analysis and is augmented with on-site investigation. Site visits provide human rights assessors the opportunity to independently confirm or question existing data and conclusions, as well as to conduct rightsholder engagement and spot trouble areas that represent gaps in other studies. New information was collected as needed.

## **3. Overview**

### **3.1. Context**

This HRIA addresses the impacts of two separate activities, first the transition of Green Resources' southern Tanzanian tree plantations from growth to harvest (commencing with the first harvestable trees, in the Uchindile forest), and second the construction and commissioning of a Combined Heat and Power (CHP) biodiesel plant.

The Uchindile forest is located adjacent to Uchindile, Lugala, and Kitete villages, straddling the district border between Mufindi and Kilombero districts and the regional border between Iringa and Morogoro. It is approximately 100 kilometers from the proposed Sao Hill biofuel plant and the Company's national headquarters. Uchindile covers 12,121 hectares, as stated on the title deed, of which approximately 9,000 are planned for planting (excluding riparian zones and steep valleys). Approximately 3,200 hectares have been planted to date. Its boundaries comprise the government-owned Sao Hill industrial forest and the Kihata River to the west, the Luiga River to the north, and the Tanzanian railway line to the south. The landscape was previously grassland with rolling hills, which were highly prone to landslides due to steep slopes, poor soil quality (caused by annual local/traditional burning and accidental brushfires), and a shortage of strong-rooted plants. There are numerous rivers, streams and wetlands in the area's valleys. Plantation development, both by private companies and government operations, has converted the landscape to dense pine and eucalyptus forests. Evenings are chilly and damp; days are dry and warm. Local subsistence crops are maize and beans, and minor cash crops include bananas, pineapples and sugar. Tea plantations occupy significant space in the region. Despite the significant presence of industry, poverty remains widespread. At the time Company baseline studies were begun (1994) over 43 percent of villagers earned less than 50,000 TSh (US \$38) per month.

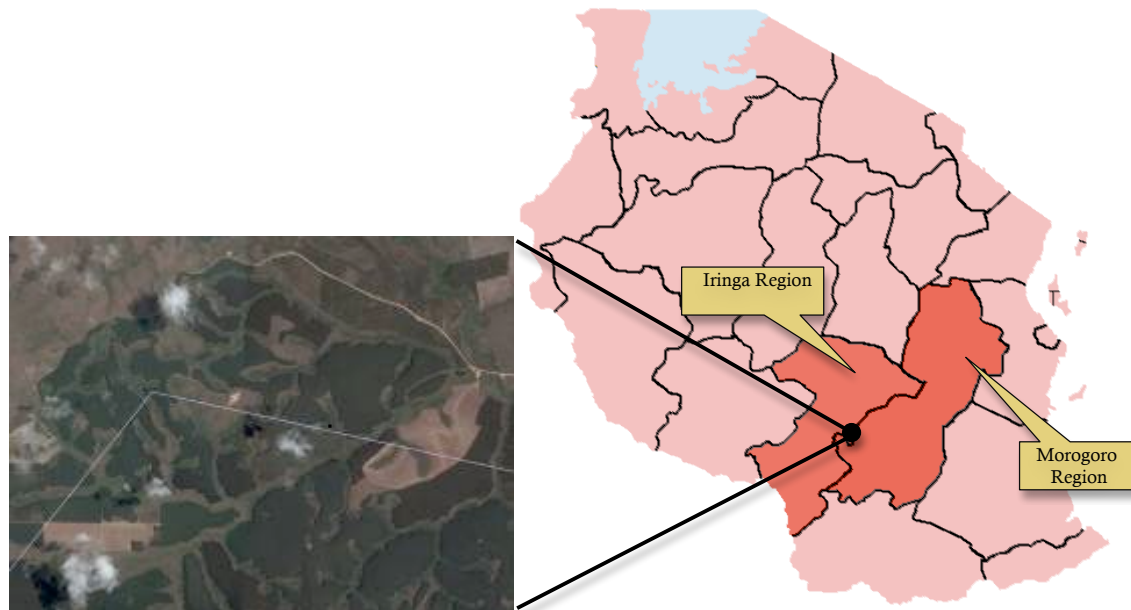
The Uchindile Project area population (Uchindile and Kitete) is sparse and stable (roughly 1500 people were counted in the 1994 EIA, compared to 1,274 in the 2006 Village Executive Committee count) due to out-migration as young people seek new cropland. Hehe and Bena, two very similar cultures, dominate.

Population near the proposed biofuel plant at Sao Hill adjacent to the Green Resources sawmill is much larger, with Mafinga town located 17 kilometers away and numerous plantations in surrounding hills.

Major health issues include infectious diseases (malaria, waterborne parasites, HIV/AIDS, tuberculosis) and traumatic injury, caused by traffic, milling and tree felling accidents.

The area has a rainy season and a dry season, with mean annual precipitation of approximately 1000mm, falling mostly between November and May.

Traditional governments were replaced by district leaders many years ago and governance is decentralized – the Projects are in Iringa and Morogoro Regions, each of which are divided into districts, then wards and villages. Both regions suffer a history of weak governance (Source: Iringa government documents).



Uchindile Forest

### **3.2. Project**

Green Resources can be said to be initiating two new projects in Tanzania: transitioning to harvesting (from strictly tree growth, pruning and planting) in its projects in Uchindile and Mapanda, and building a power plant. Over the next five years 667 hectares will reach maturity for harvesting, requiring a change in labor activities and instigating an alteration in impacts. Additionally, GRL was recently awarded an IFC loan to refurbish a boiler and build a Combined Heat and Power (CHP) biofuel plant that will run on waste from plantation and sawmill operations. This HRIA will view the dual projects through a human rights lens, discerning impacts, both positive and negative, on the fundamental rights of community members in the Project area, as defined by the Universal Declaration of Human Rights and the other international conventions outlined in Appendix 1.

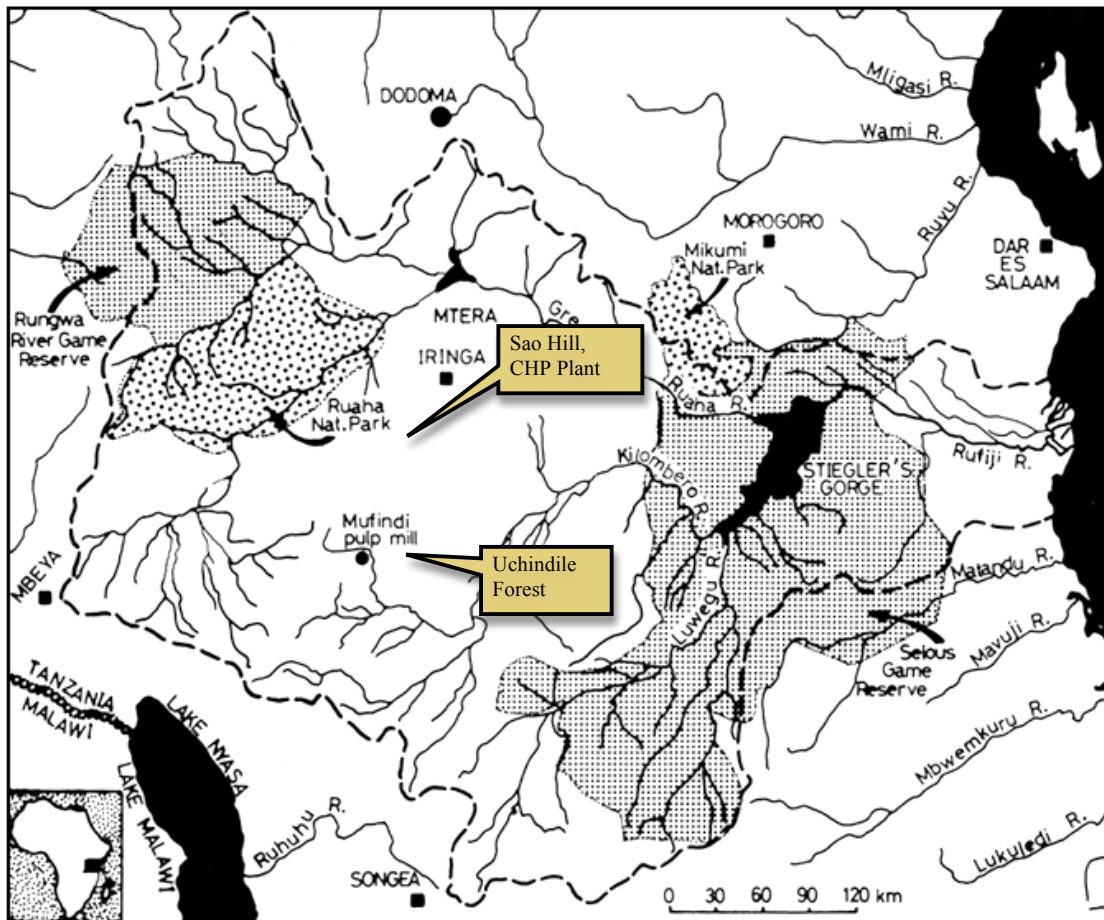
#### **3.2.1. Uchindile Forest Harvesting**

Trees will be felled with equipment that limits the amount of tree dragging (which causes erosion). Eucalyptus will then be transported by truck from Uchindile nearly 100 kilometers by road (40 kilometers linearly) to the Sao Hill Saw Mill, owned and operated by the Company. Commercially unviable trees, which have previously been left on the forest floor, will be transported to the CHP plant. Only 35 hectares of eucalyptus have reached maturity for harvesting, but 30 percent of pine planted in 1997/98 is scheduled to be thinned in 2009 (from Mapanda plantation). As of September 2009, 8000 trees had been commercially harvested at Uchindile, all eucalyptus. The primary uses for pine and eucalyptus are construction logs and transmission poles, respectively.<sup>6</sup> These are not currently planned for export, though the potential exists to ship logs to Kenya (and later, possibly, overseas). The most significant area of Uchindile planted with eucalyptus suitable for transmission poles will be ready for harvest in 2011.

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<sup>6</sup> Other uses include prefabricated houses, carpentry products, transmission poles, telegraphic poles, fencing poles, railway sleepers and wood pallets





Project Areas and major watersheds

(Modifications made to FAO map)

Construction beams and transmission poles are in high demand in Tanzania, partly owing to the nation's recent development in infrastructure, and partly because the timber market had been depressed for several decades. The Government of Tanzania sets prices for commodities, including timber, rather than relying on market prices. Until 2007, Tanzania undervalued wood by more than threefold, causing suppliers to vanish and shortages to grow. Even with the wood revaluation, Tanzania's eucalyptus prices lag slightly for the region and significantly worldwide. Uchindile harvesting will begin to fill Tanzania's need for eucalyptus poles.

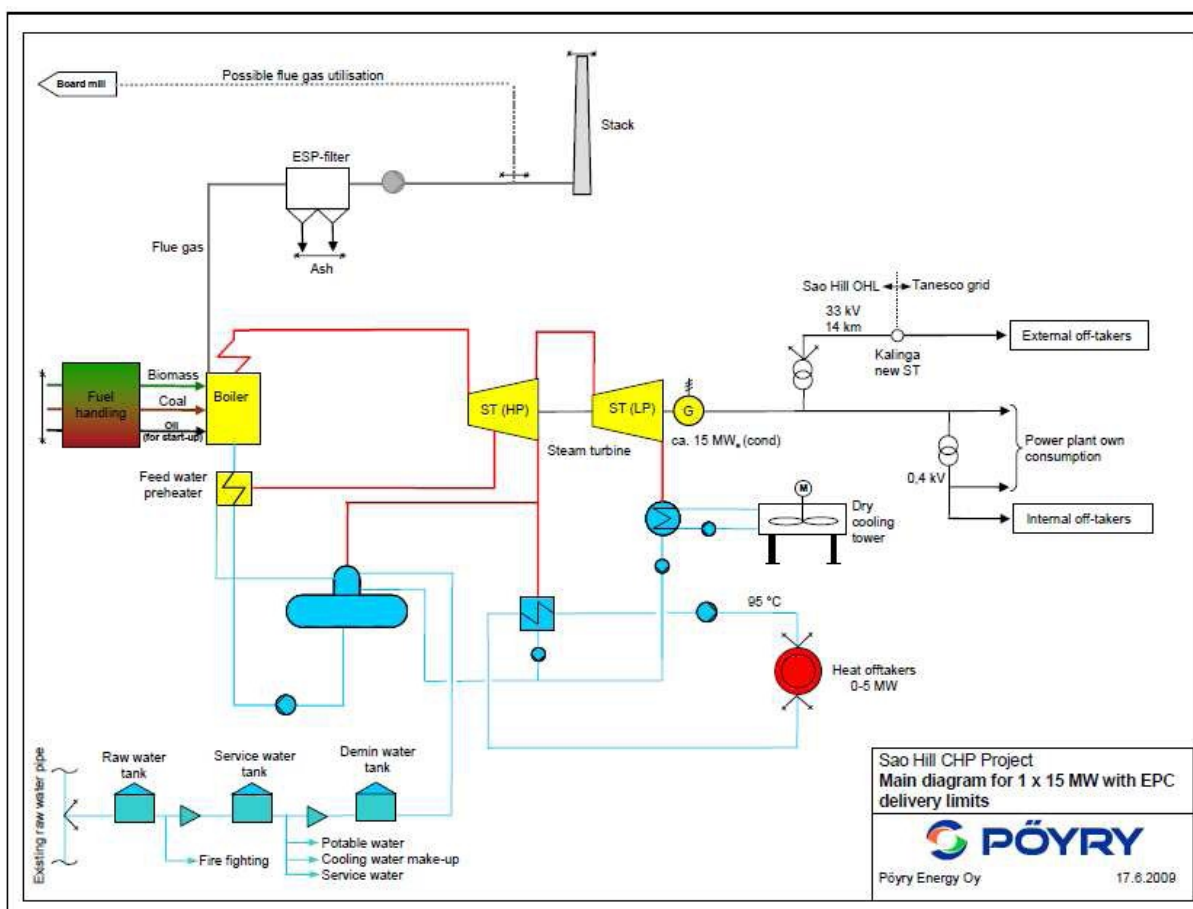
This is the area's first harvest – replanting will be conducted atop eucalyptus stumps. After first harvest, eucalyptus generally grows faster, because the new plants utilize existing root systems. Soil quality, which often depletes as trees consume nutrients, may require mineral supplements at that time. However, because most nutrients are found in leaves and branches, which will be left on the forest floor when logs are hauled out, soil quality is not expected to decline significantly.

### 3.2.2. CHP Plant

The Company will repair a non-functioning 1-megawatt biofuel plant and increase its output to 2.1 megawatts (this is not actually clear from the latest CHP plant EIA) and then construct a second plant with a total capacity of 15 megawatts. Five megawatts of heat, in the form of hot water, will be used for

timber drying onsite. Net electricity output will be 14 megawatts and overall plant efficiency is close to 30 percent. The primary components of the power plant are:

- Boiler – fluidized bed type steam generator, including furnace, steam turbine, evaporator, and super-heater. Boiler is controlled by a set of de-super-heaters, control valves and fuel feeders. Control and instrumentation system includes various alarms and annunciation devices for safe operation
- Turbine Plant – extraction-condensing type, coupled with a generator for electricity generation and protected by a deaerator, where feed water from the turbine is pressurized and heated. It protects the system from corrosive gases.
- Condensing system – low-pressure steam is cooled back to water
- Cooling system – this tower hosts heat transfer between water and air. Efficiency efforts are in place such that only 20 percent of water is expected to be lost at this stage.
- Ash-handling system – equipped with an electrostatic precipitator to remove fly ash before gas enters the chimney



*Schematic flow diagram of the proposed CHP plant schema – not the final design as approved by GRL.*

Electricity from this plant will not only relieve the Tanzanian power grid of Green Resource's needs, it will also create additional supply. These are extreme positive impacts from the project, which

may benefit the entire country, regardless of who acquires the excess energy provided by the CHP plant. The Government of Tanzania has recently made efforts to diversify power supply, and the three largest independent power producers contributing to the grid produce a total of 108.5 MW from coal and diesel. These operations have significantly higher emissions than the proposed CHP Plant. Sao Hill Energy (a new GR subsidiary) has not yet determined to whom the company will sell excess power. Unofficial reports indicate that Tanesco will be the primary purchaser, neighboring companies also buying power.

The plant will occupy approximately seven hectares of land adjacent to the sawmill. The smokestack, which is the plant's tallest point, will be 50-60 meters.

This project will have both negative and positive environmental impacts as well as economic, political, and health impacts.

### **3.3. Company**

Green Resources Limited (GRL) is the African plantation subsidiary of Green Resources ASA of Norway, incorporated in 1995. GRL was incorporated as a new company in 2001 with the merger of Kilombero Forests Ltd and Mufindi Forests Ltd. One of the original plantation projects was Uchindile, which began reaching harvesting maturity in 2008. In expanding operations, Green Resources has also incorporated two additional subsidiaries: Sao Hill Industries for its sawmill and Sao Hill Energy for the CHP plant. In this document, GRL will refer to plantation projects, SHI will refer to the sawmill, SHE will refer to the CHP plant, and 'the Company' will refer to Green Resources' Tanzania operations at large.

With over 100,000 hectares of leased land available for planting and over 14,000 hectares of forest, Green Resources considers itself Africa's "leading" forestation company. The company began pilot planting pine and eucalyptus forests in Uganda and Tanzania in 1996 and 1997, expanding planting in ensuing years. Acreage is planted according to rotating schedules that stagger maturity and pruning times, to maximize the use of labor and equipment year upon year. In 2003 the Company acquired ownership of the Sao Hill sawmill, which, though operated by Green Resources since 1996, had been owned by the Tanzanian government. Plantation operations have expanded since 1996 to include five plantations in Tanzania, an original Uganda plantation, a nursery in southern Sudan and prospects in Mozambique.

The recommissioning and expansion of the CHP plant represents the next step in the Company's industrial growth.

Company policy respects all relevant national and international laws and requires that projects contribute positively to all local communities. Mapanda and Uchindile are both Voluntary Carbon Standards (VCS) validated and Forest Stewardship Council (FSC) certified (via an accredited auditor). Idete plantation has become a Clean Development Mechanism (CDM)<sup>7</sup> project, per the United Nations Framework Convention on Climate Change. Company staff has received ISO training, and projects are undergoing assessment for Climate, Community and Biodiversity Alliance (CCBA) certification presently. Pricewaterhouse Coopers has certified the Company's financials according to International Financial Reporting Standards.

Professionals under contract to the Company compiled original data analyzed in this HRIA. Studies included:

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<sup>7</sup> The provision in the Kyoto Protocol that governs project based carbon credit transactions between developed and developing countries

Nomogaia  
 Human Rights Impact Assessment  
 Green Resources Harvesting Transition and HCP Power Plant Project

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<b>Date</b>	<b>Author</b>	<b>Title (Citation symbol in HRIA)</b>
August 1999	Orgut Consulting Tanzania Branch	An Assessment of the Environmental Impact of the Forest Plantation Project at Uchindile and Lugala Villages in Kilombero District, Tanzania
2007	V.G. Nambombe and Dr. P. Mussami	Summary of Forest Management Plan (January 2005- December 2009) For Uchindile Forest Project
July 2007	Clean Development Mechanism (CDM) Executive board	Project Design Document Form for Afforestation and Reforestation Project Activities (CDM-AR-PDD) Version 03
2007	GRL	2007 Annual Report
January 2008	Environmental Association of Tanzania (ENATA)	Green Resources Limited Environmental Impact Assessment on Proposed Mapanda and Idete Forest Projects in Mufindi District Iringa Region, Tanzania
March 2008	IFC	Environmental & Social Review Summary
August 2008	TUV SUD Industrie Service GmbH Carbon Management Service	Validation Report: Validation of the CDM-Project: Afforestation in Grassland Areas Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania
August 2008	Dr. P. Mussami	Summary of Activities Monitoring in the GRL Afforestation Projects
September 2008	Econ Poyry	Environmental, Social and Economic Impact Assessment of a 12Mw Combined Heat and Power Plant, Sao Hill, Tanzania
January 2009	GRL	Book 112.xls Training and Competence Matrix for Environment and OHS 2009
August 2009	EnviDep Ltd and Econ Poyry	ESIA for the 15 MW Combined Heat and Power Plant
September 2009	GRL	2008 Annual Report

Additional sources included

- Various legal documents and publicly available country resources
- Communications with Company personnel
  - Mwaniki Ngibuini – GRL Development Director
  - Sangito Sumari – Managing Director
  - Dr. Peter Mussami - Planning Manager
  - Vincent Nambombe - Planning Manager
  - Samson Msilu - Community Officer
  - Asifwe Makweta -Human Resources Officer
  - Agatha Chuma – Sao Hill Clinician
  - Mr. Sylvester Luagira – Uchindile Forest Project Manager
  - Zenobi Nkana – Kitete Plantation Manager
  - Contract Laborers at Uchindile and Kitete
  - Permanent Employees at Uchindile and Kitete
- Communications with key NGO personnel

- Godifrey Moshu- Mufindi Environmental Trust (MUET)
- Boniface Mliga – MUET
- Jorn Stave – Centre for Ecological and Evolutionary Synthesis
- Communications with key Government personnel
  - Mrs. Makoye – Vice Deputy Teacher, Sao Hill Primary School
  - Mr. Samwel Kihava – Second Headmaster, Sao Hill Chargarwe Secondary School
  - Mr Joseph Yobu – Headmaster, Uchindile Secondary School
  - Mr. Peter Mwenda – Medical Officer in Charge, Mufindi District Hospital
  - Various District Administrators
  - Benedicto Mnembela and Hanphrey Matimbwi – Village Executives at Uchindile
  - Leadership in Kitete town
- Documentation of local complaints against the Company since incorporation (1996)
- Company standards and guidelines
- Communications with community, including teachers, wives, workers, the young, the elderly, etc.

### **3.4. Catalogs**

Social, political, environmental and other conditions all figure into the human rights context of a community. Exploration of those three topics and their respective subtopics will suggest which rights may be impacted. Not all questions can be answered definitively. Evaluation of the data in these tables is found in **Section 11, Human Rights Impacts**.

## 4. Context Catalog

Except where expressly noted, context topic descriptions refer to conditions entirely external to Project elements. Data may be national, regional, or local. Assessors use the most directly relevant data available.

### 4.1. LABOR

Wages	
Local and national wage rates	<p>Rural minimum wage increased from 35,000 shillings (US \$26) monthly to 65,000 shillings (US \$49) on January 1, 2008.</p> <p>Annual per capita income for Mufindi residents was 156,000 TSh in 2001. It was estimated at 290,000 TSh in December of 2007 (CHP EIA 2008). (CHP EIA 2009 does not estimate 2007 incomes but approximates 2004 per capita income at 190,000 Tsh).</p> <p><b>Rights:</b> Right to Just Remuneration; Equal Pay for Equal Work  <b>Rightsholders:</b> Women, Employees of Project and Contractors</p>
Locals employability/skill level for Project jobs	<p>The government's extended history of tree farming in the area provides a wealth of capable and experienced plantation workers. For the CHP plant, however, local expertise is lacking. Of the 50 permanent positions, up to 18, all the highest positions (managers and foremen) will be filled by non-locals. Of the 500 construction positions for the CHP plant, efforts will be made to hire locally, but hiring will be dependent on skill level and contractor choice (CHP EIA 2008 and 2009).</p> <p><b>Rights:</b> Right to an Adequate Standard of Living  <b>Rightsholders:</b> Workforce, including local contract workers</p>
Unions	
Legality of unions	<p>The 2004 labor act makes unions legal and includes a right to strike (with some limitations, with an emphasis on mediation). Tanzania has ratified ILO Convention 87 on Freedom of Association and Convention 98 on the Right to Organize.</p> <p><b>Rights:</b> Freedom of Assembly  <b>Rightsholders:</b> Employees of Project and Contract Workers</p>
Presence and power of unions	<p>Unions represent a very small portion of Tanzania's workforce. The Trade Union Congress of Tanzania serves as an umbrella organization, with 350,000 members of Tanzania's approximately 370,000 union members (approximately 27 percent of the formal sector). Additionally, there are small and specialized unions. Registration with the Tanzanian government is obligatory for all unions, but as of the 1998 Trade Union Act unions are independent from government and any 20 workers can found a trade union. The 2004 labor act has not explicitly limited the right to unionize to formal employees, but in Tanzania the informal sector employs over 90 percent of the labor force, much of it rural and totally unfamiliar with labor laws and rights (High Level Commission on Legal Empowerment of the Poor, Working Paper 3: Labor Rights, p.5). The plantation labor union is called TPAWU; the industrial union relevant to the country is TUICO. Some of Green Resources' workers are unionized. Details are in section 5.1.1. of this report.</p>

<b>Rights:</b> Freedom of Assembly <b>Rightsholders:</b> Workforce	
<b>Exploitive Practices</b>	
Presence of child labor in the area	<p>The 2004 Employment and Labour Relations Act prohibits child labor. However, forced and compulsory labor by children occurred in Tanzania in 2008 (US State Department Human Rights Report). By law the minimum age for contractual employment is 14 and children may be employed only to do light work that is unlikely to be harmful to their health and development and does not prejudice their attendance at school. Children under 18 may not crew on a ship or be employed in a mine, factory, or any other worksite where working conditions may be hazardous.</p> <p><b>Rights:</b> Rights of the Child; Right to Education  <b>Rightsholders:</b> Children</p>
Presence of child labor in the supply chains	<p>The law establishes criminal penalties for employers of child, trafficked, and forced laborers; violators can face fines up to 4,680,000 Tsh (approximately \$3,900) and/or imprisonment for one year. No penalties were imposed during 2008, attributed to a shortage of inspectors. The most recent data available, from 2000-2001, indicate that 35.4 percent of children ages five to 14 were working.</p> <p><b>Rights:</b> Rights of the Child; Right to Education  <b>Rightsholders:</b> Children</p>
Labor trafficking in the area and/or in supply chain	<p>Countrywide, children are trafficked primarily for forced labor as domestic servants and to a lesser extent for commercial sexual exploitation. Most reported incidences are in Arusha, Zanzibar, and other major tourist destinations. There is little evidence of labor trafficking in Iringa Region.</p> <p><b>Rights:</b> Right to Favorable Working Conditions  <b>Rightsholders:</b> All</p>
<b>Discrimination</b>	
Local/cultural rules regarding women working	<p>The constitution prohibits discrimination based on nationality, ethnicity, political affiliation, race, social status, or religion. However, homosexuality is illegal and widely discriminated against. Discrimination against persons with disabilities is not prosecuted, and discrimination against women, refugees, minorities, and persons with HIV/AIDS persists. Assault laws protect women nominally, but violence against women persisted in 2008. Law requires that women occupy at least 30 percent of seats in parliament.</p> <p>Inheritance and marriage laws do not consistently provide full equality for women, and in practice women's rights are not respected. Discrimination against women is most acute in rural areas. Rural women have less opportunity to attend school and obtain wage employment. Historically, rural women did not own land or manage businesses because of cultural constraints and lack of education. Albino women and children are murdered (26 in 2008) for the use of their body parts in wealth-generating potions.</p> <p><b>Rights:</b> Nondiscrimination  <b>Rightsholders:</b> Women; the HIV positive; gay men and women; albinos</p>
Local practices concerning	<p>The population of Tanzania is evenly divided between Christian, Muslim and indigenous beliefs, though southern Tanzania has a much smaller Muslim population.</p>



work days – prayer days, taboo days	Every worker has, by law, the right to at least one full day (24 hours) off work every week, generally Sunday. Religious holidays are respected. <b>Rights:</b> Freedom of Religion; Right to Holidays with Pay <b>Rightsholders:</b> All
Labor Laws	Tanzania’s Operational Health and Safety act of 2003 sets health and safety standards. The Employment and Labor Act of 2004 covers fundamental rights and protections (discrimination, child labor, etc), employment standards (hours, remuneration, leave, etc), union rights, and dispute resolution. <b>Rights:</b> Right to Favorable Work Conditions; Rights of the Child <b>Rightsholders:</b> Workforce; Children

Gender unemployment rates	Global Gender Gap Index	Female	Male	Ratio
	<a href="http://www.weforum.org/en/initiatives/gcp/Gender%20Gap/GenderGap">http://www.weforum.org/en/initiatives/gcp/Gender%20Gap/GenderGap</a>			
Labor force participation		88%	91%	.97
Wage equality for similar work (survey)		--	--	.76
Estimated earned income (PPP US\$)		627	863	.73
Legislators, senior officials, and managers		49%	51%	.96
Professional and technical workers		32%	68%	.47

## 4.2. HEALTH

Local health infrastructure	
Hospitals and clinics	Nationally and regionally, Tanzania suffers from a crumbling medical infrastructure and a severe lack of medical resources. Hospitals are understaffed and undersupplied. Some villages have no dispensary at all. When a medical attendant passed away at Chogo village, near a GRL project, no replacements were available nationally, so Chogo now sends patients to neighboring villages (it was reported that the government sent a nurse at the beginning of 2008, but she never reported to her new post). Kitete, too, has no dispensary. The hospital most proximate to Sao Hill and the CHP Plant location, in Mafinga, is the only public hospital in the district (which serves 300,000 locals). There are over 100 “village health posts,” 60 outstation clinics (only seven to eight of which have electricity) and six health centers, only three with electricity (two additional centers have solar power, but it is not generally used, says the hospital Medical Officer in Charge). The district has a single ambulance. Dispensaries lack laboratory equipment and wards. If patients need ward service they are referred elsewhere, but there is no transport available (although the Project offers free transport to referred sick people). Both Unilever and the Mufindi Pulp and Paper Mill have private hospitals, available to their own workers and high-paying patients (usually foreigners). Standard of care is said to have declined, and it is not clear that MPM has re-opened its facility since the mill was privatized. <b>Rights:</b> Right to Health <b>Rightsholders:</b> All
Private doctors/ midwives	The district has approximately 47 midwives and private doctors. Traditional medicine is present and integrated into the formal health sector. <b>Rights:</b> Right to Health <b>Rightsholders:</b> All

Public sanitation	<p>Latrines are used by 73 percent of the district population, and 71 percent of people have safe drinking water nationally. The rate is closer to 61 percent in Iringa. Water is fetched from ponds and streams two to three kilometers from communities near some plantations, which is not clean water. Sanitation levels are significantly lower in rural regions than urban.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> All; Rural Dwellers</p>
Health regulations	<p>Full immunization is mandatory for children under five. Tanzania has an HIV/AIDS Prevention and Control Act and the nation regulates food, drugs and cosmetics. As of 2002 traditional healers and people who practice alternative medicine are required to register with the government.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> All, Children</p>
Infectious Diseases Indicator	<p>Tanzania is in the 85<sup>th</sup> percentile for malaria and TB rates, meaning that 15 percent of ranked populations have more severe malaria and TB problems than Tanzania (World Economic Forum Estimates).</p>
Infectious Diseases at significant levels	<p>Malaria, pneumonia, diarrhea, worms (often undiagnosed), ear/eye/skin infections are most common. Project areas have high prevalence of car accidents, resulting in high rates for traumatic injuries and minor surgeries.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> All</p>
Childhood nutrition	<p>Malnutrition resulted in 53 child deaths between December 2005 and March 2006, representing less than .1 percent of children. This is likely an inadequate depiction of childhood nutrition, as children are rarely diagnosed with malnutrition. UNICEF estimates that 38 percent of Tanzanian children suffer from stunting. However, food supply is relatively stable in the region and malnutrition is not a significant concern among health practitioners local to Project areas.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> All, Children</p>
Under 5 malnutrition Rates Indicator	<p>10 percent of children born between 2000 and 2007 had low birth weights          In that same time period, 17-22 percent of children under five remained moderately underweight. An additional four percent were severely underweight.</p>
Under 5 mortality indicator	<p>126 per 100,000 live births (2006) (WHO Mortality Country Fact Sheet)          (WDR 2009 sets this number at 118 for 2006)</p>
Immunization rates	<p>93 percent (2006, UNICEF)  <b>Rights:</b> Right to Health  <b>Rightsholders:</b> Children</p>
HIV Indicator	<p>Tanzania is in the 93<sup>rd</sup> percentile for HIV prevalence globally (2008 World Economic Forum Estimates)</p>
HIV rates	<p>Six to 20 percent – rates vary depending on locality (urban v. rural) and testing prevalence. In Mafinga town, adjacent to the proposed CHP Plant, rates are</p>

	<p>approximately 16-20 percent (Government of Tanzania). Near Uchindile forest, they are estimated at closer to six percent.</p> <p><b>Rights:</b> Right to Health; Right to Education; Right to Life; Right to an Adequate Standard of Living; Right to Food; Freedom from Hunger</p> <p><b>Rightsholders:</b> All; Employee Spouses, Offspring, Dependent Elderly Parents</p>
Life expectancy indicator	51 (CIA World Factbook 2007)
Maternal mortality per 100,000 births	1500 (2006 WHO Fact Sheet); 950 (2004 Human Development Report) (This disparity is noteworthy to indicate that estimates are extremely vague, likely owing largely to poor monitoring in villages.)
<b>Proximity and size of population to project features</b>	
Population within one kilometer of fence	<p>As GRL has leased over 100,000 hectares of land from African governments, thousands of people live within Project areas. Operations do not involve blasting or large-scale land movement, and they tend not to interrupt life for communities aside from those alongside roads.</p> <p><b>Rights:</b> Right to an Adequate Standard of Living; Right to Housing; Right to Security of Person</p> <p><b>Rightsholders:</b> Project area inhabitants</p>
Population downstream	<p>Directly downstream from the Uchindile Plantation are a number of tea plantations and a few small communities. Downstream from the proposed CHP plant are small tributaries that eventually flow to the Kilombero and Rufiji rivers but do not present likely water issues (see map on p. 10)</p> <p><b>Rights:</b> Right to Clean Environment; Right to Food</p> <p><b>Rightsholders:</b> Project area inhabitants</p>
<b>Food</b>	
Food security	<p>Starvation is not a significant issue. Child deaths occur predominantly from infectious diseases and traffic accidents, not malnutrition. Food becomes most scarce at the end of rainy season, but not to the point of food insecurity, suggests the hospital head.</p> <p><b>Rights:</b> Right to Food</p> <p><b>Rightsholders:</b> The Hungry; Children</p>
Local food production	<p>The region is agricultural, with an abundance of tea and tree plantations. Maize, beans, bananas, potatoes, rice, tomatoes, cabbages and onions are grown, and livestock is kept.</p> <p><b>Rights:</b> Right to Food; Right to an Adequate Standard of Living</p> <p><b>Rightsholders:</b> All</p>
Agricultural value added per worker	\$295 (WDR 2009)
Value added as % of GNP-Agriculture	45 percent of GDP (WDR 2009)
Percentage of arable land	Only 4.5 percent of land is cultivated, both temporary and permanent (WDR 2009). Much of southern Tanzania could be farmed, but soil qualities in the hilly grasslands

under cultivation Cropland per capita of agricultural population	are poor. 0.2 hectares per capita (WDR 2008)
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### 4.3. ENVIRONMENT

Physical Environment	
Physical Landscape	<p><i>Uchindile:</i> Within the boundary of the project area there are existing patches of naturally growing shrubs and trees along valley floors as well as on rolling hills and steep slopes. These have been left untouched by the Project to prevent erosion and to protect rivers and streams from more water-consumptive plants. Riverine trees line streams and rivers, and plantation trees are planted at higher altitudes (60 meters from watersheds). Local people practice slash-and-burn agriculture and set brushfires for hunting. Soils are deeply weathered granites and are moderately acid, nutrient poor, and quick to drain. Near the surface a coarse grained, hard-packed soil dominates. Topsoil has been exhausted by over cultivation and brushfires. The slopes of the ridges are high and steep.</p> <p><i>CHP Plant:</i> The CHP plant will be located at Sao Hill, 17 kilometers outside of Mafinga Town, adjacent to the sawmill and timber treatment facility. Government tree plantations, present since the 1960s, dominate the landscape.</p> <p><b>Rights:</b> Right to a Clean Environment  <b>Rightsholders:</b> All</p>
Water Sources	
Ground Water	<p><i>Uchindile:</i> The area has one rainy season, which lasts from November to May. The area receives highly variable rain year to year, averaging about 1000mm. Evaporation is consistently 800-1200 mm/year. The project area lies in a zone characterized by low productive hydrogeological formations (from less than 1 L/sec to 4 L/sec).</p> <p><b>Rights:</b> Right to Clean Environment; Right to Adequate Supply of Water  <b>Rightsholders:</b> All</p>
Surface Water	<p>Several rivers and small streams flow through Uchindile and border the project. These water sources have varying nutrient levels and flow rates, depending on surrounding landscape and season. Almost every valley bottom consists of swampy grounds portraying springs and rivers flowing out of the valleys. The major rivers flowing through Uchindile are Ngokomiche, Kihata, and Luiga. A few small streams originate in Uchindile. Most of the streams flow into the Kilombero Valley, south of the plantation area. The paper mill adjacent to Uchindile caused significant pollution damage while under government operation in the 1990s. Water in the Kilombero river saw quality decline markedly, harming the ecosystem for miles downstream (Bryceson 1990).</p> <p><b>Rights:</b> Right to Clean Environment; Right to Adequate Supply of Water; Right to Adequate Standard of Living (for irrigators)</p>

<b>Rightsholders: All</b>	
<b>Water Quantity</b>	
Boreholes and Ground Water	<p>Water quantity is not a significant issue, even in dry season.  <b>Rights:</b> Right to Clean Environment; Right to Security of Person; Right to Adequate Standard of Living  <b>Rightsholders:</b> All</p>
Depletion rates	<p>The project area is located in a zone of potential evaporation varying between 800 - 1200 mm/year. Generally, four months of the rainy season have surplus of rainfall over potential evapotranspiration.  <b>Rights:</b> Right to Clean Environment; Right to Security of Person; Right to Adequate Standard of Living  <b>Rightsholders:</b> All</p>
<b>Uses</b>	
Drinking water and Agricultural use	<p>Streams are used for irrigation and fishing, and crops are often planted in the riparian zone. In urban areas most people use well water for drinking. In rural areas streams are used more regularly. Sixty percent of Iringa residents use improved water sources and the forty percent using unimproved water sources – streams and rivers – are predominantly rural, including all residents of Uchindile and Kitete.  <b>Rights:</b>  <b>Rightsholders:</b></p>
Other uses	<p>Much of Tanzania’s energy is hydropower but there is very little mining or non-agricultural industry in the area. Water use is generally limited to cleaning, bathing and other domestic uses.  <b>Rights:</b> Right to Adequate Standard of Living; Right to Clean Environment  <b>Rightsholders:</b> Surrounding communities</p>
Quality	<p>Rivers are polluted with human and animal waste and are unsafe for drinking, based on health data; no bacterial data was provided. Mineral data shows elevated ammonium levels and low pH values in March of 2007, though this appears to be anomalous.  <b>Rights:</b> Right to Adequate Standard of Living; Right to Clean Environment  <b>Rightsholders:</b> Surrounding communities; Consumers of Locally Grown Food</p>
<b>Air</b>	
Quality	<p>In this sparsely populated area where tree plantations have been growing for decades, air quality is good. A highway running from Mbeya to Dar es Salaam contributes to pollution but not, it is suspected, with notable impact.  <b>Rights:</b> Right to Clean Environment; Right to Health  <b>Rightsholders:</b> All</p>

#### **4.4. POLITICAL/ LEGAL**

<b>Form of Government</b>	
Government	Tanzania’s government ranks in the 39 <sup>th</sup> percentile for effectiveness, according to

Effectiveness Indicator	World Bank Policy and Institutional Assessments (2007) (See Appendix)
Functioning democracy	<p>Tanzania was formed with the merger of newly independent former British colonies in 1964. Colonial rule was followed by single-party dictatorial rule until 1995, when Tanzania held its first democratic elections since the 1970s.</p> <p>Tanzania has a president and a vice-president, as well as a national parliament and regional parliamentary bodies (Zanzibar elects an independent president for internal Zanzibar affairs). National parliament has 274 seats, 30 percent of which are legally designated for women. The country is divided into 25 regions and 94 districts.</p> <p><b>Rights:</b> Right of Self Determination  <b>Rightsholders:</b> All</p>
Traditional government structure in place	<p>The political authority of chiefdoms was replaced by a combination of locally elected leaders and administrators appointed by the district, regional, and national government. Cultural history is strong in Iringa region, however, with a growing movement to honor the memory of the chiefs and chiefly alliances that helped the south resist German, and then British, colonial rule.</p> <p><b>Rights:</b> Right of Self Determination  <b>Rightsholders:</b> All</p>
Regulatory Quality Indicator	Tanzania's regulatory quality is in the 39 <sup>th</sup> percentile (Bertelsmann scoring / World Bank Governance Indicators 2007)
Elections, reform processes, human rights record, existence/well being of civil society	<p>Elections are every five years, with the next election pending in 2010. Tanzania's human rights record since multiparty rule began (1994) has improved fairly steadily. Corruption persists in the legislature, judiciary, and law enforcement arena, and free press has been curtailed at times. Violence against women (structural and physical) persists, as does discrimination against a variety of minorities (US State Department Human Rights Report). The Mafinga District has approximately 23 active NGOs, six marketplaces, four police offices, three post offices, a handful of libraries and two major banks. Ethnic and religious diversity has not incited conflict.</p> <p><b>Rights:</b> Right of Self Determination; Right to Participate in Public Life  <b>Rightsholders:</b> All</p>
<b>Law Systems</b>	
Rule of Law Indicator	Tanzania ranks in the 38 <sup>th</sup> percentile globally for rule of law (Global Integrity Index / World Bank Governance Indicators)
Legal code including environmental, political, education legislation	<p>The legal system is based on English common law. Compulsory International Court of Justice (ICJ) jurisdiction has not been accepted. Laws exist regulating agriculture, energy, intellectual property, environment, transportation, communications, banking, taxes, mining, health, labor, business, land distribution, penal systems, public law, constitutional law, and electoral law. Primary education is mandatory and free.</p> <p><b>Rights:</b> Right of Self Determination  <b>Rightsholders:</b> All</p>
Political evolution, occupation/colonization	<p>Tanzania was built out of two former colonies of Tangyanika and Zanzibar, which gained independence from England in 1961 and 1963 (respectively). Prior to colonization, the territory was home to hundreds of small tribes, which had a degree of interaction (friendly and unfriendly) but few overt alliances. Alliances were built in an effort to oust the Germans, Tangyanika's colonizer until WWI, and some of these</p>

	<p>allegiances persist, but the end of the chieftdom system has curtailed ethnic self-identification. Tanzanians are largely Bantu ethnicities, and Christianity has mingled with indigenous religions, particularly in southern Tanzania.</p> <p><b>Rights:</b> Right of Self Determination; Security of Person  <b>Rightsholders:</b> All</p>
Tax structure	<p>People earning minimum wage pay only social security tax (10 percent). Tanzanian tax laws include the Income Tax Act (2004), the VAT Act (1997), the East African Community Customs Management Act (2004) and various others.</p> <p><b>Rights:</b> Right to Public Participation (Freedom from Corruption); Right to Health  <b>Rightsholders:</b> All; The Elderly</p>
<b>Strength of Governance</b>	
Perception of Corruption Indicator	50 <sup>th</sup> percentile (World Bank Policy and Institutional Assessment scoring 2007)
Corruption	<p>Corruption is an issue in the judiciary and in the police force. Elections have been considered free and fair in mainland Tanzania.</p> <p><b>Rights:</b> Right to Public Participation (Freedom from Corruption)  <b>Rightsholders:</b> All</p>
Effectiveness of police	<p>The U.S. State Department alleges that police nationwide have been implicated in violence against women, violence against albinos, prisoner abuse and corruption. There have been few police issues in GRL areas. Police operate from a central command in Dar, with junior command centers at the regional and district level in addition to police checkpoints. These are all, generally, traffic police. Reported crimes are primarily unarmed petty thefts.</p> <p><b>Rights:</b> Right to Security of Person; Freedom from Arbitrary Arrest  <b>Rightsholders:</b> Remote victims</p>
Effectiveness of civil courts	<p>Corruption remains a problem in Tanzanian civil courts.</p> <p><b>Rights:</b>  <b>Rightsholders:</b> All</p>
<b>Civil war, conflict</b>	
Local military size, military structure, and military presence	<p>This is not a recent, likely or current conflict zone. Military service became voluntary in 2007, and legal service age was raised to 18. Military expenditures account for only 0.2% of Tanzania's budget. Military presence in the southern region is minimal. There is low availability of weapons. What exist are of Chinese and Soviet make. There is little history of ethnic/religious strife, and the country's most recent conflict involved Uganda's invasion of Tanzania in 1978.</p>
<b>Free speech/protests</b>	
Political / Civil Liberties Indicator	55 <sup>th</sup> percentile for civil liberties (Freedom House ranking / World Bank Governance Indicators)
Attitude of local police regarding demonstrations	<p>During political or civil protests, police regularly use force to disperse gatherings. Police brutality is widely reported among arrestees.</p> <p><b>Rights:</b> Freedom of Expression  <b>Rightsholders:</b> All</p>



Voice and Accountability Indicator	66 <sup>th</sup> percentile, globally. (Bertelsmann Transformation Index -- CIRI CIRI Human Rights Database for public voice and government accountability ranks Tanzania at 50 <sup>th</sup> percentile)
Freedom of Press	A free press is constitutionally and legally enshrined, and generally well protected. There is very little media in any of the Project areas. There are some radios. Radio Tanzania covers the entire country, though it is undoubtedly spotty. Much information is exchanged person-to-person. <b>Rights:</b> Freedom of Expression <b>Rightsholders:</b> All
Local laws regarding demonstrations	The constitution provides for freedom of assembly, and the government generally respects this right. The government requires organizers of rallies to obtain police permission in advance. Police have the authority to deny permission on public safety or security grounds or if the permit seeker belongs to an unregistered organization or political party. Law prohibits preaching or distributing materials considered inflammatory. During the year the government occasionally rejected requests from religious groups seeking to hold demonstrations because of the possibility that the gathering could become confrontational or inflame religious tensions. <b>Rights:</b> Freedom of Assembly <b>Rightsholders:</b> Employees; Contract Labor
State of local activism	Activism is relatively high, with key issues including women's rights, HIV/AIDS awareness and the state of Tanzanian education. Activists operate generally unhindered, and distrust of them is on the decline. Twenty-three civil society organizations exist around Project areas, though only a handful are active. <b>Rights:</b> Freedom of Assembly <b>Rightsholders:</b> Employees; Contract Labor
Intensity of opposition- local, national, international	Minimal to nonexistent <b>Rights:</b> Freedom of Association <b>Rightsholders:</b> All
<b>Indigenous Peoples</b>	
	Indigenous peoples are not present; as such no risk of conflicts, cultural degradation, or cultural ties to land are anticipated.
Cultural practices tied to land	There are graves within forest areas.

## 4.5. SOCIAL

<b>Demographics</b>	
Age pyramid	Population under age 15: 44 percent Population aged 15-64: 52 percent Population aged 65 and over: three percent (2005 – Human Development Report 2008) <b>Rights:</b> Nondiscrimination; Right to Work; Right to Adequate Standard of Living; Rights of the Child

	<b>Rightsholders:</b> Children that may be required to support parents and grandparents
Gender balance	51 percent female, 49 percent male
Ethnicity	99 percent Bantu ethnicities (130 present in Tanzania) in the southern region, with some South Asians. The primary ethnic subgroups are the culturally similar Hehe and Bena tribes. <b>Rights:</b> Nondiscrimination <b>Rightsholders:</b> Minorities (none present)
Languages	Kiswahili, English <b>Rights:</b> Nondiscrimination <b>Rightsholders:</b> Rural Dwellers lacking these language skills; the Under Educated
Density of local population	Nationwide population density is 43 people per square kilometer (HDR 2009), but in Iringa Region it is estimated at 25 people per square kilometer (Government of Tanzania). Uchindile's population at the time of government census (2002) was approximately 2000 people, which includes what the government defines as "rural" Uchindile populations (including Lugala and Kitete) <a href="http://www.tanzania.go.tz/census/census/districts/kilombero.htm">www.tanzania.go.tz/census/census/districts/kilombero.htm</a> . <b>Rights:</b> Right to Clean Environment; Right to Adequate Standard of Living <b>Rightsholders:</b> Longtime residents in Project area and downstream
Minority groups / Local attitudes toward minorities	Non-locals who are given senior jobs are sometimes treated as outsiders, though this is not the case for teachers or, generally, senior Company officials. <b>Rights:</b> Nondiscrimination <b>Rightsholders:</b> N/A
Groups at risk of marginalization	Women (particularly unwed mothers and widows), people living with HIV/AIDS and their families, the elderly are at risk for marginalization. At a number of the Company's plantations, communities that have fewer workers at GRL compared to their neighbors expressed feeling marginalized. <b>Rights:</b> Non-discrimination; Right to Adequate Standard of Living; Right to Health <b>Rightsholders:</b> Orphaned Children; In-migrants; The Elderly; Women
<b>Religion</b>	
Predominantly Christian – several denominations. Islam is underrepresented in the area compared to Tanzania at large.	

## 4.6. ECONOMIC

GDP Indicator	\$16.7 billion total (IMF World Economic Outlook Database, Oct. 2008) \$428.37 per capita (current prices) \$1255.56 per capita (based on PPP)
Standard of living/ Poverty rates	Poverty rates are extremely high, particularly in rural areas than urban areas. Tanzania's southern regions are its least densely populated but not its poorest. Mufindi, where the CHP plant is planned, is a relatively prosperous district, owing to tea and tree plantations. Surrounding countryside outside of towns and cities are significantly poorer. Approximately 45 percent of villagers around Mapanda and Idete earn less than T. Shs 50,000 (\$38) per year.

	<p><b>Rights:</b> Right to Favorable Working Conditions; Right to Adequate Standard of Living Adequate for Health; Right to Just Remuneration</p> <p><b>Rightsholders:</b> Residents of surrounding villages; Residents in communities from which the Project does not hire</p>
Population living on under \$1 or \$2 / day	<p>(WB Human Development Reports – 2005 data)</p> <p>Under \$1 a day - 57.8 percent</p> <p>Under \$2 a day - 89.9 percent</p>
Source of local livelihoods	<p><i>Uchindile:</i> Locals participate in subsistence and cash crop farming and work on tree plantations (weeding, planting, trimming, etc). Service industries are present in towns, but the vast majority of the populations of Mbeya and Iringa Regions live in rural settings. One third of villagers keep livestock.</p> <p><i>CHP Plant:</i> Residents of Mufindi District derive their income primarily from agriculture (78 percent). Six percent are involved in business, two percent keep livestock, three percent have “white collar” jobs and 11 percent are involved in contract labor. People living in the Sao Hill residential area are nearly all employed in connection to either the government forest plantation, the Green Resources Limited office or SHI (including transportation).</p> <p><b>Rights:</b> Right to Standard of Living Adequate for Health; Right to Just Remuneration</p> <p><b>Rightsholders:</b> All</p>
Presence / legality / history of artisanal or small-scale mining	<p>Most mining is done in Tanzania’s northern regions. Uranium deposits have been found in southern Tanzania but have not yet been exploited. Gold deposits have been found in Iringa Region, but there is no strong history of small-scale mining in the area. The Mineral Policy of 1991 legally protects small-scale mining, but it is not present in the area.</p> <p><b>Rights:</b> N/A</p> <p><b>Rightsholders:</b> N/A</p>
Major industries	<p>The most significant industry in Iringa region is forestry, including plantation tree farming, logging, paper production and timber (transmission pole) production. Agriculture predominates. Even in urban Iringa, 40 percent of the population is dependent upon agriculture, growing maize, beans, tomatoes, potatoes and vegetables. Small-scale industry includes brick making, carpentry, local brewing, metal works and food processing.</p> <p><b>Rights:</b> Labor Rights</p> <p><b>Rightsholders:</b> All</p>
Employment rates	<p>Unemployment is approximated at five percent nationwide, with slightly more women unemployed than men. An estimated 82 percent of Tanzanians are involved in agriculture, which accounts for 40 percent of the national economy. Three percent of the population is involved in industry and 15 percent in services (2005 data – Human Development Report)</p> <p><b>Rights:</b> Right to Adequate Standard of Living; Right to Just Remuneration</p> <p><b>Rightsholders:</b> All; Workforce; Women (barred from workforce)</p>
Natural resources	<p>Tanzania is rich in natural resources, including gold, copper, uranium, tanzanite, precious and semiprecious stones, trees, and wildlife. Wildlife is counted among natural resources as part of the government’s “policy for poverty reduction,”</p>

	presumably suggesting that wildlife is valuable for the tourism industry. <b>Rights:</b> Right to Clean Environment <b>Rightsholders:</b> All
Water Ownership Structure	Section 62 of the Tanzanian Water Policy empowers rural people to communally own water resources within their villages. Villages have a mandate to plan, construct, manage, protect and open a “water fund.” Section 71 provides that the ministry will issue water rights to anyone who is interested. The policy does not explicitly state the tenure of water resource to individuals, however. The common feature in most villages is that individuals or the community at large owns water resources and especially wells. The Village Land Act recognizes water as a natural resource that requires central government management. (All other resources can be managed by the village.)
Availability of housing	High <b>Rights:</b> Right to Housing <b>Rightsholders:</b> Employees of the Project; Contractors; Local Community Members
Land ownership structure	The Tanzanian government technically owns all land. The Tanzania Land Act makes official differentiation between traditional landholding and official government land leases (which can last no more than 99 years). Village leaders can allocate land in case of disputes or when fertile land is lying fallow for what is deemed too long. The 1999 Village Land Act endows registered villages with designated land. The president can take it away, but the Act empowers the village council to manage the land on behalf of villagers. <b>Rights:</b> Right to Property; Right to Just Remuneration <b>Rightsholders:</b> Relocated Villagers; In-Migrators
Style / material of housing	On Project property houses are brick with shingled roofs, electricity and cement floors. In more remote areas housing is 68 percent mud and pole-thatched roofs and 32 percent mud bricks (some burnt and reinforced with cement) and corrugated metal. <b>Rights:</b> Right to Housing <b>Rightsholders:</b> All

**Education**

Local school infrastructure	Primary education is free and mandatory. Secondary school has fees, requires boarding (generally) and is significantly less well attended. Parents question the value of educating children, and teachers face significant hardship (Uchindile teachers fetch their salaries in Mlimba, a train journey that takes two to three days and frequently requires students to miss school while teachers are retrieving pay). Gender ratios in primary school are even. All public schools are community-government partnerships, whereby government generally provides teachers, teacher salaries, and some funds for school supplies, while communities (and benefactors, including corporate donors) provide labor, additional materials, and any “perks” such as electricity. Only eight of Uchindile’s Standard Seven graduates went to secondary school (only two of whom were girls). No students from Kitete go to secondary school.
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Village	Shortage
Primary school in Uchindile	2 classrooms promised for secondary school, 1 classroom promised for primary school. Significant delays in completion, but promised by F

	2009. An additional 2 classrooms for the primary school were to be constructed starting in June 2009
Primary school in Kitete	Kitete has a classroom shortage and GRL promises to start construction of two new rooms in May 2009.
Primary school in Sao Hill (400 students)	Spouses of GRL employees act as teachers. There are currently 17 and an excess of classrooms (some are unused)

Uchindile has 248 pupils and five teachers. The government promises eight but teachers refuse to report for work.

**Rights:** Right to Education

**Rightsholders:** Children

Education Indicator Ranked 159 out of 177 countries. Indicator .631 (UN Human Development Report 2007/2008)

Educational attainment Primary school has over 90 percent enrollment. Absenteeism is highest among students who live the farthest from school (sometimes 10 kilometers). The dropout rate was 17 percent in 2008 and has been decreasing annually. Poverty is a significant factor in student retention at higher grade levels. Longitudinal data shows significant improvement in education rates over time. No improvement has been made in Kitete and little if any has been made in Uchindile (interviews with teachers).

**Rights:** Right to Education

**Rightsholders:** Children

Literacy Indicator Ranked 136 out of 177 countries (UN Human Development Report 2007/2008)

Literacy rates Age 15-25 – 77 percent  
 Adult – 69.4 percent  
**Rights:** Right to Education  
**Rightsholders:** All; Women

## 5. Project Catalogs

### 5.1. Uchindile Forest Harvesting

#### 5.1.1. LABOR

##### Wages

Wage scale Plantation workers make a minimum of 2,500 Tsh/day (\$2 US) and work six hour days, six days weekly. The Company approximates that 70 percent of GR workers make more than minimum wage, but many make *much* less, because they are “temporary” workers paid only for days worked, with no sick leave or maternity leave, meaning that missed workdays devastate their salaries. Minimum wage is not livable, based on current prices in the area (Assessor price survey – results visible in section 5.1.7. “Occupation of Other Sources of Employment” below). Wages increase 10 percent annually (in 2009 they increased 12 percent). Salaries for permanent employees at Uchindile range from 72,800 Tsh/month for watchmen, patrolmen and fire crew (64,064 Tsh after NSSF tax payment) to 1,176,000

Tsh/month (1,293,600 Tsh after tax) for the plantation manager. In August 2009 there were 60 permanent employees at Uchindile and 237 “contract workers.” Contract workers are paid for hours worked, receive no benefits, and must pay for their own protective gear at times. Their wages ranged from 7,500 Tsh (6750 Tsh after tax) to 77,500 (69,750 after tax), working anywhere from three to 28 days in the month. The Company has said it maintains workers as contract labor (three-month contracts renewed four times yearly) so that they continue subsistence farming. This is not the case for the majority of laborers at Uchindile, who have found it impossible to adequately tend crops.

**Rights:** Right to Just Remuneration

**Rightsholders:** Employees of Project; Contract Laborers

### Unions

Number of workers who would likely be members of existing unions

Uchindile’s permanent employees are 20 percent of the total labor force, which is mostly made up of contract workers with tenuous ties to trade unions (at Kitete workers had never even heard of Tanzania Plantational Agricultural Workers Union, or TPAWU, which is officially their union). The most recent collective bargaining document presented by TPAWU, issued in June 2009, appears to demand little more than national legal requirements, including numbers of consecutive sick days, minimum pay, nondiscrimination, maternity leave and opposition to child labor. This union has never initiated a strike and its members skeptical of its strength. Of Uchindile’s 297 workers (August figures), 59 could potentially be union members, but only one (the elected union leader, who was recently relocated to a different plantation by senior management) appears to participate actively. In transferring the labor leader, Management has essentially eliminated the Union at Uchindile (interviews: Plantation Manager, Laborers).

**Rights:** Freedom of Association

**Rightsholders:** Employees of Project; Contract Laborers

### Employment

Employment profile

Green Resources employs approximately 2000 people on average (sometimes up to 3200). At Uchindile there are 68 formally employed workers (August 2009 payroll shows 60) and a varying number of contract workers, ranging from 200 to 820. The permanently employed workers include supervisors, fire crew, security, drivers, dispatcher-watchmen and medical support. Contract workers have frequently expressed disappointment in their status and treatment (see: Feb 2008 Uchindile Stakeholder Meeting). Among contract workers are: watchmen (not dispatchers), planters, weeders and pruners.

**Rights:** Equal Pay; Nondiscrimination; Right to Livelihood

**Rightsholders:** Employees of Project; Contract Laborers; Project Area Inhabitants

Child Labor

GRL does not allow child labor in its tree plantations.

**Rights:** Rights of the Child; Right to Education

**Rightsholders:** Children

### Conditions of work

Hours of work

By Tanzanian law, employees work a maximum of 45 hours weekly – five eight-hour days and every other Saturday. Health workers and overseers at plantations work these hours. Day laborers work six hour days (8am to 2pm), six days a week sometimes leaving at 1 to be home before dark (there are long walks to

	<p>plantations). Watchmen work 72-hour shifts, with short breaks (a few hours) in afternoons when patrollers come by the watchtower. This is not consistent with Tanzanian labor law, which states: "an employer shall not require or permit an employee to work more than 12 hours in any day" (2004 Labour Act, Section 19).</p> <p><b>Rights:</b> Right to Favorable Working Conditions  <b>Rightholders:</b> Contract and Permanent workers</p>
<p>Transportation to/from site</p>	<p>Many workers walk to and from work. A journey that can be as much as 3.5 hours each way. All workers walk great distances, as Company-provided transportation deposits workers at the Uchindile office, which can be 10 kilometers from work sites (laborer interviews). Despite repeated external recommendations and internal worker complaints, the primary transportation (sporadically) provided to workers is a tractor. An Isuzu Fuso Tipper, which, while better than the tractor is not a suitable means for transporting workers, is sometimes used but not with any degree of regularity. At times both the tipper and tractor are out of commission, and workers are required to walk the entire distance to site.</p> <p><b>Rights:</b> Right to Favorable Working Conditions  <b>Rightholders:</b> Contract and Permanent workers</p>
<p>Worker Health</p>	<p>Work is labor-intensive, compounded by long walks to and from worksites. Workers walk up to 50 kilometers a day, leaving home at five am and returning at four or five at night. Only permanent employees are provided any food at all while working (watchmen, who work 72-hour shifts, are given beans and ugali since they have no opportunity to return home to eat. Others are given porridge once a day). This makes for unhealthy, undernourished workers. Compounding worker ill health, communication among managers and overseers is poor, such that workers who are unfit for certain tasks are assigned them anyway. Where workers are afforded no sick leave, it is to be expected that they will attempt to work when ill. Reassigning ill workers to impossibly intense tasks is tantamount to denying them the right to work (and can exacerbate their health problems in the process). In at least one case a sick workers assigned to low-impact work was reassigned to labor-intensive tasks, first causing her to become sicker, then forcing her to leave work and lose her income.</p> <p><b>Rights:</b> Right to Favorable Working Conditions  <b>Rightholders:</b> Contract and Permanent workers</p>
<p>Worker Safety</p>	<p>Workers are required to wear work-specific protective gear by Company standards, however there is no enforcement of this. Because many workers are temporary, the company does not automatically issue them all safety gear. Temporary workers are often required to purchase their own safety gear, which some of them decide not to do.</p> <p>Workers who <i>do</i> own protective gear often remove it while working and face no repercussions. This is likely to be contributing to GRL's accident rates. At 28 non-fatal injuries in 2007 and 21 in 2008 among its 240 workers, injury rates at SHI are higher than national non-fatal injury rates at sawmills in the United States (10 per 100 workers, 2002 estimates) and over double the rates in Australia (5.6 per 100 workers in 1996). These rates are relevant to tree felling because it appears that sawmill employees were transferred to Uchindile as chainsaw operators.</p> <p><b>Rights:</b> Right to Favorable Working Conditions  <b>Rightholders:</b> Contract and Permanent workers</p>



Worker Benefits, Unions	<p>Only permanent employees receive benefits, including sick leave, maternity leave, termination benefits and the right to collectively bargain. They are the only union members. This means that 80 percent of workers are denied such benefits. Temporary workers do not even clearly understand whether they receive doubled salaries for working on holidays, as required by Tanzanian law. The union itself is extremely weak and inadequate. Because plantation workers have no interaction with other plantations, the company can relocate a labor leader from one plantation to effectively eliminate the union there. This was done at Uchindile in Sept/Oct 2009.</p> <p><b>Rights:</b> Right to Favorable Working Conditions; Right to Belong to a Union; Right to Strike</p> <p><b>Rightsholders:</b> Contract and Permanent workers</p>
Worker standard of living (housing, food, water	<p>Worker housing at Uchindile plantation is provided for non-local workers (those who do not live in Uchindile, Kitete, and Lugala villages). VCS documents indicate, and FSC Principles require, that workers housed on site are provided houses with electricity (solar) and good water, waste and sanitation provisions. None of these provisions is met at the on-site dormitories at Uchindile. Dormitories have no electricity. The water tank, which should be filled monthly, has not been refilled since November 2008. The latrines are putrid and lack water for flushing. Lacking access to clean water, workers drink, wash, and do laundry and dishes in a dirty, red trickling stream one kilometer down a perilously steep slope, which is completely impassable when wet. Sometimes they walk 4 kilometers to the Company store's water tank, which is filled more regularly but also runs empty at times. Because the Company brought workers from Sao Hill to conduct tree felling, there are now thirty men living in the men's dormitory (which has only 10 beds), and eight women living in the women's dormitory (which has only two beds). Quarters are too close to be sanitary and workers have no privacy.</p> <p>In Uchindile town, tree harvesting has had no impact on housing quality. Houses continue to be made of mud brick or mud-and-thatch, with the nicest houses belonging to the Ward Executive and former employees of Tanzara Railroad. All workers fetch water from streams with high bacterial counts, often becoming ill. Food is in short supply across the area. For more on this see "Livable Wage" below.</p> <p><b>Rights:</b> Right to Favorable Working Conditions</p> <p><b>Rightsholders:</b> Contract and Permanent workers</p>
Livable Wage	<p>Despite Company assertions that temporary work is designed to promote continued subsistence farming, workers do not have time to perform farming and plantation work. For some workers, this means their wives take on a double-load of farm work. This does not improve family well-being, because wives are not given their husbands' wages to improve nutrition, clothing or housing. Instead, several wives work second jobs (making local alcohol, sewing garments for neighbors, etc) to support their families. For single-parent households, wages are not enough to support children, childcare (10,000 Tsh/month) and family expenses (price survey, Uchindile and Kitete, September/October 2009) while promoting improved standards of living.</p> <p>In Kitete the problem is particularly acute. Workers cannot be farmers and plantation workers, because while they are at the plantation wild hogs decimate their crops. Kitete farmers run out of home-grown food within three to four months</p>

	<p>of harvest, requiring them to buy all of their food and household needs in Makambako. Workers spend their entire paychecks on transportation (by train), cooking oil, maize, beans, kerosene, sugar and other daily needs. Very little or no cash is ever left over for savings or home improvements.</p> <p><b>Rights:</b> Right to Favorable Working Conditions; Right to an Adequate Standard of Living; Right to Fair Pay</p> <p><b>Rightholders:</b> Contract and Permanent workers</p>
Project training programs for workers	<p>Uchindile Security received required military training, and 27 security guards (including fire patrollers) protect the Uchindile forest from fires, theft, and trespassers. New plantation staff receives GPS training and biomass inventory analysis. On-the-job training is informal. Little other upward mobility is possible. Supervisors (selected from among the ranks of local workers on a temporary basis) are trained first, then nursery workers. Training addresses work responsibilities and safety standards.</p> <p>Some training is foregone entirely for locals, and contractors replace local labor. When harvesting began, the Company opted to send workers from Mafinga to conduct felling. No local workers were trained to operate chainsaws. Chainsaw operators received one week of work-specific training before beginning felling.</p> <p><b>Rights:</b> Right to Work</p> <p><b>Rightholders:</b> Employees of Project; Contract Laborers; Inhabitants of Local Communities</p>
Project jobs profile, job not suitable for women	<p>Women comprise approximately 25 percent of the Company's total workforce, primarily working in the nursery and weeding. Women run many of the Company's health dispensaries (including the one at Uchindile) and account for 20 percent of junior management positions. Men do heavier labor, which pays higher salaries due to longer work hours. Women also are more likely to miss hours of work to conduct farming and care for children. The disparity in income is significant. In August 2009, women comprised approximately 20 percent of the contract labor workforce at Uchindile and earned only 17 percent of the salary (August 2009 Payroll).</p> <p><b>Rights:</b> Nondiscrimination; Right to work</p> <p><b>Rightholders:</b> Employees; Contract Laborers; Women</p>
Means to distinguish between locals and recent immigrants when offering jobs/training	<p>Uchindile is a remote, undesirable location for migrating populations. Laborers do not flock to the site for employment, and locals were previously subsistence farmers who picked up plantation work for extra income. The Company has a Standard Operating Procedure requiring job applicants to specify where they live and where they are from, with the aim of giving first priority to local workers. This is not in effect for contract labor.</p> <p><b>Rights:</b> Right to Work; Nondiscrimination</p> <p><b>Rightholders:</b> Employees; Contract Laborers; Inhabitants of Local Communities; The Women and Unskilled</p>

### 5.1.2. HEALTH

#### Facilities

Project clinics	The dispensary, which is only a first aid station, is stocked with bandages, ibuprofen, antibiotics and anti-malarial medications but is not equipped to care for
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	<p>sick or seriously injured patients. The nearest hospital is over an hour away and difficult to reach in some seasons. Additionally, the dispensary is located in the center of the plantation, 20 kilometers or more from where workers actually conduct operations. No transportation is available within the project site for workers to access health care if needed. Sometimes (up to once a week by some estimates) Company vehicles are used to take sick workers to health facilities, but if a worker is too sick to reach the plantation, no medical care is available.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> Employees of Project; Contract Laborers; Contractors</p>
<p>Project clinics, District health facilities – medical stocks, wards, beds</p>	<p>Project dispensary has only rudimentary first-aid and sees very few patients. Community clinics are staffed by local clinicians and supplied by train deliveries from the government, which sometimes come six months late. There are no wards, no hospitals, and only one bed for patients in Uchindile. Assessors spent the night in the doctor’s house, which has never been occupied (no doctor has ever arrived to his/her post in the town).</p>
<p>Health engineering of Project: infectious disease vectors</p>	<p>GRL plantations have varying levels of malaria risk. At Uchindile, waterborne illnesses are more prevalent. The Kilombero Valley at large, and Uchindile in particular, has high HIV rates for a rural area (two to 10 percent). The Project protects against malaria by stocking Plantation dispensaries with malaria tablets, although workers say that the remoteness of the dispensary is a hindrance from receiving treatment there. No precautions are taken to keep malaria and HIV rates down.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> Employees of Project; Contract Laborers; Contractors</p>
<p>Existing sanitation systems (including any improvements made by Company) – latrines at clinics, schools and private houses</p>	<p>Locals draw water from surrounding streams. The Company has committed to providing water for workers, at the clinic and near the dormitories. Latrines provided by the Company near dormitories are dirty and have no water. In the middle of plantations, where workers spend most of their day, no latrines are present.</p>
<p>Project’s community development programs for health</p>	<p>There is debate as to whether and to what extent health programs are conducted. Project and Company managers say communities receive HIV and Malaria education. However, community members have no recollection of such programs occurring, there are no records of such sessions, and ignorance about HIV is rampant. Some locals have confused malaria symptoms with HIV. Communities have requested health training but none has been forthcoming, they say. HIV and malaria have been responsible for 70 percent of adult deaths in Kilombero district in recent years, by government estimates. The VCS document for Uchindile indicates that the Company was implementing assessor recommendations to “improve accessibility of clean water by providing boreholes where necessary,” and that it will</p>

“improve the local health facilities by providing laboratory equipments and medicinal kits,” which does not appear to be the case. Uchindile’s dispensary has no lab equipment beyond the capacity to conduct HIV tests (through a government initiative), and medicines are provided by the government on an inconsistent three-monthly schedule.

**Rights:** Right to Health

**Rightsholders:** Employees of Project; Contract Laborers; Contractors; Families of the afore mentioned; Local Community

Response to pressure on employee health centers to serve wider community.

Uchindile’s plantation dispensary (first aid station) does not turn away people in need, but it is so far from most communities that walking the distance is impossible for the very ill, and it is not worth the walk for the less ill. The Project has promised to refurbish and help restock most of the dispensaries in surrounding communities, to decrease pressure on the Project’s own facilities. In 2005 the company donated \$3,500 in unspecified supplies to the Uchindile town dispensary (Company documents indicate that Green Resources spent \$136,000 on community health in 2005 -- Annual Reports show this figure at closer to \$205,000 but note that \$120,000 of that was a third-party grant), but the town clinicians feel that help from the company is so limited as to be nearly irrelevant. If this is simply because the Company does not demonstrate to communities that these supplies were donations, it is doing itself a disservice. In 2006 and 2007 Company expenditure on Community health was reduced more than 20-fold from 2005 levels (2008 Annual Report). Such significant fluctuations suggest that medical support is not sustained, meaning there is no stable access to healthcare in communities. At least four health authorities have reiterated that Company support is inconsequential to local wellbeing, in both Mafinga health facilities and Uchindile. There are no facilities in the area suitable for proper health care at Uchindile. Expatriates use the private hospital owned Unilever near Mafinga town. The privately owned Mufindi Paper Mill has medical facilities approximately 30 kilometers from Uchindile. The Company has considered seeking permission for its workers to use the MPM facilities, although the logistics of how workers would be transported that distance have not been made clear. Senior management was not forthcoming about this possible arrangement. It is unclear why.

**Rights:** Right to Health

**Rightsholders:** Local Community

**Health Impact/Risk Assessment**

No Health Impact Assessment was conducted, so Company impacts cannot be assessed to contrast with baseline. District health officers monitor health profiles to an extent, but the Company has neither records from this monitoring nor data from its own first aid centers.

**Risks**

Project risks power line injuries Traffic accidents

Currently N/A

Significant concerns exist in felling and transporting trees during harvesting. Risk of traffic accidents are compounded by the CHP Plant’s need for biomass (more logs being transported than would otherwise be). Trucks will collect biomass from Sao Hill Forest Projects (government owned) as well as GRL operations. Speed limits and night driving restrictions have been implemented to mitigate risk among Green

	Resources drivers, but not within other plantations. <b>Rights:</b> Right to Health; Right to Security of Person <b>Rightsholders:</b> Residents Dwelling Near to Roads; Children
Risk of Tree Felling Injury	Best practices for tree felling are required by certifications that Uchindile has received, though felling accidents can still happen. According to international best practices, workers are to be provided air masks/precipitators, safety boots, overcoats and helmets. The Company handbook lists helmets, ear protection and boots among safety gear for felling crews. Chain saw operators are provided cut-resistant gloves, eye protection, and leg protection with cut-resistant material. Proper escape angles during tree felling direction and the use of sufficiently sharp and regularly maintained machinery is employed to reduce felling risks resulting from kinks. Dust hazards are not accounted for in the Company's plantation operations handbook. There are no penalties for workers who remove protective gear while working, and some workers say they have not been provided needed eye protection. Contract workers are required to pay for safety gear, so some say they opted not to receive it. <b>Rights:</b> Right to Health; Right to Security of Person <b>Rightsholders:</b> Project Employees; Contract Laborers
Risk of escape of hazardous materials	Risks lie in fuel spills from vehicles and equipment. The Project has plans to use only designated areas for refueling. Petroleum fuels, lubricants and other chemicals are to be managed according to established industry best practices as outlined in the IFC Environment, Health and Safety Guidelines for Forestry and the Company handbook. <b>Rights:</b> Right to Health; Right to Security of Person <b>Rightsholders:</b> Project Area Inhabitants; Employees of Project / Contractors
Risk of increased disease from population influx	This risk of disease is not yet significant at the plantations, where population influx has not been notable, and transportation into major towns remains pricy and difficult. STD rates may be increasing at GRL's dormitories due to increased travel between communities and population centers (provided weekly by the company for harvesting workers contracted from Sao Hill), but testing is still quite low in rural areas so rate changes are not known. <b>Rights:</b> Right to Health <b>Rightsholders:</b> Project Area Inhabitants; Employees of Project / Contractors

### 5.1.3. ENVIRONMENT

<b>Air Quality</b>	
Air emissions from operations	There are no significant air emissions from tree harvesting, beyond fuel used for transportation and felling. <b>Rights:</b> Right to Health; Right to Clean Environment <b>Rightsholders:</b> Project Area Inhabitants
Dust and emissions from road traffic and operations	Dust and emissions are highly likely to increase, generated from tree felling (dust and sawdust) road construction and timber transport. The Company handbook indicates that roads will be treated (covered with gravel and murrain, then coated with sodium chloride to bind the two and minimize dust).

<p><b>Rights:</b> Right to Health; Right to Clean Environment  <b>Rightsholders:</b> Project Employees, Contract Laborers, Project Area Inhabitants</p>	
<p><b>Surface Water</b></p>	
<p>Community water sources for drinking and cleaning</p>	<p>All water is drawn from streams and rivers at the community level.</p>
<p>Project's water quality or quantity impacts affect agricultural water use</p>	<p>Tree harvesting does not prevent inherently problems to water quality, beyond increasing dust and sediment in streams.  <b>Rights:</b> Right to Health; Right to Clean Environment  <b>Rightsholders:</b> Project Area Inhabitants</p>
<p>Project-supplied water for drinking and cleaning – directly view contents of water tanks and color/quality of well- and tank-water</p>	<p>The water basin for the dormitories had not been refilled for 11 months at the time of site visit. The water basin for the clinic and more senior housing tends to run dry one day each month. Water is pumped into the basins by fire-fighting bowsers.</p>
<p>Use of surface water</p>	<p>The Project's most significant water use is firefighting. The Company owns 20 thousand-liter water bowsers, equipped with pumps and hoses for firefighting. Nurseries need year-round access to stream water. None is needed for tree harvesting. Uchindile has been awarded the Water Right to abstract 375 liters per day from Isimani stream for domestic water supply and 24,300 liters per day during rainy season to irrigate nurseries (Ministry of Water, 17 April, 2008).  <b>Rights:</b> Right to Adequate Supply of Water; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>
<p>Minimal surface water will be diverted, no water supply reservoirs will be created, plantation harvesting involves no water treatment, and no significant effects are foreseen on water quality from operations.</p>	
<p><b>Ground Water</b></p>	
<p>Total water usage</p>	<p>Evapotranspiration losses will decrease during harvesting, as mature trees with large crowns – which may transpire up to 250 liters per day or more – are felled (EIA 6.2). Evapotranspiration has not been a problem to date.  <b>Rights:</b> Right to Adequate Supply of Water  <b>Rightsholders:</b> All surrounding communities</p>
<p>Effect on ground water</p>	<p>Minimal. Quality may decrease somewhat, as root systems improve water quality.  <b>Rights:</b> Right to Adequate Supply of Water; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>
<p><b>Ecosystem</b></p>	



<p>Project risks causing collateral damage: erosion, floods, landslides, mudslides</p>	<p>Land will have undergone substantial transformation from grassy to tree-covered to logged. Indigenous trees were not culled during planting but many have died of sun-starvation. Erosion is always a risk in timber harvesting. Steps to prevent this include the purchasing of top-of-the-line equipment, training tree fellers, and instituting proper felling techniques. All these steps are being taken.</p> <p>Soil quality is already fairly poor do to local/traditional annual burning, and it is expected to have diminished during tree growth – trees reduce groundcover, which support soil organisms, which contribute to soil fertility – but no change is anticipated in harvesting if precautions are taken against erosion (Uchindile VCS p. 90).</p> <p>The buffer zone around rivers (which was increased from 30 to 60 meters in 2004) protects riparian ecosystems. On-site soil erosion has been reduced by the Project – Uchindile built and maintained the organic content of the soil, developing a more open soil structure and increasing in filtration capacity and storage capacity of the soil layer within the root zone. Maximum clear cut size has been limited to 200 hectares, and sloping and soil type are considered to avoid erosion and soil disturbance. Roads are designed to keep erosion at a minimum.</p> <p><b>Rights:</b> Right to Adequate Standard of Living; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants; Farmers</p>
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#### 5.1.4. SOCIO/POLITICAL

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<p>Civil Society</p>	
<p>Intensity and scope of media scrutiny</p>	<p>N/A There is essentially no media in the area.</p>
<p>Presence/strength of NGO activity in community</p>	<p>Extremely low in plantation areas.  <b>Rights:</b> Freedom of Expression; Freedom of Association  <b>Rightsholders:</b> Unknown</p>
<p>Issues to date – with local activists, government, other</p>	
<p>Environmental</p>	<p>In 2000 a Norwegian NGO critiqued the company for contributing to the notion of paying for Europe’s environmental sins on Africa’s soil. This campaign by NorWatch is heating up anew in summer of 2009.</p>
<p>Health</p>	<p>None (many issues are present, but none have been blamed on the Project)</p>
<p>Human Rights</p>	<p>A Norwegian graduate student is planning to study the Company’s labor standards in researching her Master’s Thesis. It is not yet clear whether her report will be positive.</p>
<p>Psychological Impacts</p>	
<p>Local fears</p>	<p>Reports that locals are enthusiastic about the shift from subsistence farming to plantation work were unsubstantiated in interviews. Distrust is growing, owing to the significant delays on promised benefits to communities. Locals are also apprehensive about the loss of scrap wood, which they use as firewood and construction wood. Job insecurity and low pay have long been a worry for contract</p>

	<p>workers. Harvesting has evoked new fears that advancement will never be possible, because the company brought in workers from Mafinga as chainsaw operators, rather than train locals.  <b>Rights:</b> Right to Security of Person; Right to Privacy  <b>Rightsholders:</b> Directly Affected Villagers; Project Area Inhabitants</p>
<p>Emergency response plans</p>	<p>Emergency Response plans exist for fires; communities are trained in fire protection.                  Over the past four years, Green Resources' fire preparedness capacity has improved by establishing fire management plans, setting up stand-by crews, making wider fire breaks, fire towers and investing in hand-held fire-fighting tools. Last year a number of tractor-pulled water bowsers were procured. In order to enable more rapid response capacity, the company has recently purchased 12 pick-up mounted 'bakkie fire-fighting units', including tanks for 300-700 litre water, pumps and hoses. Since the start of 2008, 200 units of fire knapsacks have been purchased. Combined with investment in radio communication, transport capacity and better training, this is expected to continue the improvement of the company's fire response ability (Annual Report 2008).  <b>Rights:</b> Right to Health; Right to Clean Environment  <b>Rightsholders:</b> Project Area Inhabitants; Employees; Contract Laborers, Contractors</p>
<p><b>Demography and Economy</b></p>	
<p>Influx of workers – numbers, rate of in-flow, from where, for what duration, with/without families</p>	<p>Contract laborers are recruited from local areas. There is minimal in-migration to villages surrounding plantation projects (in fact, it is very difficult for these schools to recruit teachers, because so few are willing to move to such remote areas). Before harvesting the Company predicted that the same workers who cared for the trees during growth were likely to be harvesters, which was not the case. Workers from Mafinga have now been in the area for nearly a year. They live in overfull dormitories and have transportation to Mafinga weekly to see families.  <b>Rights:</b> Right to Work  <b>Rightsholders:</b> Project Area Inhabitants</p>
<p>Project employment of locals</p>	<p>The Company employed approximately 400 workers in 1999, which was elevated to 3200 by 2009 (2008 Annual Report). This figure includes contract and permanent workers in all countries where the Company has operations. Only 700 were permanent workers (2500 were contract labor – mostly local to the projects). Locals work in the nursery, in the plantations for weeding, and doing road construction. Almost all senior positions are filled by people from elsewhere in Tanzania or abroad.  <b>Rights:</b> Right to Work  <b>Rightsholders:</b> Project Area Inhabitants</p>
<p>Markets and shops – prices and variety of available food and goods</p>	<p>There are three markets in Uchindile, selling basic houseware needs (fuel, matches, batteries, longyi, snack food, etc). Prices in Uchindile are lower than at Kitete, suggesting that transportation is harder to reach Kitete, or that there is a monopoly on locally sold goods. Variety is limited and very few luxury goods (lotions, for example) are available.</p>
<p>Impact</p>	<p>Positive impacts include reducing the strain on government forests for much-</p>

nationwide needed timber, increasing the supply of transmission poles, and providing a degree of local environmental education.

**Rights:** Unknown; Right to Adequate Standard of Living

**Rightsholders:** All

The transition to harvesting will not cause an influx of population that could result in inflated food prices or overflow in classrooms.

#### Infrastructure

Project's community development programs for education

The community support planned for 2009 consisted of: 2 classrooms for Uchindile Secondary School, 3 classrooms for Uchindile Primary School, a ward office and conference room (5 offices and one hall), and a dispensary, road and school for Kitete. These projects were originally posed in 2001 and were supposed to be completed, largely, in 2005. In September 2009, the secondary school classrooms were completed but none of the others were. Uchindile primary still required paint and desks (only 90 percent of students have desks), and the other projects were mere foundations. (It is possible that one ward office is completed.) The Company has also promised a teachers' office, and girls' dormitories. Managers said these are under construction but this is not mentioned in Company documents or in field exploration (perhaps managers were referring to teacher houses at Tanga plantation). Relevant school and government authorities have lamented the delays. Company representatives in management have misrepresented the progress on these. The two constructed school buildings are still unusable (not painted, devoid of desks), and management indicated that that projects were farther along than their empty foundations would indicate.

**Rights:** Right to Property; Right to Adequate Standard of Living; Right to Education; Right to Health

**Rightsholders:** Children; Residents Dwelling near Roads; Project Area Inhabitants

Other infrastructure

Cell service is increasing noticeably, which has helped communities. The Company supplied \$3,500 worth of medical equipment to the Uchindile dispensary in 2005. Roads are markedly improved, but this has not increased transportation for locals. Company managers assert that public transit has increased significantly to all plantation sites, with a vehicle running daily from the plantations to town centers. This is manifestly untrue at Uchindile, where no public vehicles receive passengers. It was anticipated that the Project would bring wealth to otherwise poor areas. This has not been the case. In Kitete, where the majority of the population works for the Company, villagers are too poor even for hurricane lamps – they use open-flame lamps. The school and dispensary planned in 2001 and promised in 2005 was a mere concrete foundation in September of 2009.

**Rights:** Right to Adequate Standard of Living

**Rightsholders:** Residents living near roads and cell towers

### 5.1.5. SECURITY

Security plans/  
 Extent of  
 Project to be  
 Patrolled

GRL has a significant security force at its Tanzania Operations. Uchindile has security, which accounts for most of its permanent staff, to protect from fires as well as thefts.

**Rights:** Right to Security of Person

	<b>Rightsholders:</b> All
Availability of items to be stolen, including petrol tapping	Security breaches almost unfailingly result from collusion between guards and thieves. Materials to be stolen include saws, shovels, tires and, most significantly, petrol. (Chemicals and tires are objects of theft at Sao Hill) <b>Rights:</b> Right to Security of Person <b>Rightsholders:</b> All
Project relationship with military and police	There is no military or police presence at Uchindile. <b>Rights:</b> Right to Security of Person <b>Rightsholders:</b> All

### 5.1.6. ECONOMIC / INFRASTRUCTURE

Proximity of Project to urban areas	Uchindile is remote, surrounded by forest, grassland, and four small communities. <b>Rights:</b> Right to Privacy <b>Rightsholders:</b> Project Area Inhabitants
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### 5.1.7. ECONOMIC / LAND AND LIVELIHOOD

Land the project occupies	
Proposed houses – all plans for resettled rightsholders	N/A
Relocation of populations	No relocation is necessary for Uchindile tree felling. Previously, relocation included the displacement of significant cropland (ten hectares of annual crops, in addition to an space of pineapple, banana, bamboo and sugarcane stems, fruit trees, and bee hives that was not quantified in reports). Compensation was negotiated between the Company and the occupants amounting to Tsh. 1,190,000. The payment of compensation extinguishes customary rights to the land, legally placing the parcel of land of 12,121 hectares with the Company with a 99-year contract. Land tenure was predominantly by inheritance, followed by allocation by village council and newly cleared bush. Most of Tanzanian lands are allocated or purchased, indicating that these communities are not very mobile. The few villagers displaced in Lugala, Uchindile and Kitete have been successfully relocated, have acquired alternative parcels of land and are not experiencing any land shortage. Nina Lande pointed out that some farmers were not content with this arrangement, which is also noted in the VCS validation report, page 102. <b>Rights:</b> Right to an Adequate Standard of Living; Right to Privacy <b>Rightsholders:</b>
Current houses – of village leaders, of the village poor, of Project	Village housing ranges from mud and thatch to brick and zinc roofing. The head man of Uchindile has decorative woodwork on his ceiling. Not all locals own their houses – one single mother interviewed by Assessors rents a room in a two-bedroom mud-brick house. Residents of Uchindile have noted that the people with the nicest houses have acquired their wealth working either for government or for

Employees, and of non-employees the railroad company, not for GRL. The community constructed a compound to house a doctor, but no doctor has come to live in it, so it remains empty and locked. The house has windows, doors, two bedrooms, a rear courtyard for cooking, and a private outhouse. This is the nicest house in Uchindile. There is nothing similar in Kitete.

**Impacts on populated or cultivated lands surrounding Project**

Project water demands depletes supply, impacts livelihood  
 Trees were planted on slopes no steeper than a 12 percent gradient. A 60-meter buffer zone (30 meter for plantings earlier than 2005 in accordance with the EMA Act 2004) is maintained between plantation trees and valley bottoms (watersheds) (Uchindile VCS).  
**Rights:** Right to Adequate Supply of Water; Right to an Adequate Standard of Living  
**Rightsholders:** No rightsholders likely to be impacted.

Loss of homes, timber, productive trees or crops to Project  
 To mitigate risk of erosion, the Project does not strip plough or employ overall tillage.  
**Rights:** Right to Food; Right to Adequate Standard of Living  
**Rightsholders:** Unknown

Housing of employees supplied / not supplied  
 Housing is supplied free of charge, dormitory-style. Electricity is promised in Company documents but there is neither electricity nor solar. Water is alleged to come from nearby pumps, but this is not the case. A large water tank is occasionally filled by firefighting bowsers, but the tank near the dormitories has not been refilled since November 2008, say inhabitants (details of worker housing are supplied above, in "Worker standard of living").  
**Rights:** Right to an Adequate Standard of Living  
**Rightsholders:** Employees; Contract Laborers; Contractors

Project separates people from farms/jobs  
 People are separated from their homes by significant distances at times. Many report working 15-50 kilometers from their homes and families. Some spouses live at the project together, but often families are separated. Additionally, to avoid accusations of child labor, laborers are not allowed to bring children into the field, which causes some issues for mothers who work at the Project. The Company provides no childcare, contrary to Management's assertion.  
**Rights:** Right to an Adequate Standard of Living  
**Rightsholders:** Contract Laborers

Occupation of other sources of employment  
 Most contract labors are also subsistence farmers. Because walking to and from workstations occupies as much as seven hours a day, farming has become difficult for many people. Wage has ceased to be livable. See below:

Item	Cost per unit (Tsh)	Units/ month	Total
Bride Price	300,000 (min)		
Ponga Knife	2500		
Hoe	5000		
Khanga	1500		
Hurricane Lamp	3000		
Kitete Lamp	500		
Medical care	30,000/trip to dr.	.25	7500
Cooking Oil	2500/L	3	7500

Nomogaia  
 Human Rights Impact Assessment  
 Green Resources Harvesting Transition and HCP Power Plant Project

Matches	50 /box (10)		200
Cigarettes	50		500
Kerosene	1500-2000/L	2-4	5000
Childcare	10,000/month	1	10000
Rent	3,000/month	1	3000
Milling cost	2000/tin (20L)	3-4	7000
Maize	6000/tin	3-4	21000
Beans	1000/kilo	4	4000
Firewood	1000/3 days	10	10,000
Sugar	1400/kilo	2-5	4200
Batteries	500		
Soap	1000/bar	4	4000
Total for Normal month (with no extraneous expenses)			83,900

**Rights:** Right to Work; Right to Property  
**Rightsholders:** Contract Laborers



## 5.2. CHP Plant

### 5.2.1. LABOR

#### Wages

Wage scale Minimum wage increased from 48,000 shillings (US \$36)<sup>1</sup> monthly to 80,000 shillings (US \$62) monthly for the “industrial and trading services” sector on January 1, 2008. Minimum pay at the sawmill adjacent to the planned CHP plant is 3,840 shillings per day (or 85,000/month), increasing 10 percent annually. Housing with electricity, clean water and medical care are among benefits. Turnover is low except among young graduates from the forestry department.

**Rights:** Right to Just Remuneration  
**Rightholders:** Employees of Project; Contract Laborers

#### Unions

Number of workers who would likely be members of existing unions As of 2005 (most current data) 27 percent of Tanzania’s formal labor force belonged to Tanzania’s labor federation. An industrial union (Tanzania Union of Industrial and Commercial Workers, or TUICO) is present at Sao Hill. Green Resources’ permanent employees comprise only 20 percent of the company’s total workforce. Contract labor is permitted to unionize under the Labor Act of 2004, but familiarity with the concept is limited, and SHI’s “temporary” workers do not benefit from the conditions of the TUICO contract (sick pay, maternity leave, etc). The CHP EIA (2008) indicates that SHI hires 300 contract workers in addition to its 237 permanent employees. This is not reconfirmed in the updated EIA but the Company has not clarified whether such workers exist. If they do, it is assumed that they, like Plantation temporary workers, are not subject to the union contract and thus do not receive such benefits.

**Rights:** Freedom of Association.  
**Rightholders:** Employees of Project; Contract Laborers

#### Employment

Employment profile The CHP plant will require 50 full-time employees, 18 of whom will likely be from outside Iringa Region. These will be the highest paid, most skilled employees. Green Resources employs approximately 2000 people, on average, and 240 at Sao Hill, including security guards. This will be increased to nearly 290 with the construction of the CHP plant. Construction will require 500 workers.

**Rights:** Equal Pay; Nondiscrimination; Right to Livelihood  
**Rightholders:** Employees of Project; Contract Laborers; Project Area Inhabitants

#### Conditions of work

Per Tanzanian law, employees work a maximum of 45 hours weekly – five eight-hour days and every other Saturday. These hours are employed at the sawmill and will be employed at the CHP plant. Housing for employees working in the Sao Hill sawmill will be expanded for employees of the CHP plant. Currently 250 houses exist. Fifty will be added. These houses have fresh water and electricity (Interviews with Management). All workers are supplied safety gear and protective clothing; no one monitors whether they wear it.

**Rights:** Right to Favorable Working Conditions  
**Rightholders:** Employees of Project; Contract Laborers

Child Labor	<p>Green Resources does not allow child labor in its tree plantations, but the CHP will use trees from surrounding plantations, increasing the risk of child labor in the supply chain. GRL management says that youth often seek employment at the Company and suggested that such requests are also made at neighboring plantations, some of which are less vigilant about child labor protections.</p> <p><b>Rights:</b> Rights of the Child; Right to Education  <b>Rightsholders:</b> Children</p>
Project training programs for workers	<p>Workers received ISO training in 2007. Security received military training, and 20-30 security guards protect the SHI water pumps, petrol and chemicals (wood treatment chemicals). Senior/academic staff received CDM, CCBA, ISO and FSC training. The 2009 employee training schedule includes basic first aid, annual HIV training, fire prevention/fighting, and general OHS induction (Book 112.xls Training and Competence Matrix for Environment and OHS 2009). There are no records of implementation of these. CHP plant employees and construction crews have not yet been hired.</p> <p><b>Rights:</b> Right to Work  <b>Rightsholders:</b> Employees of Project; Contract Laborers; Inhabitants of Local Communities</p>
Project jobs profile, job not suitable for women	<p>Women comprise approximately 25 percent of Project's workforce. At Sao Hill, women run office affairs, charcoal kilns and dispensaries. Women do not generally apply for jobs as saw millers, truck drivers or technicians, nor are they sought out for such work.</p> <p><b>Rights:</b> Nondiscrimination; Right to work  <b>Rightsholders:</b> Employees; Contract Laborers; Women</p>
Means to distinguish between locals and recent immigrants when offering jobs/training	<p>At the CHP plant, it is accepted that 36 percent workers are unlikely to be locals, particularly in senior positions. The Company does, however, have a Standard Operating Procedure that endeavors to prioritize local workers seeking employment – prospective employees are all asked their regions/towns of origin.</p> <p><b>Rights:</b> Right to Work; Nondiscrimination  <b>Rightsholders:</b> Employees; Contract Laborers; Inhabitants of Local Communities; The Women and Unskilled</p>

## 5.2.2. HEALTH

Facilities	
Project clinics	<p>The Sao Hill clinic sees 200 patients and makes one to two hospital referrals monthly (interview with clinic staff; injury report logs). The CHP plant may heighten the burden on this first aid facility.</p> <p><b>Rights:</b> Right to Health  <b>Rightsholders:</b> Employees of Project; Contract Laborers; Contractors</p>
Health engineering of Project: infectious disease vectors,	<p>The Project protects against malaria by stocking its dispensary with malaria tablets. It is not a significant risk in the Sao Hill area. Company training schedules show that carpenters received HIV training in conjunction with CPR and First Aid training in June, and the sawmill department was scheduled for CPR, HIV and First Aid training in October. The quality and extent of these trainings is unknown, as the trainings</p>

<p>community development programs for health</p>	<p>are not documented. Nurses conduct HIV tutorials, though no records are kept of these sessions. These are supposed to be monthly. HIV and malaria were responsible for 70 percent of adult deaths in Kilombero district. The VCS report indicates that the company conducts HIV and Malaria training but offers no indication that HIV programs include prevention, treatment and counseling, as is required in standard HIV programs.  <b>Rights:</b> Right to Health  <b>Rightsholders:</b> Employees of Project; Contract Laborers; Contractors; Community members</p>
<p>Response to pressure on employee health centers to serve wider community.</p>	<p>The Sao Hill first aid station does not turn away locals needing care (almost all residents proximate to the Sao Hill dispensary are employee or family and thus entitled to use the facility), but locals very rarely seek treatment there. It is only equipped for first aid – anything more significant requires hospital care in Mafinga.  <b>Rights:</b> Right to Health  <b>Rightsholders:</b> Local Community</p>
<p><b>Health Impact/Risk Assessment</b></p>	
<p>No Health Impact Assessment was conducted, so Company impacts cannot be assessed to contrast with baseline. Health surveys are conducted and district health officers monitor health profiles to an extent, but the company has no records of this.</p>	
<p><b>Risks</b></p>	
<p>Project risks power line injuries</p>	<p>The Project does not have plans to erect new transmission lines for previously unelectrified communities.  <b>Rights:</b> Right to Health  <b>Rightsholders:</b> Residents Dwelling Near to Roads and Power Lines; Project Area Inhabitants</p>
<p>Traffic accidents</p>	<p>Risk of traffic accidents are compounded by the CHP Plant’s need for biomass. Trucks will collect biomass from GRL operations. Additional biomass will be gathered from/by other surrounding government and private plantations.  <b>Rights:</b> Right to Health; Right to Security of Person  <b>Rightsholders:</b> Residents Dwelling Near to Roads; Children</p>
<p>Risk of escape of hazardous materials</p>	<p>The CHP EIA outlines all possible and foreseen emissions and leaks from the plant. No significant risks are foreseen. See below, section 5.2.3.  <b>Rights:</b> Right to Health; Right to Security of Person  <b>Rightsholders:</b> Project Area Inhabitants; Employees of Project / Contractors</p>
<p>Risk of increased disease from population influx</p>	<p>In Mafinga town, the population is growing and the STD rates are extremely high and rising. Bringing in contracted construction workers to build the CHP plant is almost certain to increase STD rates (construction workers who travel from site to site are recognized as significant carriers of venereal diseases. Bringing those workers to Mafinga also brings their diseases to local women). Owing to a lack of social monitoring data, it is not known how employees spend their paychecks, but experience has shown that salaries often go towards the purchase of sex in one form or another. If the CHP construction workers have a high number of intimate partners (even if the workers are local), disease risks increase.  <b>Rights:</b> Right to Health</p>

**Rightholders:** Project Area Inhabitants; Employees of Project / Contractors

### 5.2.3. ENVIRONMENT

Air Quality	
Air emissions from operations	<p>The CHP plant will create air pollutants including ash, CO<sub>2</sub>, CO and NO<sub>x</sub>. Atmospheric pollutants formed during the combustion of biomass include CO, CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, light hydrocarbons, soot particles and polychlorinated dioxins. The EIA's estimated emissions for construction of the CHP plant includes vehicular emissions and manual operations emissions.</p> <p>It is problematic that the EIA conflated greenhouse gas emissions (which are a global warming issue) and pollutant emissions (which are an environmental issue). The levels of CO, NO<sub>x</sub>, SO<sub>x</sub> and particulates are not expected to have a severe impact on the area.</p> <p>Carbon emissions for operations include the transportation of coal plus its combustion for emergency situations. EIA estimates that 100 tons of coal will be combusted a year, resulting in 28 tons of CO<sub>2</sub> per year. The 2009 EIA suggests that this is roughly equivalent to the emissions saved by not using power from the Tanzania grid, which is a confusing contrast. This may mean the net gains from having a carbon-neutral CHP plant are lost if emergency situations require the use of a mere 100 tons of coal. The previous EIA estimated the CO<sub>2</sub> emissions from diesel generators, which burned 8,900 liters of diesel per year and will be displaced by the CHP plant, but this was not included in the updated EIA. The air in Mufindi district has emissions from the Mufindi Paper Mill and diesel-powered generators used by various corporations when power outages occur on the national grid, but forest growth maintains very high air quality in the area. Waste wood is currently releasing carbon dioxide and methane in the decomposition process, though not in quantified amounts. Wastewater treatment creates methane emissions, but Company documents do not clarify what wastewater is being treated, or by whom, beyond human wastewater treatment by government.</p> <p><b>Rights:</b> Right to Health; Right to Clean Environment  <b>Rightholders:</b> Project Area Inhabitants</p>
Dust and emissions from road traffic and operations	<p>Operations dust is primarily ash and cinder. Mitigation plans are built into Plant construction. Dust and emissions from road traffic is unquantified but highly likely to increase during collection of scrap wood for the CHP plant. Although the Company's road maintenance plans include reducing dust to maintain road quality, this does not encompass all roads in the area. Vehicles from government operations, MPM and private plantations use extremely dusty roads and will increase traffic significantly without planning to reduce dust.</p> <p><b>Rights:</b> Right to Health; Right to Clean Environment  <b>Rightholders:</b> Project Employees, Contract Laborers, Contract Areas, Project Area Inhabitants</p>
Surface Water	
Diversion and use of surface water	<p>Water is needed for the CHP plant boiler. The Company has applied for a permit for 500m<sup>3</sup>/day to be drawn from the Little Ruaha river (which has a dry season flow of 40,000m<sup>3</sup>/day). For future developments the Company is considering applying for a</p>

	<p>more significant water permit. Permits made available to Human Rights assessors only account for water used by plantations, not for SHI or SHE.  <b>Rights:</b> Right to Adequate Supply of Water; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>
Creation of water supply reservoirs	<p>SHI has already created a dam in the Ihefu stream, two kilometers from the mill, which serves the sawmill and local communities.</p>
Effect on surface water quality from operations	<p>Road construction has increased sediment content in rivers slightly (Company water monitoring data Sept '06 – Nov '08). Increased traffic from logging/transportation might cause dust in watersheds. Wastewater will mainly be in the form of leakage from the steam turbine and condenser systems and is generally just water, possibly with small amounts of lubricants and anti-corrosive additives or pollutants. Lubricants used for the various moving parts as well as light fuel oil for the auxiliary power in the CHP plant may leak and pollute soils and water systems. These are often relatively toxic in higher concentrations. EIA also foresees increased human waste from a construction crew of 500. Project has plans for disposal through government waste stabilization ponds and intends to empty septic tanks by truck. Risk of water contamination by flyaway ash is mitigated by planned ash management systems.  <b>Rights:</b> Right to Adequate Supply of Water; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>
Water treatment plans	<p>“Waste water from the steam cycle will be uncontaminated and can safely be released without special treatment” (EIA). The EIA’s focus on water pertains to human waste rather than Project risks to water supply. CHP plants do not often have severe impacts on water quality, but assessment of impacts on watersheds is standard. Water discharge to the environment is to be in accordance with Tanzanian and ISO 14001 standards. This process is not elaborated in any documents made available to assessors.  <b>Rights:</b> Right to Adequate Supply of Water; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>
<b>Ground Water</b>	
Total ground water usage	<p>None  <b>Rights:</b> Right to Adequate Supply of Water  <b>Rightsholders:</b> All</p>
Effect on ground water	<p>Few impacts are foreseen by EIA.  <b>Rights:</b> Right to Adequate Supply of Water; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>
<b>Ecosystem</b>	
Project risks causing collateral damage: erosion, floods, landslides, mudslides	<p>None – ash is expected to be well controlled so as to protect watersheds.  <b>Rights:</b> Right to Adequate Standard of Living; Right to Clean Environment  <b>Rightsholders:</b> Downstream users; Local Area Inhabitants</p>

Land	Land set aside for the CHP plant is relatively flat and is currently the site of eucalyptus trees. <b>Rights:</b> Right to an Adequate Standard of Living <b>Rightsholders:</b> Farmers
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#### 5.2.4. SOCIO/POLITICAL

##### Civil Society

Intensity and scope of media scrutiny	Media scrutiny is minimal. Newspapers are rare in the area. News is obtained through television, radio, and word-of-mouth, but Iringa region is not often a news subject. <b>Rights:</b> Freedom of Expression <b>Rightsholders:</b> Project Area Inhabitants
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Presence/strength of NGO activity in community	NGOs are concentrated around Mufindi town, and only a few are active. MUET is the most active organization, involved in orphan care, village poverty, and environmental security. <b>Rights:</b> Freedom of Expression; Freedom of Association <b>Rightsholders:</b> Unknown
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##### Issues to date – with local activists, government, other

Environmental	In 2000 a Norwegian NGO critiqued the company for contributing to the notion of paying for Europe’s environmental sins on Africa’s soil. The report was picked up by Friends of the Earth in a campaign leading up to Kyoto climate meetings in 2000 at the Hague. The same group, NorWatch, produced a new article lambasting the Company in Spring 2009, criticizing the low rents foreign companies, and GRL in particular, pay to the Government of Tanzania.
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Health	None (many issues are present, but none have been blamed on the Project). MUET is concerned about HIV but tries to work with the company and has not actively campaigned against the company.
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Human Rights	None, although a labor relations report pending, by a Norwegian graduate student, is likely to level serious accusations about labor rights.
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##### Psychological Impacts

Local fears	Although records of stakeholder comments from corporations and government entities are recorded in the EIA, no record exists of consultation with community members. The stakeholder list includes Company representatives, government and NGO representatives, and representatives from neighboring corporations but no signatures from the 7,424 (2002 estimate) households in Mafinga hamlet (which includes the 656 households (GR estimates) in Sao Hill itself and the 200 households under direct Company care). It is widely acknowledged that Sao Hill residents use Project wood waste for fuel, and no assessment has been done to ascertain the quantities of wood these communities require to conduct their daily activities. The other primary fear is that ash will contaminate watersheds.
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Emergency response plans	No emergency response plans are presented in CHP EIA. The Company has Emergency Response Plans to address spillages, leakages, injuries, fires, and
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collapses. Risks are primarily to employees and downstream inhabitants whose water sources could (in the unlikely event of emissions control failure) be polluted.

**Rights:** Right to Health; Right to Clean Environment

**Rightsholders:** Project Area Inhabitants; Employees; Contract Laborers, Contractors

#### Demography and Economy

**Influx of workers – numbers, rate of in-flow, from where, for what duration, with/without families**

The influx of workers is not expected to be large for construction or operation of the CHP plant. CHP plant construction will require 500 laborers, who will be housed in Mufindi town. The Company currently has 40 hectares of land for houses, rest houses, clubs, markets and sports games, as well as two pubs and a nursery school. The existing 200-house residential area will be expanded to 250 houses to accommodate permanent employees of the CHP Plant. The Company operations at Sao Hill currently employ 273 people permanently and approximately 300 contract staff. Contract workers are not provided housing. Permanent workers are provided housing, electricity, water and medical services. Depending on how many construction workers come from outside of Mafinga to construct the CHP plant, there may be issues of housing availability (and cost) in Mafinga town.

**Rights:** Right to Work

**Rightsholders:** Project Area Inhabitants

**Project employment of locals**

The vast majority of contract labor is local, but much senior staff is from elsewhere, in Tanzania and internationally. The CHP plant employees will be local, ideally, but senior positions and experts will be drawn from other regions. There is no current estimation of how many construction workers will be local.

**Rights:** Right to Work

**Rightsholders:** Project Area Inhabitants

**Impact nationwide**

Positive impacts include reducing the strain on the national power grid and potentially contributing directly to the national energy supply. The Company has not determined to whom it will sell excess power. As of September 2009, SHE intended to sell up to 10 MW to TANESCO, the national energy supplier. Local companies, including Unilever Tea Company and Mufindi Wood Poles Plant companies will purchase an additional 2 MW, leaving 3 for SHI). Any addition to the grid is a benefit to the region.

**Rights:** Unknown; Right to Adequate Standard of Living

**Rightsholders:** All

Project population influx is not expected to increase food prices significantly, nor is an influx of students expected to burden local schools

#### Infrastructure

**Project's community development programs for education**

In Sao Hill the Project has made significant contributions to local schools – both primary and secondary. No training programs have been created to increase local knowledge of CHP plant engineering, indicating that the Project intends to source senior staff from outside the area for the foreseeable future.

**Rights:** Right to Property; Right to Adequate Standard of Living; Right to Education; Right to Health

**Rightsholders:** Children; Residents Dwelling near Roads; Project Area Inhabitants

Other infrastructure	GRL has improved roads markedly. Cell service is increasing, owing to the growing workforce in the area (not entirely related to Company actions). Permanent CHP Plant workers will be provided housing with electricity and water.
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**Indigenous Groups**

Prior consent from and royalties/commitments to indigenous groups will not be a rights issue, due to the absence of indigenous communities.

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**5.2.5. SECURITY**

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Security plans/ Extent of Project to be Patrolled	The Company has a significant security force at its Tanzania Operations. At the Saw Mill in Sao Hill, 20-30 armed guards protect a fairly small compound with 240 workers. Security breaches are mainly in the form of thefts – petrol, chemicals and tires. SHI also hires 300 contract workers. <b>Rights:</b> Right to Security of Person <b>Rightsholders:</b> All
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Availability of items to be stolen, including petrol tapping	Petrol and log treatment chemicals are stored at the Sao Hill Sawmill and are guarded under a rotating security force inside a fenced and guarded compound. Security breaches almost unfailingly result from collusion between guards and thieves. <b>Rights:</b> Right to Security of Person <b>Rightsholders:</b> All
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Project relationship with military and police	Military has minimal presence in the area. Project has good relations with law enforcement, all political channels, and most local communities. <b>Rights:</b> Right to Security of Person <b>Rightsholders:</b> All
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**5.2.6. ECONOMIC – INFRASTRUCTURE, LAND and LIVELIHOOD**

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Proximity of Project to urban areas	The CHP Plant is within 15 kilometers of the significant town of Mafinga, which has a population of approximately 37,000 (Company estimates, 2008) <b>Rights:</b> Right to Privacy <b>Rightsholders:</b> Project Area Inhabitants
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**Land the project occupies**

No relocation is necessary for the creation of the CHP Plant.

**Impacts on populated or cultivated lands surrounding Project**

Project water demands are not expected to deplete supply or impact livelihoods, although it does not appear that this has been studied.

Loss of homes, timber, productive trees or crops to	The CHP plant will consume, as waste material, the wood scraps that locals have used for decades to build homes, shops, carts, tools, fences and, naturally, fires. The creation of a wood waste-powered plant will turn waste material into a valued good. The Project will take ownership of wood waste from GRL plantations as well
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Project	as other private and government plantations, requiring community members to purchase the waste that was previously free. <b>Rights:</b> Right to Food; Right to Adequate Standard of Living <b>Rightsholders:</b> Community members
Housing of employees supplied / not supplied	Supplied. For employees at Sao Hill Sawmill (and for the future CHP plan), housing is brick with clean water access and electricity. <b>Rights:</b> Right to an Adequate Standard of Living <b>Rightsholders:</b> Employees; Contract Laborers; Contractors
The Project is self-contained and not expected to separate people from farms/jobs, other sources of employment	

## 6. Company Catalog

### 6.1. LABOR / NON-DISCRIMINATION

<b>Discrimination</b>	
Company plans for hiring women and minorities / Company policy re equal pay for equal work / Nondiscrimination in hiring and promotion	Company has a zero tolerance policy toward discrimination but no mechanism for reporting or combating it. Standard Operating Procedures outline the employee selection process, by which contract laborers are assessed according to home location, experience and skills, education level, age, and clean criminal record. "Particular care should be taken to ensure that selection criteria are not in any way directly or indirectly discriminatory on grounds of gender, race, disability, religion or belief" (SOP 7). This policy is not fully in force in all operations. At plantations workers are hired without any assessment whatsoever and are assigned to jobs with little regard for skill sets. Though women do not face direct discrimination, only 25 percent of staff (both temporary and permanent) are women, and men earn more than 80 percent of Company salary (in Head Office and plantations). <b>Right:</b> Nondiscrimination; equal pay for equal work
<b>Child labor</b>	
Policies for child labor	Company is diligent in affirming that all employees and contractors are of legal working age (18). <b>Right:</b> Freedom from Exploitive Child Labor
<b>Supply Chain</b>	
Policies on supply chains and contracted labor	Company policy opposes child labor. This policy is enforced within Green Resources but not within the supply chain (surrounding plantations, which will supply wood to CHP Plant, are known to hire children). Supply chain policies are not documented. Environmental, social, political, and economic policies are dictated through IFC, FSC and Tanzanian Law. There is no monitoring of these policies. Policies on contracted labor give such workers no benefits. <b>Right:</b> Freedom from Exploitive Child Labor
<b>Employee wellbeing</b>	
Policies regarding working conditions	Company policy requires that it operate according to national law, including Tanzania's Labour Act. The Company is not fully upholding the Employment and

	<p>Labour Relations Act of 2004, which requires employers to take “positive” steps to guarantee women and men the right to a safe and healthy environment. That contract workers are required to pay for protective gear, and that workers living in Company dormitories are sleeping thirty to a room (Uchindile) may defy that clause.</p> <p><b>Right:</b> Right to Favorable Working Conditions</p>
<p>Grievance procedure for all laborer complaints</p>	<p>Grievances can be lodged in a series of Comment Boxes at various plantation offices and headquarters. There is no record of plantation comment boxes ever being used. Standard Operating Procedures grievance policy as follows: “Every person, inside or outside GRL, can disagree and make a complaint against the organization’s actions, behavior, documents, FSC certification process, forest management, etc. Complaints, disputes and contentions must be submitted in writing to the attention of the Managing Director, either to the reception of the company or put in to complaint boxes at the plantation projects which are delivered to the head office by the plantation managers and emptied monthly.” Claims are addressed by the Responsible Person and logged in a register. This policy is not effective for laborers in plantations, who have little access to complaint boxes, pens or paper. While village authorities have been known to submit letters of request and complaint, ordinary workers have no means to lodge complaints without going directly through a hierarchical system.</p> <p><b>Right:</b> Right to an Adequate Standard of Living; Right to Holidays with Pay; Right to Just Remuneration; Freedom of Association; Freedom of Association; Right to Favorable Working Conditions</p>
<p>Training standards and methods</p>	<p>Training and Operating procedures are largely based on FSC requirements, which include forest management plans and emergency plans. Specialists teach courses in specialized topics (fire fighting, for example). Senior management received official training from ISO trainers. There are conflicting reports on how casual laborers are trained, with workers suggesting that training should be conducted on the job, not at Plantation offices.</p> <p><b>Right:</b> Right to Favorable Work Conditions; Right to Work</p>

## 6.2. HEALTH

<p>Worker Safety</p>	<p>The Company intends to operate according to the IFC’s Environmental, Health and Safety Guidelines for Forest Harvesting, which includes protections against chemical hazards from wood treatment and pesticides, physical hazards, noise hazards, and fires. The OH&amp;S policy is prevention-oriented toward work-related injuries and investigations are to be conducted in the case of incidents or near-incidents with an aim to prevent recurrence. Additionally, OHS waste disposal policy includes the following: Safe disposal method means a foolproof method that when applied is not liable to cause any leakage, spread or hazard to the surrounding environment. The disposal methods are grouped according to the waste category. Thus:</p> <ul style="list-style-type: none"> <li>i) Organic wastes composting, use of landfills protected by barbed wire, burying.</li> <li>ii) Combustible wastes: burn the heaps</li> <li>iii) Non-combustible wastes: segregate and store them in a room or enclosure. Recycle the suitable types like plastics, metal, tires, steel or iron sheets.</li> </ul>
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	<p>Hazardous wastes, like oil and battery acid, must be kept in sealed containers for future use. Others, like hospital wastes, can be burned in the incinerators or buried.</p> <p>Worker safety also includes the use of safety gear, and while all permanent employees are provided this gear, there are no repercussions for removing it. This lax policy runs counter to responsible action.</p> <p><b>Right:</b> Right to Health; Right to Favorable Working Conditions</p>
Worker health (non-safety)	<p>"GRL shall implement health and safety practices to its worker in compliance with labor laws of the country and ILO conventions through provision of safety equipment and training on safety issues, medication and preventive [sic] Sexual Transmitted Diseases (STD's) [sic] including HIV/AIDS pandemic."</p> <p>When written, the Uchindile Forest Management Plan, quoted above, noted that the system of supporting local health centers for worker treatment would be displaced as each plantation acquired a dispensary. Dispensaries were differentiated from first aid stations. Only the first aid stations persist at the plantations visited and examined by Assessors, and local health centers were foundering. Worker health is not adequately protected.</p> <p>Worker health policies are to be prevention-oriented regarding work-related illness, diseases and incidents. Malaria policies are treatment, not prevention oriented (SPs are available but bed nets are not). Basic medications and first aid are kept in stock at all Project dispensaries, but dispensaries are located very far from planting sites in many cases. Workers tend only to go when they are planting very near the dispensary or when they are certain they have malaria symptoms.</p> <p><b>Right:</b> Right to Health; Right to Favorable Working Conditions</p>
Communities	<p>The IFC's EHS guidelines regarding community health and safety include concerns regarding water resources, fire, transportation and pesticide exposure. Water quality is monitored for minerals but not for bacteria. Intestinal problems indicate that water sources (hand-dug ponds adjacent to streams) are not adequate. GRL has a fire response and management plan and has educated surrounding villages in regard to fire safety. As the company does not use pesticides, no pesticide management is required.</p> <p><b>Right:</b> Right to Health; Right to Clean Environment</p>
Company policy towards marginalized groups	<p>See nondiscrimination policy above.</p> <p><b>Right:</b> Nondiscrimination</p>
Company relocation policy	<p>Relocation activities carried out in collaboration with government.</p> <p><b>Right:</b> Right to Livelihood; Right to Privacy / Noninterference; Right to Property</p>
<b>Company policy toward community health</b>	
Company policy on community safety, hazardous materials (incl.	<p>Hazardous materials policy covers spills: <b>Emergency Oil Spills</b> exist when</p> <ul style="list-style-type: none"> <li>• The quantity of spilled oil is 5 gallons or larger, or</li> <li>• The spill has entered a ground or surface water, or</li> </ul>

Cyanide Code)	<ul style="list-style-type: none"> <li>• The spill can not be contained or stopped, or</li> <li>• Additional spill equipment is needed and is not immediately available.</li> </ul> <p>In the case of an emergency spill, the person discovering it should perform the following, once it has been determined that the situation is not life threatening:</p> <ul style="list-style-type: none"> <li>• Take immediate action to stop the spill if it is continuing (i.e. shutting off valves, up righting containers, etc.),</li> <li>• Take action to prevent the spill from entering sewers or streams and to minimize the area affected. Such actions might consist of absorbing flowing oil or dikeing the area with sand bags, mats, or other absorbing materials at disposal, etc.</li> <li>• Inform the H&amp;S personnel and remain in the immediate vicinity until H&amp;S personnel have arrived on-site and relieved you from duty.</li> </ul> <p style="text-align: center;"><b>Right:</b> Right to Health; Right to Favorable Working Conditions</p>
Medical Facilities	<p>Medical Facilities are understocked and in disrepair. The Company has no plans to supply or repair them in plantation areas. A donation of supplies to Uchindile town dispensary in 2005 does not appear to have been replicated in recent years. Near Sao Hill the District Hospital at Mafinga has extremely low quality of care, with non-local workers avoiding it completely, using the Unilever facility instead. Nurses are said to conduct community education sessions but no records of these sessions exist and no workers interviewed recall them ever occurring.</p> <p style="text-align: center;"><b>Right:</b> Right to Health</p>
Company HIV/AIDS policies	<p>“GRL shall implement health and safety practices to its worker in compliance with labor laws of the country and ILO conventions through provision of safety equipment and training on safety issues, medication and preventive Sexual Transmitted Diseases (STD’s) including HIV/AIDS pandemic.” The Company also holds itself responsible to the Green Resources Employee Handbook, and the Occupational Health and Safety Act. This has not been implemented among plantation workers.</p> <p>Support is given to NGOs working on HIV issues near SHI but not at plantations. Dispensary staff conducts training. IFC EHS policies for forestry include HIV education, but workers have no recollection of ever receiving HIV training, which is validated by the significant lack of familiarity with the causes, treatments, and prevention methods for the disease. No treatment for HIV is available through the Project, and HIV is present in Uchindile as well as Sao Hill.</p> <p style="text-align: center;"><b>Right:</b> Right to Health</p>
Company Malaria / other policies	<p>Green Resources has an OHS policy and Employee handbook for its Subsidiary Companies, which stipulates company and employee accountability for OHS related issues. IFC EHS guidelines are included in the existing OHS system. Malaria treatment (SP) is available at Plantation and Sao Hill dispensaries but no prevention efforts are made.</p> <p style="text-align: center;"><b>Right:</b> Right to Health</p>

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### 6.3. ENVIRONMENT

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Company environmental standards (USEPA/	The Company operates according to the National Environmental Management Act of Tanzania, IFC’s Environmental, Health and Safety Guidelines for Forest Harvesting as well as Forest Stewardship Council (FSC) Policies and UN Clean
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Local Laws/ ASEAN standards, etc.)	Development Mechanism (CDM) Standards. <b>Right:</b> Right to Clean Environment / Air
Company history of environmental problems	None

## 6.4. POLITICAL / SECURITY

<b>Unions</b>	
Policies re unionization	Unions are legal and permitted but only account for 20 percent of workers. Union “members” are unfamiliar with their own union. The decision by Management to relocate Uchindile’s only labor leader is in contradiction to a pro-union policy. <b>Right:</b> Freedom of Association; Right to Belong to a Trade Union; Right to Strike
Relations with unions	Unions present contracts that the company approves or modifies. Interactions appear muted, and village leaders say that union heads lack bargaining power. This seems validated by the Company’s ability to relocate vociferous labor leaders to other plantations without consulting union members, communities or even plantation managers. Many “union members” are not aware that any union exists at all. <b>Right:</b> Freedom of Expression; Freedom of Association
Company policy re free speech and assembly	Per Tanzanian law, free speech and free assembly are legal. No protests have been held. Workers have expressed fear that speaking ill of the Company will cost them their jobs. <b>Right:</b> Freedom of Expression
<b>Grievances</b>	
Company policies regarding security	Security is armed but no guns have been fired. Company is not a member of the Voluntary Principles (they would not be expected to be) <b>Right:</b> Right to Security of Person
Company policies regarding corruption	Addressed within the company’s “Core Environmental and Social Values” – “We have zero tolerance towards discrimination, poor working conditions and work-related accidents within the company and corruption.” “Poor working conditions” are not specifically defined, but by international standards they are low (see “Conditions of Work,” p. 28). Likewise, corruption is not specifically defined, and policies to ensure there is no corruption are not in place. <b>Right:</b> Freedom from Coercion; Right to Public Participation
Grievance procedures for communities (non- employee)	Grievance procedures are the same for community as for employees. In villages, grievances may be aired at quarter-annual meetings. Community members feel voiceless under this policy, reluctant to air grievances directly to the authorities who make employment decisions. <b>Right:</b> Right to Privacy; Right to Standard of Living Adequate for Health
<b>Experience</b>	
History with	History with tree felling dates to 2008. No fatal accidents have occurred. This is



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Felling Trees and Power Plants	GRL's first experience with power plants. The size and complexity of the SHE CHP plant is both technically and financially big for GRAS and experienced project management and team is required to mitigate the risk. Availability of qualified and practical project professionals who are capable and willing to work for the Sao Hill Energy power plant project is a challenge (CHP Business Plan). <b>Right:</b> Right to a Clean Environment
History in Country	Present in Tanzania for 12 years (since 1997) as plantation owner and saw mill operator (and now owner) <b>Right:</b>

## 7. Special Topics – HIV/AIDS and Climate Change

The least problematic Project locations impact only the rights addressed in the catalogs on the previous pages. These issues can be mitigated with a modicum of effort on the Company's part. Often, however, more complex rights topics present themselves. Addressing these issues requires thoughtful analysis beyond what catalogs can accomplish. In the case of Green Resources' expanding operations, two special topics arise: HIV/AIDS and climate change. Only the former falls under the scope of this report, owing to the political sensitivity of the latter.

### 7.1. HIV/AIDS

HIV rates in both Uchindile and Sao Hill are concerning. While disease spread is not specific to harvesting work or power plant construction and operation, there is reason to address southern Tanzania's catastrophic HIV/AIDS situation in this assessment. Conservative estimates for southern Tanzania's HIV rate range from 8 to 20 percent (the government of Tanzania's Tacaids set Iringa's HIV rate at 16 percent in 2008. Nationally the rate is estimated at 6-9 percent). Rates are unfailingly higher among truck drivers, who are integral to GR's operations and will play a central role in harvesting timber and transporting biofuel to the CHP plant. Workers are still unwilling to be tested. The government's latest efforts to combat the disease are laudable, but Tanzania's health system is severely overburdened and cannot address HIV without the help of corporate entities whose activities contribute to the disease's spread. The Company's responsibility to "do no harm" to the health of workers and communities includes protecting them against HIV/AIDS.

The Right to Health gained international recognition as a human right with the 1946 creation of the WHO, and it was incorporated into the cadre of universal human rights in the UN's International Covenant on Economic, Social and Cultural Rights (art. 12) thirty years later. As a right it has always been accompanied by a government responsibility to protect against disease and to promote public health. But the Human Immunodeficiency Virus (HIV), which did not appear on the global stage until the 1980s, has a space in the rights discussion separate from other devastating diseases.

There are three primary reasons to single out HIV. First, the breadth of rights and rightsholders impacted by HIV set it apart from other illnesses. Second, because HIV is still a burgeoning crisis, unlike yellow fever or malaria, today's actions (and inaction) will shape the full trajectory of the HIV virus and the related Auto-Immune Deficiency Syndrome (AIDS). Third, its spread can be directly related to infrastructural development, including capital projects.

#### *Diversity of rightsholders impacted*

HIV entered the global consciousness as a deadly but remote health crisis. Stigmas were developed, and blame was allocated, around "risk populations".<sup>8</sup> But as HIV has spread, it has become clear that epidemics touch every age group and income bracket. HIV/AIDS has reached the high echelons of politics, taking the life of at least one South African presidential candidate. Where children once had whole communities participating in their upbringing, a culture of orphanages has developed. Teachers have proven particularly susceptible to the disease.

Rightsholders impacted by the disease abound. Children are first stigmatized by their parents' seropositivity, then socially and economically crippled as the disease progresses. Lacking psychological

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<sup>8</sup> The Malawian government, in a particularly catastrophic instance, held prostitute roundups and issued mass prison sentences – clear violations of human rights, for both the seropositive and the seronegative that were imprisoned by association.

support to deal with the loss of parents (or their own seropositivity) the impact on their wellbeing can be catastrophic. Girl children in particular have been victimized by HIV; they are the first to be pulled from school to help support families when a breadwinner falls ill. Wives suffer significant rights losses when their husbands become infected – they often cannot refuse sex, and they cannot support themselves and their children without the help of a husband. In part, this is because they lack the earning power, and in part because they are stigmatized and refused community support. Educators and health officials are two surprisingly hard-hit populations, partly because they are often stationed in remote areas far from their own families, and they seek physical comforts from women in neighboring towns. This impacts their own wellbeing but also the health and education opportunities for the communities they serve.

Community health is doubly impacted, first by the loss of health professionals and capacity, then by the infrastructural strain from increased needs as HIV spreads and populations become sicker. Extended families, too, are severely impacted. Dependents, particularly the elderly and infirm, rely on the young for their welfare. When the young die, the old are left powerless. Focus group studies indicate that malnutrition becomes a major concern of the siblings of HIV positive parents, who are left in charge of their nieces and nephews.

## “Structural Risks” for HIV

Capital projects are said to create Structural Risk for HIV, creating a self-reinforcing cycle for the spread of HIV by weakening social structures. This social breakdown includes:

- Social disruption resulting from sudden widespread in-migration, one of the first consequences of which is food and health insecurity
- Overwhelmed infrastructure for hygiene, medical care, and education
- Additional disruption from in-migration from other cultures, jeopardizing family integrity and local economies
- Influx of money leading to the creation/expansion of a market for transactional sex
- Unregulated expansion of sex industry fueled by demand and by increasing numbers of young people who have lost family and income to AIDS

The above shortlist of severely impacted rightsholders hints at the rights impacted by HIV’s spread. As an epidemic grows, the obvious health impacts are compounded by economic impacts, followed by social and political impacts. These “waves” of impacts, as the UNDP describes them, amount to a violation of the most fundamental human rights as they tatter a society, denying communities fundamental freedom and equality in “dignity and rights” (UD Article 1). The Rights to: Health, Life, Education, Work, Adequate Standard of Living, Privacy, Nondiscrimination, Culture, Food, and the Rights of the Child are all directly assaulted by an AIDS epidemic. Almost no other health issue sweeps across rights violations with such a broad brush.

### *Newness and Business*

Questions of curing, treating and preventing the virus present a worldwide challenge, whereby policies and actions shape the virus’s spread in a significant way. Anything a government, company or community does (or does not do) to address HIV will affect society. In recognition of this, the UN Security Council

designated HIV/AIDS as a threat to international peace and security in 2000 and later upgraded it to a “major security threat.” The virus, in essence, constitutes a war on humanity. Losing the productive to AIDS leaves children uneducated, hospitals understaffed, government seats unfilled, and society nonfunctioning. These impacts cannot be overstated, though they have been slow to materialize.<sup>2</sup>

Governments are responsible for protecting, fulfilling and promoting human rights, while corporate responsibility is limited to ‘respecting’ rights. Respect is three-pronged, involving a commitment not to commit, profit by, or facilitate rights violations.

Corporations have a variety of roles in HIV epidemics – a project erected in a remote area of an epidemic country is likely to actually spark a local epidemic. When the project involves mining or milling, the project also creates direct, “Abject Risk” – primarily from silicosis, which exacerbates TB and HIV in a multiplicative rather than additive way. A project erected in a preexisting epidemic zone is entering into a space where rights are already being violated, and a failure to act would signify complicity. As with projects erected in conflict zones, the project takes on responsibility for the location it has selected, with a cognizance that it is implicated in rights abuses by mere presence. At a minimum, a company may not exacerbate preexisting epidemics. But the creation of a mine has certain impacts on demographics and disease profiles, meaning that inaction is tantamount to negative impact on human rights.

Best practices for a corporation in an HIV zone are site-specific, and recommendations are issued in later sections. An underlying principle of effective HIV/AIDS policy is that it is ongoing and vigilant. Writing policies and promoting education are readily acknowledged as effective starting points for combating HIV, but neither can be qualified as action. Situational analysis, HIV program management, counseling, testing and treatment, and ongoing monitoring are vital. Collaboration with local groups and NGOs increase a company’s resources and a program’s effectiveness. The guides listed in the “Recommendations” section include a description of collaborative approaches.

## **7.2. Climate Change**

Climate Change is unquestionably a major human rights issue. The IFC has recognized this, stating it will update the Performance Standards to address the topic. We do not address carbon sequestration in this assessment, as the topic is too politicized currently for an exploration of rights implications to be considered in-depth and evenhanded. Debates persist about the net carbon benefits of tree farming (depending on what is done with the tree once harvested, where/how it is transported, etc.), and the human rights implications of such longitudinal impacts are beyond the scope of this study.

## **8. Preliminary List of Impacted Rights**

The rights listed below are likely to be impacted, either positively or negatively. The list is drawn from the designated rights at issue as determined in the Catalogs. Rights that were not noted in the Catalogs are not presented here. Rights that present particularly significant risks are italicized and will be addressed in **Sections 11 and 14**, below.

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### ***Nondiscrimination***

## **9. List of Presumptive Rightsholders**

Rightsholders are those whose lives are shaped by the rights that will be significantly impacted by a project. **Environmental rights** are held by those whose health or livelihood will be harmed by or improved by changes in environmental conditions. **Welfare rights** are held by those impacted by the positive increases in local economic activity or those who are made poorer as the economy grows and leaves them behind. **Labor rights** are held by both direct Project employees and by participants in the supply chain of Project inputs and Project products.

Based on the rights listed in **Section 8** and the rightsholders evoked throughout the Context and Project Catalogs, rightsholders who are more susceptible to certain rights impacts include:

### **Labor Rightsholders - By Work**

- Employees
- Contract laborers
- Contract Construction Workers

**Welfare Rightsholders - By Needs**

- The HIV positive
- Women
- Community members not employed by the project – particularly spouses of Company workers
- Children (listed because impacts on them are indirect but serious – including the right to education and the right to a cohesive family)

Individuals from each of these rightsholder groups were interviewed during Rightsholder Engagement. No environmental rightsholders are severely impacted.

**10. Rightsholder Engagement**

**10.1. Beyond Stakeholders**

As the individuals most vulnerable to rights violations, “rightsholders” are the individuals to be targeted in mitigation steps by the Company.

Separate Rightsholder Engagement is integral to a Rapid Response HRIA, even when the Company (or a third party) has already conducted Stakeholder Engagement. Green Resources, admirably, conducts regular stakeholder engagement sessions with surrounding communities (these are much less frequent in Kitete than elsewhere, which is problematic). These sessions tend to be formal events, and personal concerns are not often evoked or addressed. Additionally, socio-economic impacts addressed in these sessions are not analyzed through a rights lens. Concerns about inadequate medical facilities, for example, are mentioned in Company summaries, but the threat that this poses to the Right to Health is not directly addressed. Additionally, stakeholder input is regularly collected, but follow-through on promises has had as much as a six-year lag on delivery.

For reference, GRL’s Company-defined stakeholders are listed below:

Stakeholders for Private Forest Plantation				
	Stakeholder	Contributor	Implementer	Beneficiary
	Forest Department		√	√
	Plantation owners	√	√	√
	Plantation workers	√	√	√
	Lands Department	√		√
	Water Department	√		√
	Logging Company			√
	Workers in logging company			√
	Forest dwellers – women and farmers			√
	Furniture makers			√
	Timber exporters			√
	Timber traders			√
	Forest research institutes	√		√
	Environmental NGOs	√		√
	Local politicians	√	√	
	Revenue Authorities			√
	Transporters	√		√
	Port Authorities	√		√

This list includes timber traders and exporters, implying a supply chain that this HRIA does not address, as currently all of GRL Tanzania's products stay within Tanzania. Exportation has a separate set of human rights impact that would ideally be addressed as they became relevant.

## **10.2. Interviews**

Rightsholder engagement becomes increasingly methodical in each stage of an HRIA. Preliminary research interviews were extremely casual, with minimal use of recorders and notebooks, in an effort to keep conversation easy and promote free flow of dialog. These discussions explored the differences between official perspectives – from company, government, and NGOs – and local experiences. Later conversations were conducted as focus groups and as one-on-one interviews. All are documented in note-form, with notes (interviewee identities redacted) available upon request.

Conversations were held with inhabitants of Kitete, Uchindile and Company dormitories. No employees have yet been recruited for the work at the CHP plant. In initial interviews, Company staff was extremely accommodating in providing translations when no common language could be found between rightsholders and the rights assessor. Interviewees were more forthcoming when a third-party translator was used later in the assessment process.

## **10.3. Social License to Operate**


Social License to Operate is not the same as respect for Human Rights. One is a matter of satisfying expectations; the other is a matter of not violating fundamental human entitlements. Green Resources is not responsible for fulfilling the local right to education or right to health, but if the company promises to fill the void that government has left, it creates a rights vacuum. Broken, deferred, and disregarded promises beget bitterness, and bitter communities become inhospitable hosts. There is little risk that communities surrounding GRL plantations will become violent, but there is significant risk that communities will feel entitled to take without asking when they are not being given what is promised. So far GRL has only had nonviolent confrontations with thieves. This cannot be assured in the future, if relations continue to be strained, as they have become in Uchindile. Company Community Development staff have suggested that relations with Uchindile are now stable and friendly. This did not prove to be the case during assessment – bitterness remains strong while long-time laborers retain their “temporary” status and promises of school and health facilities remain unfulfilled.


Rightsholders working in contract labor are experiencing numerous rights violations. Labor rights are guaranteed to permanent employees, but the vast majority of the Company's workers are considered contract laborers. The Company has stated that this is a cost-cutting measure, but it was less forthcoming about the extent to which these laborers are full-time workers. That the same workers get rehired systematically, work for months and years on end, have housing on site and consider themselves GRL workers creates a gap between the reality of their situation and their treatment as laborers. Pay is naturally low in weeding, watering, and plant care work, but laborers expressed concern about certain conditions that seem particularly onerous, more in sum than individually. Workers endure job insecurity as temporary laborers but are additionally dislocated from families and support networks, all while lacking the stability of a full time job and the more inclusive entitlements that accompany. Collective bargaining is not effective for a workforce that can be laid off at any time – it is possible that workers hesitate to ask for too much out of fear that a less demanding worker will replace him/her in the coming harvest season. Additionally, contract laborers receive no sick pay, maternity leave or termination benefits. Workers are paid for the days they work – a sick or pregnant worker loses all income for the days missed. Furthermore, promotion to “permanent employee” is something that happens seemingly arbitrarily (though only to longstanding workers). Laborers do not know how long they must work as “temporary” hires before they can enjoy the small benefits of permanent employment, including a steady income.


Some have been working for 10 years as “temporary” hires. This holds true for watchmen, who have steady hours and designated schedules.

## 11. Human Rights Impacts


Using the list of impacted rights generated in Step 6, and synthesizing the information gained from the Topic Catalogues, we have rated the anticipated rights impacts on a five-grade scale, red to blue, with red being the most negatively affected rights and blue the most positively affected.

 **Red** A red rating indicates that a right is likely to be severely negatively impacted by the Project to the extent that it poses risk to the success of the Project itself.

 **Orange** An orange rating indicates that the Project has the potential to impact a right in negative ways.

 **Yellow** A yellow rating is a caution sign, indicating that the impacts of the Project on a right are variable but is likely to be significantly positive or negative. All yellow ratings require a clear explanation of why the rating was given and what the foreseen impact(s) is/are. Because of the contingent nature of yellow ratings, monitoring is necessary to determine whether, which way, and how severely the rights end up being impacted.

 **Green** A green rating indicates the Project is likely to impact a right in positive ways.

 **Blue** Rights rated blue are expected to improve significantly as a direct result of Project activities. Blue ratings indicate impacts that can positively affect a company’s reputation and can be examples of outstanding positive influence in a community.

Ratings are contingent on the interplay among Context, Project and Company with an eye to where these elements overlap.



Context / Company / International Standard		Uchindile	CHP Plant
LABOR			
Right to Favorable Working Conditions – Operational Health & Safety			
Con	Tanzanian labor law requires that corporations conduct business responsibly. There is minimal monitoring	<p>● RED</p> <ul style="list-style-type: none"> <li>- <b>Transportation</b> – Workers continue to be transported in the back of a tractor. A series of accidents on wet roads have injured workers. The Company sometimes transports workers in a Fuso tipper, which is also unsafe. Many workers must walk 7 hours a day to/from work</li> <li>- <b>Safety gear</b> –only issued to permanent employees on a regular basis. Casual labor is sometimes required to purchase such gear.</li> <li>- <b>Safety regulations</b>–no consequences for transgressions</li> <li>- <b>Health and safety training</b> – health training has not registered among workers and no records of it exist. Safety training has not resulted in workers adhering to safety policies</li> <li>- <b>Injury rates</b> – injury rates are difficult to ascertain clearly. Logs were not made available, owing to the impromptu nature of the interview with Plantation Manager Luwagila</li> </ul>	<p>● ORANGE</p> <ul style="list-style-type: none"> <li>- <b>Safety gear</b> – safety gear is to be issued to all staff (less certain for construction workers)</li> <li>- <b>Safety regulations</b> – it is foreseen that SHE workers, like SHI workers will disregard regulations, removing gear upon crossing through the entrance gates, thus nullifying the legitimacy and value of regulations</li> <li>- <b>Health and safety training</b> – Health and safety training schedules exist. No records are maintained of the outcomes of these sessions and their success rates are not monitored</li> <li>- <b>Injury rates</b> – Injury rates at SHI were nearly twice those of Australian sawmilling in recent years</li> </ul>
Co	Company subscribes to the highest global standards. These are not upheld		
Intl	ILO Fundamental Conventions; FSC Principle #4; Universal Declaration, Article 23; International Covenant on Economic, Social and Cultural Rights, Article 7		
Freedom of Association, Right to Unionize, Right to Strike			
Con	Tanzanian labor law dictates that any 20 workers that register with the government can become a union, but only 27 percent of formally employed Tanzanians are members of the national workers federation. Contract workers may have the unionizing capacity of full employees. Few workers are familiar with Tanzanian labor law	<p>● RED</p> <ul style="list-style-type: none"> <li>- <b>Number of union members</b> <ul style="list-style-type: none"> <li>o 1 in 5 workers can belong to the union</li> <li>o Union numbers are vague as the union is loosely comprised</li> </ul> </li> <li>- <b>Strength of leaders</b> <ul style="list-style-type: none"> <li>o Strongest leader transferred from plantation</li> <li>o Uchindile now says it has “no TPAWU” – workers and manager</li> <li>o Union has not successfully argued for pensions, maternity leave, increased ranks</li> </ul> </li> </ul>	<p>● YELLOW</p> <ul style="list-style-type: none"> <li>- <b>Number of union members</b> – not known</li> <li>- <b>Strength of leaders</b> – not known</li> </ul>
Co	Company policy does not have explicit guidelines for unions, although the Company professes adherence to all		

	relevant national and international laws. The Company rehires “contract” workers as temporary for 9-12 months a year, sometimes for 10 years without hiring them. It would seem that the Freedom of Association is being limited by the company’s failure to recognize them as employees. Contract workers do not fall under Company union contracts.	(full time workers) or sufficiently substantial pay increase <ul style="list-style-type: none"> <li>o Kitete has never heard of TPAWU</li> <li>o No sign of Union effectiveness</li> </ul>	
Intl	ILO Fundamental Conventions; FSC Principle #4; Universal Declaration, Articles 20 and 23; International Covenant on Economic, Social and Cultural Rights, Article 8; International Covenant on Civil and Political Rights, Article 22		
<b>HEALTH / Environment</b>			
<b>Right to Housing</b>		<b>Village Housing (Uchindile)</b>	<b>Construction Crews (CHP)</b>
Con	In the sparsely populated districts of Iringa and Morogoro there is no lack of space for housing – the shortage is in material. Houses are made of mud, wood and brick. During construction of CHP, housing will be in Mafinga and the increased competition for rooms may inflate prices	<ul style="list-style-type: none"> <li>● <b>YELLOW</b></li> <li>- <b>Access to material</b> - harvesting has little impact on access to material, but CHP will impact Village access to wood. Villagers currently buy and take firewood from plantation workers If scrap wood value increases with CHP demand, local housing will be impacted severely</li> <li>- <b>Buying power</b> – employee buying power has not increased enough to in Kitete or Uchindile</li> <li>- <b>Access roads</b> – road improvements have improved access to wood (soon to change), but for other material locals use TANZARA</li> <li>- <b>Access to water</b> – villagers use river water for all their needs, frequently becoming ill. Quality/quantity not expected to be impacted</li> <li>- <b>Sufficient space</b> - ample</li> <li>- <b>Access to sanitation</b> – Poor. Not impacted</li> </ul>	<ul style="list-style-type: none"> <li>● <b>YELLOW</b></li> <li>- <b>Sufficient housing present</b> – it has not been assessed whether housing 500 workers in Mafinga will strain supply and cause price hikes</li> <li>- <b>Appropriate pricing</b> – this cannot be determined until hiring has been conducted and the Company has established how many workers will be local</li> <li>- <b>Access to water</b> – Mafinga water is accessible and cleaner than most of the district’s</li> <li>- <b>Sufficient space</b> – see above</li> <li>- <b>Access to sanitation</b> – depending on how many workers stay in a single room, sanitation may be at risk</li> </ul>
Co	Company provides no housing to local workers at Uchindile. Construction workers for the CHP plant are to find housing in Mafinga		
Intl	Universal Declaration, Art. 25; International Convention on Economic, Social and Cultural Rights, Art. 11; International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families, Art. 43; IFC Workers Accommodation: Processes and Standards		
<b>Right to Housing</b>		<b>Dormitories (Uchindile)</b>	<b>Operations (CHP)</b>
Con	Housing materials are in short supply in	● <b>RED</b>	● <b>GREEN</b>

	Uchindile. CHP housing is planned to resemble SHI housing.	<ul style="list-style-type: none"> <li>- <b>Access to water</b> – promised supply is 11 months late. No checklist ensures that bowsers refill all tanks. Workers use stream water at the base of a perilous one-kilometer slope. Water is dirty, causes illnesses, and often runs red with silt</li> <li>- <b>Space</b> – 30 workers share a 10-person rooms; 8 workers living in 2-person rooms. Insufficient.</li> <li>- <b>Access to sanitation</b> – toilets have no water, are dirty and were swarming with flies on assessor visit. Sanitation declines in such close quarters</li> <li>- <b>Upholds Company standards</b> - Uchindile Forest Management Plan indicates that dormitories have solar power and access to good water, which is not the case.</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Access to water</b> – Present at SHI housing. Assumed at SHE housing</li> <li>- <b>Sufficient space</b> – Houses are designed to hold one family in each.</li> <li>- <b>Access to sanitation</b> – Houses will have water and sanitation. This requires monitoring</li> </ul>
Co	Company provides dormitories for plantation workers and houses for SHE workers.		
Intl	Universal Declaration, Article 25; International Covenant on Economic, Social and Cultural Rights, Article 11; International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families, Article 43; IFC Workers Accommodation: Processes and Standards		
<b>Right to Health - General</b>			
Con	Health facilities are some of the weakest in the nation. The District hospital offers extremely low quality of care, and rural dispensaries suffer severe delays in supply deliveries.	<ul style="list-style-type: none"> <li>● <b>ORANGE</b></li> <li>- <b>Adequate water</b> – villagers drink from dirty streams and become ill. This falls directly to the Company for dormitory inhabitants and indirectly to the Company for local workers, simply to uphold a worker’s right to health</li> <li>- <b>Health care</b> – local dispensary has suffered 6-month delays on supplies. No malaria testing kits or equipment are available. Depo shots run out, eliminating contraception. SPs (malaria), painkillers, antibiotics, and anti-diarrhea meds are available inconsistently. Company first-aid station is too remote to be useful. (Senior staff takes sick workers to the hospital when possible)</li> </ul>	<ul style="list-style-type: none"> <li>● ● <b>YELLOW-GREEN</b></li> <li>- <b>Adequate water</b> – fulfilled by project</li> <li>- <b>Right to treatment</b> – the district hospital in Mafinga is in poor repair and offers mediocre treatment. However, SHE employees will have access to healthcare</li> <li>- <b>Right to food</b> – fulfilled by salary</li> <li>- <b>Immunization</b></li> </ul>
Co	Company has only first aid stations for workers. Voluntary Carbon Standards (and promises made by Company within VCS Documents) are not being upheld		
Intl	Universal Declaration, Article 25; International Covenant on Economic, Social and Cultural Rights, Article 12; WHO Constitution		
<b>Right to Health - HIV</b>			
Con	Iringa and Morogoro are not poor districts, but they suffer significant shortages in health care, and HIV/AIDS rates are among the worst in the country. Seventy percent of adult deaths in Kilombero region are a result of malaria or HIV. The highway running from Mbeya to Dar es Salaam contributes to high HIV rates	<ul style="list-style-type: none"> <li>● <b>ORANGE</b></li> <li>- <b>Disease</b> – HIV rates are higher in Uchindile than in most rural communities. This could be from Project infrastructure or from the revival of the TANZARA rail line. Four percent of pregnant mothers have tested positive</li> <li>- <b>Information about disease</b> – villagers are extremely ignorant about HIV causes,</li> </ul>	<ul style="list-style-type: none"> <li>● <b>ORANGE</b></li> <li>- <b>Disease</b> – Construction workers and truckers, two integral elements of CHP plant plans, have some of the highest HIV rates of any population. Additionally, Mafinga has soaring rates. The mixing of these population groups while workers are housed in Mafinga risks exacerbating the</li> </ul>

	Co	Company has no HIV policies but international standards it embraces have them.	prevention, treatment, and symptoms (some patients have thought their malaria symptoms indicated HIV infection). No training is provided in communities – what little education is provided is conducted at Plantation offices, many kilometers from villages. - <b>Health care</b> – no treatment is available, through government or Company facilities. Government provides counseling at Uchindile clinic. Kitete has no clinic	local epidemic. - <b>Information about disease</b> – company information sessions have not been proven effective. Exhaustive and targeted programs are the only known way of reducing HIV risk to communities, and these are not being done - <b>Health care</b> – available at Mufindi District Hospital but in limited supply. Since workers are not encouraged to be tested, treatment continues to be of limited relevance
	Intl	IFC’s Environmental, Health and Safety Guidelines for Forest Harvesting; Universal Declaration, Article 25; International Covenant on Economic, Social and Cultural Rights, Article 12; WHO Constitution; ILO Code of Practice on HIV/AIDS		
Right to Development				
	Con	Uchindile towns remain isolated, poor, and with little opportunity for advancement. Tanzania suffers a nation-wide energy shortage	● ORANGE - <b>Contributes to infrastructure</b> –roads have not become used because locals remain too poor to purchase vehicles. Salaries are too low for workers to accumulate capital or start small trading or savings. No public transport exists on roads - <b>Contributes to skills</b> – skilled jobs do not go to locals, and worker training is very limited (workers were not even trained for chainsaw work) - <b>Sustainability</b> – locals were intended to continue subsistence farming but have found it impossible to tend large enough fields for subsistence and work at GRL.	● GREEN - <b>Contributes to infrastructure</b> – District and nation gain technology and energy. - <b>Contributes to skills</b> – Local workers will be trained for certain jobs after the first year - <b>Sustainability</b> – renewable energy source
	Co	Company policy was committed to development in all operations. This has been successful at Sao Hill, but development projects at Uchindile have suffered extreme delays and wages have not yet matched living expenses. Company counts among it’s social responsibilities: “Facilitate socio-economic development and poverty alleviation among poor people in the rural areas including Kitete Village e.g. infrastructure development, schools, health etc and business opportunities accruing from forestry technologies”		
	Intl	African Charter on Human and People’s Rights; UN Declaration on the Right to Development; UN Clean Development Mechanism (CDM)		
Right to Adequate Standard of Living and Right to Just Remuneration				
	Con	Uchindile villages have never been fully food secure. Housing is traditionally	● RED - <b>Access to benefits</b>	● YELLOW - <b>Access to benefits</b>

	mud/wood/thatch or baked brick. Schools are historically poor and secondary school attendance has been extremely low. Standards of living at Sao Hill are higher	<ul style="list-style-type: none"> <li>o More than four of five workers does not receive benefits</li> <li>o Health facilities are inaccessible due to distance; company and government facilities are inadequate</li> <li>o Holidays with pay are respected</li> <li>o Pensions are not available to 4 of 5 workers</li> <li>o Maternity leave and sick leave are not available to 4 of 5 workers</li> </ul>	<ul style="list-style-type: none"> <li>o Unknown whether construction workers will have benefits; operations staff will have them</li> </ul>
Co	No express policy beyond a commitment to improving local wellbeing	<ul style="list-style-type: none"> <li>o Cost-of-living ascertained by assessors indicates that Uchindile wages are insufficient.</li> <li>o The assumption that workers can/do continue to be subsistence farmers has ceased to be true. Workers are dependent on salaries, particularly in Kitete, where working at GRL leaves crops vulnerable to wild pigs, who decimate harvests (food runs out within three months)</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Livable Wage</b></li> <li>o Company wage for SHI, 85,000 Tsh/mo, should be livable as long as benefits are provided (health, housing)</li> </ul>
Intl	ILO Fundamental Conventions; Universal Declaration, Article 25; FSC Accreditation Standards, FSC Perspectives on Plantations: A Review of the Issues Facing Plantation Management (Background Paper to the FSC Plantations Review)	<ul style="list-style-type: none"> <li>- <b>Livable Wage</b></li> <li>o Cost-of-living ascertained by assessors indicates that Uchindile wages are insufficient.</li> <li>o The assumption that workers can/do continue to be subsistence farmers has ceased to be true. Workers are dependent on salaries, particularly in Kitete, where working at GRL leaves crops vulnerable to wild pigs, who decimate harvests (food runs out within three months)</li> <li>- <b>Access to Information</b></li> <li>- Workers in Uchindile and Kitete are not aware that Company documents are available at the Plantation office. They are not familiar with the terms of their contract (read out once to them by the Plantation Manager), and “contract laborers” are unclear which elements of the contract apply to them. Massive confusion exists regarding NSSF withholdings.</li> <li>- <b>Food security</b> – not present. Worsened in Kitete, where crops (unwatched) are being destroyed by wild pigs</li> <li>- <b>Improvement of lifestyle</b> – lifestyle is improved for some but worsened for others. Women in particular find workloads doubled while husbands work at GRL, and no worker’s wives knew what their husbands’ salaries were (cash has never come home to them). The</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Access to Information</b></li> <li>o Proximity to Company headquarters facilitates access to information. Company conducts occasional training sessions at Sao Hill</li> <li>- <b>Food security</b> – salary is anticipated to be sufficient. This requires monitoring</li> <li>- <b>Improvement of lifestyle</b> – foreseen from salary. However, CHP EIA has vastly overestimated this, predicting 5000 new jobs from the creation of the power plant. This is impossibly over-optimistic</li> <li>- <b>Increase in secondary school attendance/enrolment</b> – not foreseen</li> <li>- <b>Increase in skill level for improved jobs</b> – Project plans to train locals for semi-skilled work</li> <li>- <b>Just Remuneration</b> – anticipated to be appropriate. Requires monitoring</li> </ul>

		<p>presence of a cash economy has, however, increased people’s awareness of what they cannot afford, increasing the sense that the benefits of tree farming are not coming to them. Standards of living might decrease if housing material (plantation wood) vanishes</p> <ul style="list-style-type: none"> <li>- <b>School attendance</b> – no increase</li> <li>- <b>Secondary school admittance/enrolment</b> – no increase</li> <li>- <b>Skill levels for improved jobs</b> – no training for skilled work (token “training” for driving can only extend to a handful of workers). Even semi-skilled work is done by outsiders from Sao Hill</li> <li>- <b>Just remuneration</b> – Wage is not livable, inductive to healthy lives, or inclusive of sick leave, maternity leave or retirement benefits. Remuneration (including the failure to promote people to full employees) is not indicative of the years worked for “temporary” hires.</li> </ul>	
<b>Right to Clean Air</b>			
Con	As a longstanding afforestation zone, air in the project area is quite good. Dust and emissions come from roads in the area, including the major highway between Mbeya and Dar, but air pollution has not historically been a problem.	- N/A	<ul style="list-style-type: none"> <li>● BLUE</li> <li>- Sustainability assured</li> <li>- Pollution level decreased</li> <li>- Dust content controlled</li> </ul>
Co	Company has high environmental aims and earns carbon credits for air quality improvement.		
Intl	International Covenant on Economic, Social and Cultural Rights, Article 12		
<b>Right to Clean Water</b>			
Con	40 percent of people in Iringa province do not have access to clean water.	<ul style="list-style-type: none"> <li>● YELLOW</li> <li>- <b>Project increases sedimentation</b> - slightly</li> <li>- <b>Project increases/decreases bacteria</b> - unknown</li> <li>- <b>Project water-consumption impacts</b></li> </ul>	<ul style="list-style-type: none"> <li>● ● GREEN-YELLOW</li> <li>- <b>Project increases/decreases sedimentation</b> – decrease of diesel generators benefits watersheds</li> <li>- <b>Project increases/decreases bacteria</b> –</li> </ul>
Co	Company has permits for water use, but permit for CHP Plant water use was not made available. Water use impacts on		

	Mafinga and surroundings were not assessed.	<p><b>surrounding area</b> – no</p> <ul style="list-style-type: none"> <li>- <b>Protects watersheds</b> – efforts in place</li> <li>- <b>Consistent monitoring</b> – done for pH, temperature, salinity, turbidity and minerals; not bacterial content</li> <li>- <b>Accessibility of clean water to workers and communities</b> – very poor. Locals and workers drink from dirty, bacteria-laden streams</li> </ul>	<p>project collaboration with government sanitation protects watersheds. Requires monitoring</p> <ul style="list-style-type: none"> <li>- <b>Project water needs impact surrounding area</b> – not assessed</li> <li>- <b>Protect watersheds</b> – not planned</li> <li>- <b>Consistent monitoring</b> - planned</li> </ul>
Intl	International Covenant on Economic, Social and Cultural Rights, Article 12		
<b>Right to Education</b>			
Con	Absenteeism is low, there is parity between boys and girls in primary school, and Sao Hill Primay is well staffed and supplied. Uchindile Primary is missing doorframes, roofs, teachers, and supplies. Kitete school barely functions. Primary education – free, mandatory, highly attended. Quality is extremely poor in Kitete (two teachers, no supplies, 40 students, no students going on to secondary school) and quite poor in Uchindile (three teachers, 250 students, inadequate books, pens, staff, building). Secondary education – not available to Kitete students, due to expense and distance. Rarely available to Uchindile, due to cost. Skills training – none available for higher employment in local industries (including tree farming semi-skilled work)	<p>● <b>ORANGE</b></p> <ul style="list-style-type: none"> <li>- <b>Primary education</b> – Project is yet to complete its promised classrooms for Uchindile Primary. Only foundations have been laid for Kitete Primary. No new teacher’s houses or dormitories are yet visible</li> <li>- <b>Secondary education</b> – not available to Kitete students, due to expense and distance. Rarely available to Uchindile, due to cost. Secondary classrooms promised by Project not yet complete (two complete, two pending)</li> <li>- <b>Skills training</b> – none available for higher employment in local industries</li> </ul>	<p>● <b>GREEN</b></p> <ul style="list-style-type: none"> <li>- <b>Primary education</b> – high quality and highly attended in Sao Hill. Support from Project as desks and refurbished buildings</li> <li>- <b>Secondary Education</b> – accessible by proximity, equipped with girl’s dormitories. Lacks sufficient classrooms.</li> <li>- <b>Skills training</b> – available on-site at CHP plant (planned) – requires monitoring</li> </ul>
Co	Company Development Programmes have committed to rebuilding schools, teacher housing, and girls dorms for over eight years. Projects have not been completed.		
Intl			
<b>Nondiscrimination</b>			
Con	Misogyny is endemic in the area. Denied education, property rights, and incomes until fairly recently, they have been powerless members of society. The gender	<p>● <b>YELLOW</b></p> <ul style="list-style-type: none"> <li>- <b>Equalizing staff gender</b> – highly imbalanced. GRL-employed women are sometimes empowered by the job (particularly single</li> </ul>	<p>● <b>YELLOW</b></p> <ul style="list-style-type: none"> <li>- <b>Equalizing staff gender</b> - unlikely</li> <li>- <b>Equalizing salaries</b> – few women likely to apply</li> </ul>



	<p>gap is widened when women’s unsalaried responsibilities – cooking, cleaning, farming, care giving – are increased due to a husband’s acquisition of paid work. Added income can be a boon to a family, or it can further alienate and isolate mothers, depending on how a husband approaches his job and his income. Boys still significantly outnumber girls in secondary school, and domestic violence remains a significant issue, shrouded in secrecy. Widows may be deprived of their property rights. Polygamy increases when incomes rise, and abandonment of wives increases in step. This is demonstrable at Uchindile town. While people aren’t richer in real terms, more cash is present.</p>	<p>mothers), and sometimes oppressed by the low salary and mundane, hard work, which is compounded by responsibilities at home</p> <ul style="list-style-type: none"> <li>- <b>Equalizing salaries</b> – women are 20 percent of the Uchindile workforce, earning approximately 17 percent of the salary (August 2009 payroll)</li> <li>- <b>Promotion opportunities</b> – none available</li> <li>- <b>Status of women at home</b> – “prestige” of farming has declined, and women (wives who farm) have suffered as a result. In some cases, they have been abandoned for GRL workers</li> <li>- <b>Childcare</b> – none provided, so women must turn to family or pay for babysitting (10,000 Tsh/month) in order to work</li> <li>- <b>Maternity leave</b> – none for four out of five workers</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Promotion opportunities</b> –not tailored to women</li> <li>- <b>Status of women at home</b> – no change</li> <li>- <b>Childcare</b> – none available</li> <li>- <b>Maternity leave</b> – available for all permanent employees</li> </ul>
Co	Company is an equal opportunity employer, but only 25 percent of workforce is female.		
Intl	Universal Declaration, Articles 1-2, 6-7, 23; International Covenant on Economic, Social and Cultural Rights, Article 7; International Covenant on Civil and Political Rights, Several Articles		
<b>Rights Not Significantly Impacted by the Project</b>			
<p>In cataloging and analyzing Company, Project and Contextual information, assessors have concluded that the following rights are unlikely to be impacted in significantly positive or negative ways: Right to Work; Rights of the Child; Freedom of Religion; Right to Life, Liberty and Security of Person; Freedom from Degrading Treatment and Torture; Freedom from Arbitrary Arrest and Imprisonment; Freedom of Thought and Expression; Freedom of Assembly; Right of Self Determination; Right to Property; Right to Privacy; Right to Food / Freedom from Hunger; Rights of the child. Note: Assessors see structural inequality as a significant issue, but “equal pay for equal work” does not appear to be exacerbated by company policies.</p>			

## 12. Gap Analysis and Further Work

There is a significant shortage of data on:

1. CHP water uses – sources, quantities and impacts (these are gaps within the CHP HIA)
2. Emergency plans to address, spillages, leaks, fires, and other environmental problems at CHP plant
3. Health baseline data and changes/impacts over Project life at CHP and Uchindile (health impact/risk assessment), including HIV/STD rates and risk factors
4. Assessment of wood needs everywhere that locals require waste from plantation trees. This includes Kitete, where nearly all residents currently buy wood scraps from government and Company tree farms for firewood.
5. Detailed plans for how construction workers will be fed, housed and cared for.
6. HIV/STD mitigation plans
7. Gender disaggregated data on incomes, wages, and employment
8. Longitudinal data of improved standards of living among local communities, records of annual income, changes in housing material, shifts in disease profiles and improvements in school retention rates.

## 13. Recommendations

These recommendations are designed according to internationally recognized best practices to assist corporate action in respecting human rights and improving human rights impacts. In addition, suggestions are made on topics involved with human rights (not directly human rights issues), if the assessor believes they could be of use to the Project. As can be observed in the Human Rights Impacts Chart above, the rights most at risk are labor rights. Because labor and community are so intimately intertwined at the plantations, there is some overlap between labor and environment/community rights, but all can be characterized under labor as the following:

- The Right to Favorable Working Conditions
- The Right to Nondiscrimination
- The Right to Belong to a Trade Union and the Right to Strike
- The Right to Health and a Basic Standard of Living

### ***13.1. Recommendations for Human Rights Respect - Crucial***

The human rights listed below are all labor rights. Given how significant the overlap is between the community and laborers, though, and how significantly communities are impacted by poor labor conditions, these labor rights abuses extend beyond the workforce and constitute human rights abuses for whole villages. Low pay and poor operational health and safety conditions impact everyone.

#### **13.1.1. Right to Favorable Working Conditions**

Operational Health & Safety is central to the right to favorable working conditions. This is true for contract workers as well as permanent, unionized employees. As all workers are entitled to a safe and health work environment, all workers are entitled to safety equipment. All gear should be distributed to workers free of charge, and workers who fail to wear this gear while working should be fired or furloughed. Repercussions are necessary to ensure safe working environments. Non-fatal accident rates at the SHI sawmill are more than twice what they are in Australia, and similar injury rates at SHE would be

unacceptable from a human rights standpoint. Attention to OH&S should reduce injury rates in all Green Resources operations.

Along similar lines, emergency plans should be established and published to address any potential spillages, leaks, fires or environmental problems (escape of ash, namely) from the CHP plant.

Careful attention to worker health must be paid when sick workers are assigned low-impact work. Reassigning such workers to hard labor without cause and with significant negative impact to worker health violates labor rights. Records should be kept and supervisors and managers should interact regularly about such worker placements. A Company policy should be written to this effect.

### **13.1.2. Right to Belong to a Trade Union, Right to Strike**

The nature of TPAWU as a union comprised of sub-unions means that transferring union leaders from one plantation to another severely compromises the authority and power of union leaders. There is no functioning union, and the company is not endeavoring to have one. A real union should exist, have company support, and function effectively.

### **13.1.3. Right to Just Remuneration and Holidays with Pay**

Minimum wage is not livable based on current prices in communities surrounding Uchindile. cursory assessment indicates that to cover expenses workers would need a minimum of 80 Tsh monthly, plus subsidies for health care, which currently cost workers two months of income for a single severe illness, between transportation costs, medication and hours of work lost. NSSF should be thoroughly explained and NSSF cards need to be distributed with the utmost haste. Tanzania law requires double pay on holidays. This does not appear to be in effect.

### **13.1.4. Right to a Basic Standard of Living – including the right to health**

Living conditions for CHP construction workers – and where how they eat, sleep, work and conduct themselves – should be written out as a policy and followed attentively.

Assessment of wood needs should be conducted everywhere that locals require waste wood from plantation trees. This includes Kitete, where nearly all residents currently buy wood scraps from government and private tree farms for firewood and housing. Residents already pay for this wood, and Project plans will likely increase prices to prohibitive levels.

## ***13.2. Recommendations to Improve the Status of Rights Protection or Social License to Operate***

### **13.2.1. Nondiscrimination**

Train local women for jobs at the CHP plant and driving trucks. When the plant first opens, only offer one-year contracts to the non-local workers who have the required training, using that time to train local women and men for the job. This has worked elsewhere in surprising places. Women truck drivers hired by mines in South Africa, for example, have proven more efficient and safer, ultimately saving the company money while empowering women (see: AngloGold Ashanti South Africa)

Advocate that parents send their children to secondary school, particularly girl children. A direct payment plan for school fees for the children of low-wage employees has been effective elsewhere. Unilever, adjacent to SHI and SHE, has this policy for high-achieving children of unionizable employees and has seen highly favorable results, including rising public support for the company and worker

satisfaction. The company is not required to do such socially responsible work, but it should be acknowledged that women are held back in plantation work because they lack the physical strength to do high-paying work. Inherent disadvantages are tantamount to discrimination.

### **13.2.2. Right to Belong to a Trade Union, Right to Strike**

Green Resources' labor unions barely function. Union members do not understand the union's role, and union leaders feel so powerless that they fall back on village leaders to try to bargain with the company. Labor/union training could be highly valuable for workers, so that they can understand the difference between reasonable labor requests and handouts, and so they can effectively interact with management. The ILO is always the best resource for labor training, and it has a library in Dar es Salaam. FES Tanzania conducts labor training and may be worth considering as a trainer for TPAWU and TUICO.

### **13.2.3. Right to a Basic Standard of Living – including the Right to Health**

Assessment of water uses for CHP plant should be conducted. The EIA indicates that assessors collected no data. Current soil and water quality do not appear in the document, an omission that will severely complicate efforts to monitor change in quality or quantity available to residents downstream.

It is strongly recommended that the Project commission a Health Impact and Risk Assessment, not only to mitigate negative impacts on some health issues, but to chart the improvements in others. International public health experts, whose research extends beyond what local clinicians can learn from patient logs, conduct health Impact/Risk Assessment. In the case of Green Resources, this process is significantly eased (and rendered less costly) by the proximity of a Demographic Surveillance Study (DSS) site in central Morogoro Region. DSS fieldworkers collect data with efficiency and professionalism in very short periods of time. For suggested Health Impact Assessors, please contact this report's authors.

Health facilities<sup>9</sup> – the company dispensary is inaccessible to most, due to its remoteness from work sites and towns. The company should instead focus its resources on supplying village clinics. There is discussion of a medical treatment agreement with MPM for use of their facility. This plan has serious drawbacks, including the extreme distance (minimum 26 kilometers). It is more economical and beneficial to support health where locals can easily access care. Owing to the lack of public transportation, village sites are the best possible option.

HIV is endemic in southern Tanzania, with rates systematically higher in cities and towns than in rural areas. But GRL improves and builds roads that increase mobility to all the communities surrounding its plantations. This is likely to have a significant impact on local rural HIV rates. The Company lacks

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<sup>9</sup> Corporate Roles in Government Responsibilities - The Right to Health is to be protected, promoted and fulfilled by the Tanzanian government. Tanzania has created programs and plans to tackle endemic illnesses, including HIV and malaria. However, GR is remote, located in regions that are low-priority for the government. Programs aimed to benefit Tanzanians do not reach the residents of Iringa and Morogoro. Because Green Resources has a divested interest in the health of its workers (both to limit absenteeism and to ensure that health is not deteriorating under the Company's watch), it is recommended that the Company increase communication with the government to request and ensure that health programs reach plantation communities. In Uchindile supplies have been known to arrive up to six months late from the government. Vouchers for bed nets are not effectively used (and local interest in bed nets remains extremely low, owing partly to a lack of understanding). The clinics that GRL has promised should be completed with haste, and the Company is recommended to pressure lobby the government as much as is necessary to staffs them sufficiently.

data or monitoring systems for HIV. It is strongly recommended that the Company conduct a thorough analysis of HIV rates among workers in the plantations and at Sao Hill Industries, as well as among potential employees for the CHP plant. Workers who do not volunteer for blood testing can still provide useful voluntary information to indicate their HIV status, including marital status, sexual patterns and risk factors. This information can be obtained during company-wide physical exams and is often conducted among mothers receiving antenatal care. Education, prevention, treatment and counseling are the cornerstones of any effective corporate HIV/AIDS policy in east Africa. Although many management systems have been set forth, the policy preferred by experts was produced by the International Petroleum Industry Environmental Conservation Association (IPIECA). An overview of this policy is available online<sup>10</sup> and a more complete version comes in CD-ROM format. The IPIECA standards begin with a Company mandate to clearly define and communicate HIV/AIDS policy, complete with its position of non-discrimination and employee confidentiality. Its focus on implementation includes situational analysis of the epidemic, management responsibilities, voluntary counseling/testing/treatment of employees, education and ongoing monitoring. In addition, HIV policies require context-based actions that address on-the-ground realities. For further detail or to begin a process of creating a rights-responsible HIV policy, please consult the authors of this report.

#### **13.2.4. Right to Education**

That only five of eight required teachers have reported for duty in Uchindile suggests that teachers find these locations undesirable. The company could easily and affordably make such work more desirable by subsidizing pay. Such work would not require the use of vehicles, which are in short supply at the Project. The Company's responsibility to schools lies in both its unfulfilled promises to improve education and in its responsibility to its workers (because parents are employees, bad schools affect the lives of workers).

### **14. Conclusion**

The transition to tree harvesting at Uchindile and the construction of a CHP power plant are well-timed and well-planned activities, from a human rights perspective. Green Resources has operated for over a decade now in Iringa Region, building a rapport with certain local communities while developing a sense of the underlying social, economic and political struggles facing locals. The Company is now recognized as one of the more generous corporations in Mufindi District. Its reputation is less sterling in Kilombero District, where Uchindile is predominantly located. However, Human Rights Impact Assessments are not built of reputations, but of impacts, both present and foreseen. Some of the most significant impacts, both positive and negative, will go unnoted by directly impacted communities. Residents of Mufindi District, for example, are unlikely to take note of improved air quality that results from the transition from diesel generators to a CHP plant, though this will improve quality of life for thousands of residents. It will be with similar disinterest that residents of Mafinga and the communities surrounding Green Resources plantations will experience rising HIV rates, although this disease is likely to be the second greatest killer of healthy adults in the region in the coming years.

The Human Rights impacts of harvesting in Uchindile are often highly dissimilar to those of the CHP plant's development, but there is also significant overlap, owing to structural inequalities and inherent rights abuses built into the south Tanzanian social and political systems. Those are addressed first in this summary, and then impacts will be described for each project separately.

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<sup>10</sup> <http://www.ipieca.org/activities/health/downloads/publications/hiv.pdf>

## **14.1. Uchindile and CHP Plant**

### **14.1.1. Right to Favorable Working Conditions**

The Company's Operational Health and Safety policies do not align with its performance. Safety gear is only issued free-of-charge to permanent employees, although some temporary workers also need protective gear. Among employees issued safety equipment, it is not always used. Workers remove gloves, goggles and helmets without consequence. This may be a contributing factor in SHI's high injury rates, which are double what they are in Australian sawmills. Similar disregard for safety precautions during harvesting and CHP plant construction and operation could be disastrous. Health and Safety training schedules exist but there are no records of the outcomes of these sessions, let alone whether they are conducted. At Uchindile, workers have no recollection of health and safety programs hosted by the Company. Worker safety is not prioritized in Uchindile transport, where workers are brought to job sites on a cart hitched to a tractor, which annually slides off the road and injures workers (company claims that the tractor is not in use are not accurate. Use of a Fuso Tipper is occasional, but workers are still regularly transported by tractor).

### **14.1.2. Right to Health**

In both Uchindile and Sao Hill, government health facilities are inadequate to protect worker health, and company dispensaries are little more than first aid stands. In a Company where heavy machinery and sharp blades are often in use, significant risks are presented to employee health, and the Company is doing very little to mitigate that risk.

The Uchindile government dispensary suffers six-month delays on supply deliveries, Kitete has no dispensary (or medications) at all, and Company senior staff members have said that they would never use government facilities in Iringa or Morogoro for their own healthcare. The district has a single ambulance. Dispensaries lack laboratory equipment and wards. Patients needing ward service are referred – but not transported – elsewhere. This is average for Tanzania, yet Iringa district has one of the highest infant mortality rates in the country. Morogoro district, where Uchindile is partly located, has alarmingly few health facilities – five dispensaries and three health centers, compared to Kilimanjaro district, which has a similar population size, one sixth of the area, and five times the number of dispensaries).

The company only supplies its dispensaries with basic first aid, anti-malarial drugs, basic antibiotics and painkillers. While these facilities are better stocked than government dispensaries, they are not adequate to address the health and safety needs of local workers, let alone tree fellers and biofuel plant operators. Traffic accidents alone took the lives of four GRL employees in 2007. While mitigating steps have been taken, the increase in traffic, and the lack of appropriate health facilities (see Catalog for description of hospital conditions) render this an inadequate health landscape.

Worker health also includes a freedom from disease and a right to be informed about one's own health risks. In Iringa and Morogoro Regions, HIV is high, but knowledge about the disease is extremely low, particularly in rural areas. Workers are not receiving the HIV training promised by the company. Meanwhile, HIV rates are likely to rise in Mafinga when construction workers come to the site. The Company has expressed intentions to hire construction workers locally, but no figures exist for how many workers will have to be hired from elsewhere in the country. Construction crews have notoriously high HIV rates. Truck drivers, too, have extremely high HIV rates, and Green Resources harvesting and CHP projects increase the frequency with which truck drivers criss-cross the Kilombero District border. Any increased intimate relations between these drivers and construction workers and local women will increase the community's HIV risks. That the company has no current data on HIV among its workers (obtainable, indirectly, through interviews when blood tests are rejected) means it cannot estimate its

impact on their wellness. That HIV rates are already four percent in Uchindile (among pregnant women) where people confuse malaria symptoms with AIDS suggests that a significant problem is brewing.

Studies lay bare the implications of an HIV epidemic for eastern African communities. The medical, social and economic repercussions of such epidemics are well documented and harrowing. Impacts listed below were documented at the Demographic Surveillance Study site in Karonga District, Malawi, by specialists conducting longitudinal research on a population undergoing infrastructure development and increased mobility due to new roads, similar to the situation at Uchindile. Additional research from capital project sites in South Africa, Tanzania and Uganda are referenced, as researched by UNAIDS, UNICEF, and the International Federation of the Red Cross (IFRC). All are available upon request, should there be any doubt about the severity of a spiking HIV/AIDS rate in a Tanzanian village.

Tanzania's countrywide HIV rates are estimated at six to 20 percent (WHO Epidemiological fact sheets on HIV and AIDS, 2008 update). Iringa Region is among the worst affected (16 percent of tested individuals were positive in 2008), owing largely to the thoroughfare that runs through the region connecting Mbeya and Dar es Salaam. In Mafinga, rates are particularly elevated, as the town is a hub for industry, trucker stopovers, and significant prostitution.

HIV inflicts the most damage on the communities least capable of coping. It is often contracted by young, healthy, productive members of society and progresses more rapidly to AIDS under circumstances of poverty, illness and poor nutrition (UNAIDS, IRIN). In the poor communities surrounding Uchindile, that HIV is present at all is a testament to poor disease management, education, and prevention systems. The remote communities are so ignorant of HIV that they confuse malaria symptoms with HIV. Some believe traditional healers can cure the disease. As previously impoverished men increase their wealth, they often spend wages on second wives or girlfriends, putting additional women at risk of contracting the disease. There is firsthand evidence of this in Uchindile.

Governments are responsible for protecting, fulfilling and promoting human rights, while corporate responsibility is limited to 'respecting' rights. Respect is three-pronged, involving a commitment not to commit, profit by, or facilitate rights violations.

Corporations have a variety of roles in HIV epidemics – a project erected in a remote area of an epidemic country is likely to actually spark a local epidemic. A project erected in a preexisting epidemic zone is entering into a space where rights are already being violated, and a failure to act would signify complicity. As with projects erected in conflict zones, the project takes on responsibility for the location it has selected, with a cognizance that it is implicated in rights abuses by mere presence. At a minimum, a company may not exacerbate preexisting epidemics. But the creation of a capital project has certain impacts on demographics and disease profiles, meaning that inaction is tantamount to negative impact on human rights.

The Company's foremost exacerbation of the area's HIV crisis comes through the otherwise positive action of constructing and improving roads. By building roads and encouraging public transport between urban centers and remote areas, the Company breaks down the barriers that, on the one hand, kept villages poor, but on the other hand, kept them relatively free of sexually transmitted diseases. That road building has both positive and negative effects is universally recognized. That the Company's roads have been beneficial to communities in the short-term is disputable, but that they will become so in the future seems certain. HIV is a slow-moving and insidious disease, however, and by the time evidence of its spread surfaces, it is often beyond the capacity of individual companies to control. As no other entity (including the government) has significantly changed the level of accessibility for communities around GRL, a rise in HIV rates in the area will be almost expressly attributable to the Company.



The Company's secondary and tertiary impacts on the spread of HIV are less easily delineated. It is difficult to distinguish the Company's specific role in the spread of HIV near Sao Hill, as the area is replete with plantations, industries, non-local workers and truck drivers that are in no way associated with GRL, SHI, or SHE. However, by contributing to the pool of outsiders, truckers, and enriched men who acquire second wives, girlfriends and hire sex workers, the Company contributes to all of the forces that have created the current HIV crisis.

GRL is not operating by the Uchindile Forest Plan in regard to HIV. The Plan commits GRL to implementing "health and safety practices ... in compliance with labor laws of the country and ILO conventions[,] through provision of safety equipment and training on safety issues, medication, and preventive [sic] Sexual Transmitted Diseases (STDs) including HIV/AIDS." This commitment is a significant one, supplemented by the ILO's *Code of Practice on HIV/AIDS* (2001), which includes requirements for prevention, care and support, gender-specific programs, and detailed training targeted for different sectors of the workforce.<sup>11</sup> There are straightforward recommendations for the Company to mitigate its impact on HIV rates (see section 13, above), which would bring it back into compliance with its own standards. Until significant actions are taken, this is a significant and severe violation of the Company's responsibility to respect the Human Right to Health.

#### 14.1.2. Nondiscrimination

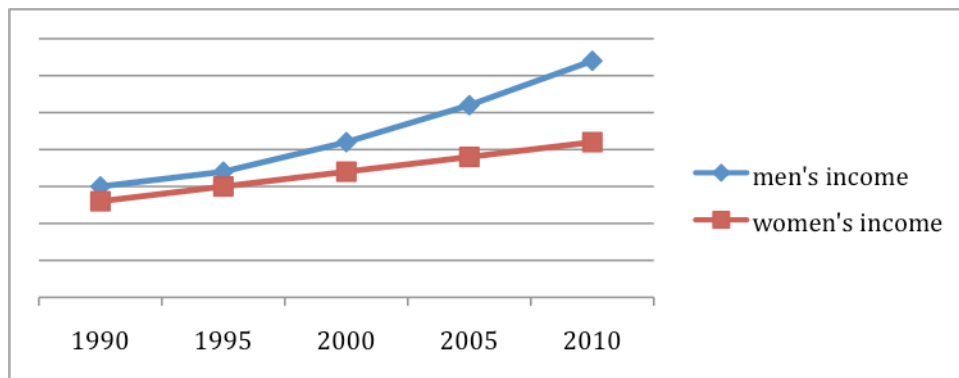
Misogyny is endemic in Tanzania's southern highlands. The company is not responsible for this reality, but it is responsible for ensuring that its operations do not widen the gap between men and women's empowerment. In Green Resources' operations, no women hold senior positions. Women rise no higher than junior management – secretaries and dispensary clinics.

Structural inequality<sup>12</sup> is powerful and overwhelms nondiscrimination policies that GRL has established. By failing to address contextual inequality, GRL appears to be deepening inequalities between men and women. By virtue of improving their workers' access to cash, the Company is preferentially benefiting its higher-paid employees. Because only men apply (or meet qualification requirements) for higher-paying work, only men are experiencing significant economic gain. As evidenced on the August 2009 Uchindile payroll, men hold five times more jobs than women and work more hours. Only four women are permanent employees out of the company's 60 hires. The situation is even more problematic among "temporary" workers. When children are ill or fields need to be tilled, it is the women who lose income. Rough estimates from August 2009 payroll suggest that women comprise 20 percent of temporary workers and earn a mere 17 percent of wages. The resulting income disparity can be depicted as follows (this is an approximation and not based on actual salaries):

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<sup>11</sup> <http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/normativeinstrument/kd00015.pdf>

<sup>12</sup> Discrimination can be discussed in terms of both discriminatory practices and discriminatory outcomes. If a practice treats certain groups unfairly, it is apparent in the policies upon which the practice was built and leaves little room for definitional debate. Discriminatory outcomes, in contrast are borne of discriminatory contexts. This is referred to as **structural inequality**. Women facing structural inequality don't have education, permission, or confidence to enter the work force. Sometimes exhausting, unpaid workloads in the home drain them of the time and energy to apply for jobs. This can be compounded by cultural norms that stigmatize women who work away from home – referred to as loose, even if they are in no way engaged in sex work.



This is called **disparate impact**. Enriching men and leaving women comparatively impoverished worsens the economic and social position of women.

The UN specifically addressed this problem in a March 2009 release, noting that the costs of unequal sharing of responsibilities weakens the labor market attachment for women, weakens their access to social security benefits, and decreases their available time for education, training, leisure, self-care, and political activities.

In the meantime, the Company has a responsibility to know what the impacts are on women's mental and physical wellbeing. This data is not currently collected.

## 14.2. Uchindile:

### 14.2.1. Freedom of Association, Right to Unionize, Right to Strike

Tanzanian labor law dictates that laborers, be they “temporary” or permanent employees, can form a union, but only 27 percent of Tanzanians are members of the national workers federation. Although contract workers may have unionizing capacity, few are familiar with Tanzanian labor law. Green Resources officially has two unions for its workers, TUICO for Sao Hill workers and TPAWU for plantation workers. The company does not include its “contract” workers within its union, excluding 80 percent of the workforce. The TPAWU union itself is problematic as well (see below).

There are human rights issues in hiring laborers nine to 12 months a year, year after year, without providing them benefits and rights equal to those of full employees. Laborers have made this complaint repeatedly, and the company has promised to hire more full-time workers. This promise has been slow to materialize for the vast majority of workers, and the Company acknowledges that it does not hire workers as full employees due to cost. The problems with this hiring system are fourfold, from a rights perspective:

1. Workers are not successful in their efforts to collectively bargain, even though they have a union. There is no right/ability to strike, and while taking issues to arbitration is possible, Senior Management transferred the one person empowered to do this in Uchindile, named Chalamela, to a different plantation before any such action could be taken.
2. Contract workers are not entitled to the same benefits as full employees. With neither sick leave nor maternity leave, workers are essentially penalized for becoming ill or pregnant. Additionally, workers have no job security. The Company assures that their labor shortage means that anyone seeking work receives it, but Uchindile cut casual labor from over 800 to under 300

last spring. There is no certainty that workers will be hired back in the next season, and there are no pensions (although the June 2009 contract proposal mentions these but workers do not believe there has been any resolution, and Management did not mention that bargaining had been successful for the union) or termination benefits. Perhaps most regrettably, there is almost no training that would lead to upward mobility for unskilled and semi-skilled workers. The Company did not even go so far as to train local workers in tree harvesting skills using chainsaws (a one-week course for Sao Hill workers).

3. Temporary laborers, in not benefitting from union contracts, are not truly a part of the union, despite Company claims to the contrary. In fact, most workers in Kitete have never even heard of TPAWU, let alone learned they are members of it.

4. Because union heads are elected within individual plantations, essentially as plantation representatives, company decisions to relocate those workers (in accordance with their job descriptions and company needs) essentially obliterates unions as they are growing. This was the case in Uchindile when Management relocated Chalamela, a nursery overseer but also the union head, from Uchindile to Mapanda. Now everyone in Uchindile, from the Forest Manager to the casual laborer, agrees, “Uchindile has no union now.”

The Company has no data of improved standards of living among local communities, records of annual income, changes in housing material, shifts in disease profiles and improvements in school retention rates. Without quantitative data to assert GRL’s value to contract workers and their families, labor activists will have no reason to believe that keeping workers in temporary employment is merely a means of sparing GRL the hassle of collective bargaining with each plantation, let alone the expense of giving essentially full-time workers the benefits to which they are entitled by Tanzanian labor law.

### **14.2.2. Right to Housing**

The Company has argued that plantation salaries will result in improved housing for locals. In the 12 years that GRL has been in Uchindile this has not come to pass. Houses in Uchindile are still predominantly mud brick, and houses in Kitete continue to be mud and thatch. Because the company does not conduct assessments of worker expenses it is impossible to know whether this is because salaries go towards beer purchases rather than aluminum roofs. What is certain, however, is that all local workers build their houses using scrap wood from surrounding plantations. Generally locals buy scrap wood from plantation workers from the government forests, who sell discarded wood at low rates. If scrap wood value increases with CHP demand, locals will suffer a palpable negative impact to their right to adequate housing.

Far more problematic is the housing situation for workers living in dormitories. For the past year TUICO members from Sao Hill have been living in the dormitories with plantation workers. The men are sleeping three-to-a-bed, the women sharing a two-bed room among eight people. CDM documents assuring that workers have clean water and solar electricity are wrong on both counts. Workers spend substantial portions of their wages on kerosene because there is no electricity, and the Company has not provided water since November 2008. Instead, workers get their water for drinking and washing from a trickling stream at the base of a perilous one-kilometer hill, which is impassable in the rain. The stream runs red with silt and causes frequent stomach ailments among workers. Sanitation is extremely poor in the housing units, between extremely close quarters for workers and the pit latrines with no water for flushing.

### **14.2.3. Right to Adequate Standard of Living**

Food security has always been an issue in the communities surrounding Uchindile plantation. It is the company's responsibility to ensure that it does not exacerbate this. In Uchindile lifestyle has been improved for some but worsened for others. Single mothers find they can support their children and work without being shunned from society, though the salary is too low for advancement or for any chance of seeking higher education. Wives of workers have found their workloads increased while salaries from husbands have failed to return to the home. Women cannot tend as many crops alone as they could with their husbands' help. The result is less food for the family and greater strain on women. In Kitete food insecurity may actually be worse as a result of plantation work. Workers at the plantation are unable to guard their fields, leaving them unprotected against wild pigs that roam the valley. Home-grown food in Kitete runs out three months after harvest, leaving workers entirely dependent upon Green Resources salaries, which are not livable wages (see below).

Water in Uchindile and Kitete is fetched from neighboring streams. Locals know this water makes them sick, but they have no alternatives. Sickness often causes them to miss work and lose income. This is indirectly the Company's responsibility, because the Company's website homepage pledges: "The company is committed to supporting local communities through investment in schools, health facilities and provision of safe water." It is directly the Company's responsibility at the dormitories.

School attendance and educational attainment have seen no improvement in plantation areas since Green Resources arrived, and skill levels remain stagnant, with the Company bringing outsiders to the plantation to conduct new jobs (chainsaw work).

The Right to Just Remuneration is not defined by a minimum wage. On the contrary, minimum wage is supposed to be designed to ensure that wage earners have a livable salary. Salaries paid to GRL's contract workers are not livable. For detail on this, please see the price chart in section 5.1.7. (Occupation of Other Sources of Income, P. 38).

### **14.2.4. Right to Education**

It is the government's responsibility to fulfill children's Right to Education. In Tanzania, the government commits itself to sending teachers and money for supplies. Communities provide additional support, with help from generous donors. Corporations often contribute to education in Project areas, and Green Resources at one point committed to supporting its local schools 100 percent. Those commitments have declined in the company's 12 years of operation in Uchindile. If the Company had made more limited promises, it would not be guilty of violating the Right to Education. By promising classrooms, teacher houses and girls dormitories, however, it has left a gaping whole that otherwise the community might have filled, essentially guaranteeing that the Right to Education would not be fulfilled. Company promises have been unfulfilled since 2001. School buildings that were supposed to be completed in 2005 (and were declared completed in 2009) were still not usable in September of 2009. The school promised to Kitete in 2005 is no more than a foundation. If the company cannot fulfill these promises, it is highly remiss in making them. Instead, the communities would be better served by the Company making small donations – pens and workbooks or chalk and desks – or incentivizing government teachers to work in remote locations. That only five of eight required teachers have reported for duty in Uchindile suggests that teachers find these locations undesirable. Affordable recommendations to remedy this are mentioned in section 13.2.4.

### **14.3. CHP Plant**

#### **14.3.1. Right to Development, Right to Clean Air**

The benefits of a CHP plant are likely to improve environmental and economic rights nationwide, contributing to Tanzanian sustainable development in important and tangible ways. Tanzania's energy consumption increased from .05 to .08 Btu between 1996 and 2006, while production has only increased from .019 to .021 Btu. The nation's hydroelectric power is significantly affected by drought. An updated Energy Policy (2003) has done little to improve Tanzania's energy infrastructure. Most of the country still relies on firewood for energy.

Regardless of who buys SHE's excess energy (corporation or government), the low capacity and weak infrastructure of Tanzania's energy supply will be improved. Additionally, the energy supply will be relatively clean, an issue relevant to Tanzania, whose CO<sub>2</sub> emissions have increased from 2.5 million metric tons of CO<sub>2</sub> in 1996 to 4.6 million in 2006 (US Energy Information Administration). Even within the project, the CHP plant will improve CO<sub>2</sub> emissions, displacing the diesel generators that the Company has used in the past. By increasing the available energy supply to Tanzania, more communities will have the opportunity to capitalize on the benefits of electricity, whether in homes, schools or dispensaries.

### **14.4. Social License to Operate**

It is worth reiterating that Green Resources' role is exacerbatory at worst, and certainly not instigative of preexisting rights issues associated with gender discrimination and HIV/AIDS. But the Company has taken on significant responsibility for surrounding communities, and follow-through is increasingly vital. Ironically, the Company's lofty promises could actually make it a greater target for claims of human rights abuses, in light of its severe failures in regard to its labor force and surrounding communities.

In the most recent (and for the CHP plant assessment, most pertinent) instance of the Company overpromising benefits to the community, GR predicted that the creation of the CHP Plant would bring economic benefits to thousands of workers, starting with the company's 50 permanent workers and expanding outward through a multiplier. The influx of cash and labor may cause some increase in people's ability to fulfill welfare rights, such as rights to livelihood, housing, health and food, but the EIA vastly overestimates these benefits. A multiplier of 5 is overgenerous for any project with less than 35 local workers – a multiplier of 143 verges on nonsensical. Caution should be used when significant community benefits are promised; GR has frequently disappointed local populations by promising assistance – schools, desks, medical supplies, and road upgrades, among others – that fails to materialize (Stakeholders Report, November 2008).

The Company documents ongoing monitoring of the environment and community, and company policies, insofar as they are tied directly to international standards, are clear and exhaustive. However, there were significant gaps in the available data regarding labor activities and environmental impacts, which are reflected as problems in the Company's human rights ratings in **Section 11**. Additionally, questionnaires for communities have design flaws that are worrying from a human rights perspective. In communities where Green Resources has promised two classrooms but delivered half of one, the Company questionnaire asks *whether* the company contributes to school construction, but not to what *extent*. The difference is more than semantics – it gets to the heart of a rights dilemma that is building in communities. When the Company makes promises about employment, roads, dispensaries and schools, communities allocate resources to other projects rather than focus on one that has a promised donor. This is leaving them without vital elements of their communities. Road construction was so slow to Kitete that

eight years after promised road construction community surveyors still had to walk the final distance to the community (that road was still equally impassable in September 2009). The Company unquestionably “involves itself,” as one Company questionnaire phrases it, in construction projects for schools, but rarely do they do so on schedule or to the extent promised. Communities are supplied seedlings, but until recently they claimed they were not taught proper care for them. Furthermore, these are communities who often rely on the Company for external income – it is important to be sensitive to fears that criticism of the Company would result in layoffs. Where job security does not exist, workers are not free to express their opinions about their employer.

That Uchindile town leaders have boycotted Stakeholder Engagement meetings with the Company is illustrative. Communities that feel shortchanged by a project are willing to seek allies elsewhere. Company claims that these issues are resolved are specious at best and deliberately dishonest at worst. Green Resources has faced minimal international outrage in the past, but logging companies are subject to greater scrutiny than tree farmers, as are power plant operators. Heightened traffic accidents and HIV rates are well documented in the District Hospital, and the Company’s understated policies on matters of community health will not protect it from complaints.

Green Resources is poised to become a large player in international forestry and logging, and the Company has plans to set up operations in communities more hostile to foreign investment than Tanzania and Uganda (including southern Sudan, where a small nursery has been planted). To grow successfully as a rights-responsible Company, significant changes need to be implemented in labor policies, monitoring actions, nondiscrimination and health policies.

## APPENDIX #1 Relevant, Substantive Human Rights

Rights Topics	Right / Freedom	Source
UD = <i>Universal Declaration of Human Rights</i>		
ESC = <i>International Covenant on Economic Social and Cultural Rights</i>		
CP= <i>International Covenant on Civil and Political Rights</i>		
<b>I. Labor</b>		
A. Working Conditions	1. Right to Favorable Working Conditions 2. Right to Work	UD 23, ESC 7 UD 23, ESC 6
B. Child Labor	1. Freedom from Exploitive Child Labor	ESC 10
C. Non-Discrimination	1. Nondiscrimination 2. Equal Pay for Equal Work 3. Freedom of Religion	UD 1-2, 6-7 ; ESC & CP (many) UD 23, ESC 7 UD 2, CP 18
D. Right to Unionize	1. Freedom of Association 2. Right to Belong to a Trade Union 3. Right to Strike	UD 20, CP 22 UD 23, ESC 8 ESC 8
E. Fair pay	1. Right to Just Remuneration 2. Right to Holidays with Pay 3. Right to a Basic Standard of Living	UD 23, ESC 7 UD 24, ESC 7 UD 25
<b>II. Security</b>		
A. Freedom from violence/coercion	1. Rights to: Life, Liberty, Security of Person 2. Freedom from Degrading Treatment / Torture 3. Freedom from Arbitrary Arrest, Imprisonment	UD 3, CP 6,8, 9, 10, 11 UD 5, CP 7 UD 9, CP 14, 15
B. Free speech/freedom from intimidation	1. Freedom of Thought 2. Freedom of Expression 3. Freedom of Assembly	UD 18, CP 18 UD 19, CP 19 UD 20, CP 21
<b>III. Health / Environment</b>		
A. Environment	1. Right to Adequate Supply of Water 2. Right to Clean Air / Environment	ESC 12 ESC 12
B. Health	1. Right to Std. of Living Adequate for Health 2. Right to Health	UD 25 ESC 12
<b>IV. Indigenous Rights</b>		
A. Informed consent	1. Right of Self Determination 2. Rights to Natural Resources 3. Right to Subsistence	ESC 1 ESC 1 ESC 1, CP 1
B. Culture	1. Right to Cultural Participation	UD 27, CP 27
<b>V. Property / Economic</b>		
A. Housing	1. Freedom of Residence 2. Right to Housing	UD 13 UD 25
B. Livelihood	1. Right to an Adequate Standard of Living	UD 25
C. Property	1. Right to Property	UD 17
D. Privacy	1. Right to Privacy; Noninterference	UD 12, CP 17
E. Food	1. Right to Food, Freedom from Hunger	UD 25, ESC 11
<b>VI. Education</b>		
A. Education	1. Right to Education	UD 26, ESC 13
B. Childhood	1. Rights of Children	CP 24
<b>VII. Political</b>		
A. Corruption	1. Right to Participate in Public Life	CP 25



## APPENDIX #2 Survey Data for Topics

A blank under ‘Information’ represents a work that has not been produced. (P) represents partial

<b>Topic</b>	<b>Information Body</b>
<b><i>LABOR</i></b>	
<b>WAGES</b>	
What are local wage rates	Government Docs
Locals have skills to enable them to be employed by Project	EIA
<b>UNIONS</b>	
Presence, legality and power of unions	US DoS HR Report
<b>EXPLOITIVE PRACTICES</b>	
Presence of child labor in the area	
Human trafficking in the area	US DoS HR Report
<b><i>HEALTH</i></b>	
Infectious disease profiles and trends	
Local health infrastructure	EIA
<b>SURFACE WATER</b>	
Quantity and Quality	
Use and sources (agricultural, industrial, domestic, drinking, bathing)	EIA
<b>GROUND WATER</b>	
Uses (drinking water, agricultural, domestic)	EIA
Depletion rates; Quantity and Quality	EIA
<b>AIR QUALITY</b>	EIA (P)
<b><i>POLITICAL/GOVERNMENT</i></b>	
<b>FORM OF GOVERNMENT</b>	
Traditional government structure in place	EIA
Confidence in government to provide basic welfare rights, liberty rights	
Confidence in government to effectively regulate Project	
Corruption	
Effectiveness/brutality of police	
Effectiveness of civil courts	WB Gov'ce Indices
<b>CONFLICT</b>	
Recent, likely, or current conflict zone	
Local military size, military structure, and military presence	
History of ethnic/religious strife	
<b>FREE SPEECH / PROTESTS</b>	
Attitude of local police towards demonstrations	
State of local activism, Intensity of Project opposition (local, national, etc)	
<b>SOCIAL</b>	
Local attitudes toward minorities/marginalized groups	N/A
Conflicts with indigenous communities	N/A
<b>ECONOMIC</b>	
Standard of living/ Poverty rates	EIA
Presence of illegal or small-scale mining in the area	N/A
Availability of housing	EIA
<b>EDUCATION</b>	
Local school infrastructure	EIA
Educational attainment	EIA
<b>PROJECT</b>	
Fears of harm from the Project	EIA (P)
Respect for Project Management	

### APPENDIX #3 Ratifications of Global Human Rights Treaties

Code	Treaty Name	Signed/Ratified
CAT	Convention Against Torture and Other Cruel Inhuman or Degrading Treatment or Punishment	
CAT OP	Optional Protocol	
CCPR	International Covenant on Civil and Political Rights	Signed 1976
CCPR OP1	Optional Protocol	
CCPR OP2	Optional Protocol	
CED	Convention for the Protection of All Persons from Enforced Disappearance	
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women	Signed 1985
CEDAW OP	Optional Protocol	
CERD	International Convention on the Elimination of All Forms of Racial Discrimination	Signed 1972
CESCR	International Covenant on Economic, Social and Cultural Rights	Signed 1976
CMW	International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families	
CPD	Convention on the Rights of Persons with Disabilities	
CPD OP	Optional Protocol	
CRC	Convention on the Rights of the Child	Signed 1991
CRC OP AC	Optional Protocol (Armed Conflict)	Signed 2003
CRC OP SC	Optional Protocol (Child Prostitution/Pornography)	Signed 2003

Source: UNHCHR

<http://www.unhcr.ch/tbs/doc.nsf/NewhvVAIISPRByCountry?OpenView&Start=1&Count=250&Expand=186#186>  
<http://www.unhcr.ch/pdf/report.pdf>

## APPENDIX #4 Relevant Laws of the Country

### Constitutional law

[http://www.chr.up.ac.za/hr\\_docs/constitutions/docs/TanzaniaC.pdf](http://www.chr.up.ac.za/hr_docs/constitutions/docs/TanzaniaC.pdf)

### Criminal Law

The Anti- dumping and Countervailing measures Act, 2004

<http://www.lrct.or.tz/documents/1-2004.pdf>

The Penal Code (Amendment) Act, 1980 - (Act No. 14/80)

<http://www.parliament.go.tz/Polis/PAMS/Docs/14-1980.pdf>

### Company law

Business Activities Registration Act, 2007

<http://www.lrct.or.tz/documents/Business%20Activities%20Registration%20ACT%2014-2007.pdf>

Companies Act 2002

<http://www.parliament.go.tz/Polis/PAMS/Docs/12-2002.pdf>

Fair Competition Act 2003

<http://www.parliament.go.tz/Polis/PAMS/Docs/8-2003-2003.pdf>

The Business Activities Registration Act, 2007 ( Act No.14/07)

<http://www.parliament.go.tz/Polis/PAMS/Docs/14-2007.pdf>

The Cooperative Societies Act, 2003

<http://www.lrct.or.tz/documents/20-2003%20Cooperative%20Societies%20Act.pdf>

The Public Corporations (Amendment) Act, 1999

<http://www.parliament.go.tz/Polis/PAMS/Docs/17-1999.pdf>

### Labor Law

The Employment and Labour Relations Act 2004

<http://www.parliament.go.tz/Polis/PAMS/Docs/6-2004.pdf>

The Labour Institution Act, 2004

<http://www.lrct.or.tz/documents/7-2004.pdf>

The Occupational Health and Safety Act, 2003

<http://www.parliament.go.tz/Polis/PAMS/Docs/5-2003.pdf>

The Organization of Tanzania Trade Unions Act, 91 – (Act No 20/91)

<http://www.bunge.go.tz/Polis/PAMS/Docs/20-1991.pdf>

Trade Unions Act, 1998

<http://www.parliament.go.tz/Polis/PAMS/Docs/10-1998.pdf>

### Health law

The HIV and AIDS (Prevention and Control) Act, 2008 (Act No. 28/08); Commission for Aids Act, 2001

<http://www.parliament.go.tz/Polis/PAMS/Docs/28-2008.pdf>; <http://www.bunge.go.tz/Polis/PAMS/Docs/22-2001.pdf>

Traditional and Alternative Medicines Act, 2002

### Tax law

Income Tax Act 2004

<http://www.tra.go.tz/documents/Income%20Tax%20Act%202004.pdf>

### Environmental Law

The Environmental Management Act, 2004

<http://www.parliament.go.tz/Polis/PAMS/Docs/20-2004.pdf>

The Forest Act, 2002

<http://www.parliament.go.tz/Polis/PAMS/Docs/14-2002.pdf>


Water Laws

<http://www.parliament.go.tz/Polis/PAMS/Docs/1-1999.pdf>

### Agriculture Law (Numerous)

## APPENDIX #5 World Bank Governance Indicators







[http://info.worldbank.org/governance/wgi/sc\\_chart\\_print.asp](http://info.worldbank.org/governance/wgi/sc_chart_print.asp)

 Print

**TANZANIA**

Governance Indicator	Sources	Year	Percentile Rank (0-100)	Governance Score (-2.5 to +2.5)	Standard Error
<u>Voice and Accountability</u>	15	2007	43.8	-0.15	0.14
	9	2002	41.8	-0.27	0.17
	6	1998	35.1	-0.49	0.22
<u>Political Stability</u>	9	2007	39.9	-0.07	0.22
	7	2002	41.3	-0.17	0.24
	6	1998	42.3	-0.09	0.25
<u>Government Effectiveness</u>	13	2007	39.3	-0.42	0.17
	10	2002	40.8	-0.39	0.16
	6	1998	30.8	-0.55	0.16
<u>Regulatory Quality</u>	11	2007	39.3	-0.37	0.16
	9	2002	30.7	-0.56	0.20
	7	1998	37.1	-0.31	0.24
<u>Rule of Law</u>	17	2007	41.9	-0.45	0.14
	13	2002	38.6	-0.49	0.15
	9	1998	39.5	-0.42	0.18
<u>Control of Corruption</u>	14	2007	43.0	-0.45	0.13
	9	2002	14.1	-1.00	0.17
	7	1998	11.7	-1.09	0.19

 90th-100th Percentile	 50th-75th Percentile	 10th-25th Percentile
 75th-90th Percentile	 25th-50th Percentile	 0th-10th Percentile

Source: Kaufmann D., A. Kraay, and M. Mastruzzi 2008: *Governance Matters VII: Governance Indicators for 1996-2007*

**Note:** The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, and international organizations. The aggregate indicators do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources or for any other official purpose.

## APPENDIX #6 Global Competitiveness Index WEF

2.1: Competitiveness Profiles

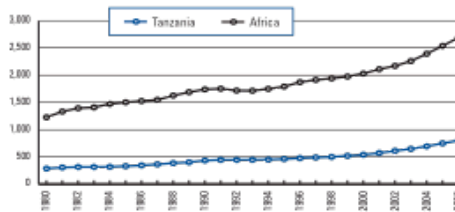
# Tanzania

### Key indicators

Population (millions), 2006.....	39.0
GDP (billions, current US\$), 2006 .....	12.8
GDP (PPP US\$) per capita, 2006 .....	.801
Sectoral value-added (as percentage of GDP), 2004	
Agriculture.....	45
Industry.....	17
Services.....	38
Human Development Indicator rank (out of 177 economies), 2004 .....	162

Source: UNFPA, IMF, EIU, UNDP

GDP (PPP US\$) per capita, 1980–2006



### Global Competitiveness Index 2007

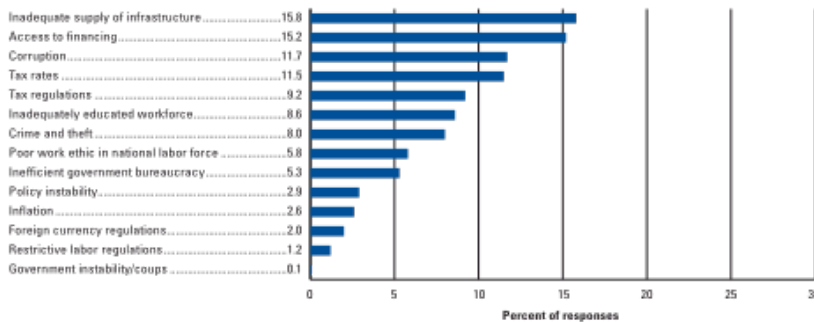
	Overall rank (out of 120)	Score (1–7)
<b>Global Competitiveness Index 2007</b> .....	<b>108</b>	<b>3.4</b>
GCR 2005–06 (out of 117 economies).....	105	3.3
<b>Basic requirements</b> .....	<b>115</b>	<b>3.6</b>
1st pillar: Institutions.....	64	4.0
2nd pillar: Infrastructure.....	96	2.7
3rd pillar: Macroeconomy.....	103	3.9
4th pillar: Health and primary education.....	121	3.8
<b>Efficiency enhancers</b> .....	<b>96</b>	<b>3.2</b>
5th pillar: Higher education and training.....	115	2.6
6th pillar: Market efficiency.....	76	4.1
7th pillar: Technological readiness.....	87	2.9
<b>Innovation enhancers</b> .....	<b>77</b>	<b>3.5</b>
8th pillar: Business sophistication.....	83	3.7
9th pillar: Innovation.....	56	3.3

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### Stage of development



### The most problematic factors for doing business



Note: From a list of 14 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

## The Global Competitiveness Index in detail

INDICATOR	SCORE	RANK/128
<b>1st pillar: Institutions</b>		
Property rights.....	3.9	85
Diversion of public funds .....	3.3	73
Public trust of politicians.....	3.0	38
Judicial independence.....	3.9	57
Favoritism in decisions of government officials.....	3.8	30
Government spending .....	4.1	27
Burden of government regulation.....	3.5	30
Business costs of terrorism.....	5.3	56
Reliability of police services.....	3.5	85
Business costs of crime and violence .....	3.5	89
Organized crime.....	4.8	65
Ethical behavior of firms .....	3.8	88
Efficacy of corporate boards .....	4.3	85
Protection of minority shareholders' interests.....	4.7	49
Strength of auditing and accounting standards .....	4.3	77
<b>2nd pillar: Infrastructure</b>		
Quality of overall infrastructure.....	2.9	77
Quality of railroad infrastructure.....	2.8	56
Quality of port infrastructure.....	3.4	69
Quality of air transport infrastructure.....	3.7	90
Quality of electricity supply.....	2.1	118
Telephone lines* .....	0.4	121
<b>3rd pillar: Macroeconomy</b>		
Government surplus/deficit* .....	-3.3	89
National savings rate* .....	16.1	89
Inflation* .....	4.6	70
Interest rate spread* .....	10.4	99
Government debt* .....	n/a	n/a
Real effective exchange rate*.....	n/a	n/a
<b>4th pillar: Health and primary education</b>		
Business impact of malaria.....	3.2	123
Business impact of tuberculosis .....	3.3	123
Business impact of HIV/AIDS .....	2.1	127
Infant mortality* .....	78.0	108
Life expectancy* .....	48.0	115
Tuberculosis incidence* .....	478.6	110
Malaria incidence* .....	3,000.0	111
HIV prevalence* .....	8.8	120
Primary enrollment*.....	54.4	119
<b>5th pillar: Higher education and training</b>		
Secondary enrollment* .....	7.5	125
Tertiary enrollment* .....	1.0	118
Quality of the educational system .....	3.1	85
Quality of math and science education.....	2.9	106
Quality of management schools .....	3.3	97
Local availability of research and training services .....	4.0	65
Extent of staff training .....	3.1	89

\* Hard data

Note: For descriptions of variables and detailed sources, please refer to "How to Read the Competitiveness Profiles."

INDICATOR	SCORE	RANK/128
<b>6th pillar: Market efficiency</b>		
Agricultural policy costs .....	4.6	12
Efficiency of legal framework .....	3.7	64
Extent and effect of taxation .....	3.4	54
No. of procedures required to start a business* .....	13.0	99
Time required to start a business* .....	30.0	52
Intensity of local competition.....	4.4	83
Effectiveness of antitrust policy.....	3.7	67
Imports* .....	32.5	89
Prevalence of trade barriers.....	4.0	95
Prevalence of foreign ownership.....	5.4	41
Exports* .....	22.4	109
Hiring and firing practices .....	4.1	56
Flexibility of wage determination.....	5.5	54
Cooperation in labor-employer relations .....	4.6	62
Reliance on professional management.....	4.8	45
Pay and productivity .....	3.5	93
Brain drain .....	2.6	88
Private sector employment of women .....	5.4	16
Financial market sophistication .....	2.9	90
Ease of access to loans .....	2.7	86
Venture capital availability .....	3.2	58
Soundness of banks.....	5.7	53
Local equity market access.....	4.8	68
<b>7th pillar: Technological readiness</b>		
Technological readiness.....	3.4	76
Firm-level technology absorption.....	4.6	72
Laws relating to ICT .....	3.3	73
FDI and technology transfer.....	5.5	17
Mobile telephone subscribers*.....	5.2	118
Internet users* .....	0.9	115
Personal computers* .....	0.7	110
<b>8th pillar: Business sophistication</b>		
Local supplier quantity .....	4.4	81
Local supplier quality.....	3.6	92
Production process sophistication .....	2.9	97
Extent of marketing .....	3.7	86
Control of international distribution.....	3.6	97
Willingness to delegate authority.....	4.1	33
Nature of competitive advantage.....	3.3	68
Value chain presence .....	2.6	106
<b>9th pillar: Innovation</b>		
Quality of scientific research institutions.....	4.2	40
Company spending on R&D .....	3.4	41
University-industry research collaboration .....	3.5	41
Gov't procurement of advanced tech products .....	4.1	38
Availability of scientists and engineers .....	4.4	70
Utility patents* .....	0.0	80
Intellectual property protection .....	3.2	79
Capacity for innovation.....	2.6	99

## Appendix #7 Living Standards Survey

This survey is an approximation. No formal surveys were conducted at Uchindile. Questions were asked informally to individual community members. Sometimes the order was changed or the specific questions were changed, depending on the individual's familiarity with certain topics.

### LIVING STANDARDS MEASUREMENT SURVEY TEMPLATE

#### Community Questionnaire:

##### DEMOGRAPHIC INFORMATION:

1. How many households are living in the community?
2. How many people are living in this community? (children 0 – 14 years? 15 – 49? above 50?)
3. In the past 10 years, how many people have moved out of your community/
4. To which areas do most migrants go?
5. What are the main reasons why people have moved out of your community?

##### ECONOMY AND INFRASTRUCTURE

1. What are the major economic activities of the people of this community/
2. Do you think that life for the people in this community is better or worse than in was 10 years ago? Why?
3. Is the road that comes to this community impassible during certain times of the year?
4. For how long is the route usually impassible during the year?
5. Do most households have electricity, or only a few?
6. How many households have pipe-born water?
7. What is the major source of drinking water for most people in this community during the dry season? During the rainy season?
8. Is there a restaurant in this community? Post office?
9. Does public transport pass by?
10. How far away must you go to catch public transportation?
11. How often does public transport pass by this community?
12. Do any people in this community leave temporarily during certain times of the year to look for work elsewhere?
13. What type of work do they look for during these times of the year?
14. Do any of the following social services or organizations exist in this community? If yes, in what year was this program established in this village?
  - daycare center/feeding post; red cross assistance; partage assistance; roman catholic assistance; other – enter other appropriate options
34. Are there any of the following groups at village level?
  - funeral insurance groups; health insurance groups; women's groups; faith-based groups; income-generating groups: farming; income-generating groups: non-farming; labor sharing groups
35. Do members of this community engage in any communal income-generating activities, such as: communal farming; communal fishing; communal businesses; other (specify)
36. Is this community considering any new income-generating projects?
37. What new income-generating projects is this community considering?
38. Have there been any collective action activities in this village in the past 12 months?
39. What was the value of all cash and in-kind contributions expected from each household?
40. What percentage of households participated?
41. Does this community have any communally-owned assets, such as: communal land; communal farm or fishing equipment; communal transport; communal water supply; other
42. Other than neighbors and relatives, from whom do people in this community borrow money?
  - bank; community fund; commercial money lenders; credit union; NGO's/micro finance projects; other (specify)

##### EDUCATION

1. Where is the primary school in this community?



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2. Where is the secondary school in this community (distance)? How many forms does the school have? Is this a boarding school? Does it have boy and girl dormitories?
3. Regarding Technical or Vocational Schools: How far is this school from the community? How much does it cost to attend?
4. How far away is the nearest nursery school to this community? Do children attend? At what cost?

#### HEALTH

1. Answers regarding the following health services: dispensary; health center; hospital; village health worker; other health service (specify)
  - Where is the nearest [dispensary; health center; hospital; village health worker] located?
  - How long does it take to get there?
  - What is the highest level of health worker at this facility?
  - Who owns this health facility?
2. Are there any drug shops in this community?
3. Are there any private laboratories in this community?
4. Are there any traditional healers in this community?
5. How many healers are there in this community?
6. How far from here is the nearest traditional healer located? Are traditional healers integrated with the formal system?
7. What are the most important health problems in this community?
8. Does this community maintain a register of births and deaths?
9. How many people in this community have died in the past 12 months?
10. Are there places in this community to be tested for HIV/AIDS?
11. How far from here is the nearest place someone can get tested for HIV/AIDS?

#### AGRICULTURE

1. Does anyone in this community engage in farming?
2. What are the major crop(s) grown by people of this community?
3. How many times per year is each crop planted in general?
4. Is this mainly a food crop, a cash crop or both?
5. During which month(s) is it planted? During which month(s) is it harvested?
6. Is there an agricultural extension center in this community?
7. How far away is there an agricultural extension center or market?
8. Does an agricultural extension agent visit the farmers of this community?
9. In which year did agricultural extension agents first start visiting this village?
10. Do farmers in this community have access to tractors?
11. Do any of the farmers in this community use chemical fertilizer?
12. Do any farmers in this community use insecticides or herbicides?
13. Are there any irrigated fields in this community?
14. During the past 12 months have you received normal rain patterns?
15. Which crops were affected by the deviation from normal rain pattern? Positive or negative?
16. How much money does an agricultural laborer earn in this community?
17. In this community, do children (10 – 14 years old) sometimes work for food or cash for other household's farms or businesses? Would a child be paid for work?

#### CULTURE

1. How many children in this community ages 0-14 have lost one or both natural parents?
2. On what is this information based? (a register kept by the community; a register kept by another organization; other secondary data; educated guess?)
3. Has this community ever sent a child to an orphanage? Where? How many? This year?
4. If her husband dies, is it customary for the wife to inherit his: land? House? Other property?
5. Can a widow be inherited as a wife by the brother or other male relatives of the deceased?
6. When a man dies, who settles the inheritance?

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SHOCKS IN PAST 10 YEARS

1. Within the past 10 years, what were the living conditions of the community?  
- the reasons behind these answers and the coping techniques should also be recorded

Primary School Questionnaire:

CHARACTERISTICS

1. Is this school public or private?
2. In what year did this school begin to operate?
3. What is the highest grade taught in this school?
4. Is this school a boarding school or a day school?
5. How many classrooms are there in this school, including temporary classrooms?
6. How many classrooms have blackboards?
7. Does this school operate in shifts (morning and afternoon sessions)?
8. Are children attending this school ever expected to work on the school building or collect firewood or fetch water for the school or teachers?

ENROLLMENTS

1. Are all of the students who want to enroll in this primary school admitted?
2. If no, why aren't some children who want to enroll in this primary school admitted?  
- not enough space/class rooms; child not resident in village; bad behavior; poor grades; student can't pay; too few teachers; other (specify)
3. Is there a waiting list for admission to this school?
4. If yes, how many children are on the waiting list?
5. Why were some children absent in the last day of school?  
- child is ill; work at home; inability to pay fees; not enough space/crowded; other's illness; truancy/bad behavior; too few teachers; other (specify)

FEES

1. Are there annual fees required to enroll in this school? How much for each year of Secondary?
2. Are any children exempt from paying the annual fees?
3. Are students required to wear uniforms at this school?
4. If yes, how much do uniforms cost?

SCHOOL DYNAMICS

1. How many textbooks are available for the students of each grade?
2. For each grade (p1 – p7) provide the answer to following questions:  
- Number of classes? Number of students enrolled? Number of girls enrolled? Number of students who attended last week? How many children in this grade have lost both of their parents? (boys/girls)
3. How many children completed p7 during the last academic year?
4. How many of the p7 graduated gained admission to secondary schools?
5. How many teachers are assigned to this school? How many are present? Why the disparity?
6. Did this school receive any assistance or contributions in the form of books; exercise books; desks; cement; roofing; other (specify) in the past 12 months?
7. If yes, from which organization(s) was this [enter selected option] received?  
- Lutheran Church; Catholic Church; Seventh Day Adventist; Mosque; Cooperative Unions; Social Welfare Office; Red Cross; Etc.; enter appropriate selection of organizations
8. What is the value of all the assistance of this form in the past 12 months from all organizations?

Household Questionnaire:

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#### PRICES

1. Provide a list of commonly available goods for which the interviewee should provide an estimated cost
2. What is the price of the following items?
  - Aspirin 300ml?
  - Paracetamol? Panadol?
  - SP?
  - Other?
3. What is the price of the following items?
  - kerosene?
  - firewood?
  - dry cell battery 1.5 volts?
  - iron coal pot?
  - hurricane lamp?
  - matches?
  - bar soap?
  - local linen shroud?
  - machete?
  - etc.; provide an appropriate selection of non food items

#### EDUCATION

1. How old are school children (age range)?
2. At what age can they read a newspaper? Write a letter?
3. At what age did each child start/end school?
4. Highest grade completed?
5. Reasons for leaving early?
  - potential = child is ill; work at home; inability to pay fees; not enough space/crowded; other's illness; truancy/bad behavior; too few teachers; other (specify)
6. How many how many hours did your child spend in school last week? Is that typical?
7. Why did the child not attend school for the normal hours in the past 7 days?
  - = own illness; to care for ill family member; to work at home; to work outside home; public or religious holiday; vacation; funeral, mourning; school closed; class cancelled; other (specify)
8. How far is the school from here?
9. Do children live at home while attending school?
10. How much does a household spent during 12 months on [enter student's name] education for:
  - School fees? Uniforms and sports clothes? Books and school supplies? Transportation to school? Board and lodging? Contributions to school (building materials, other materials, or side payments)? Other ? (clubs, extra classes, pocket money, etc.)
  - Total?
11. Presence of funds to support education – church, government, NGO, community?
12. How does one get awarded such support?
13. Value of support?
14. Satisfaction with school? Buildings, supplies, teachers (number, knowledge)?
15. Gender breakdown of students in primary and secondary?
16. Reasons why girls aren't sent? Boys?

#### HEALTH

##### PART A: Acute Illness in the past four weeks

1. Do you sleep under a mosquito net to protect yourself against mosquitoes?
2. For how long have you been using a mosquito net?
3. Has the net you sleep under ever impregnated?
4. During the past four weeks have you had any illness or injury? For example, have you had a cough, a cold, diarrhea, an injury due to accident, or any other illness?
5. Did this illness or injury begin less than six months ago?

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6. During the past four weeks have you had any other illnesses or injuries?
7. Did this illness begin less than 6 months ago?
8. For how many days did you suffer from this illness or injury?
9. If illness: Can you describe the symptoms that you suffered from during this illness? If injury: What type of injury did you have?
10. For how many days were you unable to carry on your usual activities because of this illness or injury?
11. Has anyone been consulted for treating this illness or injury? For example, a doctor, nurse, TBA, healer, pharmacist or other practitioner?
12. Where was the first place that you sought care?
13. Is this a public or a private establishment?
14. What illness did the health practitioner think that you had/have?
15. What illness do you think you were suffering from?
16. Did you have any other illness or injury in the past 4 weeks?
17. How many other illnesses or injuries did you have in the past 4 weeks?

PART B: Chronic Condition

1. Have you been living with any problem for more than six months?
2. How long ago did this health problem start?
3. Has this condition ever been diagnosed by a health professional?
4. What condition did the health practitioner think that you have?
5. What symptoms do you have?
6. Have you suffered from diarrhea for a month or more?
7. Have you lost much weight in recent months?
8. Have you had a recurring fever for a month or more?
9. Have you suffered from any skin rash in the past year?

PART C: General Health

1. In general, would you say your health is:
2. Do you have any disabilities?
3. Are you 15 years or older?
4. If yes, can you do the following activities?
  - Vigorous activities like running; lifting heavy objects; participating in sports or doing hard labor?
  - Walking uphill? Bending over or stooping? Walking more than a kilometer? Walking over 100 meters?
  - Eating, bathing or using the toilet?

WATER

1. What is the main source of drinking water for your household?
  - urban plumbing; rural (local) plumbing; public tap/standpipe; dug well; protected dug well or spring; unprotected dug well or spring; tanker-truck; lake, river, stream; bottled water; other (specify)
2. What is the main source of water used by your household for other purposes such as cooking or bathing?
3. What is the main source of water used by your household for yard irrigation?
4. In the last two weeks, has the drinking water been unavailable for at least one whole day?
5. How many hours does the water run during a day when it is available?
6. Do you use your main drinking water source all year?
7. What is the alternative drinking water source that you use?
8. How do you get drinking water when your principal source is not available?
9. Do you treat your water in any way to make it safer to drink? (boil; add bleach/chlorine; strain through a cloth; use water filter (ceramic, sand, etc.); solar disinfection; let it stand and settle; other (specify); don't know)
10. When did you treat your drinking water the last time to make it safer to drink?
  - today; yesterday; this week; this month; several months ago; other (specify)
11. Do you pay for water?
12. How long does it take to get to your main water source, get water and come back?
13. Who spends most time fetching water for your household?
14. How much a month do you pay others for carrying water?
15. The used water in your household (for bathing, washing, cooking) is usually discharged into?

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- piped sewer system; latrine/toilet in the house; cesspool/septic tank used only for my household; septic tank used by several households; goes onto the street; goes onto your own yard; don't know; other (specify)
20. What kind of toilet facility do members of your household usually use?
  21. Do you share this facility with other households?
  22. How many households in total use this facility?
  23. If you have a septic tank or cesspool, what do you do when it is filled?
  24. How much do you pay each time to have your septic tank or cesspool emptied?
  25. The last time your youngest child passed stools, what was done to dispose of the stools?
    - used latrine; put into latrine; put into drain or ditch; thrown into garbage; buried; other?
  26. How do you dispose of solid waste in your household?
    - burn; bury in yard; compost; scavengers collect; neighborhood waste collection and local disposal; other (specify)

ACTIVITIES

PART A: General Activities

1. Are you 7 years or older?
  2. How many hours did you spend yesterday cooking, doing laundry, cleaning your house?
  3. How many hours did you spend yesterday collecting water?
  4. How many hours did you spend yesterday collecting firewood (or other fuel materials)?
  5. How many hours in the last 7 days did you spend on household agricultural activities (including livestock) or fishing, whether for sale or for household food?
  6. How many hours in the last 7 days did you run or do any kind of non-agricultural or non-fishing household business, big or small for yourself?
  7. How many hours in the last 7 days did you help in any of the household's non-agricultural or non-fishing household businesses, if any?
  8. How many hours in the past 7 days did you engage in casual, part-time labor?
  9. How many hours in the last 7 days did you do any work for a wage, salary, commission, or any payment in kind?
- 
2. During the past 7 days, have you worked for someone who is not a member of your household, for example, the Government, a firm, and employer, or some other person outside your household?
    - If yes, at the end of this section proceed directly to Part B
  3. And during the past 12 months?
  4. During the past 7 days, have you worked in a field or garden belonging to yourself or your household, or have you raised livestock?
    - If yes, at the end of this section proceed directly to Part C
  5. And during the past 12 months?
  6. During the past 7 days, have you worked for yourself or your household? For example, as an independent merchant, or fisherman, lawyer, doctor, or other self-employed activity?
    - If yes, at the end of this section proceed directly to Part D
  7. And during the past 12 months?
  8. Why did you not work during the past 7 days?
    - = own illness; handicapped; too old/retired; do not want work; student; housework; too young; on vacation; awaiting reply of employer/agency; waiting to start new job; no work exists; don't know how to look; illness of family member; other reason (specify)
    - If this option is picked proceed directly to Part E

PART B: Employment During the Past 7 Days (Other questions also incorporated included unions, strikes, strength thereof)

1. For the work you did as an employee in the past 7 days, what did you do in this work? What kind of trade, industry, or business is it connected with?
  - = farming/livestock; fishing; trader/merchant/sales; transport; construction; education professional/admin; health professional/admin; other professional/admin; secretary/clerk; factory worker; restaurant, bar or hotel; skilled trades; other (specify)
2. How many hours did you do this work in the past 7 days?

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3. Is this number the number of hours you usually work at this job in a week?
4. Why did you not work usual hours in the past 7 days?
  - = own illness; illness of family member; overtime due to illness of other employee; other overtime; public or religious holiday; vacation; funeral/mourning period; other absence (specify)
5. For whom did you work in the past 7 days? That is, did you work for:
  - = the government; a state-owned company; a private employer; cooperative society; religious institution; other (specify)
6. Do you receive a salary for this work?
7. How much is your salary, after deduction of all taxes (take home/in-pocket) and how often is it paid?
8. For how many [days, weeks, months – whatever is appropriate] did you do this work in the last year?
9. Did you or will you receive per diem allowances, bonuses, incentives, gratuities, or overtime income for your work?
10. How much for these per diem allowances, bonuses, incentives, gratuities and overtime income amount to?
11. Have you received or will you receive payment for this work in the form of food, crops, animals or subsidized/free housing, etc.?
12. How much would these goods cost in the market, and how often do you get them?
13. Will you receive a retirement pension for this work?
14. Have you worked as an employee at any other job in the past 7 days?
15. What did you do in this work? What kind of trade, industry, or business is it connected with?
  - = farming/livestock; fishing; trader/merchant/sales; transport; construction; education professional/admin; health professional/admin; other professional/admin; secretary/clerk; factory worker; restaurant, bar or hotel; skilled trades; other (specify)
16. How many hours did you do this work in the past 7 days?
17. How much will you be paid for this work, including your salary, commissions, per diems, tips, and gratuities?
18. During the past 7 days, have you worked in a field or garden belonging to yourself or your household, or have you raised livestock?
  - = yes, farming, with or without livestock; yes, livestock only, no
19. In the past 7 days, were you self employed in your own business or profession or in one belonging to your household?

PART C: Self-Employed Farmers in the Last 7 Days

1. In the past 7 days have you worked on gardens belonging to yourself or members of the household, or spent any time processing crops from them?
2. How much time did you spend processing crops or working on your household's garden(s) in the past 7 days?
3. In the past 7 days have you spent any time caring or transforming the products for animals belonging to you or your household?
4. How many hours in the past 7 days did you spend feeding, caring for, tending, and transforming these animals belonging to yourself or your household?
5. In the past 7 days, were you self-employed in your own business or profession or in one belonging to your household?

PART D: Self-Employed Businessmen in the Last 7 Days

1. What type of business or self-employment did you work at in the past 7 days? What kind of trade, industry, or business is it connected with?
  - = farming/livestock; fishing; trader/merchant/sales; transport; construction; education professional/admin; health professional/admin; other professional/admin; secretary/clerk; factory worker; restaurant, bar or hotel; skilled trades; other (specify)
2. How many hours did you do this work in the past 7 days?
3. Is this the number of hours you usually work at this job in a week?
4. Why did you not work your usual hours in the past 7 days?
  - own illness; illness of family member; overtime due to illness of other employee; other overtime; public or religious holiday; vacation; funeral/mourning period; other absence (specify)
5. For how many years have you been doing this work?
6. Have you worked in any other businesses or self-employed professions belonging to yourself or your household did you participate in the past 7 days?

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7. In how many other businesses or self-employed professions belonging to yourself or your household did you participate in the past 7 days?

8. How many hours did you work at these other businesses or professions in the past 7 days?

PART E: Other Activities in the Past 7 Days

1. In the past 7 days, have you spent any time collecting firewood or fetching water for your household?

2. How many hours did you spend collecting firewood and fetching water in the past 7 days?

3. In the past 7 days have you had to restrict your work activity (either at home or at a job) due to your own illness?

4. For how many days were your work activities restricted because of illness?

5. For how many days were you too sick to perform any work in the past 7 days?

6. In the past 7 days, have you spent any time caring or visiting anyone in your household who was ill?

7. How many hours did you spend caring for ill household members in the past 7 days? For example, washing the patient, feeding the patient, changing the dressings, purchasing medicines, visiting patients.

8. In the past 7 days, have you attended the funeral of someone in your household or of a friend or relative, or were you in mourning?

9. For how many hours were you away from your normal activities to attend funerals or mourning?

PART F: Main Job in the Last 12 Months (meant for non-employees of the Company)

1. What did you do in your main job or activity in the past 12 months? What did this job consist of? What kind of trade, industry, or business is this connected with?

- = farming/livestock; fishing; trader/merchant/sales; transport; construction; education professional/admin; health professional/admin; other professional/admin; secretary/clerical; factory worker; restaurant, bar or hotel; skilled trade; no activity or job; other (specify)

2. Is this the same work as a job or activity already cited for the past 7 days?

- If yes, proceed directly to Part G; If no, continue with this section

3. In this work were you working for a family farm working for someone else's family business or working for someone outside the household?

- = self-employed as a farmer or working on family farm); self-employed in business or working in family business; worked as an employee, for someone else

4. For whom did you work? That is, did you work for:

- the government?
- a state owned company?
- a private business or firm?
- cooperative unions?
- religious institutions?
- other (specify)?

5. Do you receive a salary for this work?

6. How much is your salary, after deduction of all taxes (take home/in-pocket). How often is it paid?

7. For how many [days, weeks, months – enter appropriate unit] did you do this work in the last year?

8. Did you or will you receive commissions, tips, per diem allowances, gratuities or any payment in the form of food, crops, animals or free/subsidized housing for your work or overtime work?

9. How much does this amount to and how often do you get them?

10. Will you receive a retirement pension for this work?

INDIVIDUAL EXPENDITURES:

1. For the following items answer both questions, A and B:

A: In the past 12 months, have you acquired any:

B: What is the value of all the [enter selected item] that you have acquired in the past 12 months?

- Fabric or cloth?
- Other clothing and footwear (e.g. shirts, pants, dresses, shorts, underclothes)?
- Medicines, other services and transportation for healthcare?

2. For the following items, answer both questions, A and B:

A: In the past 2 weeks, have you acquired any [enter selected item]?

B: What is the value of all the [enter selected item] that you have acquired in the past 2 weeks?



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- Food consumed outside the home (at restaurants, bars or bought on the street)?
- Beverages consumed outside the home?
- Cigarettes, tobacco?
- Gambling, games of chance, lottery tickets?
- Sporting events, cinema, contributions to clubs, etc.
- Cosmetics, lotions, perfume, body lotions?

MIGRATION

1. Is this person a previous household member?
2. When did you move away from the homestead you were living in before?
3. Why did you move from your original homestead?
  - found work; to look for work; posted on a job; looking for land; schooling; marriage; divorce; parents died; to care for a sick person; to seek medical treatment; following inheritance; other family problems; other (specify)
4. How long have you lived at the present location town/village?
5. What was the total value of all cash you took with you when you left?
6. Think of all the assets (land, equipment, furniture, clothing, etc.) that you took with you when you left. What is the value of all these assets if you were to sell them today?

SHOCKS EXPERIENCED IN THE LAST 10 YEARS

1. Answer the following question for each of the past 10 years:
  - What type of year was it?
    - predominantly very good; predominantly good; predominantly average/normal; predominantly bad; predominantly very bad
  - If very good, why was it a very good year?
  - If very bad, why was it a very bad year?
  - If very bad, how did you cope?

FARMING

PART A: Land

1. Describe all of the gardens owned by member of your household in the past 12 months. Additionally, describe all other gardens not owned but used by your household in the past 12 months.
2. What is the total area of this garden?
3. Is this plot:
  - owned and cultivated by yourself; not owned but rented in; owned and rented out; owned and left fallow
4. Did you or your household have to pay for the use of this garden in cash or in kind in the past 12 months?
5. What was the value of crops and cash or any other payments made for the use of this garden in the past 12 months?
6. Did you or members of your household receive any payments in cash or in kind (crops) for the use of this garden in the past 12 months?
7. How much was received by the members of your household in cash or in kind for the use of a garden in the past 12 months?
8. If you wanted to sell this garden today, how much could you get for it?

PART B: Crops

1. In the past 12 months, have the members of your household grown any of the following crops?
  - provide and appropriate list of potential crops
2. How much [enter selected crop] was sold during the past 12 months?
3. How much was the harvest of [enter selected crop] sold for?
4. Have you lost any part of the harvested crop to insects, rodents, fire, rotting or stolen?
5. If you had sold this same quantity at the time you lost it, what is the most amount you could have gotten?
6. What was the total value of [enter selected crop] that you kept for seed or gave to laborers or landowner, or as a gift in ceremonies or other?

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7. Do you have any of [enter selected crop] in stock at present?
8. If you were to sell this quantity now, what is the greatest amount of money you could get?

PART C: Farm Inputs

1. In the past 12 months, did your household: Use any hired labor? Buy any seeds? Use manure? Use fertilization? Use pesticides? Have expenses for transporting its crops? Have any other payments associated with crop production, such as the purchases of sacks, containers, storage, irrigation, renting of animal traction, etc.?
2. How much did you spend on [enter selected option from above] in the past 12 months?

PART D: Sales of Products from Home Grown Crops

1. Has any member of your household, during the past 12 months, processed any crops for sale?
2. During the past 12 months, has any member of your household made the following products for sale from his/her crops?
3. In how many of the past 12 months have members of your household sold crops?
4. How many times? How much money did they usually receive each time?

PART E: Hand Tools

1. How many of the following tools are owned by members of your household?  
- hoes; axes; machetes; picks; shovels; wheel barrows; sickles; pruning shears, etc. – provide and appropriate selection of tools
2. For how much could you sell all these tools today?

PART F: Farm Equipment

1. During the past 12 months, has any member of the household owned a: hand mill/grinder? watering equipment? farm buildings? other equipments for farming/processing?
2. Does any member of your household still own a [enter selected item] now?
3. How many [enter selected item] do the members of your household own altogether today?
4. For how much money could they sell all these [enter selected item] today?
5. How much did your household earn for leasing items during the last 12 months?

LIVESTOCK

PART A: Animals

1. During the past 12 months, has any member of your household raised or owned:
2. Do any members of your household own or are they raising [enter selected option] at the present time?
3. How many [enter selected option] of all ages are owned by your household at present?
4. If your household wanted to sell one of these [enter selected option] today, how much would your household receive?
5. How much has your household received from selling [enter selected option] over the past 12 months?
6. Did your household own any [enter selected option] 12 months ago?
7. How many of [enter selected option] all ages, did your household own 12 months ago?
8. What is the value of [enter selected option] meat that was consumed by your household in the past 12 months?
9. How many [enter selected option] raised by your household were lost, stolen, disinherited, or died during the past 12 months?

PART B: Sale of Individual Animal Products

1. During the past 12 months, have any members of your household sold products obtained from their animals? How much has that earned the family?

PART C: Livestock Expenditures

1. In the past 12 months, has a member of your household spent money of the following items in order to raise livestock?
  - paid labor for herding?
  - buildings and maintenance of pens and fences?
  - feed, including salt?
  - insecticides spray for animals
  - veterinary services, inoculations or other medical products?
  - commission on the sale of animals?
  - compensation for damage caused by animals?
  - other expenses for livestock, poultry or bees (specify)?

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2. How much money have all the members of your household spent on [enter selected option] in the past 12 months?

NON FARM SELF EMPLOYMENT

PART A: Non-farm Self-Employment Respondent

1. Name of the business?

2. Name of the best informed person?

PART B: Non-farm Self-Employment Income

1. How long had your household owned this business?

2. How many months in the past 12 has this business been in operation?

3. During the past 12 months, have you hired anyone else from outside your household to work in this business?

4. How many other workers have you hired to work in this past 12 months?

5. What is the value of all these payments in the past 12 months (including payments in cash and the value of payments in kind)?

6. After paying for expenses for this business, including hired workers, purchase of goods, personal items for your household, how much money did you receive from this business in the past 2 weeks?

7. In the past 2 weeks, have any of these businesses' products or services been consumed by your household instead of being sold?

8. What was the value of products consumed or used by your household in the past 2 weeks?

9. In the past 2 weeks, did you use part of the money you got from this business for yourself or for your household?

10. How much money from the business did you use for yourself or your household?

11. After making purchases for the business and after using some money for yourself or your household, was there any money left?

12. How much money was left after purchases for the business and after using some of the money for yourself or your household, in the last 2 weeks?

13. Does your business own an inventory stock of goods not yet sold?

14. How much could you sell all of these goods for today?

PART C: Non-farm Self-Employment Assets

1. Did this business (trade, industry, profession, etc.) own any of the following in the past 12 months?

- buildings and land; vehicles or boats; tools, equipment, machinery, nets, paddles, lamps, etc.; other durable goods for running this business

2. Does this business currently own any [enter selected option]?

3. If you wanted to sell, how much could you sell all [enter selected option] owned by this business today?

HOUSING

PART A: Type and Ownership of Dwelling

1. Which buildings and rooms does your household occupy?

2. How many buildings does this household occupy?

3. How many rooms does your household use for sleeping (including outside the main house)?

4. Main construction material of outside walls?

5. Main flooring material?

6. Main roofing material?

7. Most windows are fitted with:

8. Does this dwelling belong to a member of your household?

9. If you wanted to sell this dwelling today, how much would you be able to get for it?

PART B: Housing Expenditures

1. Do any members of your household own any other dwellings?

2. Did anyone in the household rent out these other dwellings in the past 12 months?

3. How much was received in rental income in the past 12 months from these other dwellings?

4. If you wanted to sell these other dwellings today, how much would you be able to get for them?

5. What is the main source of lighting for your dwelling?

6. How much was your electricity bill last month?

7. What kind of fuel is most often used by your household for cooking?

8. How much was spent by members of your household in the past 2 weeks on:

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- firewood?
- charcoal?
- kerosene?
- other fuel for cooking or lighting (specify)

GOODS AND EXPENDITURES

PART A: Durable Goods

1. Does any member of your household have: bicycles?radio/cassette/record/cd players? stoves (gas, electric, biogas, charcoal, wood)? sewing machines? motorbikes? refrigerators or freezers?fans?cameras?video equipment/television?cars, other vehicles?watches, jewelry?Iron (electric or charcoal)?telephone (mobile or landline)? carpets? other durable goods?
2. If you wanted to sell this [enter selected item] today, how much would you receive?
3. Does anyone in your household operate a savings or bank account?

PART B: Household Annual Expenditures

1. In the past 12 months, have any members of your household purchased or spent money on the following items?
  - list of expenditures = rent or payments for the dwelling where you reside; home repairs (not construction extension); repairs of vehicles including bicycles; repairs of other household items (radios, shoes, clothes, etc.); kitchen equipment (plates, spoons, forks, etc.); linen, towels, bed sheets, blankets; home services (cooking, cleaning, gardening, childcare, etc.); government taxes/licenses; dues to cooperative or professional organizations; weddings of household members; dowries of household members; donations to churches, mosques, and civic organizations; jewelry and watches (beads, bangles, bracelets, necklaces, etc.); toys, games, books (other than school books); haircuts, hairdressing; umbrellas, handbags, pouches or wallets; expenses associated with illness of household members who died in the past 12 months (hospitalization, medicines, etc.); funeral and other expenses associated with any death of household members in the past 12 months
2. How much did the members of your household spend on those items in the past 12 months?

PART C: Household Two Week Expenditures

1. In the last two weeks, have you or anyone in your household purchased:
  - newspapers or magazines; gasoline or motor oil; envelopes, writing paper, pens and pencils; candles, paraffin, matches; batteries; toilet soap, washing powder, toothbrush, toothpaste, etc.
2. How much have you or anyone in your household spent on [enter selected item] in the last 2 weeks?

PART D: Inheritance or Bride Price Received

For any deaths that have occurred in the last 10 years ask the following questions:

1. Was [enter name of deceased]'s death associated with any inheritance?
2. What was the total value of the inheritance received by you or any other member of your household? In cash? In kind? In land?
3. In the past 10 years were there any inheritances received by anyone in your household?
4. What was the total cash received from the inheritance?
5. Estimate the value of goods and assets received from this inheritance if items were sold today (exclude land)
6. Estimate the value of any land given as inheritance if that land was sold today.
7. In the last 10 years, did you or anyone in your household receive any bride price?
8. Was this bride price associated with anyone you previously lived with?
9. In what year was this received?
10. What was the total value of the bride price received by you or any other member of your household? In cash? In kind? In land?

FOOD CONSUMPTION

PART A: Seasons

1. When is rainy season?
2. What homegrown foods do you eat?

PART B: Food Consumptions of Home Production

1. During the past 12 months, have the members of your household eaten [enter selected crop] that was grown or raised by the members of your household?

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2. During which months of the last 12 did your household consume [enter selected crop] that the members of your household produced starting 12 months ago?
3. How often during the rainy season did you eat home produced [enter selected crop]?
4. How much would it have cost to buy the amount you ate each time during the rainy season?
5. How often during the months of the dry season did you eat home produced [enter selected crop]?
6. How much would it have cost to buy the amount you ate each time during the rainy season?
7. During the past 12 months, have the members of your household eaten any [enter selected item] that was produced by animals belonging to your household? (eggs, milk, yogurt, cheese?)
8. During which months of the last 12 did your household consume the [enter selected item] from animals belonging to your household?
9. How often during the months of the rainy season did you eat home produced foods?
10. How much would it have cost to buy the amount you ate each time during the rainy season?
11. How often during the months of dry season did you eat home produced [enter selected item]?
12. How much would it have cost to buy the amount you ate each time during the dry season?
13. During the past 12 months, have the members of your household eaten any fish, edible insects, or wild game (including game birds) that were collected or captured by members of your household? (Other proteins?)
14. During which months of the last 12 did your household consume the [enter selected item] captured or collected by members of your household?
15. How often during the months of the rainy season did you eat the items that you collected?
16. How much would it have cost to buy the amount you ate each time during the rainy season?
17. How often during the months of dry season did you eat items that you collected?
18. How much would it have cost to buy the amount you ate each time during the dry season?

PART C: Food Expenditures, Seasonal Foods

1. During the past 12 months, have the members of your household bought any of the following foods for their own consumption?
2. During which months of the last 12 did members of your household buy [enter selected item] starting 12 months ago?
3. How often during the months of the rainy season did you buy [enter selected item]?
4. How much did it cost to buy this amount each time during the rainy season?
5. How often during the months of the dry season did you buy [enter selected item]?
6. How much did it cost to buy this amount each time during the dry season?
7. During the past 12 months, have members of your household bought any of the following foods for their own consumption?
  - wheat flour, bread; macaroni and spaghetti; biscuits, cakes or buns; other oils; jams, jellies, marmalades, sweets; salt; chicken, duck, other poultry; beef; mutton and goat; pork; baby food, excluding milk; sodas; other alcoholic beverages consumed at home; yeast, baking powder; milk powder; tinned meats, fish, vegetables or fruits; other prepared foods consumed at home; other foods or crops (specify)
8. During which months of the last 12 did members of your household buy [enter selected item]?
9. How often during this period did they buy [enter selected item]?
10. How much did it cost to buy this amount each time?
11. How often in the past year did you have problems satisfying food needs of the household?
12. How many meals does your household usually have per day?
13. In the past week, how many days did your household consume meat?

INFORMAL ORGANIZATIONS

PART A: Informal Organizations (Community Support)

1. Do you or members of your household participate in informal organizations on which you can rely for assistance in times of illness, funerals and other hardships or events?
2. What are the names of the chairman and secretary of this group?
3. How many individuals are members of this group?
4. Which individuals in the household are members?
5. Does this group provide insurance/help in case of a funeral?
6. What is the amount of support you expect from this group in the case of a funeral?

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7. Does this group provide insurance/help in case of illness?
8. What is the amount of support you expect from this group in the case of illness?
9. Does this group provide insurance/help in case of some other hardship or event?
10. Which is the main other hardship/event for which this group provided insurance/help?
11. What amount of support have you received from this group? In cash? In kind? In labor?
12. What were the contributions to [enter name of group] in the past 12 months? In cash? In kind? In labor?
13. What were the benefits received from [enter name of group] in the past 12 months? In cash? In kind? In labor?
14. Does this group possess any durable goods (cooking pots, plates, spoons, cups, sheets, etc.)?
15. What is the approximate total value of all these durable goods?
16. Does this group operate a fund in cash or a stock in-kind?
17. What was the main purpose of this fund?
  - to make transfers to group members who need assistance; to help group members save money; to make credit available to group members; other (specify)
18. What is the value of all funds and stocks the group has?
19. Is there an entrance fee in cash or in-kind to join the group?
20. How much is the entrance fee?

PART B: Ability to Cope

1. Would you be able to raise 20,000 shillings in one week if you needed to?
2. How would you raise it?
  - = selling durable goods/equipment; selling land/house; selling stocks or crops; selling livestock; from savings; from relatives/friends in the same village/town; from relatives/friends in a different location; taking extra work
3. Do you know a friend or relative willing and able to give you [enter money amount] if you were in need of it?

PART C: Receipt of Assistance from Outside Organizations

1. Did you or members of your household receive any assistance in cash or in kind from any organization in the past 10 years?
2. What organization did you receive assistance from?
  - = Lutheran Church; Catholic Church; Seventh Day Adventist; Mosque; Cooperative unions; Social Welfare Office; Red Cross; World Vision; other (specify)
3. How much have the members of your household received since 1999 in cash or in kind?
4. How much have the members of your household approximately received from an organization in the past 12 months in cash and in kind?

INTERACTION WITH OTHERS

PART A: Interactions with Network Members

1. If you were to need 5,000 shillings today, who would you ask?

PART B: Gifts and Loans Received from Others

1. Did you or any member of your household receive gifts or loans from any other person or did anyone spend time helping your household in the last 12 months, excluding the people you provided on the network roster?
  2. What is the name of the person who gave gifts or loans to your household in the past 12 months?
  3. What is his/her relationship to you?
  4. Where does [enter name] live?
  5. Was this mainly a gift or a loan or was it in the form of labor?
  6. What is the total value of gifts or loans in cash or kind you have received from [enter name] in the past 12 months?
  7. Was this loan or gift meant for someone specifically in the household?
  8. What was the main reason for this gift/loan?
    - = medical care; funeral expenses; school expenses; wedding expenses; transportation; subsistence needs; purchase of durable goods/land; investment; birth; just a friendly gesture; other (specify)
  9. In the past 12 months, did [enter name] spend any time assisting you or your household in the form of farm work, taking care of the sick, or any other tasks?
  10. How many days in the past 12 months?
- PART C: Gifts and Loans Given to Others in the Past 12 Months

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1. Did you or anyone in your household give any loans to any people in the last 12 months, excluding the people you provided on the network roster?
2. What is the name of the person who received gifts or loans from this household in the past 12 months?
3. What is his/her relationship to you?
4. Where does [enter name] live?
5. Was this mainly a gift or a loan or was it in the form of labor?
6. What is the total value of gifts or loans in cash or kind you have given to [enter name] in the past 12 months?
7. Was this loan or gift given from someone specific in your household?
8. What was the main reason for this gift/loan?
9. In the past 12 months, did you or your household spend any time assisting [enter name] in the form of farm work, taking care of the sick, or any other tasks?
10. How many days in the past 12 months?

FEMALE QUESTIONNAIRE

All female members of the household aged between 15 and 49 years old should fill out this section

PART A: General Questions

1. Have you ever had your period?
2. How old were you when you have your first period?
3. How old were you when you first married?
4. Have you ever been pregnant, even if you had a pregnancy that only lasted a few weeks?
5. How many children have you given birth to? Include births where the child only lived a few short hours or died later.
6. In all, how many children have not survived?
7. What were the ages of the children at the time of their deaths?
8. How many children do you have living at home?
9. While you were pregnant with your last child, did you go for medical consultations for your pregnancy at a maternity home, women's consultation, or other health service facility?
10. If no, why did you not go for medical consultations for your pregnancy at a maternity home, women's consultation, or other health service facility?
11. How many consultations did you have in connection with your pregnancy?
12. Who assisted you at the birth of your last child?
13. Where did you give birth to your last child?
14. Did you breastfeed your last child?
15. If you did not breastfeed, why not?
16. Does your child receive anything in addition to breast-milk?
17. When did you start breastfeeding?
18. How many months did you exclusively breastfeed your child, without water, tea, juice, etc.?
19. How many months altogether did you breast-feed the child? That is, how old was he/she when completely weaned?
20. Have you had any miscarriages, even though the pregnancy lasted only a few weeks or months, or have you had a stillborn child?
21. How many miscarriages and stillbirths have you had in your life?
22. Have you seen a doctor or health worker regarding this current pregnancy? If no, why not?
23. Are you currently doing something or using any method to delay or avoid getting pregnant?
24. Which of the following reasons best describes why you do not use any birth control method?
  - = want to have a child; too expensive; husband or partner does not want to; do not know how to use; do not know where to buy; religious reasons; health problems; not in a relationship; other
25. What birth control method are you currently using?
26. In the past month did you have to pay for the method of birth control that you are using?
27. How much did you (or your husband) pay for this method?
28. In your opinion, who (or what) was the most important source of information you have had about topics related to sexual matters?



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- mother; father; other relative; husband/partner; boyfriend; friend; co-worker; peers; doctor; nurse, midwife; teacher; pharmacist; books; newspaper, magazines, brochures; radio; tv; other (specify)

PART B: HIV/AIDS

1. Have you ever heard of the virus IV or an illness called AIDS?
2. In the past month, have you heard or seen any information about the HIV/AIDS virus?
3. From what source did you receive this information?
4. Would you say you rather agree or disagree with the following statements?
  - One infected with HIV/AIDS a person remains infected for life.
  - HIV/AIDS leads to the death of the infected person.
  - Once infected there is no cure for HIV/AIDS.
  - A healthy person can NOT get infected with HIV/AIDS.
  - If you take good care of yourself, you can live a long life, even if infected with HIV.
5. Do you think that HIV/AIDS can be transmitted by: medical instruments? kissing? sexual contact with a casual partner (opposite sex)? sexual contact with a regular partner/spouse? sexual contact with a virgin partner? ...
  - first sexual contact?
  - public bathrooms?
  - getting injections with an unsterilized needles?
  - homosexual contact?
  - mosquito bites?
  - sharing a meal with a person who has HIV or AIDS
  - from infected mother to a newborn child?
  - hairdresser?
  - dental treatment?
  - blood transfusion?
6. How likely do you think it is that you yourself will contract HIV/AIDS?
7. Why do you think you are at a moderate to high risk of contracting the HIV/AIDS virus?
8. Why do you think that you have little risk of contracting the HIV/AIDS virus?
9. What ways can people protect themselves from getting infected with the HIV/AIDS virus?
  - use condoms?
  - have fewer partners?
  - both partners have no other partners?
  - no casual sex?
  - no sex at all?
  - avoid injections with contaminate needles?
  - other
10. Have you or your partner ever used a condom?
11. What are the reasons you and your partner used a condom?
12. How often do you use a condom?
13. Why do you only sometimes/almost never use a condom/
  - birth control is partner's responsibility; partner objects to the method; have only one sexual partner; trust my sexual partner; condom is for sex workers only; condom is for the wives/husbands who have sex outside of their marriage; condoms are not effective in pregnancy prevention; interfere with sexual intercourse; expensive; respondent cannot get pregnant; respondent prefers another method
14. Have you ever asked a partner to use a condom and they refused?
15. If a person uses condoms inconsistently, do they put themselves at risk of HIV?
16. If he/she uses condoms with all sexual partners, do risks for HIV/STI infection decrease?

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<sup>1</sup> All currency conversions are approximate. The current market exchange rate in May 2009 is 1,324 Tanzania Shillings to the US Dollar. Purchasing Power Parity exchange rate is approximately 545 Tanzania Shillings to the US Dollar in 2008 according to the International Monetary Fund.

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