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PROTECTING ECOSYSTEMS AND RESTORING FORESTS IN MALAWI (PERFORM)

FOREST LANDSCAPE RESTORATION PRIVATE SECTOR INVESTMENT OPPORTUNITY REPORT



GINA ALTHOFF – PERFORM

JULY 2018

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS AND ABBREVIATIONS

ASWAp-SP	Agriculture Sector Wide Approach Support Project
BPI	Business Partners International
COP	Conference of Parties
CPI	Consolidated Processing Industries
FDI	Foreign Direct Investment
FLR	Forest Landscape Restoration
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GEF	Global Environmental Fund
GoM	Government of Malawi
KHP	Kawandama Hills Plantation
LEDS	Low Emission Development Strategies
MIF	Malawi Investment Forum
MITC	Malawi Investment and Trade Center
NAP	National Agriculture Policy
NFLR	National Forest Landscape Restoration
NFLRA	National Forest Landscape Restoration Assessment
NGO	Non-governmental Organization
OAF	One Acre Fund
PERFORM	Protecting Ecosystems and Restoring Forests in Malawi
REDD+	Reducing Emissions from Deforestation and Forest Degradation
TLC	Total LandCare
USAID	United States Agency for International Development
USD	United States Dollar
UNFCCC	United Nations Framework Convention on Climate Change
WICO	Wood Industries Corporation
WRI	World Resources Institute

EXECUTIVE SUMMARY

In 2015, the Government of Malawi (GoM) made a pledge to restore 4.5 million hectares of land throughout the country as part of the Bonn Challenge Global Restoration Initiative. The GoM published a National Forest Landscape Restoration Strategy in 2017 that outlined approaches to achieve Malawi's restoration goal. Many of the approaches offer opportunities for private sector businesses. For many businesses, accessing financial capital is an important part of increasing the scale of their restoration activities. While many of the businesses working to restore Malawi's landscapes have sound business models, they lack exposure to investors who possess the financial resources needed to finance growth.

In 2017, the USAID-funded Protecting Ecosystems and Restoring Forests in Malawi (PERFORM) project started a series of activities to identify businesses contributing to Malawi's restoration goal, to learn about their potential investment opportunities, and to connect them with investors. The project's objective in this activity was to help existing businesses attract more investment to increase the scale of their restoration activities.

The project identified a total of 22 large enterprises engaged in restoration. After conducting a preliminary screening of each business, there were a total of 8 businesses that offered investment opportunities that would be attractive to investors. The amount of investment sought by each business ranges from a low of USD \$500,000 to a high of USD \$10 million. In total, businesses are seeking between USD \$12 million to USD \$23 million of investment.

In June 2018 several of the businesses identified in the first part of the project were brought together with investors and government officials at the Malawi Investment Forum at a side event sponsored by the PERFORM project, the World Resource Institute, The U.S. State Department, and the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety. During the event, businesses presented their investment opportunities to investors and discussed potential investment deals. Businesses, investors, and government officials also took part in a panel discussing ways to reduce barriers to investment.

Malawi's demographics and economic outlook are creating opportunities for restoration-based businesses and investors. Several pragmatic actions could further increase the amount of outside investment reaching businesses. Events like the Malawi Investment Forum should continue to help businesses gain exposure to investors interested in new investment opportunities. A forum that brings government, businesses, investors, and donors together to discuss successes and challenges could also help reduce investment barriers. Many businesses and investors face the same barriers, but they are often not aware of their shared challenges or united in overcoming them.

Continuing support for these businesses will ensure they remain important partners for achieving Malawi's restoration goal.

I.0 INTRODUCTION

I.1 PHYSICAL, ECONOMIC, POLITICAL AND SOCIAL BACKGROUND OF MALAWI

The Republic of Malawi is a landlocked country with an estimated population of 18.5 million people (CIA World Factbook 2017; Figure 1). Malawi has a sub-tropical climate, which is characterized by a warm-wet season and a cool-dry season. The country has a total land area of 9.4 million hectares, of which 5.8 million hectares are cultivated and 3.2 million hectares are under forest cover. The remaining 2.9 million hectares of Malawi are covered by Lake Malawi, which is a fresh water lake that makes up part of Malawi's eastern border with Tanzania and Mozambique. Lake Malawi provides the source water for Malawi's largest river, the Shire River, which is the main source of Malawi's electricity.

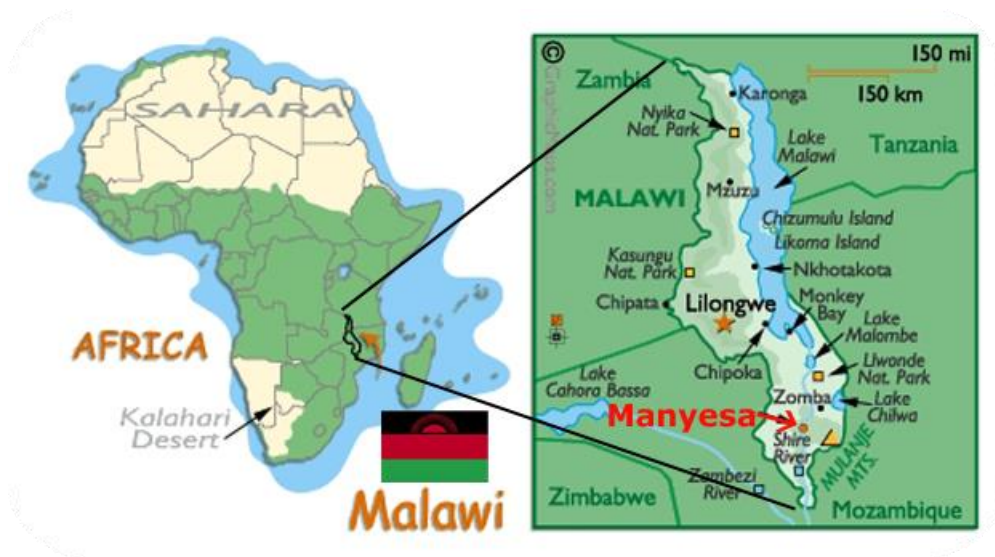


FIGURE 1: MAP OF MALAWI

Source: Afriem.org

Malawi's economy is primarily driven by agriculture, services, and industry. Agriculture contributed approximately 33 percent of Malawi's gross domestic product (GDP) in 2016 and employed more than 80 percent of the country's population. The service sector accounted for 50 percent of the country's GDP in 2016, followed by industry, which contributed 17 percent. GDP grew by 2.5 percent in 2016, although growth is expected to slow as the impacts of two years of severe drought ripple through the economy (CIA World Factbook 2017).

Despite the relatively low economic growth predicted in the near future, Malawi remains an attractive place for some investors because of the country's relative political stability. Malawi's government is a relatively stable multi-party democracy led by President Arthur Peter Mutharika. According to the Economist Intelligence Unit:

“A split parliament, coupled with widespread popular discontent over high living costs, weak governance and rampant corruption, will stir some political volatility, but underlying stability is expected to remain intact.”(Economist Intelligence Unit 2017)

Since 1993, the country has organized five peaceful presidential and parliamentary elections.

In 2012, Malawi received Foreign Direct Investment (FDI) worth USD \$1.2 billion, which represents 22 percent of the FDI flows to Southern Africa. The Malawi Investment and Trade Centre records indicate that FDI increased by 18 percent from 2011 to 2012. The increase is indicative of the improved business climate in Malawi that has attracted outside investors.

The infrastructure and energy sectors received 62 percent and 33 percent of the total 2012 investment, respectively. Tourism, services and processing only received negligible amount of outside investment. Most FDI came from China and the United Kingdom, which together accounted for 92 percent of FDI. FDI from South Africa, India, Pakistan and local investors, accounted for less than 4 percent of the total in 2012 (MITC 2017).

1.2 DEGRADATION AND RESTORATION OPPORTUNITIES IN MALAWI

Land degradation and deforestation are creating a number of social and environmental challenges in Malawi, including: high rates of soil erosion; soil degradation and nutrient loss; lower crop yields; increased food and livelihood insecurity; reduced climate regulation; lower resiliency to climactic shifts and increased risks of floods (Akinnifesi, Makumba, and Kwesiga 2006).

Activities like unsustainable charcoal, fuelwood and timber production; continuous cultivation; and slash and burn agriculture benefit from degradation in the short run because they can extract benefits from the environment without paying any of the costs associated with unsustainable land management. Over the long run, without any change from the current situation, the productivity of these land uses will decline and render them uneconomical.

In strictly economic terms, land degradation and deforestation are estimated to have cost Malawi more than \$244 million in lost productivity between 2001 and 2009 (Nkonya et al. 2011). Other studies have put the agricultural related costs of degradation alone at closer to \$84-\$99 million dollars per year (Dreschel and Gyiele 1999).

Restoration activities can reduce or reverse the negative effects of degradation. Restoration uses tree-based activities to restore the ecological functionality that underpins productive land uses. In 2016, Malawi conducted the National Forest Landscape Restoration Assessment (NFLRA) to identify opportunities to restore degraded land throughout the country with tree-based interventions. As a result of the NFLRA process, the Government of Malawi (GoM) committed to restore 4.5 million hectares of degraded land throughout Malawi by 2030. The National Forest Landscape Restoration (NFLR) Strategy was published in 2017 to build on the NFLRA by outlining a path for achieving Malawi's restoration commitment. The NFLR Strategy relies on engaging the private sector, public sector, traditional authorities and other local community organizations to successfully achieve Malawi's forest landscape restoration potential.

This report identifies and evaluates the investment potential of private enterprises that restore areas of degraded and deforested land as part of their business model. The project's objective is to document and use the investment opportunities available through each business to attract investment and increase the scale of each business's restoration activities.

1.3 PROJECT PROCESS

The process to identify restoration businesses and investors began in June 2017. The PERFORM project and staff at the Malawi Investment and Trade Center (MITC) created an initial list of businesses potentially engaged in restoration. The consultant started with the initial list and conducted an internet search to identify additional businesses. In total, 29 businesses were initially identified, although only 22 were thought to still be active after further screening.

Between June 21st and July 19th, 2017, emails were sent to the 22 businesses to learn more about their business models. At the beginning of each email, phone call and meeting, background information on the project was shared with the business representatives. They were told that the USAID-funded PERFORM project is working to bring outside investment into Malawi's forestry and agriculture sectors by working with enterprises to identify and share their investment opportunities.

Six businesses responded to the initial email and four agreed to connect via Skype. The Skype calls were conducted as informal conversations, with the goal of understanding how each business operates and how those operations rank on the investment criteria scales. Two businesses

responded to the emails stating that they were interested in connecting, but that Skype was not their preferred method of sharing information. The consultant created an electronic survey that asked approximately 20 questions that could be used to fill out the World Resource Institute (WRI) business checklist and evaluate the enterprises ability to meet the USAID/Malawi guidelines for engaging with the private sector. The online survey is shown in Appendix B.

The project used two sets of criteria to evaluate investment opportunities. WRI's New Restoration Economy team developed a business checklist that evaluates restoration investment opportunities across five different areas to determine how attractive a particular investment opportunity might be. Investment opportunities were also evaluated with USAID/Malawi's criteria for engaging with the private sector.

In August of 2017, the consultant visited Malawi and met with representatives from eight businesses operating throughout the country. Visits were informal and ranged from short meetings to extended site tours. Once the in-country meetings were finished, a preliminary list of investment opportunities was created. The summary of each investment opportunity was shared with representatives for feedback. Some enterprises did not comment on their summary.

In June of 2018, the PERFORM project co-hosted a side event titled "Increasing Investment in Restoration for Resilience" at the Malawi Investment Forum. The event brought together restoration businesses and investors to discuss opportunities and barriers to increase investment. Business participants included: Moringa Miracles, Consolidated Processing Industries, 14Trees, and Afribam. Investors included: Business Partners International and Uhusiano Capital. Dr. Clement Chilima, the Director of Forestry, was also present to represent the Malawi Department of Forestry.

The remainder of this report provides an overview of the business checklist and prioritization framework used to evaluate each company. The report also summarizes each company's business model and provides a summary of the business and its investment opportunity. The report concludes by discussing barriers preventing additional investment in restoration businesses and potential solutions to reduce these barriers.

1.4 WRI RESTORATION PROJECT CHECKLIST

WRI published a business model checklist to determine if a restoration business presented an investible opportunity (WRI 2017). The checklist outlines 33 indicators across 5 thematic areas that help determine if an enterprise is a restoration investment opportunity:

- Commercial viability: Can the project make money and be profitable?
- Scalable: Does the project have potential to become larger with additional investment?
- Replicable: Can the project's concept be replicated in other geographies?
- Environmental Impact: Does the project help restore the environment?
- Social Impact: Does the project have positive impacts on the local communities?

The responses to questions included in the checklist were used to identify businesses that can attract private capital and deliver the environmental and socioeconomic outcomes that impact investors look for. In order for projects to be accepted, they need to meet all five of the criteria listed above. The full checklist and the completed checklists for each enterprise are available in Appendix A.

1.5 USAID ENGAGEMENT ASSESSMENT / PRIORITIZATION FRAMEWORK

In 2016, USAID/Malawi published a report assessing the potential to engage with the private sector to meet ongoing development objectives in Malawi. The report identified criteria that would make

private sector businesses valuable partners for realizing mutually beneficial goals and overcoming key development bottlenecks. In the forestry and agricultural sectors these criteria included engaging with enterprises whose business models would:

- Address threats to biodiversity in areas of significant biological diversity
- Combat illegal wildlife trade and trafficking
- Build adaptive capacity and resiliency of local communities
- Slow or reverse deforestation and improve land management

Nearly all of the businesses interviewed for this project were involved in building the adaptive capacity and resiliency of local communities and slowing and/or reverse deforestation and improving land management. However, no businesses operated in areas of significant biological diversity or focused specifically on combating the illegal wildlife trade.

1.6 MALAWI NATIONAL CLIMATE CHANGE INVESTMENT PLAN

In 2013, the GoM released the country's National Climate Change Investment Plan. The plan was created to prioritize and coordinate investments into programs and activities that are helping the country address the social and environmental challenges posed by climate change. Programs and activities that are helping smallholders to adapt or mitigate the negative effects of climate change are the plan's main focus. Priority areas under the plan that overlap with the goals of this project are:

- Integrated Watershed Management – The program's goal is to reduce soil erosion and improve soil productivity in the country's watersheds.
- Improving Climate Change Community Resilience Through Agricultural Production – The main goal of this program is to expand the adoption of sustainable and climate smart agricultural production to meet national and household food security, agro-processing and manufacturing of raw material needs for domestic and export markets.
- Enhancing Disaster Risk Management – One of the sub-tasks of this priority area is to strengthen the capacity of communities to respond to and to recover from climate-based disasters, such as floods and droughts.
- REDD+ – The main goal of the REDD+ program is to increase carbon stocks and sinks as well as forest cover through afforestation and reforestation; sustainable forest management; and enhancement and conservation of forest carbon stocks.

Businesses that can align their activities with the above priority areas will position themselves well for additional investment opportunities. This should not be challenging since all of the restoration investment opportunities outlined in this report link to at least one priority area.

The plan has put five financing mechanisms in place to fund activities that contribute to the above priority areas. Activities that align with the plan can work with the GoM to access financing through the government, development partners (e.g. Global Environment Fund), civil society (e.g. NGOs), the private sector, and carbon markets. In some cases more than one source of financing may be needed to fund an activity (NCCIP 2013).

1.7 OVERVIEW OF ENTERPRISES ENGAGED IN RESTORATION IN MALAWI

Table I summarizes the evaluations of potentially investible businesses based on WRI and USAID's investment criteria. In total, there are six businesses that can attract investment. The results from the WRI criteria ranking are available in Appendix C. All six businesses are structured as for-profit entities, which allows them to take on debt and/or equity financing. The other enterprises are structured as different types of non-profits, which limits their appeal to investors. Still, non-profit enterprises are important entities in terms of conserving and restoring forest cover.

The six businesses with investment opportunities operate in the timber and agricultural sectors. Kawandama Hills Plantation, Consolidated Processing Industries (CPI), and Salona Estates all produce timber and fuelwood. Afribam, Moringa Miracles, and Malawi Mangoes all produce different types of tree crops. The enterprises are in different phases of development. Kawandama Hills, CPI, and Malawi Mangoes have been doing business for several years and currently produce marketable outputs. Moringa Miracles, Afribam, and Salona Estates are in the pre-revenue phase of their business plans, although all three enterprises have access to land, which can be an important barrier for a business to overcome in Malawi.

TABLE I: RESTORATION BUSINESSES AND INVESTMENT OPPORTUNITIES IN MALAWI

Enterprise Name	Business Structure	Sector	Environ. and Social Benefits	Meets WRI & USAID Investment Criteria	Investment Sought	Size of Restoration Opportunity (Ha)	National Climate Change Investment Plan Priority Areas
Kawandama Hills	For-profit	Essential oil; charcoal	Yes	Yes	\$500,000+	1,500	REDD+
Tropha Estates	For-profit	Tree crops	Yes	Yes	\$500,000 - \$2,000,000	220	REDD+; Improving Climate Change Resilience Through Agricultural Production
Moringa Miracles	For-profit	Tree crops	Yes	Maybe	\$1,000,000 +	300	Integrated Watershed Management ; Improving Climate Change Resilience Through Agricultural Production; REDD+
Consolidated Processing Industries (CPI)	For-Profit	Tree crops	Yes	Yes	\$1,000,000 +	5,000	Integrated Watershed Management ; Improving Climate Change Resilience; REDD+
Afribam	For-Profit	Tree Crops	Yes	Yes	\$500,000	180	Integrated Watershed Management ; Improving Climate Change Resilience; REDD+
Malawi Mangoes	For-profit	Tree crops	Yes	Yes	\$9,000,000 +	400 - 450	REDD+; Improving Climate Change

							Resilience Through Agricultural Production
Salona Estates	For-profit	Timber; food crops	Yes	Yes	\$500,000	400	REDD+
TLC Viphya Plantation	For-profit	Timber	Yes	Yes	\$500,000 - \$1,000,000	10,000	REDD+
Lujeri Tea Estate	For-profit	Timber; tree crops	Yes	Yes			Improving Climate Change Resilience Through Agricultural Production
African Parks	Non-profit/ NGO	Tourism	Yes				
Mzuzu Coffee	Non-profit/ Cooperative	Tree Crops	Yes				REDD+; Improving Climate Change Resilience Through Agricultural Production
Total LandCare	Non-profit/ NGO	Extension Services	Yes				Integrated Watershed Management ; Improving Climate Change Resilience Through Agricultural Production; REDD+
AgDevCo	Investment Firm	Investment	Yes				
Shire River Basin Co	Non-profit / Public-private Partnership	Infrastructure	Yes				Integrated Watershed Management
One Acre Fund	Non-profit / NGO	Farm inputs; extension services	Yes				Improving Climate Change Resilience Through Agricultural Production; Disaster Risk Management

Some of the businesses have processing facilities where they can add value to their primary outputs. Kawandama Hills Plantation has a basic refinery set up to extract essential oils that are exported to Europe. KHP also has 12 kilns it uses to produce sustainable charcoal. Malawi Mangoes

constructed the largest fruit processing plant in Malawi, which allows the company to manufacture several types of products. CPI currently has production facilities to make valued-added products like doors and furniture. CPI has also purchased factory production lines to make plywood and block board. Tropha Estates recently completed construction of a processing facility that will allow them to package their macadamia nuts themselves so they can reach new markets.

The amount of investment sought by each enterprise ranges from a low of USD \$500,000 to a high of USD \$10 million. In total, the businesses are seeking between USD \$12 million to USD \$23 million of investment. The additional investments would finance different activities, including tree planting. In total, new investment would directly reforest/afforest approximately 13,000 hectares of land that are not currently under tree cover and create a number of social and environmental benefits in the process.

2.0 INVESTMENT OPPORTUNITIES IN FORESTRY ENTERPRISES

Malawi's forestry sector is a significant source of the country's economic activity. Both hard and softwood timber are major construction materials in Malawi. Demand for charcoal continues to grow throughout the country because there are few viable alternatives for cooking fuel (the Guardian 2017). When most of the forestry sector's output is accounted for, estimates suggest it accounts for as much as 4.4 percent of Malawi's GDP (GoM, 2009). The sector's true contribution to GDP is likely greater because the above figure does not account for the value forests provide other activities, including growing and processing tobacco; protecting the water supply by reducing sedimentation in important catchments, protecting important watersheds for hydroelectricity generation; and generally improving the quality of the environment. The timber industry also employs a substantial number of people through companies like Wood Industries Corporation (WICO) and RAIPLY. In addition, Malawi's Department of Forestry employs approximately 6,400 people.

There are opportunities in Malawi's forestry sector for patient investors looking for businesses with ownership of land and facilities that can add value to primary outputs. Several businesses have concessions and logging agreements to utilize and manage plantations and conserve forest reserves. Still, the full commercial potential of Malawi's large forest plantations is diverse and extensive (MITC 2017).

2.1 KAWANDAMA HILLS PLANTATION

Kawandama Hills Plantation (KHP) is one of the largest essential oil plantations in southern Africa. The plantation covers an area of approximately 6,000 hectares, of which 1,300 hectares have been planted with *Corymbia citriodora*, a tree used to produce lemon fragrant oil for the natural insect repellent and perfume markets. KHP produced 15 tons of oils in 2016 and hopes to reach a production goal of 60 tons per year. The plantation employs more than 200 people from surrounding communities.

RESTORATION OPPORTUNITY

KHP has planted over 1,300 hectares of trees to date with plans to plant approximately 1,700 additional hectares. In addition, KHP conserves and protects around 3,000 hectares of indigenous woodlands on its lands from illegal timber harvesting.

ENVIRONMENTAL AND SOCIAL IMPACTS

KHP is the first recipient of a license to produce sustainable charcoal in Malawi. KHP uses the wood and spent-leaf biomass from its oil production in twelve half orange kiln types to efficiently produce charcoal and minimize the waste from their production process. KHP works closely with its partner charity, Expand, to implement a number of development projects in local villages in two districts. Through this collaboration, KHP has created a staff village with renovated housing for over 500 residents. The village has part-time electricity from a generator; running water; sports grounds; and housing that is renovated annually. KHP also established nurseries and primary schools for all children in the area as well as a local entertainment area and sports facilities.

INVESTMENT OPPORTUNITY

KHP is open to a number of investment opportunities to help expand the scale and scope of their business offerings outside of their core essential oils business. The plantation has beautiful scenery and a number of exotic animals that provide great opportunities for investments in tourism. The sustainable charcoal business also has significant potential for growth through additional investment.

2.2 CONSOLIDATED PROCESSING INDUSTRIES

Consolidated Processing Industries (CPI) is a company based in the Viphya Plantation of Malawi. It was incorporated in 2016 and was founded by three individuals: Enock Zimba, the Chairman; Tawonga Mtegha, the Managing Director; and Peter Mwanza, the Finance Director. CPI's concept is to produce value-added wood products sustainably from the limited resources remaining in the Viphya Plantation. CPI currently has production facilities to make doors and furniture and has purchased factory production lines to make plywood and block board.

RESTORATION OPPORTUNITY

CPI is in the process of applying for a 5,000 hectare forestry concession from the Government of Malawi and has pledged to replant 500 hectares of depleted forest by May 2019 with funding from a USAID-funded project. With the concession, CPI plans to plant 300 to 500 hectares of trees per year for the next 10 years. CPI will plant additional stands of indigenous trees to encourage natural fauna and flora to grow. CPI's nursery has the capacity to produce more than 1 million seedlings. Seedlings sufficient to restore about 150 hectares will be donated to the surrounding communities so that they have a vested economic and silvicultural interest in the industry that employs them.

ENVIRONMENTAL AND SOCIAL IMPACTS

The Viphya Plateau is an important watershed for Lake Malawi, and it is well noted that the flows of the once-perennial rivers have now become seasonal. Restoring several thousand hectares of forest will help CPI maintain and enhance existing swamps and riparian strips within its concession to ensure the viability of rivers and tributaries. CPI will also allocate 250 hectares to produce *Eucalyptus grandis* and *Eucalyptus cloeziana* for sustainable charcoal production using efficient retort kilns which improve charcoal yields by over 33 percent to domestic kilns. As a result, CPI will be compliant with Conference of the Parties (COP21) at the United Nations Framework Convention on Climate Change (UNFCCC). By executing this plan, CPI contributes to the Reducing Emissions from Deforestation and Forest Degradation (REDD+) program and the Low Emission Development Strategies (LEDS) Global Partnership.

INVESTMENT OPPORTUNITY

CPI would like to expand its factory capacity in line with the growth of its planted trees and enter new lines of timber-based, value-added manufacturing (e.g. glue laminated timber, medium-density fiberboard (MDF), particleboard and cement bonded particleboard). The housing shortage in Malawi naturally lends itself to prefabricated wood-based structures that would be more carbon neutral than the burnt brick model commonly employed. Within Africa, this would be a unique and environmentally-conscious solution to an increasing demand for housing.

2.3 AFRIBAM

RESTORATION OPPORTUNITY

Afribam is the only bamboo company in southern Africa able to supply certified tissue culture giant bamboo seedlings. They have worked alongside Forest and Garden Services and built the largest bamboo nursery in eastern Africa. Forest and Garden Services has the largest giant bamboo plantation in eastern and southern Africa at 180 hectares. The farm employs over 100 people from the surrounding communities and with limited irrigation to some areas of the bamboo, the farm can also grow vegetables and crops for the first few years of operations.

ENVIRONMENTAL AND SOCIAL IMPACTS

Afribam's long term plan is to create a sustainable firewood and charcoal supply chain as an alternative to the indigenous wood currently used, mitigating deforestation in Malawi. Giant bamboo is a short cycle, non-clear-cut crop with a permanent 60 percent standing carbon sink. Bamboo is

readily processed by hand, making it a low barrier-to-entry utility crop that can yield 40 tons of dry biomass per hectare and 5 tons of edible shoots per annum.

INVESTMENT OPPORTUNITY

Afribam is open to a number of investment opportunities to help expand the scale of its nursery and plantation. Working with NGOs and tobacco companies, Afribam has already supplied several hundred thousand plants to rural communities across Malawi since 2014. While this may seem significant, a recent survey has indicated the need to plant 35 million plants over the next decade to address the fuelwood needs of rural households. Meeting the required target will require significant expansion of the nursery and water infrastructure and a significant increase in the procurement of tissue culture material.

As the supply of bamboo reaches critical mass, further investment opportunities will emerge: biomass for fuelwood or charcoal; utility materials for building or furniture production; the processing of fiber; and nutritional supplements.

2.4 SALONA AND CHAMALUKWA ESTATES

The Salona and Chamalukwa Estates are commercial farms that cover a combined area of approximately 1,600 hectares. The estates are owned and managed by the Kamatenda family, which has more than 40 years of experience growing commercial crops such as tobacco, maize, legumes and livestock. The family has also diversified their activities to become involved in transportation and quality grading of produce. This project would expand the activities of the estates by introducing a commercial crop of pine trees that would be used to produce pine planks and poles for export and domestic sale.

RESTORATION OPPORTUNITY

The Salona and Chamalukwa Estates currently have 1,600 hectares of land under fallow. Under the proposed project, the fallow land will be afforested with pine trees at a density of approximately 3,000 trees per hectare.

ENVIRONMENTAL AND SOCIAL IMPACTS

The project will create employment opportunities for people in nearby communities and an emphasis will be placed on hiring women from the local communities. The estates will also work closely to share knowledge about tree management practices and species-specific knowledge in order to help communities restore their own land through reforestation. The afforestation project is also expected to alter the micro-climate surrounding the plantation, leading to increased soil moisture and decreased soil loss.

INVESTMENT OPPORTUNITY

The Salona and Chamalukwa Estates are seeking investments of US \$500,000 or more to establish 1,600 hectares of pine plantation, including the establishment of a nursery and the planting of seedlings.

2.5 TLC VIPHYA PLANTATION

The TLC Viphya Plantation aims to be the first Forest Stewardship Council (FSC) certified forest plantation in Malawi. TLC Viphya has a concession on more than 15,000 hectares of plantation that it uses to grow a combination of pine and eucalyptus. The company currently produces round logs, firewood, and slash that it sells to several different end users throughout Malawi. Future outputs will include poles, milled timber, particle board, and other value-added outputs.

RESTORATION OPPORTUNITY

TLC Viphya's forest concession is on an area of land that was formerly pine plantation, but has been bare since the previously planted pine trees were harvested but not replaced. The company's plan is to replant approximately 12,000 hectares of land with a combination of pine and bluegum eucalyptus over the next five years.

ENVIRONMENTAL AND SOCIAL IMPACTS

TLC Viphya's replanting activities will restore flood and erosion control in an area where large-scale deforestation has reduced the environment's ability to supply these important ecosystem services. The company invests in a number of programs and activities to benefit local communities; TLC Viphya has rehabilitated two schools and established three shallow wells to provide clean drinking water for local villages. The company has plans to continue its investment in education and community health as its operations expand. TLC Viphya will implement new community food programs to reduce food insecurity and work with local farmers to grow nitrogen-fixing crops alongside the company's seedlings during the first two years of tree growth.

INVESTMENT OPPORTUNITY

TLC Viphya is already in negotiations with a private equity investor to fund the majority of the business plan, but the company is interested in talking to other investors about new opportunities.

3.0 INVESTMENT OPPORTUNITIES IN AGROFORESTRY ENTERPRISES

Malawi grows a wide variety of tree-based crops including bananas; mangoes; macadamia nuts; and avocados. The country's agricultural sector accounts for 32 percent of the economic activity in Malawi and more than 85 percent of the country's exports (Simoes, A.J.G., Hidalgo, C.A. 2011). Agriculture is also a significant employer, accounting for approximately 90 percent of employment in the country. Smallholder farmers grow an estimated 75 percent of Malawi's annual food supply and cultivate more than 2.7 million hectares of land (ADF 2006). Many larger businesses are working with smallholders to establish outgrower schemes that provide the businesses with a decentralized supply of inputs while the smallholders benefit by diversifying their production and generating cash incomes.

The GoM recognizes the important role agriculture plays in the national economy and has taken steps to strengthen investment opportunities in agriculture. The Agriculture Sector Wide Approach Support Project (ASWAp-SP) was set up to overhaul and develop new agricultural sector policies to expand the commercial agriculture sector of the economy. The National Agriculture Policy (NAP) was created to promote the cultivation and processing of non-traditional, high-value agriculture value chains. The NAP focuses on promoting sustainable production through the use of irrigation, mechanization, agro-processing, and value addition.

Malawi's population is also continuing to increase, which is reducing average smallholder farm sizes and pushing people off of rural farms in pursuit of work. As a result, low-skilled labour is abundant and relatively inexpensive and will likely remain so into the future. This creates opportunities for low-margin activities like commodity production of tea, coffee, tree nuts, and fruit. There are also opportunities to add value to these commodities with processing that allows them to be exported to high-value markets. Malawi has abundant fresh water resources that remain undeveloped as sources of irrigation water which, combined with Malawi's favorable climate, create opportunities to grow high-valued crops year-round.

3.1 TROPHA ESTATES

Tropha Estates, a subsidiary of Jacoma Estates, is a producer of macadamia nuts, chilli and paprika in northern Malawi. Tropha has planted 370 hectares of macadamia nut trees. Early investments in Tropha provided capital for the company to develop irrigation infrastructure as well as a macadamia nut processing plant, which will allow the company to access new markets as macadamia nut production increases in the years ahead. The company employs 400 full time workers and 500 seasonal workers from nearby communities.

RESTORATION OPPORTUNITY

Tropha Estates has plans to establish an additional 170 to 220 hectares of macadamia nut trees on areas that were once used to grow tobacco. The company is also hoping to plant macadamia nut trees outside of its own plantation by adding new outgrowers to their existing operation.

ENVIRONMENTAL AND SOCIAL IMPACTS

The outgrower schemes that Tropha manages allow more than 1,000 local farmers to access export markets, which is important in a country where low yields and poor quality typically prevent access. The outgrower scheme also helps local farmers adopt climate-smart agricultural practices and manage their resources more efficiently to protect themselves from the impacts of climate change. Tropha uses their irrigation infrastructure to supply local farmers with irrigation water so they are less exposed to the risks of drought. Additionally, the company funds a local clinic and a primary school and provides maize at subsidized prices to surrounding communities.

INVESTMENT OPPORTUNITY

Tropha could take on additional investments of USD \$500,000 to \$2.0 million to increase the area planted with macadamia nut trees by 170 to 220 hectares and to expand its processing facility. Additional investment would be used fund extension and outreach services to increase the number of outgrowers that work directly with Tropha.

3.2 MORINGA MIRACLES

Moringa Miracles is a limited liability company incorporated in Malawi in 2011 to commercially cultivate the Moringa tree genus (*Moringa oleifera*). The company has plans to produce both leaf powder and seed oil for domestic consumption and export. Leaf powder will be produced at the company's farm in the Lower Shire River Valley and oil seed will be produced in partnership with local smallholders. Residual cake from the oil seed production process will be sold on the local market as an animal feed. Through research trials, Moringa Miracles has been able to produce moringa powder at lower costs than competitors while still maintaining the quality and safety standards to meet UK Food Standard Agency requirements.

RESTORATION OPPORTUNITY

Moringa Miracles owns a 150 hectare farm where it will establish a plantation of Moringa trees. Initially the company will plant 30 hectares of Moringa. As demand increases, Moringa Miracles will plant the remaining 120 hectares. The company will also establish an outgrower scheme to establish Moringa trees on the farms of smallholders in the Shire River watershed. The outgrower scheme has the potential to increase the number of hectares under tree cover by several hundred additional hectares.

ENVIRONMENTAL AND SOCIAL IMPACTS

Moringa Miracles will partner with 1,700 smallholders, increasing to 3,400 from 2019, through an outgrower program. One hundred thousand trees will be gifted to selected smallholders and the company will guarantee a route to market for the seed subsequently produced. All of the seed produced by smallholders will be purchased at the market rate and will increase smallholder incomes by an average of USD \$150 each year. This will increase average incomes by 43 percent. These partnerships, combined with wage earnings, will inject almost US \$500,000 into the local economy and lift more than 17,000 Malawians out of extreme poverty by 2019.

INVESTMENT OPPORTUNITY

Moringa Miracles is seeking an investment of USD \$1.2 to 1.5 million to plant 30 hectares of Moringa trees and to construct a processing facility to produce Moringa powder. The funds will also be used for extension services to establish the outgrower scheme.

3.3 MALAWI MANGOES

Malawi Mangoes is the first commercial fruit farming enterprise and fruit processing company in Malawi. It is also one of the largest mango producers in southern Africa. The company grows approximately 220 hectares of mangoes on its farm, with plans to expand to 330 hectares by the end of 2018. The company produces mango juice for domestic consumption; exports whole mangoes to high valued markets; and has plans to export dried mango in the near future. The company employs approximately 280 full-time workers in addition to several hundred smallholders as outgrowers.

RESTORATION OPPORTUNITY

As part of its ongoing operations, Malawi Mangoes has plans to plant approximately 400 to 450 hectares, formerly used as rangeland, with mango trees, wind breaks, and natural forests. All of the planting will comply with the stringent environmental standards set by the Rainforest Alliance.

ENVIRONMENTAL AND SOCIAL IMPACTS

Malawi Mangoes was the first mango producer in the world to receive Rainforest Alliance accreditation, which means 30 percent of their farmland is maintained as natural habitat. The company also invests in programs and activities to benefit more than a dozen communities that live near its farms. Malawi Mangoes has also invested in schools, boreholes, and transportation infrastructure for adjacent communities. The company provides significant employment opportunities for community members and promotes primary and secondary education of children living nearby to help prepare them for well-paying jobs with the company in the future.

INVESTMENT OPPORTUNITY

Malawi Mangoes is seeking investment of USD \$9 million to expand the existing farm and to purchase processing equipment to increase the number of value-added products produced. The company is seeking an additional investment of USD \$10 million to build out a separate 1,700 hectare farm.

4.0 NON-PROFIT ENTERPRISES

Several other enterprises are involved in restoration projects and while they lack direct investment opportunities, they are making important contributions to Malawi's restoration efforts.

4.1 TOTAL LANDCARE

Total LandCare (TLC) is an NGO founded in 1999 to sustain and to expand a successful agriculture and natural resource management program, The Malawi Agroforestry Extension Project (a 12 year-old project funded by USAID). TLC's mission is to improve the livelihood and the standard of living of smallholder farming households using integrated community approaches to address basic needs and community challenges. TLC's main focus is the empowerment of communities to find solutions to their own challenges by establishing a foundation of knowledge, skills, and resources that the community can use to transition from subsistence survival to business-based livelihoods.

RESTORATION OPPORTUNITY

The organization's activities and interventions offer a number of restoration opportunities across four thematic areas: forestry; sustainable agriculture; rural-based enterprises; and water and sanitation. TLC's forestry interventions focus on restoring the productivity of forest areas through tree planting; expanding the adoption of efficient cookstoves, and allowing woodlands and on-farm trees to naturally regenerate. TLC's sustainable agriculture interventions focus on increasing and conserving soil nutrients, reducing soil loss, and conserving soil moisture – all of which help to improve crop performance. The rural-based enterprises include activities like mushroom cultivation and honey production, both of which rely on natural forest areas. These interventions help communities value natural forest areas, offering communities a direct incentive to restore and conserve their forest areas.

ENVIRONMENTAL AND SOCIAL IMPACTS

TLC's projects have improved the environment and livelihoods of communities in 17 districts throughout Malawi. TLC helps communities overcome a number of social and environmental challenges, including low agricultural output and lack of diversified food crops; food insecurity; poor nutrition; vulnerability to variable weather and climate change; limited access to capital; credit; inputs and markets; high incidence of disease; shortages of fuelwood and building materials; and the degradation of natural resources.

4.2 SHIRE RIVER BASIN MANAGEMENT PROGRAM

The Shire River Basin Management Program aims to bring many people and sectors together to plan, develop, and manage the natural resources of the Shire River Basin for the benefit of the present and future generations. The project has three main targets: build capacity to design management plans in four water catchment areas; oversee the implementation of catchment plans; and develop small scale enterprises to reduce pressure on agricultural land.

RESTORATION OPPORTUNITY

The Shire River Basin Management Program offers a great restoration opportunity since it covers an area of tens of thousands of hectares. The largest water catchment is 41,000 hectares in size. The program has distributed several varieties of seedlings to smallholders to restore degraded agricultural land inside the basin.

ENVIRONMENTAL AND SOCIAL IMPACTS

The program is focused on restoring degraded and deforested land inside the Shire River Basin to improve water yield and water quality. The program has also invested in job training, business development, and infrastructure development.

4.3 ONE ACRE FUND

One Acre Fund (OAF) provides a bundled services within walking distance of smallholder farmers. The bundled services include financing for farm inputs; distribution of seed and fertilizer; training on agricultural techniques; and market facilitation to maximize profits from harvest sales. In 2016, OAF served approximately 2,600 farm households in 3 districts in Malawi.

RESTORATION OPPORTUNITY

OAF's activities in Malawi now include distributing tree seedlings to the smallholder farmers with whom they work. OAF has a contract with a nursery in Malawi to produce 100,000 seedlings that will be planted by the 2,600 households it currently serves. OAF plans on expanding its activities to reach 200,000 households within 5 years, which means the potential to restore large areas of degraded land through targeted tree planting is significant.

ENVIRONMENTAL AND SOCIAL IMPACTS

In 2015, severe flooding across Malawi caused widespread crop damage and losses. OAF helped farmers replace rain-damaged seed and distributed a modest weather insurance payout. As a result, farmers working with OAF saw a 71 percent higher maize yield than farmers who operated independently. This equated to an average household earnings increase of USD \$21 per year.

4.4 MZUZU COFFEE

Mzuzu Coffee Growers Union is a collection of six smallholder cooperatives that produce shade-grown, Fair Trade, and organic certified coffee for the domestic market and export. The union has 3,000 member farmers, of which 25 percent are women. The cooperatives also run two coffee shops, known as the Mzuzu Coffee Den and the Mzuzu Coffee Suites.

RESTORATION OPPORTUNITY

The cooperative's farmers are involved in a sustainable agriculture pilot program that is helping them move away from mono-crop systems. Farmers are encouraged to adopt shade-grown coffee production techniques, which prevent soil erosion. Farmers are also being taught how to make organic fertilizers to improve soil fertility.

ENVIRONMENTAL AND SOCIAL IMPACTS

The cooperative's farmers strive to earn at least USD \$1,000 per year by growing coffee, which is a substantial income compared to the national average. The union has also invested in local infrastructure by building bridges and accommodation for teachers to help improve access to education. Additionally, the union is working with its members to help them respond to challenges posed by climate change by adopting sustainable land management practices.

5.0 INVESTORS

More than 15 investment funds have expressed interest in investing in the agriculture and forest sectors of developing countries in support of the Bonn Challenge and AFR100 restoration initiatives. Local funds that are not partners of the Bonn Challenge, such as AgDevCo, are also actively looking for investment opportunities in both sectors. Five of the funds researched for this project have a history of making investments in forestry and agriculture in the East African region (Table 2).

TABLE 2: RESTORATION-FOCUSED INVESTMENT FUNDS WITH A HISTORY IN MALAWI OR THE EAST AFRICA REGION

Name	Country	Activities Invested In	Philosophy
AgDevCo	Malawi	Commercial agriculture	AgDevCo is a social impact investor and project developer operating exclusively in the agriculture sector in Africa. The company's mission is to reduce poverty and to improve food security by investing in profitable agricultural projects with strong links to markets.
Uhusiano Capital	Sub-Saharan Africa	Special Purpose Vehicles (SPVs), Green Energy projects and strategic advisory focused on impact and international business development.	Uhusiano Capital addresses the capital needs of African-based projects and opportunities, providing expertise in asset-raising for first time funds and start-up companies. The key focus is creating social impact at the base of the pyramid via companies and portfolios that combine commercial rewards with social and impactful gains in the communities they serve.
Business Partners International	Malawi	Small and medium enterprises engaged in a variety of sectors. BPI currently does not invest in enterprises engaged in primary production.	BPI is a specialist risk finance company that provides customized financial solutions, sectoral knowledge, and mentorship for formal SMEs. The focus of the fund is to provide access to funding and post-investment technical assistance support for SMEs, thereby stimulating wealth creation, increasing employment, and fostering local entrepreneurship.
Terra Bella Fund / Terra Global Capital	Malawi, Tanzania	REDD+ reduction of deforestation in select protected areas, REDD+ community forest management	The fund is a global leader in technical advisory and investments that produce financially, socially, and

			environmentally sustainable landscapes.
Global Environmental Fund	Malawi	Commercial forestry	GEF is a private equity fund manager focused on resource productivity investments globally. For more than 25 years, the firm has been investing in businesses in both emerging and developed markets, principally in North America, Latin America, and South Asia, where changing energy, environmental, and natural resource use has resulted in business and financial opportunities.
Sustainable Forestry Investments	Tanzania	Forest plantation management and restoration of natural forest	Dutch-based investment company holding assets in Ghana and Tanzania.
Form International	Tanzania	Forest plantation management and restoration of natural forest	Form International is a forest management and services company that manages forest assets in Africa and delivers a range of technical and financial services to clients worldwide, including forest plantations, forest restoration enterprises, nature conservation and agroforestry in Ghana and Tanzania. The focus is on the restoration of degraded forest lands to productive, ecologically, and socially functioning landscapes.

Note: Form International is a part-owner of Sustainable Forestry Investments.

The funds range from impact investors willing to forgo market rates of return in order to create positive social and environmental impacts to funds that invest in sustainability as a means of earning above-average financial returns. To date, the funds have primarily invested in forestry projects that include the production of timber, the sequestration of carbon, and the restoration of natural forests.

AgDevCo, a multinational investment firm with a presence in Malawi, is the only fund that has a history of investing in commercial agricultural projects, such as macadamia nut production, in Malawi. Other investment funds are less interested in investing in primary production due to the number of objective risks, such as drought, pests, and disease that threaten the sector's financial returns. As a result, AgDevCo may be the best-positioned fund to invest in businesses focused on restoration through primary production.

Business Partners International (BPI), which also attended the Malawi Investment Forum, is a South African fund with a base of operations in Blantyre, Malawi. Unlike AgDevCo and Uhusiano, BPI does not invest in primary production. Instead, the fund focuses on providing customized financial solutions, sectoral knowledge, and mentorship for formal small and medium enterprises (SMEs). The focus of the fund is to provide access to funding and post-investment technical assistance support for SMEs, thereby stimulating wealth creation, increasing employment, and fostering local entrepreneurship. Given BPI's focus, the fund may be best suited to providing investment to companies focused on value addition rather than primary production.

The Global Environment Fund, Sustainable Forestry Enterprises, and Form International are most experienced in commercial forestry and seem more likely to fund enterprises like TLC Vipyha Plantation, Salon Estates, and Kawandama Hills Plantation. None of the investible enterprises have the opportunity to monetize their carbon, which would limit the interest from investment funds created to invest in carbon offset projects like the Terra Bella Fund.

There are 12 investment funds with interest in the forestry and agriculture sectors of developing countries that have no history of making investments in the East African region (Table 3). All of the funds are impact investors who want to create social and environmental returns in addition to financial returns.

TABLE 3: OTHER RESTORATION-FOCUSED INVESTMENT FUNDS

Name	About the Investor
Althelia Ecosphere	Althelia Ecosphere's Althelia Climate Fund invest in projects that reduce deforestation, mitigate climate change, protect biodiversity, and provide a fair and sustainable living to rural communities while offering investors a fair return on capital.
The Moringa Fund	Moringa is an investment fund which targets agroforestry projects located in Latin America and Sub-Saharan Africa. The fund is looking for partners to develop sound and sustainable projects combining economic benefits with high environmental and social programs.
Permian Global Fund	The fund develops and implements projects that optimize the storage of carbon in natural forests for the purpose of climate change mitigation.
Livelihoods Carbon Fund	The livelihoods funds propose innovative investment models to simultaneously address environmental degradation, climate change and rural poverty, while helping businesses become more sustainable.
Landscape Fund	The Landscape Fund uses a networked financing approach, which provides an innovative response to financing sustainable land use via intelligent diversification and addressing the finance needs of smallholders.
Land Degradation Neutrality Fund	The fund is expected to partner with all types of entities engaged in sustainable land management, ranging from consultants, corporates, and development financial institutions to sub-national governments and national authorities, NGOs and organized local communities, cooperatives and farmers organizations among other local economic actors.
EcoBusiness Fund	The fund is spearheading the preservation and promotion of biodiversity through private enterprise. In providing financing to the fund's target group for investing in activities that conserve nature and foster biodiversity, the EcoBusiness Fund seeks investments that yield both financial and environmental returns.
Arbaro Forest Fund	Investing in sustainable timber plantations, the Arbaro Fund aims at merging strong financial returns with a substantial social and ecological value-add.
EcoEnterprises II	The fund utilizes mezzanine, quasi-equity, and long-term debt instruments to drive growth in expanding sectors such as sustainable agriculture, agroforestry, sustainable aquaculture, ecotourism, certified forestry, and wild-harvested products.
Commonland	Commonland believes that landscape restoration offers tremendous untapped opportunities for sustainable economic development. To demonstrate this potential, it develops landscape restoration projects that are based on business.
EcoPlanet Bamboo	EcoPlanet Bamboo is leading the industrialization of bamboo as a viable and environmentally attractive alternative fiber. The conversion of degraded land into certified bamboo farms and bamboo plantations is coupled with investment into development of innovative technology to provide turnkey solutions for products and markets that currently contribute to the deforestation of our world's natural forests.
NatureVest	NatureVest is the conservation investing unit of The Nature Conservancy. NatureVest's mission is to create and execute investable deals in a wide variety of sectors around the world that deliver conservation results and financial returns for investors. Their vision is based on the conviction that capital markets, businesses, and governments must invest in nature as the long-term capital stock of a sustainable, equitable, and more efficient economy.

Note: The investment funds were listed by the World Resources Institute at: <http://www.wri.org/our-work/project/AFR100/impact-investors>. There may be other funds willing and able to invest in enterprises that restore degraded and deforested land, but the funds listed above represent the best options for enterprises

seeking investment because they have taken the necessary steps to align themselves with restoration initiatives like the Bonn Challenge and AFR 100.

Many of the funds in Table 3 may be well aligned with the group of businesses that provide investment opportunities. Funds like the Moringa Fund and the Livelihoods Carbon Fund, which target projects that improve the welfare of surrounding communities and benefit the environment, would be good fits for businesses like Moringa Miracles. The EcoBusiness Fund, which targets projects in the ecotourism and forestry sectors, may find opportunities to work with a business like Kawandama Hills Plantation to establish an ecotourism business and enhance the protection of KHP's natural forest area. Salona Estate's proposed plantation project on its large estate could be a good fit for the Commonland and Arbaro Forest Funds, which invest in sustainable landscapes and sustainable forestry, respectively. Commonland, along with the EcoEnterprise II Fund, may be well placed to make investments in TLC Viphya Plantations, Moringa Miracles, and Malawi Mangoes, given both funds' interest in certified forestry and sustainable landscapes.

6.0 BARRIERS TO INVESTMENT

Barriers that prevent investment in restoration businesses in Malawi were explored during interviews with each business. During the 2018 Malawi Investment Forum a panel of restoration businesses and investors was convened to further discuss the issue.

During the interview phase of this project, representatives of each business were asked about the key barriers they face when trying to conduct and grow their business. Representatives shared several barriers in the forestry and agricultural sectors such as:

- Slow government processes to approve business plans and access land;
- Lack of capital and high interest rates at startup and growth stages;
- Markets for wood products are undermined by illegal activities that undercut market prices;
- Poor transportation, energy, and communication infrastructure increase the costs of production and distribution, which reduce competitiveness and profitability;
- Knowledge gaps about production processes and genetic varieties;
- Difficulty to meet volume and quality standards; and
- Risks of theft, fire, and pests.

These issues were explored further during the 2018 Malawi Investment Forum. According to Dr. Clement Chilima, the Director of Forestry, the cost of restoration can be high enough to be prohibitive for the government to commit resources to large-scale efforts. Part of the challenge the government faces is due to the large number of hectares of gazetted forest reserves. The reserves create an administrative barrier between utilization and commercialization because the land must be protected for its natural values. As a result, it is difficult for the government to open the land up to commercial development that could offset some of the costs of restoration.

Many of the barriers faced by the private sector involve energy, finance, and access to land. During the panel discussion at the MIF, several businesses cited the lack of a consistent energy supply as a major barrier to restoration. The lack of energy increases production costs, which decreases the cost-competitiveness of the products produced by companies.

Many businesses said that capital investment was a large barrier to doing business because interest rates from Malawi's commercial banks are uncompetitive and outside investors are in short supply. Businesses also face barriers due to lack of finance that stem from a mismatch between when companies need investment and when investors demand repayment. Investors often want to generate returns over the short- and medium-terms, while investments in forestry and restoration are long-term investments.

Several businesses cited the difficulty of accessing large tracts of land as a barrier to operations. Enterprises said their plans often took a long time to carry out because government processes for permits and approvals are often drawn out. Additionally, gaining access to land, either for lease or purchase, can take months or, in some cases, years. One business commented that they have had a difficult time proving their concept because they cannot access enough land to launch a pilot project.

Businesses in the forestry sector also struggle with downward pressure on prices that are a result of illegal timber harvesting and charcoal making activities that undercut market prices for sustainably produced timber and charcoal. Some of the commercial agriculture businesses struggled to maintain high quality and volume standards that are necessary for their products to access high-value export

markets while other businesses face the opposite challenge because the price of their products are undercut by lower quality alternatives.

Investors shared the barriers that they perceive as limiting the amount of investment they can direct towards Malawian restoration businesses. Like businesses, the primary constraint stems from a lack of reliable power sources. Investors also cited land access as a potential barrier. Some investors said that a lack of guarantee funds, which can take on the first layer of risk, is preventing them from making investments in Malawian companies.

7.0 KEYS TO SUCCESSFUL BUSINESSES

Past experience has shown that businesses can take several steps to increase their probability of investment success. Feedback from decades-old agricultural enterprises in Malawi suggest that success depends on:

- Committing to enterprises over the long term (20 to 50+ years);
- Building relationships with nearby communities and making the businesses' successes the communities' success;
- Building relationships with investors to have a source of reliable and affordable capital to expand operations and persist through temporary adverse conditions; and
- Building a nimble businesses that can respond to the inevitable ups and downs of the business cycle.

Businesses that are committed to their enterprises over the long-run (15 to 50+ years) are more likely to persevere in Malawi than those that take short-term views of success. Many businesses discussed how long it can take to receive permits and approvals for new activities and expansion of existing activities. Developing business models that operate on long time scales is one way of ensuring that short-term challenges can be overcome without a large cost to the business.

It is important that businesses commit themselves to building relationships with the communities that surround their operations. When communities feel unfairly cut off from the benefits of enterprises that operate nearby, they may encroach on the enterprises' land or even damage the enterprise itself (Nyasa Times 2016).

Businesses can take a number of steps to share the benefits of their success with local communities. Several businesses helped communities make investments in medical clinics and schools or drill boreholes to ensure access to clean water and store maize to increase food security during times of drought. The businesses can be large employers for people from local communities. Outgrower schemes also offer another way to share the success of the business.

Finding patient investors that understand the unique challenges of investing in forestry and agricultural enterprises in Malawi is also a great asset to businesses. Many of the businesses highlighted in this report have long-term perspectives that require investors that are comfortable earning a return over a 10 to 15 year period. Finding investors who are comfortable with the risk of longer-term projects allows the enterprises to focus on carrying out their business plans rather than focusing on generating short-term returns.

8.0 RECOMMENDATIONS

The most useful outputs from this project were the barriers that businesses, investors, and government identified as obstacles to investment in restoration. Many of the challenges, like lack of access to reliable electricity, are not unique to businesses engaged in land restoration; they are pervasive throughout the country and affect every economic sector. However, other challenges, like the production and selling of illegal timber products, affect restoration businesses uniquely.

As the GoM continues to refine its approach to achieving the country's Bonn Challenge commitment to restore 4.5 million hectares of degraded land, it should consider which barriers are already being addressed through other initiatives and which ones are unique to restoration and must be addressed individually.

In the short-term, restoration businesses would benefit from enforcement of laws against illegal timber production, both for sawn wood and charcoal. Businesses cannot compete against competitors that effectively have access to trees at no cost. Additionally, the GoM should create a private sector restoration task force that convenes each quarter to discuss common problems and potential solutions. The experience from the MIF showed that businesses, investors, and government share many of the same challenges, but they are unaware of their shared circumstances because there is no forum through which they can have a regular dialogue.

Over the medium- and long-terms, the GoM should establish a guarantee fund to take the first layer of risk in investments in restoration businesses. In addition to reducing investment risk, a guarantee fund could also help investors exercise more patience with tree-based investments, thereby reducing another significant barrier to private investment. Lastly, the GoM should expand its promotion of Malawian companies engaged in restoration to help them gain the attention of international investment funds. The success of this project was made possible by bringing businesses together with investors to see new opportunities in Malawi's restoration sector, and that success should continue to be built on each year.

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10.0 APPENDIX

10.1 APPENDIX I: WRI RESTORATION BUSINESS CHECKLIST

The checklist below is a guide to finding investable restoration projects. These sets of questions were developed by the New Restoration Economy team at the World Resources Institute and are being applied in our search for promising business models in forest and landscape restoration.

The responses to questions included in this checklist can be used to identify and shortlist those projects that can attract private capital *and* deliver the environmental and socio-economic outcomes we are looking for. In order for projects to be accepted, they need to pass all five of the criteria listed below. While this might sound demanding, investors are very demanding when they allocate capital.

This checklist is best completed by an independent third party who will visit and speak with the restoration companies. Once you have used the checklist to develop a list of promising restoration projects, then the next step is to work with project teams to understand the barriers to scale they are facing, and the type of assistance they need to move forward.

Questions or comments? Please contact Sofia Faruqi at sofia.faruqi@wri.org.

Project name: _____

- 1. Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?			
Has an organization been set up to develop the project?			
Are there ongoing commercial operations?			
Are there full-time employees?			
Is there a business plan?			
Are there revenues? I.e., have there been any sales?			
Are there profits, or are there expected to be in the next year?			

- 2. Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?	2x	10x	20x or more
Are most business costs fixed or variable?	Mainly variable	Combo of both	Mainly fixed
What is the marginal cost (cost of selling one more unit)?	High	Medium	Low
How does the cost of gaining new customers change as the project grows?	Increases	Constant	Falls
What is the targeted size in terms of hectares (ha) 3 years from now?	2,000 or less	2,000-10,000	10,000 or more

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than

one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?	Yes	Maybe	No
Are the staff requirements very specialized and/ or difficult to find?	Yes	Maybe	No
Can the same concept be done in another part of the country?	No	Maybe	Yes
What about the broader region or continent?	No	Maybe	Yes
Can this concept be replicated in other countries outside the continent?	No	Maybe	Yes
What is the payback period?	10+ years	6-9 years	1-5 years
How difficult is it to start a similar project in another location?	Difficult	Manageable	Easy

4. **Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?	Yes	Somewhat	No
Does the project contribute to increasing natural resource productivity?	No	Somewhat	Yes
What is the diversity in species planted or managed by the project?	Monoculture	2-3 species	4+ species
Is long-term sustainability incorporated into management plans and strategy?	No	Somewhat	Yes
How much does soil health improve?	Minimal/zero	Somewhat	A lot
How much does air and water quality improve?	Minimal/zero	Somewhat	A lot
What is the impact on wildlife and biodiversity?	Minimal	Medium	Positive
What is the extent of other ecosystem improvements?	Low	Medium	High

5. **Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?	Under 10	10-30	30+
What % are women and youth?	Under 25%	25-50%	Above 50%
What % are poor?	Under 25%	25-50%	Above 50%
What % of higher-value activities are completed using local talent?	Limited	Some	Most

In addition to employment, does the local community benefit from this project?	No	Maybe	Yes
Outside the local community, do people benefit from this?	No	Maybe	Yes

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)			
Scalable (“Good” for at least 3 questions)			
Replicable (“Good” for at least 3 questions)			
Environmental impact (“Good” for at least 3 questions)			
Socio-economic impact (“Good” for at least 2 questions)			

10.2 APPENDIX 2: MALAWI ENTERPRISE SURVEY

The Malawi Enterprise Survey was made available to enterprises through a web link that directed them to the survey page. The survey can be found at: <https://www.research.net/r/BMZ8Y7G>. The survey questions are given below. Statements inside of the parentheses, (), reflect the question type. Questions were either open-ended, yes/no, or multiple choice.

Questions

1. What services and products does your enterprise produce and market? (Open-ended)
2. Is your enterprise currently selling products and services? (Yes/No)
3. How many full-time employees does your enterprise employ? (Open-ended)
4. What percentage of employees are women and young adults (aged 18-26)? (Open-ended)
5. In addition to employment, does the local community benefit from this project? (Yes/No)
6. Does your enterprise have a business plan? (Yes/No)
7. Has your enterprise generated any revenues? (Yes/No)
8. Has your enterprise generated and profits/does your enterprise anticipate being profitable over the next 12 months? (Yes/No)
9. In your opinion, how much could your enterprise grow revenues from its current level? (e.g. 2x, 5x, 10x, etc....)(Open-ended)
10. What are the largest costs your enterprise faces? (e.g. ;and, labor, material inputs, etc...)(Open-ended)
11. What is the size of your enterprise in terms of hectares? (Open-ended)

12. How much capital does your enterprise require? (Open-ended)
13. Does your staff require specialized skillsets or training? (Yes/No)
14. How difficult is it to start a similar enterprise in another location? (Open-ended)
15. Does the enterprise contribute to increase natural resource productivity (Yes/No)
16. What is the diversity in species planted or managed by the project? (Monoculture; 2-3 species; More than 3 species).
17. Is long-term sustainability incorporated into management plans and strategy? (Yes/No).
18. Does your enterprise improve water and/or air quality? (Yes/No)
19. What is the name of your enterprise? (Open-ended)
20. What is your email address?

End of Survey

10.3 APPENDIX 3: WRI RESTORATION BUSINESS CHECKLIST FOR KAWANDAMA HILLS PLANTATION

Project Name: Kawandama Hills Plantation

Location: Northern Region, Malawi

Contact Person: Tanya Clarke, Tanya.Clarke@cplmalawi.com

1. **Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?	X		
Are there full-time employees?	X		
Is there a business plan?	X		
Are there revenues? I.e., have there been any sales?	X		
Are there profits, or are there expected to be in the next year?			X

2. **Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?		Constant	
What is the targeted size in terms of hectares (ha) 3 years from now?		2,000-10,000	

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?			No
Are the staff requirements very specialized and/ or difficult to find?			No
Can the same concept be done in another part of the country?	No		
What about the broader region or continent?		Maybe	
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?	10+ years	6-9 years	1-5 years
How difficult is it to start a similar project in another location?		Manageable	

- 4. Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?			4+ species
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	
How much does air and water quality improve?			A lot
What is the impact on wildlife and biodiversity?			Positive
What is the extent of other ecosystem improvements?			High

- 5. Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?		25-50%	
What % of higher-value activities are completed using local talent?			Most
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?		Maybe	

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)		X	
Replicable (“Good” for at least 3 questions)	X		
Environmental impact (“Good” for at least 3 questions)	X		

Socio-economic impact (“Good” for at least 2 questions)	X		
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10.4 APPENDIX 4: WRI RESTORATION BUSINESS CHECKLIST FOR MALAWI MANGOES

Project Name: Malawi Mangoes

Location: Salima, Malawi

Contact Person: Charlie Leaper, Charlie@malawimangoes.com

- 1. Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?	X		
Are there full-time employees?	X		
Is there a business plan?	X		
Are there revenues? I.e., have there been any sales?	X		
Are there profits, or are there expected to be in the next year?			X

- 2. Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?			Falls
What is the targeted size in terms of hectares (ha) 3 years from now?		2,000-10,000	

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?	Yes		
Are the staff requirements very specialized and/ or difficult to find?	Yes		
Can the same concept be done in another part of the country?			Yes
What about the broader region or continent?			Yes
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?		6-9 years	
How difficult is it to start a similar project in another location?		Manageable	

4. **Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?			4+ species
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	
How much does air and water quality improve?		Somewhat	
What is the impact on wildlife and biodiversity?		Medium	
What is the extent of other ecosystem improvements?		Medium	

5. **Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?			Above 50%
What % of higher-value activities are completed using local talent?			Most
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?			Yes

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)		X	
Replicable (“Good” for at least 3 questions)	X		
Environmental impact (“Good” for at least 3 questions)	X		
Socio-economic impact (“Good” for at least 2 questions)	X		

10.5 APPENDIX 5: WRI RESTORATION BUSINESS CHECKLIST FOR MORINGA MIRACLES

Project Name: Moringa Miracles

Location: Malawi

Contact Person: Iain Church, iainchurch@moringamiraclesltd.com

1. **Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	Yes		
Has an organization been set up to develop the project?	Yes		

Are there ongoing commercial operations?	Yes		
Are there full-time employees?	Yes		
Is there a business plan?	Yes		
Are there revenues? I.e., have there been any sales?		Yes	
Are there profits, or are there expected to be in the next year?		Yes	

2. **Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?			Falls
What is the targeted size in terms of hectares (ha) 3 years from now?		2,000-10,000	

3. **Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?		Maybe	No
Are the staff requirements very specialized and/ or difficult to find?		Maybe	No
Can the same concept be done in another part of the country?			Yes
What about the broader region or continent?			Yes
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?			1-5 years
How difficult is it to start a similar project in another location?		Manageable	Easy

4. **Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?	Monoculture		
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	A lot
How much does air and water quality improve?			A lot
What is the impact on wildlife and biodiversity?		Medium	Positive
What is the extent of other ecosystem improvements?		Medium	High

5. **Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?		25-50%	
What % of higher-value activities are completed using local talent?		Some	
			Yes
Outside the local community, do people benefit from this?		Maybe	

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	Yes		
Scalable (“Good” for at least 3 questions)		Yes	
Replicable (“Good” for at least 3 questions)	Yes		
Environmental impact (“Good” for at least 3 questions)	Yes		
Socio-economic impact (“Good” for at least 2 questions)	Yes		

10.6 APPENDIX 6: WRI RESTORATION BUSINESS CHECKLIST FOR TROPHA ESTATES

Project Name: Tropha Estates

Location: Northern Region, Malawi

Contact Person: Duncan McDavid, dmcdavid@jacomaestates.com

1. **Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?	X		
Are there full-time employees?	X		
Is there a business plan?	X		
Are there revenues? I.e., have there been any sales?	X		
Are there profits, or are there expected to be in the next year?		X	

2. **Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	20x or more
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?			Falls
What is the targeted size in terms of hectares (ha) 3 years from now?		2,000-10,000	

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?			No
Are the staff requirements very specialized and/ or difficult to find?			No
Can the same concept be done in another part of the country?		Maybe	
What about the broader region or continent?			Yes
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?		6-9 years	
How difficult is it to start a similar project in another location?		Manageable	

- 4. Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?	Monoculture		
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	
How much does air and water quality improve?		Somewhat	
What is the impact on wildlife and biodiversity?	Minimal		
What is the extent of other ecosystem improvements?		Medium	

- 5. Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?			Above 50%
What % of higher-value activities are completed using local talent?		Some	Most
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?		Maybe	

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)	X		
Replicable (“Good” for at least 3 questions)	X		

Environmental impact (“Good” for at least 3 questions)	X		
Socio-economic impact (“Good” for at least 2 questions)	X		

10.7 APPENDIX 7: WRI RESTORATION BUSINESS CHECKLIST FOR SALONA ESTATES PLANTATION

Project Name: Salona Estates Plantation

Location: Central Region, Malawi

Contact Person: Thyphord Chirwa, thyphord.ywc@gmail.com

- 1. Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?	X		
Are there full-time employees?	X		
Is there a business plan?		X	
Are there revenues? I.e., have there been any sales?	X		
Are there profits, or are there expected to be in the next year?	X		

- 2. Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	
Are most business costs fixed or variable?			Mainly fixed
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?			Falls
What is the targeted size in terms of hectares (ha) 3 years from now?		2,000-10,000	

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?	Yes		
Are the staff requirements very specialized and/ or difficult to find?			No
Can the same concept be done in another part of the country?			Yes
What about the broader region or continent?			Yes
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?	10+ years		

How difficult is it to start a similar project in another location?		Manageable	
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4. **Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?		2-3 species	
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	
How much does air and water quality improve?		Somewhat	
What is the impact on wildlife and biodiversity?		Medium	
What is the extent of other ecosystem improvements?		Medium	

5. **Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?			Above 50%
What % of higher-value activities are completed using local talent?		Some	
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?			Yes

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)	X		
Replicable (“Good” for at least 3 questions)	X		
Environmental impact (“Good” for at least 3 questions)	X		
Socio-economic impact (“Good” for at least 2 questions)	X		

10.8 APPENDIX 8: WRI RESTORATION BUSINESS CHECKLIST FOR TLC VIPHYA PLANTATION

Project Name: TLC Viphya Plantation

Location: Northern Region, Malawi

Contact Person: Richard Bunderson, rich.bunderson@gmail.com

1. **Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?			X
Are there full-time employees?			
Is there a business plan?	X		
Are there revenues? I.e., have there been any sales?			X
Are there profits, or are there expected to be in the next year?			X

2. **Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?			20x or more
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?			Falls
What is the targeted size in terms of hectares (ha) 3 years from now?			10,000 or more

3. **Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?	Yes		
Are the staff requirements very specialized and/ or difficult to find?		Maybe	
Can the same concept be done in another part of the country?			Yes
What about the broader region or continent?			Yes
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?		6-9 years	
How difficult is it to start a similar project in another location?		Manageable	

4. **Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?		2-3 species	
Is long-term sustainability incorporated into management plans and strategy?			Yes

How much does soil health improve?			A lot
How much does air and water quality improve?		Somewhat	
What is the impact on wildlife and biodiversity?		Medium	
What is the extent of other ecosystem improvements?		Medium	

- 5. Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?			Above 50%
What % of higher-value activities are completed using local talent?		Some	
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?			Yes

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)	X		
Replicable (“Good” for at least 3 questions)	X		
Environmental impact (“Good” for at least 3 questions)	X		
Socio-economic impact (“Good” for at least 2 questions)	X		

10.9 APPENDIX 9: WRI RESTORATION BUSINESS CHECKLIST FOR KAWANDAMA HILLS PLANTATION

Project name: Consolidated Processing Industries

Location: Viphya Plantation, Malawi

Contact person: Peter Mwanza (pmwanza@gmail.com)

- 1. Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?	X		
Are there full-time employees?	X		
Is there a business plan?	X		
Are there revenues? I.e., have there been any sales?	X		
Are there profits, or are there expected to be in the next year?	X		

- 2. Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?			Low
How does the cost of gaining new customers change as the project grows?		Constant	
What is the targeted size in terms of hectares (ha) 3 years from now?			10,000 or more

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?	Yes		
Are the staff requirements very specialized and/ or difficult to find?			No
Can the same concept be done in another part of the country?		Maybe	
What about the broader region or continent?		Maybe	
Can this concept be replicated in other countries outside the continent?		Maybe	
What is the payback period?		6-9 years	
How difficult is it to start a similar project in another location?		Manageable	

- 4. Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?		2-3 species	
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	
How much does air and water quality improve?		Somewhat	
What is the impact on wildlife and biodiversity?			Positive
What is the extent of other ecosystem improvements?			High

- 5. Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?			30+
What % are women and youth?		25-50%	
What % are poor?			Above 50%
What % of higher-value activities are completed using local talent?			Most
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?		Maybe	

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)		X	
Replicable (“Good” for at least 3 questions)		X	
Environmental impact (“Good” for at least 3 questions)	X		
Socio-economic impact (“Good” for at least 2 questions)	X		

10.10 APPENDIX 10: WRI RESTORATION BUSINESS CHECKLIST FOR AFRIBAM

Project Name: Afribam

Location: Central Region, Malawi

Contact Person: Grant Blumrick, grant@fgsmalawi.com

- 1. Commercially viable.** Can this project make money and be profitable? If the answer is Yes to 4 or more of the below, then the venture passes this threshold.

	Yes	Maybe	No
Is there a marketable product or service?	X		
Has an organization been set up to develop the project?	X		
Are there ongoing commercial operations?	X		
Are there full-time employees?	X		
Is there a business plan?	X		
Are there revenues? I.e., have there been any sales?	X		
Are there profits, or are there expected to be in the next year?	X		

- 2. Scalable.** Does this project have the potential to become much bigger than it is today? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Roughly how much could this project grow revenues from its existing level?		10x	
Are most business costs fixed or variable?		Combo of both	
What is the marginal cost (cost of selling one more unit)?		Medium	

How does the cost of gaining new customers change as the project grows?			Falls
What is the targeted size in terms of hectares (ha) 3 years from now?		2,000-10,000	

- 3. Replicable.** Can this concept be copied in other geographies by other people? This is important to ensure that resources are focused on ideas that can be replicated rather than one-time projects. If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project require significant amounts of start-up capital?		Maybe	
Are the staff requirements very specialized and/ or difficult to find?			No
Can the same concept be done in another part of the country?			Yes
What about the broader region or continent?			Yes
Can this concept be replicated in other countries outside the continent?			Yes
What is the payback period?			1-5 years
How difficult is it to start a similar project in another location?		Manageable	

- 4. Environmental impact.** Does this project help to restore the environment? If at least 3 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
Does the project depend on the extraction of non-renewable natural resources?			No
Does the project contribute to increasing natural resource productivity?			Yes
What is the diversity in species planted or managed by the project?		2-3 species	
Is long-term sustainability incorporated into management plans and strategy?			Yes
How much does soil health improve?		Somewhat	
How much does air and water quality improve?		Somewhat	
What is the impact on wildlife and biodiversity?		Medium	
What is the extent of other ecosystem improvements?			High

- 5. Socio-economic impact.** Does this project have a positive impact on the local community through employment and other means? If at least 2 of the responses below fall in the “Good” category, then this criterion is met.

	Poor	Average	Good
How many people does this project hire?		10-30	
What % are women and youth?		25-50%	
What % are poor?		25-50%	
What % of higher-value activities are completed using local talent?			Most
In addition to employment, does the local community benefit from this project?			Yes
Outside the local community, do people benefit from this?			Yes

Based on the above questions, does the project meet the criteria?

	YES	MAYBE	NO
Commercially viable (“Yes” to at least 4 questions)	X		
Scalable (“Good” for at least 3 questions)		X	
Replicable (“Good” for at least 3 questions)	X		
Environmental impact (“Good” for at least 3 questions)	X		
Socio-economic impact (“Good” for at least 2 questions)	X		



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