

PROJECT PROFILE:

SUSTAINABLE RURAL ENTERPRISES AND LIVELIHOODS

INTRODUCTION AND BACKGROUND

Problem Statement

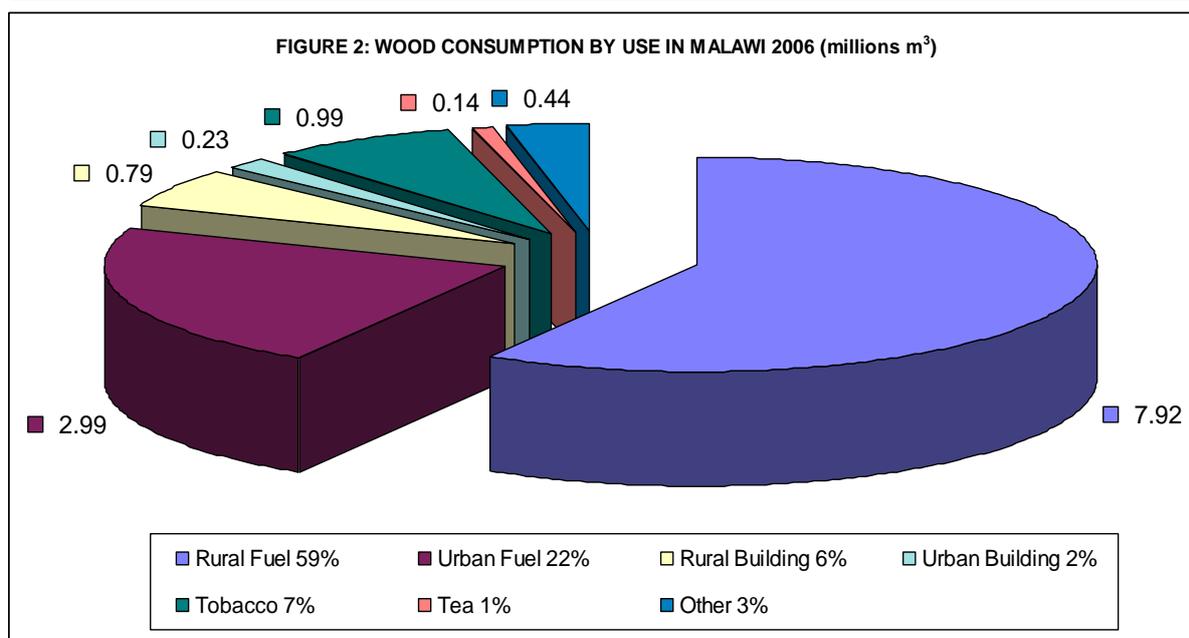
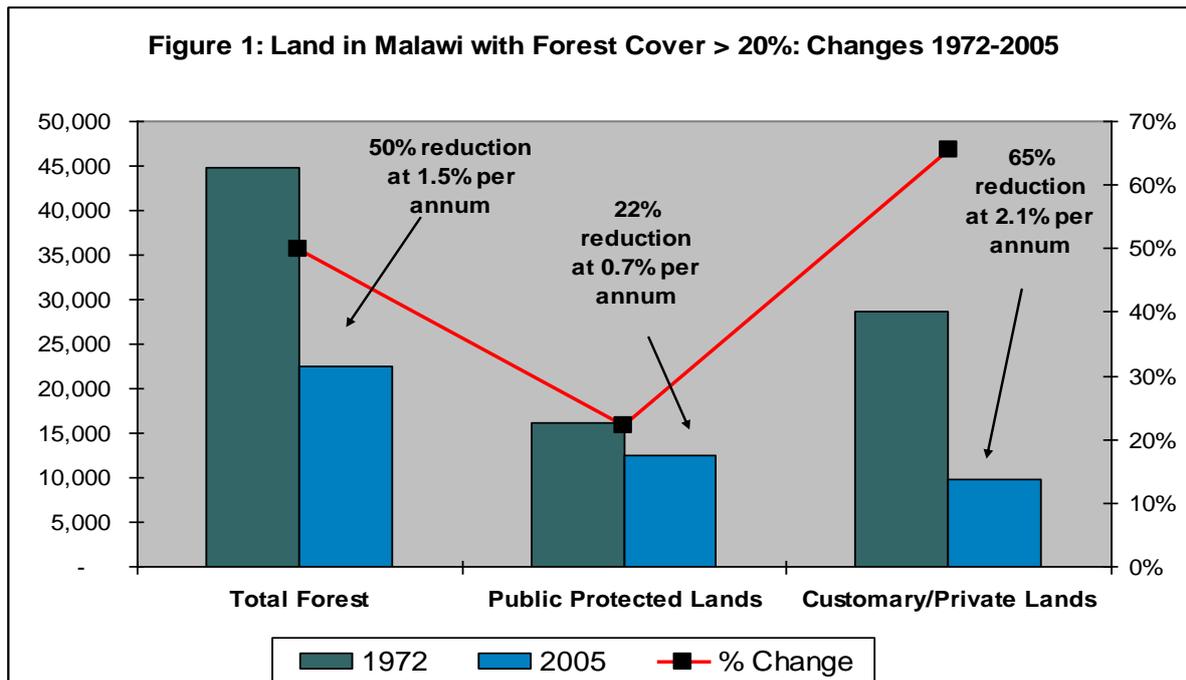
Population pressures in Malawi impact directly on renewable natural resources, agricultural productivity, employment, marketing, food security, poverty, health, and education. For many areas, land holdings are shrinking in size and becoming more fragmented. Traditional practices that preserved the integrity of natural resources are dying out and marginal areas have been brought under cultivation. Continuous cropping is now the norm, often in monocultures with little or no fallowing and few inputs. The rising demand for agricultural land and wood for fuel and building materials has led to serious levels of deforestation. The attendant loss of biodiversity is often accompanied by adverse changes in climatic and hydrological regimes. The result threatens important water catchments, leading to diminished stream flows, risks of floods, and siltation of rivers, dams, and lakes. All have far-reaching effects on agriculture, fisheries, industry, trade, and health.

Most deforestation in Malawi has occurred on traditional and private land where wood is regarded as a free resource, but encroachment into protected lands is increasing due to declining enforcement by government. Tobacco is a special concern because of the vast amounts of wood used for leaf curing and shed construction. Between 1972 and 1990, total forest cover in Malawi declined by an appalling 41%, averaging 2.3% annually (see **Fig. 1**). Forests declined by another 15% from 1990 to 2005. The annual rate of loss dropped to 1%, due to decreased land clearing for agriculture because most arable land was already under cultivation. Government policies aggravate the situation by setting wood prices in plantations and reserves at artificially low levels. Since wood prices are lower than production costs, incentives to plant trees are limited. The problem is further exacerbated by industries that use wood in various types of processing because wood is treated as a free input harvested from land with open access. These factors impede development of efficient tree-based markets. As a result, deforestation will continue unabated until policies and markets are strengthened with the recognition that wood has real value, not only as an input, but to sustain production by maintaining the integrity of the environment.

Analysis of Malawi's Situation

The rising scarcity of trees has direct impacts on farming. Loss of tree cover causes organic matter to mineralize and leach more quickly from the topsoil, with long-term effects on fertility. It also forces households to replace wood energy with crop residues and animal manure, which are better reserved for soil improvement. Women and girls must walk greater distances and spend more time fetching fuelwood and water at the expense of more productive activities such as farming, child care, and education. Scarcity of wood also limits opportunities to generate income from wood sales, beer brewing, fish smoking, brick making, pottery, etc. These non-farm enterprises are among the few options available for resource-poor households to earn cash for food and other basic needs.

Today, rural households across the region face many inter-related constraints characterized by a) frequent food shortages; b) overdependence on maize, a moisture/nutrient-demanding crop; (c) environmental degradation; (d) limited access to inputs, credit and capital; (e) acute shortages of energy and safe water; (f) poor knowledge and skills to adopt productivity-enhancing technologies; (g) weak extension services, and (i) lack of market information. Collectively, these problems have led to a vicious cycle of increasing poverty that is eroding the productive capacity of agriculture and the natural resource base. Eliminating these growing threats requires a long term commitment of resources under a strategy that tackles the root causes of the problems in a holistic manner.



Note: Calculated from Bunderson and Hayes 1995; MFNR 1993; WB 1992.

Implications for Future Wood Supplies

Figure 1 shows Malawi's current forest area (tree cover > 20%) by land category. The estimated sustainable supply of wood for 2006 is an optimistic 5 million m³ versus a consumption level of 13.5 million m³. **Figure 2** shows a breakdown of major uses. The deficit of 8.5 million m³ represents an annual loss of forest cover equivalent to 60,000-80,000 ha of closed canopy forest. Under prevailing trends of economic and population growth, wood demands will increase to 15.2 million m³ by 2015. At these rates, Malawi's remaining natural forests will all but disappear in 15 years unless enormous efforts are made to plant more trees, to identify practical technologies to reduce wood use and find alternatives, and to strengthen policies to enforce needed changes.

Actions to Increase Wood Supplies and Reduce Deforestation

- Undertake massive campaigns to educate people about the value of trees, and to change prevailing attitudes that wood is a free resource.
- Increase tree planting among all sectors to meet the rising demands for tree products, to conserve biodiversity and water catchments, and to reduce environmental degradation.
- Establish and implement policies to reduce the use of wood energy by introducing a) appropriate fuel-efficient stoves in rural areas, b) switching to alternative fuels in urban centers; c) improving fuel efficiency of flue-cured barns, and d) using live barns for grading sheds and burley tobacco.
- Establish and implement policies to ensure self-sufficiency in wood production for commercial activities that use tree products, including tea and tobacco. To enforce such a policy, an automatic tax could be levied on the production output of these enterprises, calculated in units of wood used. To avoid or reduce this tax, the enterprise must demonstrate the level of wood self-reliance for its products.
- Increase community-based participation in the management of public and customary forest lands on a sustained-use basis.
- Initiate communications with Government to eliminate market distortions from policies that keep prices of forest products at artificially low levels. This will lead to greater incentives to plant trees as a viable economic enterprise.

Collectively, these types of interventions are essential to sustain the multiple uses and services of the region's forest resources. They will also become more attractive as wood supplies decline, and costs increase. Without such efforts, expensive remedial measures will be necessary to combat the many problems associated with deforestation.

The issue is simply one of time: ***Act now while there is opportunity, or pay the price later when there are no options left.***

CONCEPT AND OBJECTIVES

It is clear from the foregoing that Malawi faces complex social, economic and environmental problems that resist swift and simple solutions. In their struggle to survive, people are unable to balance immediate short-term needs with sound resource use. The situation needs to be reversed to sustain livelihoods with minimal dependence on foreign assistance.

The challenge is to produce fast results. This challenge is compounded in areas where trees are relatively abundant, which makes it doubly difficult to convince people that tree planting is a valuable and worthwhile endeavor. Paying for the services rendered is often viewed as a simple solution, but it also becomes a trap that many programs fall into, frequently leading to poor rates of tree survival and growth from poor outplanting practices and neglect after establishment. Ultimately, the costs involved become unsustainable, especially when the results are less than satisfactory. The struggle is then to start over using a participatory approach, explaining the need for communities to commit their land and labor to a worthy cause without payment. Making this transition can be more difficult than initiating the approach from the outset, despite the training and skills imparted from earlier top-down efforts. Examples of past failures using this type of approach are well documented in the literature.

In response to this situation, the Tobacco Industry has embarked on a program to promote sound agricultural practices and environmental stewardship with the mutual interest of securing the long term sustainability of tobacco production in Malawi.

The proposed program builds upon the successful results and foundation established by APP and SURELIVES as well as other programs managed by TLC and WSU in the past. The basic concept is to expand the programmatic and geographic focus under a broad holistic approach with a dual purpose thrust:

1. To improve the food security, nutrition, health and general well-being of rural communities,
2. To assist farm households in making a shift toward commercial-based enterprises, with the aim of promoting sustained economic growth.

The vision to achieve this objective is to provide support to rural communities to meet their basic household needs and to introduce innovations for diversifying and intensifying the production, harvesting, and marketing of agricultural and natural resource products. Value-added processing will be explored to increase rural incomes and competitiveness in markets. One approach to help realize this potential will be to establish linkages between large private firms and local commercial suppliers of products.

Key objectives:

The elements outlined above will be implemented to achieve the following objectives using TLC's successful model of extension and training:

1. Reduce deforestation by improving the economic use and management of natural resources to supply wood energy and construction materials for tobacco curing and domestic household needs on a sustainable basis focusing on the following interventions:
 - Tree planting with a concentration at the household level to build self-sufficiency.
 - Sustainable management of natural woodlands and trees.
 - Introducing live barns and energy-saving kitchen stoves to reduce wood use.
 - Planting local bamboo to replace wood for many products and uses, thereby reducing pressure on woodlands.
2. Increase and diversify farm productivity to improve household food security, nutrition, and incomes through low-cost, sustainable systems of irrigation linked to good markets.
3. Enhance village and household health standards by introducing low-cost methods to provide safe water and sanitation.
4. Develop opportunities to establish smallscale enterprises with strong links to sound markets to increase incomes with greater independence and reduced risk.

The benefits realized by communities will accrue from the synergistic effects of a holistic approach involving diverse interventions. The results will lead to growing demands among communities within and outside project sites to participate in all components of the program.

IMPLEMENTATION

Geographic Expansion

Existing sites in Lilongwe, Dowa and Nkhotakota Districts were expanded to include new villages. In addition, new areas targeted include Salima District for 2007/08, in Ntchisi District for 2008/09 and in Dedza District for 2009/10. These districts include areas bordering Thuma, Ntchisi, Dedza and Nkhotakota Reserves, all of which are under pressure from encroachment by communities living around their borders.

Village selection will follow criteria established under APP. Likewise, the identification of key land-use problems and potential remedial actions within the newly selected villages will employ the procedures previously used.

Capability and Resources

The implementation approach is key to the success of the program, and will continue to focus on empowering communities to take action through intensive training, extension and technical support from the WSU/TLC team. Field coordinators will support and participate in the establishment and management of all practices with farmers so that activities are conducted correctly and in a timely manner.

TLC and WSU have the management capacity to implement the proposed program with a modest level of funding to meet increased needs for equipment, operations, and high caliber field staff. Detailed needs are as follows:

Management and Staffing Structure

WSU and TLC will oversee and manage the project through WT Bunderson and ZD Jere. Funds will be channeled via WSU to Malawi to meet financial, staffing and resource needs. Support staff will be used to assist with office administration, procurement, field operations, training, accounting, reporting, monitoring and evaluation.

The workplan calls for recruiting 1 new field coordinator and 1 driver to cover the addition of Salima District in 2007/08.

Procurement of Equipment

The following supplies and equipment are needed to meet the expanded scope of the program.

- 1 motorcycle for the new Forestry / Irrigation Technician to be recruited
- Irrigation equipment for treadle pump irrigation and water harvesting/stream diversion
- Forestry, irrigation and conservation agriculture materials and supplies
- Hand pumps for shallow wells
- Materials to construct concrete san-plats for pit latrines
- Extension and training materials for farmers.

Target Interventions

A brief description of targeted practices and interventions in **Table 1** is provided under **Interventions** in the main menu which includes illustrations in the **photo gallery**.

TARGETS FOR 2007/08 TO 2009/10

Annual targets are shown in **Table 1** and remain constant each year in line with the budgets. Outputs over the 3 year period are summarized as follows:

- 1500 villages and 30,000 households impacted
- 4500 households adopting sustainable agricultural practices on 900 ha
- 6 million tree and bamboo seedlings raised, minimum outplanting of 85%.
- 300,000 natural trees protected and managed on farms
- 300 Village Forest Areas demarcated for sustainable use and management
- 1500 Live tobacco barns established
- 3000 wood stoves constructed and in use
- 1350 households adopting irrigation practices on 270 ha
- 90 villages and 4500 households provided with safe water
- 3000 households with eco-pit latrines

Table 1: Scope and Scale of Targeted Interventions for 2007/08 to 2009/10 (not cumulative)

PROGRAM ELEMENTS	2007/08 TARGETS		2008/09 TARGETS		2009/10 TARGETS	
	Participation	Area or No.	Participation	Area or No.	Participation	Area or No.
Overall Program						
Villages	500	NA	500	NA	500	NA
Participating Households	10,000	NA	10,000	NA	10,000	NA
% Female Participation	35	NA	35	NA	35	NA
Sustainable Agricultural Practices	Households	Ha	Households	Ha	Households	Ha
Conservation Farming	500	100	500	100	500	100
Agroforestry Practices	250	50	250	50	250	50
Soil & Water Conservation	750	150	750	150	750	150
Forestry Programs	Households	No.	Households	No.	Households	No.
Nurseries	10,000	500	10,000	500	10,000	500
Tree Seedlings Raised	10,000	1,800,000	10,000	1,800,000	10,000	1,800,000
Bamboo Seedlings Raised	10,000	200,000	10,000	200,000	10,000	200,000
Outplanting of Trees	10,000	1,530,000	10,000	1,530,000	10,000	1,530,000
Outplanting of Bamboo	10,000	170,000	10,000	170,000	10,000	170,000
Protecting Natural Trees On Farms	4,000	100,000	4,000	100,000	4,000	100,000
Village Forest Areas Protected	2,000	100	2,000	100	2,000	100
Live Tobacco Barns	500	500	500	500	500	500
Improved Wood Stoves	1,000	1,000	1,000	1,000	1,000	1,000
Smallscale Irrigation	Households	Ha	Households	Ha	Households	Ha
Treadle Pump Irrigation	150	30	150	30	150	30
Stream Diversion/Water Harvesting	300	60	300	60	300	60
Water and Sanitation						
Villages with Protected Shallow Wells	30	NA	30	NA	30	NA
Households with Safe Water	1,500	NA	1,500	NA	1,500	NA
Households with Eco-Pits Latrines	1,000	NA	1,000	NA	1,000	NA

REPORTING

Semi-annual progress reports will be produced in June and December of each year based on standard reporting procedures of WSU and TLC.

Use of information from these reports for PMUSA's internal and external reports is perfectly acceptable, but WSU and TLC request the opportunity to review all externally presented material related to this project.

MONITORING AND EVALUATION PLAN

Regular monitoring and evaluation of project activities, results and impacts is integral to the project's management information system. The M&E plan is outlined in Table below:

Program Component	Survey Method	Indicator	Frequency
Improved Agronomic / Conservation and Agroforestry Practices	Community Based Monitoring & Evaluation - with verification sample surveys of clubs and households	<ol style="list-style-type: none"> No. of participating households for each practice Area under each practice 	Once/year
Forestry		<p>Tree Planting Program</p> <ol style="list-style-type: none"> No. of participating clubs and households No. of nurseries established No. of tree and bamboo seedlings raised No. of tree and bamboo seedlings outplanted No. of tree and bamboo seedlings surviving <p>Sustainable Management of Natural Woodlands</p> <ol style="list-style-type: none"> Cultivated Lands <ol style="list-style-type: none"> No. of mature trees retained on farms No. of regenerating trees on farms Natural Woodland Conservation <ol style="list-style-type: none"> Area of mature woodlands Area of regenerating woodlands 	<p>Once/year</p> <p>Once/year</p>
Reduced Wood Use	Results of trials and household surveys.	<p>Improved Tobacco Curing Barns</p> <ol style="list-style-type: none"> Trials conducted on efficiency (improved vs. traditional barns with tree species comparisons) No. of improved barns built and in use No. of participating households <p>Improved Kitchen Wood Stoves</p> <ol style="list-style-type: none"> Trials conducted on efficiency (improved vs. traditional stoves) No. of improved stoves built and in use No. of participating households 	<p>Trials: Once</p> <p>No. of barns and stoves: Once/year</p>
Irrigation	Sample Household Surveys	<p>Tobacco Seed Beds and Tree Nurseries</p> <ol style="list-style-type: none"> No. of clubs/households using improved irrigation technologies for a) seedbeds and b) nurseries No. of households growing maize, vegetables and other crops during the dry season under improved irrigation Yields of produce per household <ol style="list-style-type: none"> Quantity for home consumption Quantity sold with prices/revenues 	Seasonal – 3 times/ year
Water and Sanitation	Village & Household Surveys	<ol style="list-style-type: none"> Assessing the status & potential of water resources No. of covered wells built with handpumps No. of eco-pit latrines built and in use 	Once/year
Program Impacts	<p>Sample household surveys</p> <p>Satellite image analysis</p>	<p>Improved Livelihoods</p> <ol style="list-style-type: none"> Average income/year % Households food secure year-round % Households self-sufficient in wood <p>Land Cover: Change in land use/cover</p>	Bench line in Year 1; thereafter every 2 years

Expected Project Benefits

Improved Livelihoods

In the long-term, the proposed interventions will have positive impacts on the livelihoods of the communities by increasing wood supplies and opportunities to earn income, while reducing forest and soil degradation. Measures planned to address these concerns are both ameliorative and sustainable. Expected benefits include:

- Communities will be empowered to address their own problems and needs; to harness their own resources and capabilities; and to formulate bye-laws to better regulate, use and manage their natural resources with the following benefits:
 - ◇ Improved access to wood through tree planting, conservation initiatives, and alternative or more efficient methods of wood use.
 - ◇ Increased household food security and nutrition.
 - ◇ Improved health with reduced disease from access to safe water and sanitation.
- Participating communities and households will improve their skills in sustainably managing their farm and forest resources, thereby benefiting them individually and the region economically. Prospects will be available to diversify activities from sustainable harvesting and use of tree-based resources. Direct benefits include increased food security, income generation and better access to wood products.
- The environment will benefit from reduced soil and forest degradation through a) increased tree planting, b) increased protection and management of natural woodlands, c) increased efficiency of wood use; and d) increased use of alternative materials for construction and fuel.
- The project's integrated community-driven approach in natural resource management will provide lessons and experiences to build a successful model for replication, expansion, and adaptation to other areas in Malawi as well as to neighboring countries.
- Impacts will include reduced child labor with increased opportunities for children to participate more productively in school from a general improvement in the surrounding village and home environment.
- Development of case studies illustrating successes and benefits of the program.
- Spin-off programs will arise that address issues of mutual interest to all partners (e.g., introduction of irrigation and other technologies to increase food security and income; development of improved natural resource curricula for primary and secondary education; reducing the use of child labor in rural areas; cross-over programs that address the inter-related elements of nutrition and health, especially HIV-AIDS).
- Buy-in from other stakeholders will be mobilized within and outside the region to attract support for expanding and strengthening the program, with opportunities to improve technologies through research and development involving a range of institutions.
- By collaborating with partners from Government and the Tobacco Industry, the project will evaluate progress and perceptions to document important benefits to each partner. Defining real "win-wins" in the specific context of the region as well as Malawi will capitalize on this increased understanding to improve and replicate programs on a broader scale.

NATURE AND TIMEFRAME OF IMPLEMENTATION

Details of planning and implementation needs for each program component are outlined below:

1. Planning needs March-May:

- Secure funds for procurement and planning needs
- Identify and select suitable areas and village communities for Malawi.
- Sensitize and train the selected communities in each component of the project.

2. Implementation, June-February:

- Develop village-based action plans for implementation.
- Supply villages with resources to implement the agreed plan of action.
- Provide extension support to villagers on the technologies being established.
- Monitor and evaluate results.
- Produce semi-annual technical and financial reports (i.e., July and January)
- Develop annual workplans and budgets for Malawi by March of each year.