

NARRATIVES AND REALITY FOR TREE PLANTING IN SOUTHERN MALAWI

by

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## THESIS ABSTRACT

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This thesis examines the roots of deforestation in Malawi and how it has been problematized and turned into an accepted discourse of an impending crisis. I argue that deforestation in Malawi has been prioritized in order to suit the needs of Malawi's powerful elite and does not reflect the real and urgent problems of Malawi's small farmers. Deforestation has been explained by narratives which suggest that the farmers are to blame either because they have over-consumed fuelwood without replanting or have cut too many trees for expanding agriculture. These narratives not only mask the ultimate cause of deforestation, which is unequal access to land, but also deflect attention from more immediate problems. In recent surveys, however, Malawi's farmers have been clear about their priorities. Deforestation is a concern, but poverty and lack of food security are their chief problems.

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## CHAPTER I

### INTRODUCTION

Malawi is a small, landlocked country in Southern Africa that shares borders with Tanzania to the North, Mozambique in the East and South, and Zambia to the West (Appendices A and B). Its landforms vary greatly with much of the Eastern section of the country bordering Lake Malawi, but then rising to a highland plateau with rolling hills and step ravines. While it does not contain rich mineral deposits like some of its neighbors such as South Africa and Zambia, the Southern part of the country, from the valley to the highlands along the Shire River, contains some of Southern Africa's best agricultural land.

Despite its apparent natural bounty, Malawi struggled with extreme poverty from the beginning of its colonial history through the twentieth century. Attempts to create economic prosperity were built on creating an export led economy based on large-scale agricultural production of cash crops. Throughout its history, the central policies of Malawi's government have focused on taxing and seizing land from Malawi's population of food producing, smallholder farmers in order to subsidize large estates which produced cash crops such as tobacco. These policies failed spectacularly. Not only did the estate sector consistently fail to thrive economically, but it also created poverty among Malawi's smallholder farmers who became poorer and less food secure. Over the years, this failure to achieve adequate basic living conditions, let alone prosperity, has not been blamed on bad economic policies and land tenure laws, but on a variety of other factors including, importantly, environmental ones such as soil depletion and lack of fuelwood.

Since the colonial era there have been ‘experts’ who have warned of an impending environmental crisis and who have recommended planting trees as the solution. The proposed reasons for this crisis have generally hinged on two major explanations. The first reason was that smallholder farmers practiced intensive and unsustainable agriculture that caused erosion and soil depletion that threatened to precipitate a ‘dust bowl’ crisis similar to the one experienced by the US during the 1930s. Poor farming practices adversely affected the ability of smallholder farmers to manage their fields or grow more food. If they planted trees, however, nutrients would be returned to the soil and erosion would be brought under control. The second, and main reason for the impending environmental crisis was that the ever-expanding need for fuel derived from wood had led to too many trees being cut and not enough trees being planted. This, in turn, created a fuelwood crisis that destabilized both the estate and peasant economies. Over time, the threat of an impending environmental crisis became an accepted discourse and the explanations for it became narratives that tended to support and reinforce each other. It became ‘received wisdom’ that an environmental crisis caused by lack of trees was just around the corner. When it eventually came to pass, this crisis would leave Malawi with no fuelwood for individuals or the export-based economy, and a parched and withered landscape. Consequently, for almost 100 years there have been colonial government, Malawian government, and international policies aimed at encouraging Malawi’s smallholders to plant more trees. And yet, for almost 100 years, these policies and initiatives have failed. The smallholders, the people who were both blamed for the impending crisis and exhorted to preempt it, did not perceive the same crisis and so did not plant trees in meaningful numbers (Walker, 2004).

This thesis looks at the discourse surrounding tree planting in Malawi and suggests that the problems of soil depletion and lack of fuelwood, though real, are complex and cannot be solved without addressing the issues of unequal land distribution and poverty. Moreover, I propose that the tree planting discourse was deceptive and counterproductive because the narratives that explained it and provided its substance were false. Typically, the discourse has been presented as an environmental crisis caused by lack of trees, which, in turn, created severe agricultural problems and fuel shortages. Seen this way, the solution to the problem has always been easy: plant more trees. This is exactly what successive governments in Malawi have tried to do. Yet despite enormous efforts, the tree planting initiatives failed to motivate farmers because they did not see the need to plant trees as one of the most important concerns in their lives. For them, poverty and food security have always been of paramount importance so they never fully embraced the discourse. They could not afford to. I will argue that Malawi's smallholder farmers have been correct. Soil depletion and lack of fuelwood are not driven primarily by lack of trees. Instead, they are the direct result of a poverty-producing economic system put in place during colonial times and replicated by the leaders of independent Malawi. This system has created land shortages among small farmers, has forced them to work their land intensively in order to meet their food requirements, and has severely restricted their *access* to trees. From this perspective, there are no easy solutions, but it is clear that poverty is the overarching concern. Land degradation and lack of access to wood cannot be meaningfully addressed unless they are placed in context, and are part of an overall strategy to reduce poverty and tackle inequality.

In the first part of this thesis I will present the historical context for the construction of the discourse of an impending environmental crisis caused by lack of trees by looking at the historical and economic context in which it took shape. I will disassemble the dominant narratives that have contributed to the discourse in order to separate the fact from the fiction, and to inspect the motivations and power relations between the political and economic elite who constructed and maintained the discourse and the rural poor who shouldered the blame for it. I will also examine the lasting power, the so-called 'stickiness', of the narratives. I will look at the history of how these stories and explanations became so deeply embedded in any understanding of Malawi's problems that they continued to exert a powerful influence even after they should have been called into question. I contend that their 'stickiness' is directly related to the fact that very powerful groups imposed and supported them. At first, this was the British colonial authority, but after independence this power shifted to the regime of "Life-President" Kamuzu Banda and to the wealthy international economic community. The concept of a 'fuelwood gap' is the most prevalent of the narratives. Fuel scarcity because of lack of trees became a strong and lasting narrative because it was promoted by the British and continued to be a useful explanation for the major economic interests of the country after independence. The threat of fuel scarcity is also an emotionally charged one because it always relates to power, money, and fear. The narrative of land degradation due to uninformed and inadequate farming practices has also shown remarkable staying power. It, too, developed under the colonial period and persisted through the twentieth century. It suggested that those in power controlled superior technical knowledge while smallholder farmers were ignorant of how to manage their

lands. In this way, it shaped the problem of land degradation as a technical one rather than one that was created by unequal distribution of land. These false narratives have served to obfuscate and deflect a more important truth. They suggested that the ‘fuelwood gap’ and land degradation by smallholder farmers were the main reasons behind a lack of trees. The primary problem, however, is not lack of fuelwood or poor farming practices, but poverty caused in part by a skewed and unequal land ownership structure. What remained unexamined throughout was whether or not there was actually a lack of trees.

In the second part of this thesis I analyze a survey undertaken by Peter Walker in 2008. It questioned people from 75 households from the small village of Mchombo in Southern Malawi about their use of land, natural resources and trees, in particular. Critically, this survey builds upon previous data collected by Walker from the same site during a year of field research in 1995-6. In the earlier studies, respondents identified lack of trees as a problem, but showed little enthusiasm for planting them even though there were numerous programs which promoted tree-planting through the distribution of free or highly subsidized tree seedlings. Part of the reason for this lack of interest in tree planting was the fact that while forests had virtually disappeared from customary lands wood could still be ‘poached’ from private estates where it was still readily available. Instead of being interested in planting trees, farmers were most concerned with feeding their families and meeting their everyday needs. The 2008 survey confirms this sentiment. Nevertheless, 80% of villagers in the new survey responded that they have planted trees in recent years, signaling that some sort of shift may have occurred. Lack of

access to trees may be viewed as a bigger problem than it was in the past, and as a result farmers are coming up with new strategies to meet their needs. The reasons for this may be that access to trees, especially trees on private estates, has continued to decline in the intervening years so that available wood is actually becoming a significant problem, at least in the local context. Finally, the survey suggests that despite the narratives that have been forced upon them, Malawi's smallholder farmers have a very real and good sense of the problems that they are facing and are able to prioritize them according to their most pressing needs. Overwhelmingly, they cite poverty as their chief concern. The real question, then, is can Malawi's government and the international development community create policies to address land degradation and the need for fuelwood that are not derived from the old narratives, but instead see them as issues that pertain to local availability and access and stem from poverty and unequal distribution of land?

## CHAPTER II

### THE AVAILABILITY OF TREES AND THE IMPORTANCE OF WOOD

Wood is the primary source of fuel in Malawi as it is in most of the developing world. Malawian farmers use it to cook their food, and to heat and light their houses. The wood used for fuel comes from trees the farmers own, or is gathered from nearby woodlands to which the farmers may or may not have the legal right of access. Apart from fuel, trees serve a variety of other purposes. They can provide extra food in the form of fruit. They provide poles and timber for construction or can be turned into charcoal and sold to the cities as a source of extra income. They are also essential to supporting the ecosystem by providing habitat for animals, replenishing the soil and preventing erosion. Trees are extremely useful, and Malawi's farmers recognize this.

Though trees are important, food is the top priority for Malawi's farmers. When farmers are faced with food insecurity and decreasing farm size they will cultivate every available inch of land with food crops that will provide the highest and most dense nutrient yield. In the case of Malawi, that crop is maize. In fact, more than 90% of the land cultivated by smallholder farmers is planted with maize (Carr, 2010). But maize cultivation places enormous stress on the soil, and intensively worked land leads to soil exhaustion and erosion, making it even harder to cultivate and forcing smallholder farmers to search for new land on which to plant food. When food is difficult to cultivate it will always take precedence over the availability of wood. Furthermore, wood may still be available even if many farmers are finding that they have diminished access trees.



Despite the narrative of a lack of trees, forests still constitute anywhere between a quarter and third of the land area in Malawi (WRI, 2010; FAO, 2006). Unfortunately, most of the forested areas are on private lands in the Northern and Central provinces in areas that are too far away to be readily available to most farmers. This is particularly true for the farmers in Malawi's Southern province where there is the highest population density and the greatest percentage of land under cultivation. In Mchombo, for example, all the village-owned land is under cultivation in order to produce food. Trees that were once poached from nearby estates have become in short supply as the estates have cleared their woodlots in order to sell charcoal to the cities and plant more tobacco. Malawi's farmers are not faced with the problem of lack of trees, but of lack of access and availability. Wood that used to be freely and locally gathered must now be bought, which forces farmers to choose whether they will spend their limited money on food or wood. In areas of extreme poverty and food insecurity such as Malawi, the choice is clear.

This is not to suggest that deforestation isn't happening – it is. While there is some contestation about the rate, there is no debate on the general trend.<sup>1</sup> According to its own Department of Forestry, Malawi, with 125,000 acres of forest cut each year, has the highest deforestation rate among fourteen Southern African nations. The point of this thesis, however, is not to ascertain the exact state of Malawi's forests. Rather, it is to suggest that the narratives of an environmental crisis due to a scarcity of trees did not

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<sup>1</sup>Kalipeni and Feder, 1999, cite the alarming rate of 3.5% per year. Kainja, 2000, examines satellite photographs taken between 1972 and 1992 that show the continual decline of Malawi's forests and propose they were disappearing at the still discomfoting rate of 2.8% per year. The World Resources Institute suggests a more modest rate of a total of 4.6% between 2000 and 2005 (WRI, 2010).

match the reality encountered by Malawi's farmers who knew there were trees, but saw their access to them shut off over time.

## CHAPTER III

### ECONOMIC OVERVIEW

From 1891 until 1964 Malawi was a colony of the British Empire. During that time, the British aimed to create a dual economy in which an export-based, estate-dominated economy was promoted by the colonial authority to the detriment of smallholder agriculture. The best land was appropriated for estates and laws were enacted which disrupted traditional agriculture by the imposition of a hut tax and other devices. The effect was a decrease in the size and quality of the plots farmed by Africans, an increase in the number of Africans forced into wage labor, and the creation of systemic poverty among Malawi's smallholder farmers. The imbalance that was created under the colonial system was reproduced and strengthened after independence by the country's first president, the "Life President" Dr. Hastings Kamuzu Banda, who ruled with an iron fist for the first thirty years following independence. During his tenure in office, Banda favored the interests of a new class of estate owning African elites by controlling the prices small farmers could achieve for their cash crops through manipulation of the state marketing board – the only legal venue farmers had for selling their crops. Profits from the marketing board were used to create cheap credit for the estate sector. Just as in colonial times, Malawi's small farmers were forced to subsidize a failing economy which was based on the exportation of cash crops from plantations. Despite multi-party elections in 1994, and the apparent democratization of Malawi, Banda's successor, Bakili Muluzi, perpetuated many of the same structural inequalities. The upshot for most of the people of Malawi was a century of increasing poverty and

food insecurity caused by too many smallholders being forced to scrape by on marginal and diminishing farm plots while subsidizing a failed economic strategy.

In 2005 the newly elected president of Malawi, Bingu wa Mutharika, faced a crisis. The country was extremely poor and heavily indebted. For fifteen years, the international community led by the World Bank had been insisting that the government of Malawi not subsidize fertilizer for its smallholder farmers with as part of a structural adjustment policy. Yet famines had occurred in 1994, 2002 and as recently as the 2004-5 growing season. People were going hungry, but Malawian farmers could not afford the fertilizer to grow enough food. The country was food insecure and was reliant on international loans and aid to meet the food requirements of its people. Against the protests of the World Bank and international donors, Malawi began a program called the Malawian Inputs Subsidy Initiative (MISI). This program concentrated on the small farmers rather than the large estates, and subsidized both fertilizer and maize seed to a level that was affordable by the majority of the country's farmers. The result has been an increase in food production and a rise in household food security.

Despite this recent good news, Malawi remains one of the world's poorest countries. It has a population of approximately 15 million people that is dominated by rural farmers. More than 85% of Malawi's people are smallholders who live near the subsistence level on plots that range from .5 to 1 hectare (Kainja, 2000). Food, water and fuel for cooking and heating are among their most basic needs, but frequently are in short supply. Money is also in short supply since most farming families sell only a small portion of their crops for cash while using the rest for home consumption.

## CHAPTER IV

### CREATING POVERTY THROUGH LAND INEQUALITY

The first westerners to arrive in the area now called Malawi (then called Nyasaland) were British missionaries and settlers following in the steps of David Livingstone who had reached the shores of Lake Malawi by 1859. Settlers and commercial interests followed, but in relatively small numbers, through the 1860s, 70s and 80s. The land seemed good for agriculture and was well populated with a variety of different ethnic groups, but it was remote from other British interests and lacked infrastructure or access to ports, and (unlike other countries in the region) had no significant mineral resources. As such, it seemed to offer little strategic or commercial value and was largely unnoticed by colonial powers. This changed in 1890 when the British sought to assert territorial claims to the area because of fears that the Portuguese were encroaching from Mozambique to the West. Although the British did not have major ambitions for Nyasaland, they did not want the Portuguese to drive a wedge between their southern and eastern African colonies. Moreover, there was a small but vocal population of missionaries who pushed for formal protection under the Crown. Therefore, in 1891, the British officially declared the area of Nyasaland to be a protectorate and started to exert control.

During the years under the colonial system, Nyasaland did not attract much attention from the British government as most of the Empire's energies and resources were directed to its other African ventures. With little external support or financing, the colonial administration set about trying to make the new colony pay for itself by creating

an economy that was based on the export of commodities from large-scale, European owned estates. Two important and destructive precedents were set early on. The first was the appropriation of huge amounts of the best land by the colonial government that then sold it on to Europeans who formed enormous estates. People were forced off their traditional areas for cultivation and either had to seek wage labor or tenancy farming rights on the estates or had to re-settle on smaller, less productive plots that were marginal to the estates. The effect was the creation of land scarcities for the majority of the population who only had access to small amounts of land. The second factor that arose was an emphasis on tobacco as the crop of choice. Different crops were tried, but tobacco emerged as the most economically viable. The upshot was an economic system that was based on a single non-food crop that was susceptible to large price fluctuations, was labor intensive and required large amounts of wood for fuel.

Land alienation began almost right away when the first consul-general, Harry Johnson, reserved approximately 45% of the good, arable, land for private, European estates. Large numbers of people were displaced in the seizure, and a standard for land inequality that favored European estate owners, suppressed smallholders, and favored export crops over subsistence food crops was put in place. Over the years, the actors changed, but the structure of imbalance in land ownership that favored the export producing estate owners over the food-producing smallholder farmers continued.

In order to supply the estates with a workforce, the colonial administration had to find a way to coerce people into wage labor. So the British did what they had done in their other Southern African colonies: they imposed a hut tax. Because so few people

had access to money, they were given the option of working on a nearby estate as a form of payment. Two systems of estate labor emerged during the colonial period. The first was known as *thangata* and was based, very loosely, on a traditional system in which some service was owed to the village headman (Peters and Kambewa, 2007). The way in which the British interpreted and imposed the arrangement, however, was a perversion. This system imposed compulsory labor requirements on Africans as a form of rent that essentially amounted to serfdom. From the start the system was abused. Originally, the *thangata* system called for three months of labor, but on many estates this quickly became six months making it all the harder for farmers to produce enough food to feed themselves or their families thus forcing them to rely even more heavily on wage labor. The second was known as tenancy and was, essentially a form of sharecropping. Laws were put in place that tightly restricted the type of crops people could grow, and all crops had to be sold back to the estate at prices determined by the estate owners. The result was a system that subsidized the estates with labor that was free or controlled at an artificially low wage.

Land seizure created a huge demographic shift. Farmers were forced off their lands and migrated out of the Northern and Central regions where their land had been seized, but there was little work. The majority of the population shifted to the lower third of the country, the Southern region, in which there was the best agricultural land and the most opportunity for wage labor. Unfortunately, the reason the Southern region had the most need for wage labor was because it contained the highest percentage of land under estate control - almost half of the total land area and the vast majority of the arable land

(Walker, 2004). The people who migrated, willingly or not, to the Southern region in order to work on estates were forced to grow most of their own food on small plots of marginal land. This created a pattern in which large estates controlled the best land while the vast majority of people farmed the marginal land on the outskirts of the estates or worked as sharecroppers on the estates. Adding insult to injury, policies were put in place that strictly regulated which crops smallholders could produce. All cash crops were reserved exclusively for the estates or had to be sold to them at artificially low prices. By commanding the best land and the types of crops that could be planted the colonists were able to keep control over Malawi's farmers while using them to subsidize the estate sector.

The colonial economic system necessitated that colonies pay for themselves and generate profit by cheaply producing commodities for export. In the case of Malawi, this proved difficult. Coffee was originally promoted, but, following the introduction of large quantities of Brazilian coffee on the world market in 1902, the price dropped so low that estates could not turn a profit even with a supply of free labor or artificially suppressed wages. Following the collapse of coffee, other crops were tried including cotton and tea, but crop disease and lack of access to markets turned most commercial ventures into failures. Tobacco was the one crop that showed the most promise to buck this trend. It was introduced in the early years of the 20<sup>th</sup> century and by the 1930s it had grown to be the dominant export commodity replacing cotton (Van Donge, 2002).

Tight control and regulation of the economy are hallmarks of the colonial system, but the regulation of tobacco in Malawi stands out. In 1926 the Native Tobacco Board



(NTB) was established in order to monopolize the production and control of tobacco in favor of the estates. Only the estates could sell tobacco on the Auction Floors, the exchange where the price was established and tobacco was sold. Moreover, if smallholders wanted to grow tobacco they had to apply for permission through the NTB and could only sell their product through an estate. Tenants who lived on estates produced tobacco with seed and inputs that they were forced to buy on credit from the estates owners. They then sold the tobacco back to the estates at reduced prices that were set by the government. The estates sold the tobacco for export on the Auction Floors at a substantially higher price. The effect was that smallholders not only subsidized the estate-run tobacco industry, but also that the government and the estates collaborated to fix prices and reduce competition (Tobin and Knausenberger, 1998, McCracken, 1983).

The observation that colonial economic systems produce and reproduce conditions of poverty is not a new one. Yet the cultivation of tobacco in Malawi also had environmental repercussions that relate directly to the construction of the discourse of tree scarcity and the narrative of a fuelwood gap. The production and curing of tobacco requires enormous amounts of fuel, usually in the form of wood. Most tobacco produced in Malawi during the colonial period was flue-cured. That is, it was hung in large wooden or brick drying sheds where it was heated by a series of pipes, or flues, which ran throughout the structure. A typical curing lasted for at least a week during which time wood-burning ovens had to be kept burning constantly in order to keep the flues hot. Furthermore, most curing sheds were usable for only two years after which they were

dismantled and a new shed was built. This meant that tobacco-producing estates needed a large and constant supply of wood for fuel and for construction.

While Malawi had large tracts of native woodland, known as *miombo*, characterized by small, dense hardwoods that grow very slowly and never grow very large. One hundred years of growth might produce only a small tree 30 centimeters in diameter. *Miombo* had traditionally been the fuelwood of choice for most farmers who used it for cooking and for heating their homes, but it was never used in such quantities that it became scarce. The emergence of tobacco estates changed this. They required vast quantities of *miombo* that could not be quickly or easily replaced. The discourse of deforestation and lack of trees began in truth. Large tracts of *miombo* woodland were cleared and estates began to worry that they might not have a readily available supply of wood for fuel or construction. In order to meet the demand, the colonial government began encouraging people to plant trees. They also encouraged people to plant a different species, eucalyptus, which grew much bigger and much faster.

## CHAPTER V

### THE POST-COLONIAL ERA

Malawi gained its independence in 1964 without much complaint from the British. Bigger and more lucrative colonies had already left the fold and Malawi had never really benefited the empire very much. Besides, by the early 1960s independence was in the air across the African continent and the British could see the writing on the wall. The first leader of an independent Malawi was Dr. Hastings Kamuzu Banda. Like many other African leaders in the first wave of independence, he showed great promise originally. He was a European- and American-trained medical doctor and an elder of the Church of Scotland who spoke compassionately about the people of Malawi. In the end, however, he replicated colonial estate-based economic policies, replaced many of the old, European elite with a new African elite, and ruled as a dictator. Some estates were broken up, but many remained in the hands of European landowners and others were given to friends as a way of cementing his power and establishing a new African land-owning class loyal to Banda.

During Banda's thirty years in power, Malawi's economy became even more firmly fixated on the production of tobacco. In part, this was because Banda was a staunch ally of the West and followed a pro-capitalist, export-led, economic policy that endeared him to foreign investors while establishing his power base with the new elite at home. In part, this was also because Malawi came to become more and more dependent on international aid and foreign-financed debt. Like many other African countries, Malawi became heavily indebted during the 1970s for a variety of reasons including bad

loans and the spike in oil prices. Tobacco was the primary commodity through which Malawi could gain the currency necessary to finance its debt. Malawi followed an economic agenda dictated by the World Bank and the IMF. Through the 1980s, this included structural adjustment policies that focused on re-financing of debt (which usually meant taking on more debt) and concentrating the economy on revenue producing exports. Between 1974 and 1993, tobacco's value as a percentage of Malawi's tradable exports grew from 39 percent to 69 percent (Van Donge, 2002). During the colonial period, tobacco had emerged as Malawi's primary export crop. Following independence, the government and the estates became almost entirely dependent on the production of tobacco.

## CHAPTER VI

### THE CONSTRUCTION OF FALSE NARRATIVES

Any discussion of forest narratives owes a debt to the seminal article *False Forest History, Complicit Social Analysis: Rethinking Some West African Narratives* by James Fairhead and Melissa Leach. In it, the authors challenge the assumption of deforestation in Guinea which had long been held to be a given. They found that the narrative of deforestation was deeply rooted and was so strong that social scientists and policy advocates never questioned it, but, instead, tried to mold their studies and advice to conform to it. Most people assumed that the truth of deforestation had already been established. Fairhead and Leach found that these “assumptions have strength and credibility in large part because they are linked together, diffused and stabilized within ‘narratives,’ that is, stories of apparently incontrovertible logic which provide scripts and justifications for development action. But once dissected from the reality they seek to construct, these explanations reveal instead how the applied social sciences can be used to lend weight to popular Western perceptions about African society and environment...” (Fairhead and Leach, 1995) The authors suggested that deforestation due to destructive agricultural practices and overpopulation were common, but incorrect Western assumptions about Africa. Instead, they proposed “counternarratives” which took into account local knowledge that was regionally based. Many of the ideas and themes that Fairhead and Leach identified in Guinea can also be seen in Malawi.

## CHAPTER VII

### LAND DEGRADATION DUE TO POOR FARMING PRACTICES

In Malawi, the assumption of an impending environmental crisis is an old one. Active tree planting had begun as early as 1911 with a focus on improving degraded soils and supplying the fuel needs of the estate sector. During the 1930s, there was a renewed emphasis on soil conservation when news of the American ‘dust bowl’ caused concern among colonial administrators and planters in Africa (Green, 2009; Bassett and Crummey, 2003). Experts were sent out to teach soil conservation through methods such as digging contour ridges and planting trees to act as windbreaks and to replenish the soil. Naturally, estate owners did not want to plant trees on the valuable agricultural land that they owned so they promoted planting on the margins and off the estates. The double standard was obvious. Estate owners did not want to plant trees because their land was too valuable, but small farmers were urged to plant in order to preserve the soil. This, of course, was the same land that was already in short supply because African smallholders had been pushed off much of their traditional land by the estates. If Malawian farmers failed to plant trees on their lands they were blamed for causing soil degradation and erosion.

Because food-producing farmland for smallholders was in such short supply, but food needs were great, most farmers began to plant their fields every season without rotating crops or allowing fields to lay fallow. Furthermore, the land they used was often not the best available land. By contrast, estate owners usually only had a small portion of their land in production. Their estates were vast and they did not need (and frequently

could not afford) to plant on the entire estate. Moreover, many of them already kept some reserve woodlots on their land – something small farmers could not afford to do. Consequently, the soil on estate land was often much healthier because it was not used as intensively and it was better land to begin with. Advocates of tree planting could point to the difference and say that trees were most needed on the plots cultivated by African smallholders. Tree planting supported soil conservation and represented scientific knowledge and progress while African farming methods represented ignorance, deforestation and land degradation.

Most narratives contain within them some truth. Intensive farming does cause land degradation and trees do return nutrients to the soil and prevent erosion. What is interesting about the narrative is that it failed to address the root causes of the land degradation problem and offered a solution that was impossible for most farmers. The underlying reason for land degradation was the unequal distribution of property which denied Malawi's farmers access to new land and forced them to abandon traditional farming practices and intensively cultivate every available inch of land simply in order to meet their food needs. The narrative, however, placed both the blame for land degradation as well as the burden for planting new trees on the smallholders. Yet they were not responsible for the small size and overworked condition of their farm plots, nor could they realistically afford to devote much of the little space they had to planting trees when they had an urgent need for food. Credence was given to the notion that Africans were responsible for soil erosion because it could most easily be observed on their lands. The reason for the land degradation was not, however, because African farmers were

inherently poor managers of the land, but because they had been forced to the most marginal areas and were required to abandon traditional farming practices in order to cultivate their plots intensively so they could feed their families (Kalipeni and Feder, 1999).

Over time, another, more insidious, element has been added to the soil conservation narrative – the theme of overpopulation. The theme of overpopulation dovetails nicely with the overall narrative on soil depletion because the two ideas seem to complement each other. Both seem self-evident. If there are too many people then you will have to overwork the land in order to feed them all. Even if you plant every available inch of a farm plot with maize, it will still only feed a finite amount of people. So population does matter, and Malawi's population has grown significantly over the years. In 1890, the population of Nyasaland was estimated to be 543,000 (Walker and Peters, 2006). The current population is estimated at over 15 million (CIA World Factbook, 2010). That is a huge increase. Moreover, the number of people has grown most dramatically in recent years despite a lower life expectancy brought about by the HIV/AIDS epidemic and other diseases such as malaria. In 1990 the national census of Malawi recorded a population of less than 10 million, which means that in just the past 20 years it has grown by more than 50 percent. What is more important than the overall rise in population is the fact that it has not been evenly distributed. Some districts, particularly in the Southern region, have recorded annual population increases of 5 percent, or more than double the national average. This would be a lot for any country to deal with because it means that there are a lot of new people who have to be fed. It is



also true that these people have been cultivating the land even more intensively as they are faced with additional food requirements. But Malawi, though it may appear comparatively small on a map of Africa, is about the size of Pennsylvania. There is quite a lot of land, and much of it is good land that is suitable for farming. Unfortunately, most of that land is privately owned and remote from where the majority of the population lives.

In Malawi, the problem with population is not overpopulation, but unequal distribution of people and unequal access to land. The Southern region is extremely crowded. Almost all the available arable land is already under cultivation. That which is not already under cultivation is owned by private estates or is set aside as government owned parkland. It is not available for smallholder farming or food production. The problem, then, is not so much that there are too many people, but that there is an imbalance between where the majority of the people live and how much land is available for use by farmers. When considered from this angle, the usual discussions of Malawi's population start to sound curiously Malthusian, and unnecessarily blinkered to the obvious reality that there is still a lot of land, but it is land to which most people are denied access. Finally, because this discussion is embedded in a colonial history of inequality between black Africans and white Europeans it is impossible to deny that it contains an element of racism.

## CHAPTER VIII

### THE FUELWOOD GAP

The concept of the fuelwood gap has had an unusually long and powerful history that dates back to the beginning of the colonial period. As Walker points out, by 1911 the colonial government was planting hundreds of thousands of exotic seedlings to combat erosion and to replace the *miombo* woodlands that had been cut to provide fuel to the estates. In the postcolonial era, President Banda expanded the scope of the fuelwood gap narrative by promoting tree planting as a way of providing fuel not only to the vital tobacco sector, but also to the expanding, and politically powerful, urban population which needed to buy charcoal as its primary source of fuel. National Tree Planting Day was observed as a way of expressing patriotism and millions of trees were planted annually. Between 1983 and 1987 the number of trees planted each year rose from just over six million to just over twenty million. The international development community was quick to jump on the bandwagon. Following the oil shocks of the 1970s, fuelwood was discussed as the oil of the developing world. Oil, gas, kerosene, and electricity were either too expensive or unavailable, but wood would keep the lights on. It was needed for industry, for home cooking and heating and to keep the urban poor from taking to the streets. In 1984, the World Bank went so far as to sponsor the Blantyre Fuelwood Project that forcibly displaced 22, 400 people to plant an area of 500 square km with fast-growing eucalyptus (Kalipeni and Feder, 1999). Throughout the 1980s and 1990s the fuelwood gap theory excited both economists and politicians. In 1986, economist David French famously speculated that Malawi's fuelwood gap was an unsolvable problem

because 800,000 hectares of fast-growing trees would have to be planted at a cost of \$360 million simply in order to meet projected 1990 deficits (French, 1986). More recently, some NGOs and rural development specialists have embraced the fuelwood gap theory as a motivation for sponsoring community forestry initiatives.

There is a significant component of truth in the narrative concerning the need for fuelwood. Wood is the primary source of fuel for the vast majority of Malawi's people and will probably continue to be for years to come. It is important that the people have access to wood as fuel. But the crisis of a fuelwood gap leading to total lack of access to fuel has never materialized. There have been scarcities, but Malawians have always found strategies that allowed them to meet their fuel needs. These have included traveling farther to gather wood, burning crop residue such as maize stalks and husks, or stealing wood from estates. So what drives the narrative - and what happened to those twenty million trees planted in 1987?<sup>2</sup> It seems to be driven both by a desire to control the country's primary fuel supply and by the inertia of received wisdom from the colonial era. The motivation to control a country's natural resources or to control the knowledge concerning them is powerful. The desire to control the supply of fuel is especially powerful and when fuel is a natural resource, as in the case of oil, coal or water the combination is a potent mix. Why did the discourse have such longevity? The answer probably has something to do with the fact that it plays on fear, but it also surely has to do with the fact that the discourse was associated with the strong and violent imposition

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<sup>2</sup> The estimate of twenty million trees was made by the government of Malawi during Banda's regime and is probably greatly exaggerated. Moreover, National Tree Planting Day was frequently compulsory, but took place during the height of the maize planting season. Many people would turn out for the day, but then leave the seedlings unattended when they returned to their day to day work of growing food.

of power – colonial power and the power of the Banda regime. Power can create  
'stickiness.'

## CHAPTER IX

### THEMES WITHIN THE NARRATIVES

Received wisdom, especially wisdom received from the colonial era, tends to get repeated even when the facts that may have originally supported it have changed. One of these nuggets of wisdom is that the tobacco industry desperately needs fuelwood. During the colonial era, most of the tobacco in Malawi was flue-cured which required large amounts of firewood to heat the curing sheds. Following independence, the tobacco industry began to turn to a new variety of tobacco called burley. Burley is a more attractive crop to growers because it commands a higher price. It is also cured differently. It is hung on drying racks in open-air pole and thatch sheds and air-cured without heat from flues. Because it is not heated, burley does not require the huge inputs of firewood that flue-cured tobacco uses. In fact, no wood is needed for the curing process. In 1964, only 9 percent of the total tobacco auctioned was of the burley type. By 1992, it was 73 percent of the total (Van Donge, 2002). This percentage has continued to grow since the liberalization of the tobacco industry in the early 90s. The assumption that the tobacco industry needs massive inputs of fuelwood is simply no longer true. Wood is still used to build the open-air sheds, but the sheds for air-cured burley tobacco can last for a decade or more - far longer than the two year life span of the flue-curing sheds. The tobacco industry uses far less wood than it once did, but despite this fact the notion persists that wood is needed for the tobacco industry. It is part of the narrative.

Another theme that persists is the use of eucalyptus for tree planting. Eucalyptus was introduced to Malawi by the British during the earliest years of the colonial period because it has many advantages as an agro-forestry tree. It grows very fast and very straight. It is highly resistant to insects such as termites. It tolerates dry climates well, and does not require much maintenance because it can easily be coppiced. That is, you can cut it back and it will shoot another stalk and continue to grow. All of these attributes make it an excellent tree for producing fuelwood and construction materials such as timber and poles. It is not, however, a suitable tree for preventing soil erosion and depletion or for using near agricultural lands. This is because eucalyptus trees require enormous amounts of water. In order to get this water they grow a long, straight taproot down to the water table. Eucalyptus trees will actually contribute to soil depletion and will compete with food crops for water. Moreover, through the process of allelopathy, it will actually poison nearby crops. There are many types of other trees, many of them indigenous, that grow reasonably fast, can be coppiced for fuelwood, and which actually help the soil. Some, such as *Faidherbia albida* and *Leucaena leucocephala* not only fix nitrogen, but drop their leaves during the growing season so that they can be successfully intercropped without competing with crops for sunlight or water (Deweese, 1995; Feder, 1997). Yet despite efforts by international agro-forestry experts to promote these species they have failed to catch on and eucalyptus remains a favorite.

An interesting commonality between the belief that the tobacco industry needs fuel and the continued focus on planting eucalyptus as a good agroforestry tree is that

both ideas persisted for decades despite their inaccuracies. They were plausible when they were introduced as part of the narratives during the colonial era, but had become erroneous and misleading during Banda's years. As mentioned, part of the reason for this inertia in the face of contradictory evidence is because both ideas were heavily promoted by the British during the colonial period. The imposition of power in support of the narratives made them especially 'sticky' and helped to cement them for the next hundred years. It is also true that both of these beliefs still contain an essential nugget of truth – there is a need for fuelwood, and trees can replenish soil and halt erosion. Additionally, both of these beliefs provide a compelling story that follows a simple narrative that seems both logical and easy to believe. They are also utterly self-serving to those in power. They both contain a sort of twisted rationale, an intellectual slight-of-hand, which favors the wealthy and powerful estate owners while blaming the poor who struggle with lack of food and lack of access to land.

For more than a hundred years estate owners, government officials, and powerful international institutions believed the discourse surrounding trees. They had every reason to. The narratives that explained it were powerful and came with a stamp of legitimacy. They also served the interests of those in power and absolved them of any culpability for the country's ills. Nevertheless, after a hundred years of promotion, the discourse was never fully embraced by the small farmers who never planted trees in meaningful numbers even when they were required to by a dictatorial government. They did not perceive a crisis and refused to divert their attention from their chief priorities all of which involved dealing with poverty and food insecurity. Why is this?

## CHAPTER X

### THE REALITY ON THE GROUND: TWO SURVEYS

Research was conducted in the village of Mchombo during 1995-6 and again in 2008. Mchombo is a small village in the densely populated Shire highlands of Southern Malawi (Appendix III). For decades, it has been under intense environmental pressure. Aerial photographs show that by 1965, 91 percent of the village was already under cultivation. By the time of the first survey in 1995, almost all of the remaining woodlands had been cleared. The farmers of Mchombo village clearly perceived lack of trees and deforestation to be a problem. 71 percent of the households responded that they had difficulties finding enough wood to meet their needs and all of them expected that they would have difficulties in the future. Yet the villagers had not responded by planting many trees. This was not because they were too lazy or did not understand that planting trees could be a successful strategy to meet their future needs. The reason that these farmers were not planting trees was that they had more pressing and immediate needs. They needed food. In one part of the study, farmers participated in a thought experiment that showed how they would prioritize household decisions if given a lump sum of money. Again and again, their priorities reflected a concern with food security. Their priorities were purchasing fertilizer, hybrid maize or food. Using the money to plant trees was far down the list of priorities. The sum results of the survey suggest that the farmers of Malawi did not perceive a crisis of deforestation. In fact, trees and tree products were available. The village forestland may have completely disappeared, but



there were still trees on nearby estates which villagers could ‘poach’ or find ways to informally purchase from land managers or security guards.

The first survey took place at the beginning of a time of dramatic transition for Malawi. In 1994 the “Life President” Hastings Kamuzu Banda had been forced to step down and Malawi held its first-ever democratic elections. A new man, Baikili Muluzi, took office promising a wave of reforms and government accountability. Unfortunately, this failed to materialize. In fact, Muluzi’s government was plagued by corruption and an inability to govern effectively or to enforce laws. Banda had been a dictator, but he had been a strong dictator. Muluzi was perceived to be weak. In the years following his election there were stories of whole forests being cut, sometimes overnight, in order to produce charcoal to sell in the cities. People could do this because they no longer feared any sort of reprisal from the government. Muluzi deregulated the tobacco market, but this caused a period of imbalance and price dips. Farmers who had formerly planted food tried to plant burley tobacco as a cash crop only to see the price dip because of oversupply. This, in turn, caused food shortages and increased levels of poverty. Muluzi introduced a new National Forestry Program that aimed to be less ‘top down’ and was modeled on community-based natural resource management, but still promoted the old narratives by encouraging small farmers to plant eucalyptus as a way of helping themselves and meeting the fuel needs of the country. Malawi’s National Forestry Plan from 2001 still listed “influence wood energy supply and demand” as one of its 12 key strategies (Malawi NFP, 2001). Given the uncertainty of the time and the continuation of the same old narratives it is not surprising that the farmers interviewed in the first survey

concentrated on poverty related issues and were only marginally concerned with planting trees.

A second survey took place in Mchombo village during August and September of 2008. The respondents, each representing a household (N=75), were asked a broad series of questions concerning how they use their land and managed their natural resources. Many of the questions were specifically focused on trees and aimed to ascertain whether or not farmers had changed or revised their strategies in the intervening years. They were also asked open-ended questions concerning what they perceived to be the biggest problems they faced. The results of the survey indicate that the main issues and problems faced by farmers have not changed although there is some indication that they are adapting their strategies to compensate for the continued depletion of their natural resources.

Poverty and food security remain the most important issues in the lives of Malawi's smallholder farmers even when asked a question directly pertaining to natural resources. When asked, "When you think about natural resources in general (e.g. soil, water, trees, and others), what do you see as the biggest problem facing you today?", 91 percent (68/75) mentioned poverty or an issue stemming directly from poverty or lack of good farmland. More than half of them (39) mentioned poverty directly. This is all the more interesting because the way the question was framed. Interviewees were not asked what the biggest problem in their lives was, but what the biggest problem for natural resources was. Still, the answer was poverty. Interestingly, nobody mentioned lack of fuel.

Deforestation and lack of trees were mentioned throughout, but only as they related to poverty. One respondent summed up the village's problems succinctly, "Poverty and shortage of land has led to the destruction of natural resources." Overpopulation was also cited by almost half the respondents (36), though it was clear from their responses that they saw overpopulation not as a problem in itself, but as one that related directly to lack availability of good land and, hence, a contributing factor to poverty. "Poverty, overpopulation and shortage of land has led to the destruction of the natural resources," was a typical response. When people are extremely poor, their poverty is their chief concern and informs the way they view the rest of the world.

All of the respondents answered that there was no forest or woodland left in Mchombo village. This is not surprising since it was almost completely gone at the time of the 1995-6 surveys. When asked if they had observed changes in the land everybody answered that they had and that the changes had been negative. In fact, they only mentioned two types of changes: the soils were depleted and the trees were gone. 87 percent (65) cited the lack of trees as the major observable change and a third of them specifically mentioned the lack of indigenous trees. Two of these respondents mentioned that they only place to see an indigenous tree in Mchombo village was in the graveyard. The respondents were divided over when the changes took place with roughly a third saying they happened in the 80s or before, a third mentioning the 90s and a third citing the present decade. This may have to do with the age differences of the subjects, but it is clear that they perceive a persistent decline in the state of the village's natural resources.

One of the surprising changes between this survey and the fieldwork done in 1995-96 was the number of people who are planting trees. Eighty percent of the households (59/74) responded that they have been planting trees, and four more households said that they had stopped planting only because they already had enough. This means that 85 percent of the households surveyed currently own some planted trees. While this is a positive development, it is also a bit confusing. The villagers report that there are no trees, but 85 percent of them own trees. The reasons for this apparent contradiction probably lie in perception. When villagers say there are no trees, they are most likely thinking about trees to which they have access. There may also be a language issue: when people respond that there are no trees (“palibe mitengo”), they may mean it more figuratively than literally. They probably know there are some trees, but not enough. The forest that was at one time open-access is gone. All the trees that are left are privately owned pieces of property.

The ways in which trees are used and the types of trees that are planted is also informative. When asked to name the reasons why she was planting trees, only one respondent named firewood as the sole reason. While firewood was an important reason for many of the people interviewed, 69 percent (43/62), most people, 81 percent (50/62) wanted trees for multiple reasons that including fruit, construction materials, ecological services (i.e., windbreaks, erosion control), or income. Trees are seen as valuable pieces of property that have multiple uses over their lifetime. All of the households stated that they would use trees as income, but less than half cited income as a major reason (34/75). Most households consider trees to be a sort of reserve income that can be used for special

purposes. Some wood can be sold for money to buy food in lean years or to buy construction materials, medicine or to pay for school fees. This may have ramifications for some of the NGOs who have been promoting the reestablishment of community access forests as a form of community-based natural resource management. Community forests can be a fine thing when there is plenty of available land, but in a small, impoverished village whose borders are tightly circumscribed and where land is at an absolute premium, most people will want to control the number and kind of the trees that they grow and may not want to share their investments with others.

In Mchombo village, most of the people are growing eucalyptus. Of those growing trees, 80 percent of them are growing eucalyptus and 56 percent are growing nothing but eucalyptus. This is somewhat troubling considering how deleterious eucalyptus can be to the soil especially in a small village where most of the land is already stressed, but it is also understandable given how well entrenched it is in the agro-forestry culture, how fast it grows, and how easily it can be coppiced for fuelwood. Most of the eucalyptus is grown for firewood or construction although three people mention using them for windbreaks as well. In general, although erosion was cited as a significant problem trees were not considered to be part of the solution. Furthermore, none of the respondents mentioned planting any of the tree species that can be intercropped in order to fix nitrogen and improve soil quality. These species are still only rarely available from nurseries or government forestry officials.

The fact that 85 percent of the villagers report that they either already have trees or are planting trees is a positive development, but one with some worrying implications.

Villagers had been exhorted by officials to plant trees for decades, but had responded with indifference. That was because they still had access, albeit usually illicit access, to trees that were on nearby estates and needed all of their available land for food production. Mchombo village is bordered by four estates, but at the time of the 1995-6 fieldwork most of the villagers were getting wood from only one of the estates, the Madsen estate, because the others had already been largely deforested or had effectively closed off access to villagers. If the villagers are now planting trees on their own land, does this mean that deforestation on the Madsen estate has progressed to such a degree that smallholder farmers are now running out of access to trees and wood? Are they being forced into the terrible decision of whether or not to allocate space that could have been used for food production in order to plant trees? Are they planting a larger number of eucalyptus trees that will only continue to desiccate and impoverish the soil?

It is extremely unlikely that farmers would take land out of food production in order to plant trees when food security is so tenuous. Instead, they will look for more marginal places to plant such as right next to their houses (where they can keep an eye on them and where the trees will provide shade) or on steep and degraded slopes where they will not compete with food crops and may help combat erosion. Still, it is interesting to note that while planting trees on village land may seem at face value to be a purely positive thing, it may also be an indication that trees which were once available elsewhere have become harder to find. Any such inference, however, must be based on the boundaries and geography of a particular place. After all, tree scarcity in Malawi is mostly about access within a defined region.

To summarize, the 2008 survey in Mchombo indicates several broad trends. The first is that poverty is still the main problem for most village farmers. Other issues that relate directly to poverty such as food scarcity, land access, and population pressures are understood to be part of the poverty problem and are frequently cited along with it. Lack of trees is not perceived to be a problem on the same scale as poverty although it is widely observed, and seems to be an issue of increasing concern. Trees on private estates to which they once had access are becoming harder to get. Consequently, farmers are planting more of their own trees than they did have in the past. They are also employing a strategy of diversity in which they are planting different kinds of trees that can be used in a variety of ways such as for food, fuel, construction and income. The ecosystem services that trees can provide, however, is generally not one of the main considerations. Lastly, farmers in Mchombo are acutely aware of the problems they face and are adept at prioritizing their needs. These needs are based on their own observations and experiences rather than decades old narratives or received wisdom from outside experts.

## CHAPTER XI

### CONCLUSION

For more than a century, there has been a discourse concerning an impending environmental crisis in Malawi that requires that its small farmers plant trees. Narratives have been constructed to explain and support this discourse, the two most important being the narrative of a fuelwood gap and the narrative that land degradation due to poor farming practices can be overcome by planting trees. These explanations provided oversimplified explanations to complex social, economic and environmental problems. They also tended to obscure the motivations of some of the powerful groups who were driving the discourse by ignoring or obscuring more important realities such as poverty and food insecurity caused by inequalities of land distribution. Instead, they presented an overly simplistic solution: tell poor, rural people to plant more trees. Nevertheless, the discourse of a crisis brought about by lack of trees and the narratives and solutions that supported it were so deeply embedded in any discussion of Malawi that they became received wisdom and were believed without question by those who created Malawi's policies. This continued throughout the 20<sup>th</sup> century and is still happening.

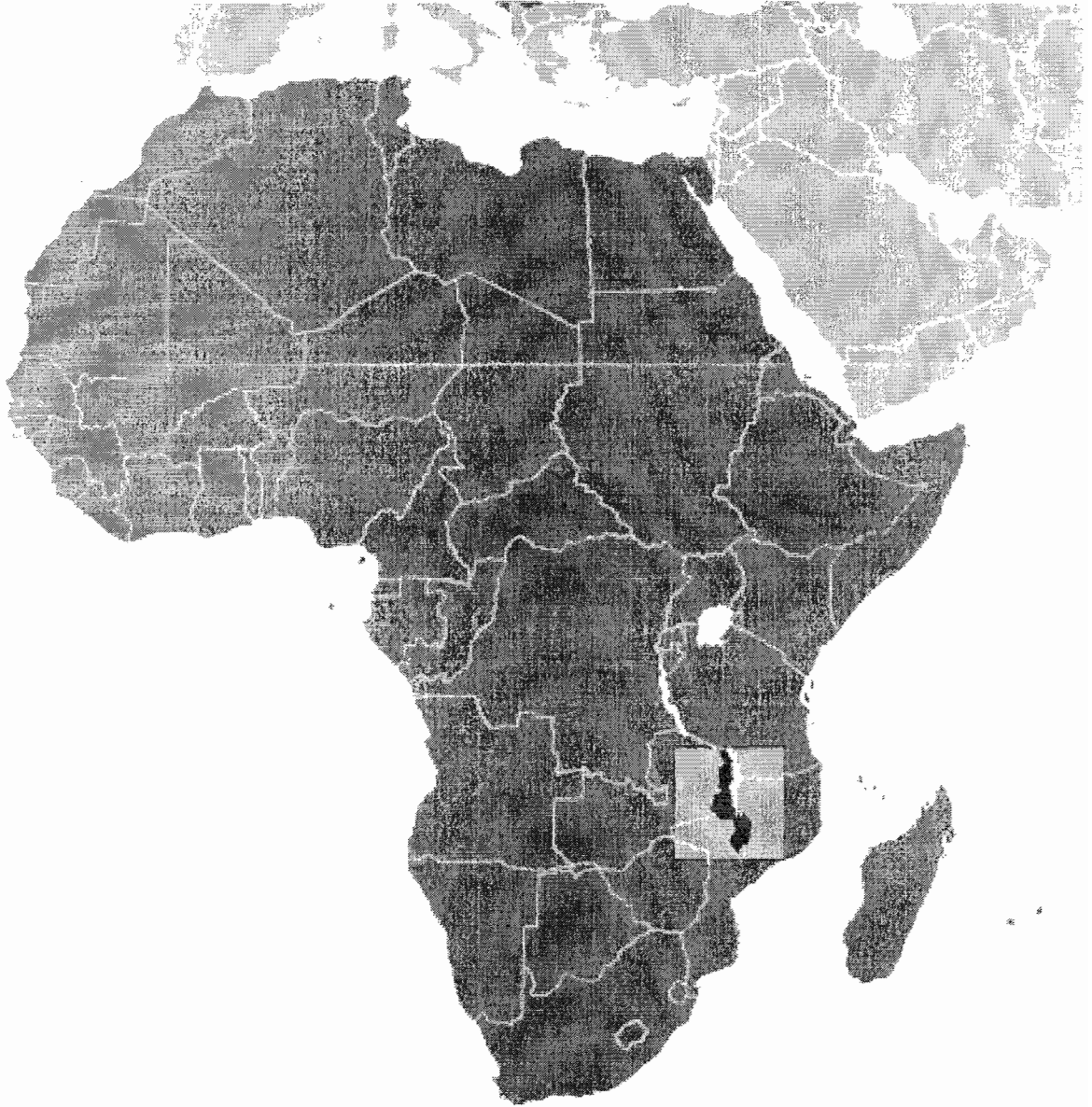
The smallholders of Malawi, however, have not planted many trees. This is because they did not perceive a lack of trees as a crisis. While they may have begrudgingly planted trees when required to, they did accept the prevailing discourse because it did not match their reality. Their reality suggested that the main crisis in Malawi was poverty. The results of the studies undertaken in Mchombo village strongly indicate that this is still the case. However, the results also suggest availability of trees is



a problem and it is becoming a more acute problem in certain areas where access to land and trees has been cut off or reduced. In the local context, the reality may be catching up with the discourse, though for reasons different from the traditionally espoused narratives. The studies also indicate that the farmers of Malawi are good at prioritizing their problems. If any meaningful attempt to address their lack of trees is to be made it will have to be part of a poverty reduction strategy that does not compete with more pressing needs such as food security and does not accept the terms of the old narratives.

APPENDIX A

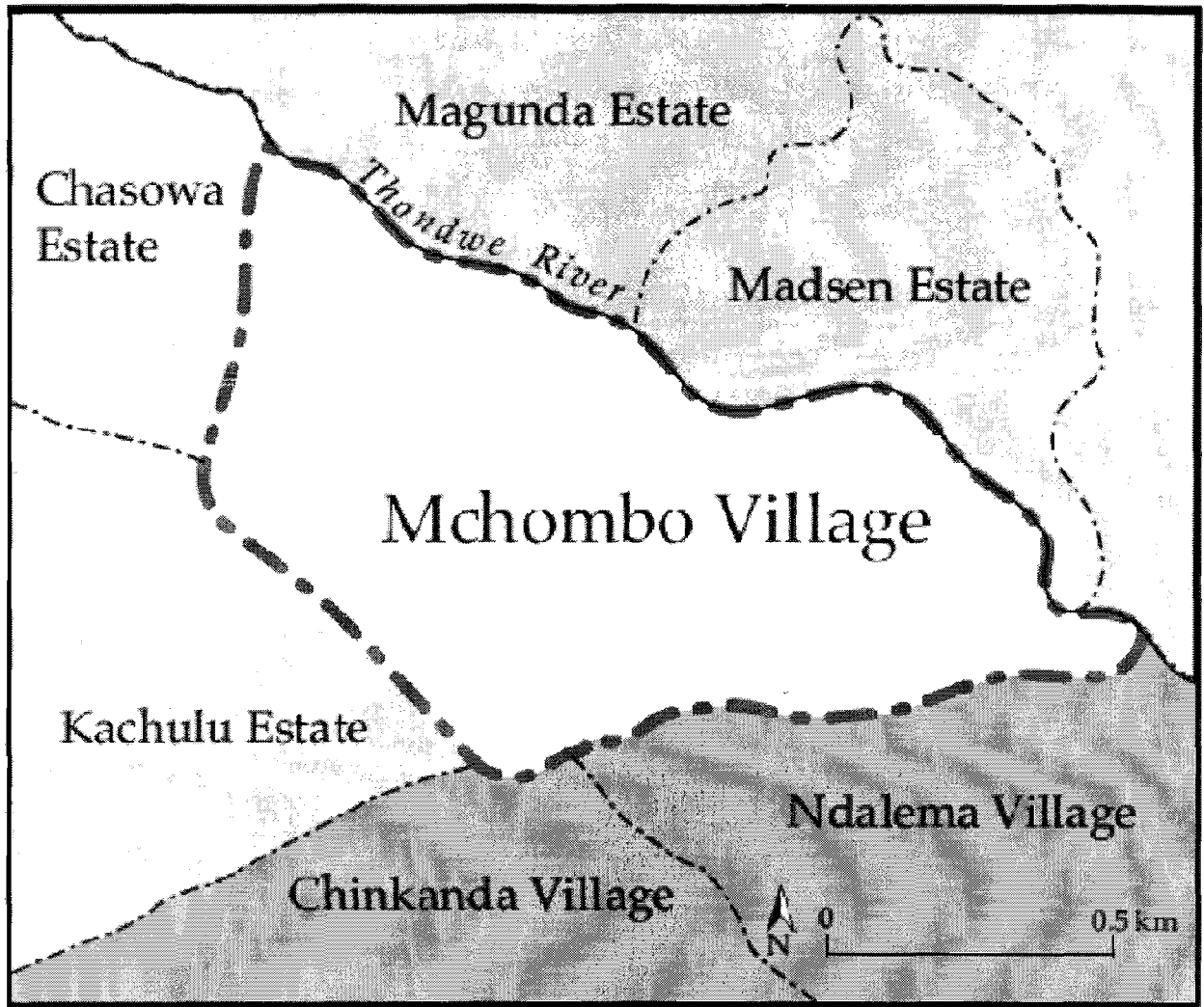
MAP OF AFRICA INDICATING MALAWI



APPENDIX B  
MAP OF MALAWI



APPENDIX C  
MAP OF MCHOMBO



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