

THE PLIGHT OF SMALL-SCALE IRRIGATION FARMING IN MALAWI: LESSONS
FROM WOVWE RICE SCHEME, 1964-2007

MA (AFRICAN SOCIAL HISTORY) THESIS

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THE PLIGHT OF SMALL-SCALE IRRIGATION FARMING IN MALAWI: LESSONS
FROM WOVWE RICE SCHEME, 1964-2007

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DECLARATION

I the undersigned hereby declare that this thesis is my original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used acknowledgments have been made.

DEDICATION

This thesis is dedicated to my mum, Lucy Nkhana who instilled in me the spirit of hard work. May the Almighty God continually shine His countenance on her.

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May the good Lord richly bless you all.

ABSTRACT

Despite the long history of existence and indeed the general significance of small-scale irrigation farming in improving the socio-economic status of peasant households in Malawi, both the past and present challenges of small-scale irrigation schemes have not been adequately documented. This study explores the challenges of small-scale irrigation schemes in Malawi in light of modernisation and neo-liberal ideas which gave rise and sustained both the management and operations of the schemes from 1964 to 1994 and 1995 to 2007 respectively.

Using the case study of Wovwe Rice Scheme in Northern Malawi, the study argues that the challenges of Wovwe Rice Scheme could not be simplistically explained through the manner in which it was established let alone through the top-down management style. Some challenges do not necessarily fit into such broad explanations. The study demonstrates that even a change in the management style of the scheme from the mid 1990s did not necessarily arrest all the challenges of the scheme. Some new challenges emerged which neither government officials nor farmers envisaged. Such challenges equally undermined the success of the scheme at a time when neo-liberal ideas of irrigation reform were employed. The study shows that between 1968 and 1994 the general set-up of the administrative structure and the lopsided pricing policies of peasant crops implemented from time to time undermined both the operations and utilization of the scheme. It also demonstrates how over-reliance on both mechanized technology such

as power tillers and seasonal credit undermined peasant attempts to make long-term investments in rice industry. The study also documents the socio-economic impact of the scheme on peasants during this era, observing that the scheme brought about economic differentiation among the peasants. By tracing the causes of this differentiation, the study demonstrates the need of taking into consideration the economic background of peasants before implementing any project aimed at improving peasants' welfare. The study also documents how administrative, economic and ecological challenges undermined the management of the scheme between 1995 and 2007, a period when farmers became actively involved in the management of the scheme. In so doing, it opens a new chapter on the forces undermining the management of the schemes in light of neo-liberal ideas of irrigation reform. Administratively, the study observes that Government's desire to save its resources by quickly withdrawing its staff from the scheme without recognizing the negative effects such an action would have in organizing farmers into a stable and capable Water Users' Association (WUA) for sustainable management of the scheme had adverse effects both on management and maintenance work in the scheme. Economically, far from the general optimism that market liberalization would bring about positive results, the study shows that market liberalization in fact negatively affected peasants in the scheme. Ecologically, this period was characterized by floods and water shortages which in turn gave rise to a number of social problems. The study also documents the achievements of the Wovwe Water Users' Association (WWUA). In so doing, it highlights the unprecedented role WUAs could play in developing scheme areas into nuclei of rural towns, one of the principal objectives for which the schemes were established.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADD	Agricultural Development Division
ADMARC	Agricultural Development and Marketing Corporation
BOT	Board of Trustees
DAD	Department of Agricultural Development
DADO	District Agricultural Development Officer
DLVW	Department of Valuation, Land and Water
GVH	Group Village Headman
IFAD	International Fund for Agricultural Development
IMT	Irrigation Management Transfer
KRDP	Karonga Rural Development Programme
KRAD	Karonga Agricultural Division
MANR	Ministry of Agriculture and Natural Resources
MNA	Malawi National Archives
MRFC	Malawi Rural Finance Company
MYP	Malawi Young Pioneers
NASFAM	National Smallholder Farmers Association of Malawi
NOIL	National Oil Industries Ltd.
OVOP	One Village One Product
SACA	Smallholder Agricultural Credit Administration.
SACCO	Savings and Credit Cooperatives
SFPDP	Smallholder Flood Plain Development Progamme
T/A	Traditional Authority

WUA	Water Users' Association
WWUA	Wovwe Water Users' Association

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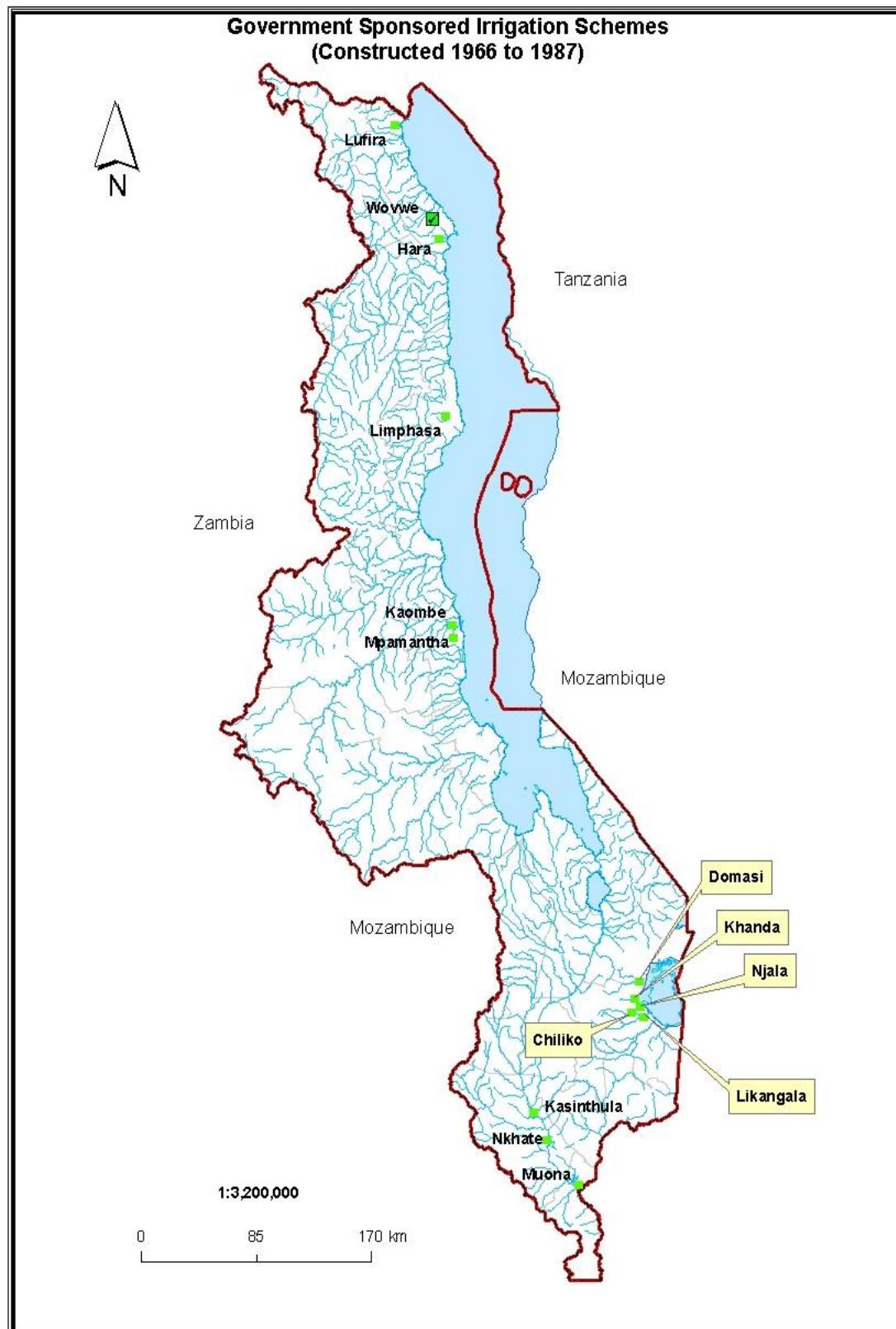
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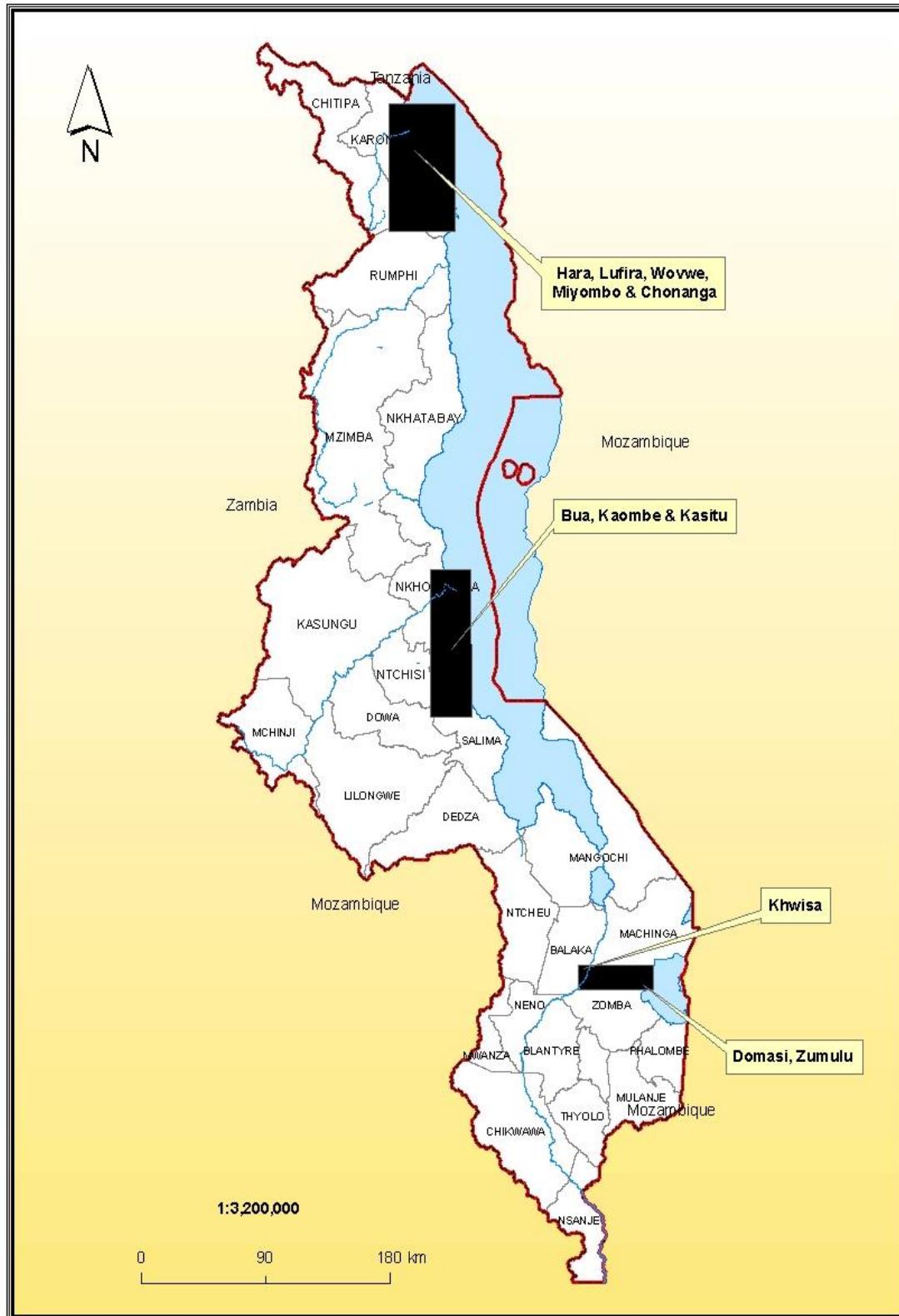
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Map 1

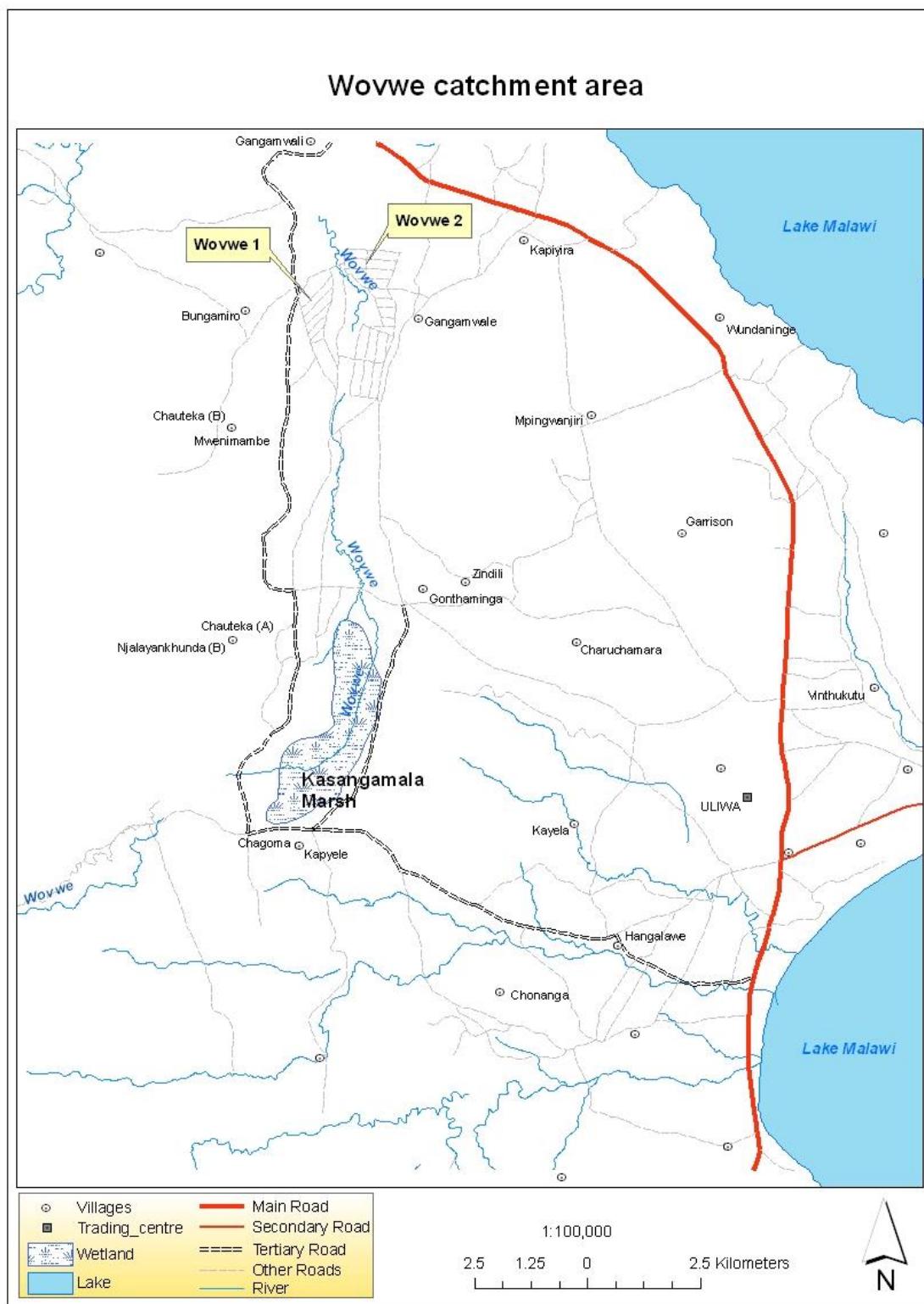


Map 2

Rehabilitated and Newly Established Irrigation Schemes



Map 3



Chapter One

INTRODUCTION

Barely four years after independence in 1964, the Malawi Government embarked on an agricultural programme that witnessed the establishment of several irrigation schemes across the country. Indeed, between 1968 and 1980, sixteen irrigation schemes were established, largely sponsored by the Chinese Agricultural Technical Mission.¹ The objectives of these schemes were both political and socio-economic in nature. Politically, the schemes were meant to promote inter-ethnic cooperation and nationhood through the permanent settling of people from different parts of the country on the scheme. Socio-economic objectives ranged from demonstrating to the local populace methods and benefits of intensive cash cropping, promoting the utilisation of underdeveloped land, increasing the volume of rice exports thereby improving the socio-economic status of the rural households, to forming nuclei of rural towns in Malawi.²

The establishment of these schemes was generally influenced by the dominant modernization-development paradigm, which post-colonial governments in Africa embraced immediately after independence. Among other things, it espoused the view that traditional African economies could be transformed into modern capitalist ones through the establishment of small-scale development projects in rural areas.³ It was therefore

hoped that irrigation schemes would bring about rural development. Thus the reduction of rural poverty, and the growing social and economic inequalities between rural and urban areas, ranked high on the agenda for the establishment of irrigation schemes in Malawi.⁴

Surprisingly, a number of studies point to the fact that while the schemes have registered success in the attainment of political objectives, minimal achievements have been registered in the attainment of socio-economic objectives. For instance, in his study of the Limphasa Rice Irrigation Scheme in the mid 1990s, Kishindo (1996) observed that not many farmers had benefited from the scheme socio-economically.⁵ In fact, he noted that the scheme was marred by high rates of farmer turnover precipitated by, among other factors, poor social amenities and poor earnings by farmers. Similarly, in his study of the Wovwe Valley, Chirwa (2002) observed that a greater part of the peasant population still lived in poverty, concluding that the schemes could not be significantly regarded as a panacea to food security and increased agricultural production at a local community level.⁶ His study further revealed that a number of farmers had been locked up in debt, which they could not easily repay to the credit organizations. A similar observation was made by Nkhoma (2004) in his study of Domasi and Likangala schemes, where he noted that the schemes brought more harm than good to farmers.⁷ Ferguson and Mulwafu (2004) observed that during the 2001/2002 famine in Malawi, people on the smallholder irrigation schemes, notably, Domasi and Likangala, were consuming maize husks and grasses.⁸ In their more recent paper, Veldwish et al⁹ perceived the development of irrigation farming in Malawi through the establishment of the sixteen irrigation schemes

as a failed modernization attempt in the sense that a good number of socio-economic objectives for which they were set have not been attained.

The picture emerging out of such findings is that small-scale irrigation farming in Malawi could as well be dismissed for failing to achieve a good number of the socio-economic objectives for which they were established. Evidence, however, shows that the schemes have faced challenges which might explain the failure to meet the intended socio-economic benefits.

It is against this background that this study was undertaken with a view of probing into the challenges of the schemes using a localised study of Wovwe Rice Scheme in Northern Malawi. This is particularly important because irrigation farming has become the most desirable option not only in addressing food security, but also changing the socio-economic status of the rural poor in Malawi. Lack of adequate information on the challenges to small-scale irrigation farming in Malawi was however the major thrust behind this study. Two reasons explain this scenario. Firstly, small-scale irrigation farming in Malawi has not been a dominant field of study in History. A few studies written on the subject from other disciplines have had their own problems. For instance, writing from an engineering perspective, Makato (1984) and Mphande (1984) in their separate studies provided a general overview of the challenges of the schemes between 1970s and 1980s.¹⁰ Their studies however were sketchy and limited in their periodisation. Chirwa's (2002) work presented a detailed analysis of the experiences of the schemes.¹¹ However, he did not seriously probe into the distant past with respect to the challenges of

irrigation schemes. Besides, his study treated the challenges as if they were applicable to one and uninterrupted historical period, yet irrigation farming has experienced several changes at the level of management. Nkhoma's (2004) work was the first attempt on the part of historians to study the subject from a historical perspective. He highlighted the development of irrigation schemes by both the colonial and post-colonial states, citing, among other things, the challenges both the colonial and post-colonial governments faced in developing small-scale irrigation schemes.¹² However, his analysis of the challenges of the schemes once they had been established is sketchy and biased towards the state in that it solely blames farmers for the limited success of the schemes.¹³ In some cases the study does not explain why farmers might have acted the way they did. The second reason for lack of adequate information on the subject has to do with the wave of irrigation reform that swept through Malawi in the mid 1990s.¹⁴ This made scholars quickly shift their attention to the present without seriously studying the past challenges of irrigation farming. As such, the past has often been taken as a backdrop to explaining the contemporary experiences of small-scale irrigation farming. At best, the challenges were explained through lack of active farmer participation in the schemes. Studies by Ferguson and Mulwafu particularly fall into this category.¹⁵

Consequently, using the case study of Wovwe Rice Scheme in Northern Malawi, this study sought to complement the previous studies by providing a historical analysis of the challenges of the schemes in light of modernisation and neo-liberal ideas which gave rise and sustained the operations of the schemes from 1964 to 1994 and 1995 to 2007 respectively. It sought to achieve the following objectives:

1. Examine the general socio-economic set-up of Wovwe Valley before the establishment of the scheme.
2. Examine the history of the establishment of the Wovwe Rice Scheme including its associated components such as farmer participation, land tenure and other agronomic practices.
3. Analyse the specific administrative, production, social and ecological challenges the scheme faced over time from 1968-2007
4. Assess the impact of the scheme on the livelihoods of the peasant society in the Wovwe Valley from 1968-1994.

The study argues that the challenges of Wovwe Rice Scheme between 1968 and 1994 could not be simplistically explained through the manner in which it was established let alone through the top-down management style that was devoid of active farmer participation. Some challenges do not necessarily fit into such broad explanations. Similarly, a change in the management style of the scheme from the mid 1990s did not necessarily arrest all the challenges of the scheme. The study shows that between 1968 and 1994, the general set-up of the administrative structure and the lopsided pricing policies of peasant crops implemented from time to time undermined both the operations and utilisation of the scheme. It also demonstrates how over-reliance on both mechanised technology and seasonal credit precluded attempts on the part of peasants to make long-term investments in the rice industry. In this period, the study also documents the socio-economic impact of the scheme on peasants, observing that the scheme brought about economic differentiation among the peasants. By tracing the causes of this differentiation,

the study demonstrates the need of taking into consideration the economic background of peasants before implementing any project aimed at improving peasants' welfare.

Between 1995 and 2007 the study observes that the scheme was affected by administrative, economic and ecological challenges. In documenting these challenges, the study opens a new chapter on the forces undermining the management of the schemes in light of neo-liberal ideas of irrigation reform. Administratively, the study observes that the government's desire to save its resources by quickly withdrawing its staff from the scheme without recognizing the negative effects such an action would have in organizing farmers into a stable and capable Water Users' Association (WUA) for sustainable management of the scheme had adverse effects both on management and maintenance work in the scheme. Economically, the study shows that market liberalization that was carried out in the late 1980s negatively affected peasants in the scheme later in this period. Ecologically, this period was characterized by floods and water shortages which in turn gave rise to a number of social problems among farmers in the scheme. Finally, the study documents the achievements of the Wovwe Water Users' Association (WWUA) which emerged during this period. In so doing, it highlights the unprecedented role WUAs could play in developing scheme areas into nuclei of rural towns, one of the principal objectives for which the schemes were established.

This study thus provides a historical spectrum through which the distant past and contemporary challenges of irrigation schemes could be viewed in a more connected manner. This information is crucial in that it would act as a guide to policy framers in

developing further interventions into small-scale irrigation farming in Malawi. In addition, by presenting a historical analysis of both the past and contemporary challenges of irrigation schemes, the study contributes to the growing body of literature on agrarian history both in Malawi and Africa. In particular, the study sheds light on the significance of neo-liberal reforms as applied in small-scale irrigation farming both within and without Malawi.

The Study Area

This study uses the case study of Wovwe Rice Scheme, which is located in the Wovwe Valley in Karonga District, Northern Malawi (see map 1). It is 36 km away from Karonga Boma in the South and 5 km west of main M1 road. It is within the area of sub-chief Mwilang'ombe, T/A Wasambo. As a Government sponsored scheme, it falls under Karonga Rural Development Programme (KRDP), Nyungwe Extension Planning Area (EPA). Wovwe Rice Scheme is christened from the River Wovwe, which is the scheme's water source. The Wovwe area consists of both lowlands and foothills. However the scheme is located within the lowland area, bordered by Nyika plateau to the West, which is the source of River Wovwe, and Lake Malawi to the East, which is the mouth of River Wovwe. The River flows from Nyika plateau to the lake passing through the scheme in a West-East direction.¹⁶ As the River flows from the plateau, it disappears in the Kasangamala Marsh only to re-emerge again just a few kilometres before passing through the scheme (see map 3). For a long time, the Kasangamala Marsh acted as a natural

reservoir, preventing the River from drying thereby ensuring a steady supply of water to the scheme.

The Wovwe area is ideal for the production of different crops ranging from maize, cotton and cassava, mostly grown in the upland areas to rice, green maize, vegetables, bananas, sugarcane, and potatoes, grown in the lowland areas (dambo). Before the scheme was developed, cassava was the main subsistence crop and has remained so to date. Second in importance as a subsistence crop was maize with rice taking the third position. Cotton was the major cash crop. The development of the scheme made rice emerge the major cash crop of the area with cotton taking the second position simply because unlike cotton, with the scheme in place, rice could be grown twice per year.¹⁷

For a long time, rice in the Valley was mostly grown in the government scheme. However, since the 1990s the Kasangamala area has witnessed the development of self-help rice schemes with an extensive irrigation system modelled after the government-sponsored scheme down the valley. While upland farming is carried out mainly during the warm/hot and rainy season from November to March/May (local summer season), lowland farming with the exception of irrigated rice, takes place mostly during the dry but cool season (local winter), from June to September.¹⁸ Winter Rice is cultivated from May to mid November. Apart from crop production, farmers are also involved in other activities which range from livestock rearing (cattle, goats and pigs), mat making and other crafts, carpentry, beer brewing, tinsmith, fishing to market vending.

Demographically, the earliest inhabitants of the area are the Ngonde and the Tumbuka. Oral tradition has it that these inhabitants settled in the valley during the 18th century, at a time when the two ethnic groups got settled in Malawi.¹⁹ The dominant original clans include the Nyondos, the Mwafulirwas, the Msiskas, and the Mwachipokas. At a time when the scheme was being constructed, the entire Wovwe Valley had about 7,000 inhabitants.²⁰ The establishment of the scheme in the 1970s witnessed the settlement of other ethnic groups in the area from different Districts in Malawi. This reflected one of the objectives for which small-scale irrigation schemes were developed – to promote inter-ethnic interactions in the country. The area now boasts the settlement of several inhabitants in addition to the above, namely, the Yao, the Lambya, the Ngoni, the Sena, the Lomwe and several other ethnic groups from Chitipa District. Despite coming from diverse backgrounds, the inhabitants fall under the jurisdiction of nine Tumbuka and Ngonde Group Village Headmen (GVH) whose villages surround the scheme, namely, Kapiyira, Gangamwale, Mphangwiyanjini, Zindisi, Kalimunda, Mwenemwambe, Bunganilo, Kanyuka, and Jumbe.

Added to these are the Malawi Young Pioneer (MYP) settlers²¹ who were deployed to settlement/irrigation schemes across the country since independence in 1964. A good number of these have permanently settled in the area. Wovwe Rice Scheme is thus surrounded by quite diverse groups of people with different background and interests. These groups have often survived on different means of livelihood.

The Wovwe Rice Scheme commands an area of 419 hectares. However, it has a net cultivable area of 365.4 hectares and the rest of the land is occupied by some office buildings and ADMARC structures. The scheme was developed in two major phases. The first phase (1968-1974) witnessed the construction of the scheme located to the western bank of River Wovwe. This is popularly known as Wovwe I and comprises 160 hectares. The second phase (1983-1987) witnessed the construction of the scheme located in the eastern bank of the River. It is known as Wovwe II and comprises 205 hectares. At the time of conducting this research, the entire scheme had 1500 farmers -950 males and 550 females. The scheme has had two official groups of farmers. The first group is that of farmers who were essentially instituted to be full-time irrigators, notably the MYP and non-MYP settlers. The second group is that of part-time irrigators, notably the local farmers who tended to straddle between the scheme and their own traditional fields. However, such divisions have not been mutually exclusive. Currently, the scheme management is ‘loosely’²² under the Wovwe Water Users’ Association (WWUA), which is assisted by officials from Karonga Rural Development Programme (KRD²³).

Two main reasons justify the choice of Wovwe rice scheme as a study site. Firstly, much as other irrigation schemes in the southern region of Malawi, notably the Chilwa basin irrigation schemes have been adequately studied, the same is not true with Wovwe. So far, the most prominent study carried out in the valley is that by Chirwa.²⁴ It is upon this study that several academic works have been written.²⁴ His study, however, was limited in its periodisation as it spanned the years 1991 to 1994. As such it lacked a more historical analysis of what happened prior to the 1990s, and a more contemporary

analysis of the events that followed after 1994. Secondly, Wovwe rice scheme is one of the government-sponsored schemes that were earmarked for a pilot project in an attempt to transfer the schemes into the hands of beneficiaries. It was envisaged that the scheme could act as a good case study in the analysis of the challenges to IMT at a local setting.

Periodisation of the Study

This study spans the period 1964-2007. The year 1964 marks the watershed in the history of Malawi since that is the year when the country witnessed the attainment of independence. It opened the new chapter on agricultural reforms in Malawi. For instance, the first post-colonial Land Policy, which *inter alia*, facilitated the take-over of customary land for small-scale irrigation schemes was drafted and adopted barely three years after independence.²⁵ Besides, the period 1964-2007 has some clearly demarcated periods reflecting scholarly shifts in the management of irrigation farming not only in Malawi but also in Africa as a whole. For instance, between 1967 and the 1980s, the emphasis by governments and donor communities to spearhead rural agriculture was highly celebrated by scholars. However, the 1990s saw another shift in scholarly thinking. The coming in of political and economic liberalisation in Africa influenced scholars to adopt Irrigation Management Transfer (IMT) as an ideal approach in the management of government sponsored projects. It was these factors that influenced the choice of the above period.

Theoretical Perspective

This study is located both within the Modernisation and Neo-Liberal traditions. Up until the early 1980s, the modernisation thinkers, held the view that development in rural areas could only be achieved through the penetration of agrarian capital, which would then disrupt the traditional ways of production, with the result of such a process being the quick transformation of the traditional sector.²⁶ They believed that the transfer of capital, modern ideas and technology into the rural areas was by far the most important thing in as far as the development of Africa's rural areas was concerned. Such ideas gave rise to a 'top-down' as opposed to a 'bottom-up' approach in the establishment and management of a number of government agricultural projects in Africa. Despite receiving enormous criticisms from later scholars in the mid 1970s,²⁷ with respect to the failure of modernisation ideas to bring about positive results, a good number of irrigation schemes in Africa and indeed in Malawi, including Wovwe Rice Scheme, were developed and managed using such ideas until the late 1980s for the rest of Africa and mid 1990s for Malawi.

In the 1980s however, having been dissatisfied with the top-down approaches to the management of development projects, the neo-liberalists²⁸ turned to participatory approaches heavily armed with slogans such as 'community empowerment' and/or 'community participation'. This approach set in motion a wave of irrigation reforms across Africa and Malawi was not spared. To understand the operations of the scheme during the above periods, therefore, it is important to turn to the very ideas that gave rise

to and sustained the operations of the scheme. These two broad theoretical underpinnings are later advanced and discussed at length in an attempt to understand the status of irrigation schemes in Africa and indeed in Malawi.

Research Methodology

This study is based on information obtained from two main sources. The first is interviews which the researcher conducted at Wovwe Rice Scheme and Karonga *Boma* between October and November, 2007. While at the scheme, the researcher interviewed different categories of informants who included ex-MYP settlers and local farmers, both from within and outside Wovwe Valley. Using snowball method of sampling, fifty farmers were selected and interviewed, thirty men and twenty women. Effort was made to interview farmers who had been associated with the scheme since the 1970s. In his support of qualitative research, Lawrence (2000)²⁹ argued that unlike quantitative research, which has to draw a representative sample, qualitative research rarely draws a representative sample. This is so because for qualitative research, it is the relevance of the informants to the research topic which determines the sample size. Besides, it is the level of saturation of the required information that matters more than the representativeness of the sample. Indeed, this sample of farmers provided adequate information for the study. The researcher also purposefully selected and interviewed chiefs and committee members of the Farmers' Association.

Both farmers and chiefs were subjected to questions on the pre-scheme society, especially on how agricultural production was organised before the advent of the scheme. This was done in order to make a proper assessment of the impact the scheme had on the people of Wovwe Valley. Farmers and chiefs were also asked questions on how the construction of the scheme had been achieved and how they had welcomed the development. The researcher also asked questions on issues of land tenure, access to credit facilities, farmer participation in activities of the scheme and how labour was mobilised for various production activities in the scheme. Members of the Farmers' Association were specially exposed to questions that assessed the challenges surrounding the issue of handing over the scheme to the beneficiaries.

In addition to the above groups of informants, the researcher also interviewed ex-government scheme officials (Ex-Scheme Managers and Technical Officers); government officials at Karonga Rural Development Programme (KRDP), which included the District Agricultural Development Officer (DADO) and the District Irrigation Officers; and those from the Karonga Agricultural Division (KRAADD), especially the District Irrigation Engineer. One official from the Department of Irrigation in Lilongwe was also interviewed. These informants were interviewed to get an official view on the operations of the scheme including the various administrative, production, social and ecological challenges both before and after the advent of democracy in Malawi. Thus oral testimony unearthed the experiences of farmers that could not be obtained from official documents. It shed light on how farmers managed to access credit facilities and how the withdrawal of such facilities affected them. It also highlighted the overall economic impact the

scheme had on farmers both at group and individual levels. Oral testimony was also central in unearthing the achievements of the Water Users Association and the challenges it faced in the administration of the scheme. In general, both farmers and officials were willing to divulge information. A good number of farmers expressed enthusiasm towards the questions that had been raised particularly because they targeted some specific challenges they were facing such as those to do with markets and irrigation inputs.

The second source of information comes in form of written records. This comprised both secondary and primary written sources. Secondary written sources consisted of published books, journal articles, unpublished seminar papers, masters and doctoral theses. These sources illuminated the study with the general debates on the status of irrigation schemes both in Malawi and Africa. Through the use of these sources, the study was properly contextualized. Primary written sources included government policy documents, monthly irrigation/ settlement scheme reports, government correspondences and some irrigation ordinances. Primary written sources provided rich information on how the scheme was constructed. It also yielded valuable data on how the official administration of the scheme was achieved. It also provided statistical information in form of production and marketing figures, the number of farmers who cultivated in the scheme, rice hectarage under cultivation, and farmers' net income in particular historical periods. Written sources were obtained from Chancellor College Library and Malawi National Archives (MNA) in Zomba, the Internet, Karonga Rural Development Programme (KRD^P) and Scheme Archives in Wovwe. While the MNA provided information that was general in nature, applicable to all the 16 irrigation schemes, KRD^P provided information that was

specifically applicable to Wovwe Rice Scheme. All written sources were subjected to both internal and external criticism. Archival information was particularly cross-checked with oral tradition especially because it was generated at a time when Dr. Banda himself was the Minister of Agriculture and Natural Resources. This would well have influenced the compilation of agricultural reports.³⁰

The analysis of the data started right in the field while data collection was underway. These data were organized into specific categories, using both pre-coded themes that were already known on the subject and other themes that emerged in the field. Such themes included those which had to do with forces that led to the establishment of the scheme, administrative structures, the credit scheme, agronomic practices in the utilization of the wetlands, to mention a few. Statistical data were analysed manually using simple Arithmetic. The figures were put into tables and an attempt was made to establish common patterns and variations in the pile of figures collected. A historical explanation was thus offered to the established patterns or variations using evidence from other sources.

Limitations

This study has been conducted amidst some limitations. Firstly, a good number of official records that were transferred to the MNA from KRDP got reprocessed but were never properly filed. As such even though the inventories contain the record of such documents, they could not be traced. To take care of this problem, the researcher relied much on

some backup records from KRDP, including some oral testimony. Secondly, the statistical information, especially the marketing figures are those registered in the official ADMARC records. They do not take into consideration the amount of rice that could be channelled through informal markets, let alone that which could be kept for household consumption. However, in the absence of any other records, they could still be relied upon. Thirdly, the period beginning from 1990 to 2007 had a few official documents simply because during this time a number of government staff had been withdrawn from the scheme paving way for farmer participation in the management of the scheme. As such, oral testimony features prominently in this period. On the other hand, information in this period could have been complemented by oral testimony from Concern Universal officials who supervised much of irrigation reform activities at Wovwe Rice Scheme. Unfortunately, by the time the researcher went into the field, Concern Universal had long checked out. Efforts to follow up these officials proved futile.

Summary of Chapters

The thesis is organised around six chapters. The first chapter is an introduction to the study. It highlights the main aim of the thesis and discusses in summary form the body of knowledge into which this study is located. It also sheds light on the study area including the justification for its choice and proceeds to discuss, in summary form, the theoretical perspectives guiding the thesis. Chapter two examines the status of irrigation schemes in Africa with special reference to Malawi. It traces the ideological reasons for the establishment of the schemes in Africa. This is immediately followed by an examination

of the shifting paradigms with respect to the status of irrigation schemes in Africa in general and Malawi in particular. These scholarly strands in turn, rooted in the theoretical perspectives as summarised in the introduction, guide the discussion in the rest of the chapters. The third chapter discusses the establishment of Wovwe Rice Scheme with its associated internal operations such as land tenure, farmer participation and other agronomic practices. It begins by discussing the preparatory work the post-colonial government undertook to facilitate both the establishment and management of the scheme and proceeds to discuss the actual construction of the scheme. Among other issues, the chapter observes that farmer participation in the scheme varied with Wovwe I experiencing low farmer participation than Wovwe II. Secondly, the chapter observes that despite operating under strict rules, farmers enjoyed a relative degree of tenure security in the scheme. The fourth chapter examines the challenges of Wovwe Irrigation Scheme during the Dr. Banda era, 1970-1994. The central features of this chapter include an examination of the administrative structure of the scheme, the credit scheme, farmers' utilisation of the scheme, and the impact of the scheme on peasants in the valley. It is argued that during this period, the scheme was confronted by an interplay of several challenges. Among others, a weak administrative structure, the lopsided nature of domestic producer pricing policies, and the culture of debt grossly undermined the potential of the scheme to effectively achieve its socio-economic objectives. On the other hand, the chapter observes that irrespective of the challenges, the scheme did bring some positive results on peasants, ranging from economic, technological to social impacts. Economic impacts were however highly differentiated.

Chapter five discusses challenges emerging from the mid 1990s to the present. The dominant theme of this chapter is the formation of the Wovwe Water Users' Association. Relying so much on Oral Testimonies, the chapter argues that the era of Water Users' Association witnessed the emergence of various administrative, economic, and ecological challenges that were hitherto uncommon. Administratively, the delayed hand-over of the scheme to the beneficiaries affected the maintenance work at the scheme such that many structures and infrastructure were left in a moribund state. Economically, the impact of the Structural Adjustment Reforms implemented in the late 1980s was highly felt during this period. The closure of state controlled markets to pave way for other private traders for instance simply created the challenges of both market and input provision to farmers. Ecologically, challenges of drought and water shortages became so common during this period. A combination of all these challenges in turn affected the effective management of the scheme by the Water Users' Association. Lastly, the chapter discusses the achievements of the Wovwe Water Users' Association (WWUA). Among others, it observes that the WWUA became so instrumental in making the scheme achieve one of its objectives - turning scheme areas into nuclei of rural towns. Among other things, it managed for the first time to tap electricity to the area to drive its mills and in the process contributing to the rise of several social amenities in the area. Since IMT at Wovwe Rice Scheme, just like in a number of these schemes, is still an evolving process, this chapter at best presents the preliminary challenges of the scheme during the era of irrigation reform with a bias towards challenges to do with the implementation of the reforms. Chapter six is a summary of the study, discussing the major findings of the study, the lessons to be learnt, and draws the readers' attention to areas for further research.

Endnotes

¹ See C.J.A Makato, “Smallholder Rice Irrigation in Malawi: The Role of the Farmer in Irrigated Rice” in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 287-294; C.U Mphande, “Smallholder Rice Irrigation Schemes: The Role of the Farmer in Irrigated Rice” in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 317-326; Paul Kishindo, “Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi” *Nordic Journal of African Studies*, Vol. 5, No. 1 (1996), pp. 1-10

² See P. Kishindo, “Farmer Turnover on Settlement Schemes”, 1996, p. 1; W.C Chirwa, Land Use and Extension Services at Wovwe Rice Scheme, Malawi”, *Development Southern Africa*, Vol. 19, No. 2 (2002), pp.310-311

³ See D.W Nabudere, “Beyond Modernization and Development, or Why the Poor reject Development” *Geographiska Annaler*, Vol. 79B, No. 4 (1999), pp. 205-207

⁴ Kishindo, “Farmer Turnover on Settlement Schemes”, 1996, p. 1

⁵ Ibid, pp. 1-10

⁶ See W.C. Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, *Development Southern Africa*, Vol. 19, No. 2 (2002), pp.307-327

⁷ See B.G., Nkhoma, “The State Peasants and Irrigation Farming in Malawi, 1964-2002”, An MA Thesis Submitted to the History Department in Partial Fulfillment of Master of Arts in African Social History, Chancellor College, (2004), pp. 84-97

⁸ A. E. Ferguson, and W.O Mulwafu, “Irrigation Reform in Lake Chilwa Basin, Malawi: Exploring Critical Land-Water Intersections and Livelihood Strategies”, Final Research Report of the BASIS Project, Oct., 2004

⁹ G. Jan, Veldwisch, et al., “Sand in the Engine: The Travails of an Irrigated Rice Scheme in Bwanje Valley, Malawi”, forthcoming.

¹⁰ See Makato, “Smallholder Rice Irrigation in Malawi: The Role of the Farmer in Irrigated Rice”, 1984, pp. 287-294; Mphande, “Smallholder Rice Irrigation Schemes: The Role of the Farmer in Irrigated Rice”, 1984, pp. 317-326

¹¹ See Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, 2002, pp. 307-327

¹² Nkhoma, “The State Peasants and Irrigation Farming in Malawi” 2004, *passim*

¹³ For instance, Nkhoma (2004) argues that during the post-colonial period the successes of Domasi and Likangala schemes were affected by poor farmer response, conflict between customary and public principles in the management of irrigation schemes, credit default among farmers, and lack of adequate funds. All the explanations save for one shift the blame on farmers.

¹⁴ These were reforms that the Malawi Government embarked on in some selected irrigation schemes. The schemes were rehabilitated with an aim of handing them over to beneficiaries thereby conforming to the tenets of the global discourse on Irrigation Management Transfer (IMT), whose basic assumption is that government-centred projects are unsustainable but once in the hands of farmers, there could be a sense of ownership and responsibility among the beneficiaries.

¹⁵ A. E. Ferguson, and W.O Mulwafu, “Irrigation Reform in Lake Chilwa Basin, Malawi: Exploring Critical Land-Water Intersections and Livelihood Strategies”, 2004; Ferguson and Mulwafu, “If Government failed, how are we to succeed? The Importance of History and Context in the Present-day irrigation reform in Malawi”, in Barbara van Koppen, Mark Giordano and John Butterworth (eds.) *Community-based Water Law and Water Resources Management Reform in Developing Countries*, (CAB International, 2007) pp.211-227

¹⁶ MNA /10/7, Wovwe Irrigation Scheme Working Paper, 1979

¹⁷ Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, 2002, p. 310

¹⁸ Ibid, p. 310

¹⁹ Oral Testimony (Hereafter, OT), Senior GVH Kapiyira, T/A Wasambo, Karonga, 27th Oct., 2007

²⁰ MNA /10/7, Wovwe Irrigation Scheme Working Paper, 1979

²¹ ‘Malawi Young Pioneers’ (MYP) was an arm of the Malawi Congress Party that was set up in 1967 by a Parliamentary Act to train young men and women in basic discipline, civics, agriculture and community development. Every year, 2000 MYP trainees would go through the training centres and about 700 of these would be deployed into the settlement/ irrigation schemes. See MNA /10/7, Wovwe Irrigation Scheme Working Paper, 1979. It was later disbanded in 1993 by the Malawi Army essentially because it had grown so militant.

²² ‘Loosely’ because the scheme has not yet been officially transferred to the Association much as the Association is practically responsible for the running of the scheme.

²³ W.C. Chirwa, *Wovwe and Adjacent areas: A Baseline Study*. Report for the World Vision International, Zomba: Chancellor College, 1995

²⁴ Works such as: Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, 2002; Diana Cammack and W.C. Chirwa, “Development and Human Rights in Malawi” *Bwalo: A Forum, for Social and Human Rights Development*, Issue 1, (1997), pp. 105-119

²⁵ See P. Kishindo, “Customary Land and the New Land Policy in Malawi” *Journal of Contemporary African Studies*, Vol. 22, No. 2, (2004), pp. 213-214; C.A. Griffiths, *Land Tenure in Malawi and the 1967 Reforms*, A Thesis submitted for the degree of Master of Laws of the University of Malawi, Zomba, 1983, *passim*

²⁶ For a critical analysis of the origins, early formulations of the Modernisation school (including how it has been shaped and remoulded in light of post World War II events), as well as the criticisms leveled against it, See T. C. Dean, “Modernisation Theory and Comparative Study of Societies: A Critical Perspective” *Comparative Studies in Society and History*, Vol. 15, No. 2 (1973), pp. 199-226; Nabudere, “Beyond Modernization and Development, or Why the Poor reject Development”, *Geographiska Annaler*, Vol. 79B, No. 4 (1997), pp. 200-215; T.M. Berger, “Decolonisation and Nation-Building: Political Development Theory and the Appeal of Commission in Southeast Asia, 1945-1975” *Journal of Southeast Asian Studies*, Vol. 34, No. 3 (2003), pp. 426-429; So Yo Alvin, *Social Change and Development: Modernisation, Dependency, and World-system Theories* (London: Sage Publications, 1990), pp.17-38, 53-87. Note: The Researcher has had a limited access to primary sources on the subject. However, interested scholars may wish to read the following works written by prominent Modernistaion theorists: C.E. Black, *The Dynamics of Modernisation: A Study in Comparative History* (New York: Harper Torch books, 1966); D. Lerner, *The Passing of Traditional Society: Modernising the Middle East* (New York: The Free Press, 1958); N. Smelser, “Towards a Theory of Modernisation”, in Amitai Etzioni and Eva Etzioni (eds.), *Social Change* (New York: Basic Books, 1964), pp. 268-264; S.N. Eisentadt, *Modernisation: Protest and Change* (Englewood Cliffs, N.J.,: Prentice-Hall, 1966); S.P. Huntington,

Political Order in Changing Societies (New Haven: Yale University Press, 1968a).

²⁷ See L. Cliffe, “Rural Political Economy of Africa” in Peter C.W. Gutkind and Immanuel Wallerstein (eds.), *The Political Economy of Contemporary Africa*, (California: Sage Publications, Inc., 1976), pp. 112-130; Catherine Coquery-Vidrovitch, “The Political Economy of the African Peasantry and Modes of Production” in Gutkind and Wallerstein (eds.), *The Political Economy of Contemporary Africa*, 1976, pp. 90-111; Williams Gavin “Taking the Part of Peasants: Rural Development in Nigeria and Tanzania” in Gutkind and Wallerstein (eds.), 1976, pp. 131-154

²⁸ The term ‘Neoliberalism’ was first coined in 1938 by a German Sociologist and Economist, Alexander Rüstow. In its original formulation, it attacked the hard core Liberalism that called for complete market liberalisation. Neoliberalism thus distinguished between areas in which the state could intervene and others in which it could not. Between 1930s and 1960s Neoliberalism was a well known idea. However, it sank into almost complete obscurity in the 1970s and 1980s. It remained there until the opponents of liberal reforms started using it as a tool for political rhetoric. See Oliver, M., Hartwich, “Neoliberalism: The Genesis of a Political Swearword”, CIS Occasional Paper 114, The Centre for Independent Studies (CIS), St Leonards, NSW 1590, Oxley, May, 2009. Today, the concept has gone beyond politics to influence development agenda in the ‘Third World’. It puts much emphasis on private sector initiatives, redefinition and reduction of the role of the state, promotion of new decentralized stakeholder-driven and community-based management institutions. See Ferguson and Mulwafu, “If Government failed, how are we to succeed? (2007) p.225; Tushaar Shah, et al, “Institutional Alternatives in African Smallholder Experience with Irrigation: Lessons from International Irrigation Management Transfer” Research Report, No. 60, Colombo, Sri Lanka: International Water Management Institute, 2002

²⁹ N.W. Lawrence (ed.), *Social Research Methods: Qualitative and Quantitative Approaches* (4th ed), (London: Allyn and Bacon, 2000), p. 41

³⁰ Dr. Hastings Kamuzu Banda was the first president of independent Malawi. He ruled the country from 1964-1994. Dr. Banda’s leadership style was dictatorial and anyone who could have compiled reports contrary to his expectations could easily be fired. For dictatorial leadership of Dr. Banda see P. Short, *Banda* (London: Routledge and Keegan Paul, Ltd., 1974), p. 202

Chapter Two

THE STATUS OF IRRIGATION SCHEMES IN AFRICA WITH SPECIAL REFERENCE TO MALAWI

This chapter examines the rise of settlement/irrigation schemes in Africa. It goes back to the late colonial period and begins by tracing the ideological reasons for the establishment of the schemes in Africa. This is followed by an examination of the dominant schools of thought which have guided scholarly work on irrigation farming both in Africa and Malawi.

The Development of Irrigation/Settlement Schemes in Post-colonial Africa

The development of irrigation/settlement schemes in Africa dates back to the later colonial period, coinciding with the dominance of modernization-development thinking, which colonial governments embraced in their attempt to develop Africa.¹ This thinking operated against the background of conceptualisations on the ‘peasant problem’ and ‘peasant rationality’.² While the former viewed African peasants as quite averse to progress and hence could only be transformed by removing them from their traditional environments and resettling them in modern schemes under the direction of experts and officials, the latter looked at the peasants as quite rational and as such could only be

improved by providing them with modern inputs, teaching them modern practices and facilitating the marketing of their produce.³ These two explanations provided an ideological justification to the establishment of both the settlement and irrigation schemes in Africa.⁴ Indeed, by the close of the 1960s, Africa was dotted with several colonial settlement schemes where peasants were removed from their original homes and concentrated in such schemes.

Immediately after independence, governments in Africa quickly embraced this thinking. Colonial settlement schemes were rehabilitated and several other new irrigation schemes, both large and small-scale, got established. Again, by the close of the 1970s, the entire region of Africa had been dotted with such schemes. Several reasons justified the rehabilitation and establishment of irrigation/settlement schemes in post-colonial Africa. These included the need to arrest rural-urban migration by making rural life more attractive; the need to achieve high rural agricultural productivity; and the desire to build the nations into unified units.⁵ The reasons were thus social, economic and political in nature.⁶

Immediately after their establishment however, these schemes, along with similar agricultural projects came under intense criticism from scholars and policy framers especially when it was noted that a number of them did not bring forth the envisaged outcomes.⁷ Henceforth, scholarly attention shifted towards finding solutions to the challenges of such schemes. These scholarly explanations fit into two shifting paradigms,

one emerging in the 1970s to the mid 1980s and the other from the mid 1980s to the present. What follows is a discussion of these broad schools of thought.

The Era of Top-down official management of the schemes, 1970s -mid 1980s

During this era, scholars became extremely interested in examining the manner in which the schemes were established and managed in order to explain the reasons behind the failure of such schemes in bringing about positive results. The general argument was that small-scale irrigation schemes were established using a top-down approach, which did not take into consideration the peasant societal structures let alone farming systems.⁸ The schemes were often imposed upon peasant societies that had their own ways of managing land and water resources, their own technologies and their own ways of organizing resources.⁹ However, no attempt was made to involve peasants in the project planning process.¹⁰ And the schemes were marred by infrastructural deficiencies emanating from inappropriate planning and design, and/or poor operational and management structures, absence of farmer involvement and participation, inadequate institutional structures and appropriate land tenure arrangements.¹¹

During this period, the need for rapid, large and small-scale development of irrigation infrastructure created large, powerful bureaucracies whose focus was civil engineering.¹² Mechanized technology, such as the use of tractors, power tillers as opposed to the use of traditional farming implements was employed in both the construction and maintenance of the schemes. Indeed, by 1980, maintenance costs for the mechanized technology and

the irrigation structures in the schemes did not match with the budgetary allocations for the schemes. In view of this, rapid deterioration and poor management of the schemes became widespread. What is more, the schemes registered high rates of farmer turnover as peasants were unwilling to actively participate in the activities of the schemes. Farmers tended to pursue what has been called a ‘hedgehog policy’ of depending on a variety of sources to earn livelihood.¹³

Similarly, because of involvement of mechanized technology, often hired out to farmers on credit, farmer’s earnings were substantially reduced. In view of this, Williams (1981) observed that rural development projects such as irrigation schemes in Africa were strategies for subjecting peasants to the control of the state.¹⁴ Sijm (1989) and Lipton (1987), both agree in their separate studies on the fact that the states often levied high indirect tax on peasant crops through the creation of marketing boards.¹⁵ Besides, prices for peasants’ produce are believed to have been deliberately set very low with the aim of subsidising the urban dwellers.¹⁶ In other words, overvalued exchange rates, heavy taxation of peasant products and expensive marketing margins of monopoly parastatals had substantially reduced peasant produce prices far below other competitive levels on world market. In view of this, peasants in the schemes were unwilling not just to produce crops at prevailing prices but also to deliver surpluses to official agencies.

Consequently a good number of these schemes proved unsuccessful. For instance, criticising the above school, Kloos (1991) observed that Ethiopian government’s attempts to stimulate food production by imposing an irrigation programme upon peasants from

the 1970s to 1980s proved ineffective.¹⁷ Failure to consult peasants in the project planning phase has been cited as one of the factors contributing to the failure.

The case of Malawi

Like the rest of Africa, post-colonial Malawi equally initiated such an ambitious programme, which extended from the late 1960s to late 1980s. Sixteen irrigation schemes were established, largely sponsored by the Chinese Agricultural Technical Mission.¹⁸ As noted above, the aims of these schemes were to promote intensive agricultural production especially for cash crops by modernizing peasant agriculture in the countryside; to increase the volume of rice exports; to promote the utilization of underdeveloped land and inter-ethnic interactions in the country, and above all, to improve the overall living standards of the rural poor.¹⁹

Modernist ideas appear to have had enormous influence over both the establishment and management of these schemes. For example, Cammack and Chirwa (1997) argued that the creation of irrigation schemes in Malawi and their consequent management were marred by a gross violation of human rights through dispossession of rural communities within an authoritarian political context, coercion and threats during implementation, top-down decision making structures and consequent lack of participation by beneficiaries in planning and implementation of programmes.²⁰ Similarly, Veldwisch et al.²¹ in their more recent study in the Bwanje Valley of Malawi have shared a similar view. Analyzing the development of small-scale irrigation schemes in Malawi, the authors observed that

designs were based on the perspective of engineers and not the beneficiaries of the schemes. In fact having analysed the recently constructed Bwanje Irrigation Scheme, they observed how the top-down approach was nevertheless employed in its construction.

What is more, in his study of the Limphasa Rice Scheme, Kishindo (1996) noted that the scheme was marred by high rates of turnover, the conclusion that was echoed by Chirwa (2002) in his study in the Wovwe Valley.²² Both scholars were agreed on the fact that irrigation schemes did not retain a considerable number of farmers on the schemes. Among other factors, they observed that the size of plots farmers held in the schemes were too small to support both the subsistence and commercial needs of farmers. As such, farmers tended to straddle between the scheme plots and their own traditional fields, a situation that led to underutilization of water, fertiliser and other resources in the schemes. These scholars also alluded to the fact that many farmers got trapped up in debt circles. As in other parts of Africa, scholars in Malawi noted during the 1970s, how the government, through ADMARC, indirectly taxed the entire smallholder agriculture by setting low prices for peasant products with a view of subsidizing estate agriculture.²³ Kydd and Christiansen (1982) observed that in the 1970s ADMARC's average gross profit per annum was K20.2 million, which amounted to a gross resource extraction from the peasant sector of MK181.2 million over a nine-year period – 1970/71-1979.²⁴ Indeed, ADMARC depots were constructed in a number of government schemes in order to facilitate the disbursement of input on credit and marketing of peasant produce.

In 1980 the Malawi government realized that a number of these schemes did not bring expected results. As a result, it initiated what was called the National and Shire Irrigation Study²⁵ which intended to review the experience with irrigation in Malawi, especially the sixteen irrigation schemes; to assess the potential for irrigation development; and to formulate a strategy for future development of irrigation farming in Malawi. The study observed that a number of schemes were in dilapidated shape and in dire need of rehabilitation. There were other several flaws, ranging from the lack of active farmer participation to the top-down management model. This study went a long way in paving a way for future interventions into irrigation farming in Malawi.

Between 1985 and 1994, the Danish International Development Agency (DANIDA) carried out a rehabilitation programme within the irrigation schemes in two phases.²⁶ The first phase (1985-1989) involved the physical rehabilitation of all the 16 irrigation schemes. The second phase (1989-mid 1990s) involved the preparation of schemes for farmer management through the introduction of Scheme Management Committees replacing the previous Land Allocation Committees.²⁷ However, a number of these changes were ineffective. For instance, in their study of Domasi and Likangala irrigation schemes, Mulwafu and Nkhoma (2003) noted that although farmers were brought on board to participate in the schemes through Scheme Management Committees, their involvement was limited to settling of disputes and allocation of plots and not necessarily the management of the schemes.²⁸ The official top-down management style precluded farmer involvement as active players.

The Era of Irrigation Reform in Africa, mid 1980s – the present

From the 1980s, it became clear that small-scale irrigation farming in Africa needed to be overhauled and the way to do that involved major institutional reforms. The era of irrigation reform should be located within the broader African institutional debate emerging in the 1980s. This debate focused much on the economic and social behaviour of African producers and attempted to understand their motives in terms of their own moral economies and group rationalities.²⁹ This view was very much popularized by Hyden (1980) as the ‘Economy of Affection’.³⁰ It posited that the conservative tendency of the peasantry to retain their household organizations, their situational ethnic and communal identities, and their autonomy from domination by state, capital and foreign interests, have been a stumbling block to any possible improvements to Africa’s rural agriculture.³¹ Africans were perceived to be communitarian by preference hence developmental activities could only succeed once this aspect was taken on board.³²

Such assumptions were later corroborated by neo-liberal development philosophy which put emphasis on private sector initiatives, redefinition and reduction of the role of the state, promotion of new decentralized, stakeholder-driven and community-based management institutions.³³ Henceforth, scholars began to argue for a bottom-up approach in the management of irrigation schemes, coinciding with the general shift in the management of rural development projects in Africa.³⁴ Such reforms were very much popularized through a global discourse on irrigation known as ‘Irrigation Management Transfer’ (IMT), highly influenced by neo-liberalists’ slogans of ‘community

participation' and/or 'local empowerment'.³⁵ It called for the devolution of responsibility for irrigation management to peasants' organizations.

At the heart of the theory of devolution is the argument that local, common users of a resource, who are empowered as a group to take over management of the resource, have the incentive to manage more efficiently and sustainably than does a centrally financed government agency.³⁶

Some reasons behind this assertion have been advanced. First, local users often have intimate knowledge of the resources. Secondly, by living and working in the area, users may also have a comparative advantage over government agents in monitoring resource use and rule compliance. Lastly, because their livelihoods depend on the resources, local users are often assumed to have the greatest incentives to maintain the resource base over time.³⁷

Irrigation Management Transfer therefore was a u-turn from an elaborate top-down command and support system, which proved quite unsustainable in a number of development projects.³⁸ Henceforth, scholars in Africa began to shift their attention from government officials to the local people as expert managers of projects meant at uplifting their socio-economic life.

In view of this, the reforms called for the creation of new forms of social organizations, such as the [Water Users' Associations (WUAs)], formalization of rights and responsibilities and physical renovations of irrigation schemes.³⁹ The basic assumption was that transferring the management of irrigation systems, partly or wholly to Water Users' Associations would result in better organization and management of the systems,

improved water management, conflict resolution, and enhanced productivity of land and also contribute to food and livelihood security of farmers in the schemes.⁴⁰

Even though IMT has been highly celebrated across Africa as a lasting solution to the problems of irrigation schemes, it cannot pass without some criticisms. Berry's works on African social institutions provide a theoretical background to the criticisms.⁴¹ She observed that African rural agricultural performance has been undermined by social institutions, which have not only resisted policy prescription, but also encouraged under-investment towards increased agricultural production and promoted inclusive strategies of management that do little to maximize the use of labour or scarce capital.⁴² More specifically, Berry observed that in a number of African societies, social relations have become objects as well as instruments of accumulation. In other words, the strategies peasants have used to gain resources, such as accumulation of patrons and/or loyal supporters, have often interfered with effective use and management of productive resources such as land and labour. In most cases, the rural elite have equally built up power over resources for continued accumulation.⁴³ Such social networks thus become so crucial in as far as the success of IMT is concerned. From a slightly different angle, Ferguson and Mulwafu (2007), observed that failure to understand history and local contexts before new institutions and social relationships are adopted to local conditions and power relations is the major problem that was observed at Likangala and Domasi Schemes in Malawi. Elsewhere it was recommended that the personnel initiating irrigation reforms should have a clear understanding of farmers' needs under their specific settings if IMT is to be successful.⁴⁴

Indeed, as noted above, the promotion of Water Users Associations has often been based on the assumption that African rural society is communitarian by preference, and anything to do with the entire community would be acceptable.⁴⁵ Little emphasis has often been put on the analysis of the internal politics let alone the social relationships governing the use of resources in these societies. In most cases IMT has been accepted as successful simply because it has been popularised as such by donors and technocrats.⁴⁶

Preliminary experience with irrigation reforms shows that in many smallholder irrigation schemes in Africa, withdrawal of state support has often led to partial or full collapse of the schemes with negative consequences on both productivity and poverty. Citing studies by Narayananmurthy et al (1997) in Sudan, Kabutha and Mutero (2001) in Kenya, Manzungu et al (1999) in Zimbabwe, and Shah et al (2002) in South Africa, van Koppen et al (2002) observe that many current modes of IMT have aggravated rural poverty and jeopardised original government goals of irrigation investments.⁴⁷ What is more, in his study of three countries in the Ferghana valley of Central Asia, Nizamedinkhodjayeva observed that the WUAs were seen by the rural poor as another state organisation meant at milking their already low income through the high water fees IMT imposed upon them.⁴⁸ Similarly, Vavrus (2003) in his studies in Tanzania observed that the WUAs were looked at as a ‘Shadow of the real Thing’ in the sense that though they appeared participatory and empowering, farmers did not assume all the political power to manage the resources.⁴⁹ Because of the high impending water charges, the people believed the WUAs were being used by the state to make the ‘unbearable’ more bearable.

Consequently, he concluded that the fact that organisations such as the WUAs encourage a shift away from ‘the developmentalist state’ to the people does not make them more democratic and acceptable. Farmers are always suspicious of such associational forms unless they originate from within the community.⁵⁰ In view of this, scholarly focus in IMT is slowly changing towards the implementation of what has often been called the pro-poor IMT.⁵¹

The Case of Malawi

Malawi, like the rest of African countries has been slowly adopting irrigation reforms. This process was facilitated by several factors. The first one was the desire by the Malawi Government to conform to the broader thinking in the management of irrigation farming. In 1996, for instance, government drafted the National Irrigation Policy and Development Strategy (NIPDS).⁵² Among other things, it aimed at ensuring that irrigation development programmes benefit as many households as possible. This included the development of small-scale irrigation schemes with full participation of beneficiaries at all stages. However even though the policy emphasised the need for cost-sharing in the operations of government schemes, the overall responsibility for the schemes was left in the hands of the Government. In the year 2000, the *National Irrigation Policy and Development Strategy* was redrafted and adopted.⁵³ Its supportive Irrigation Act was later adopted by Parliament in 2001.⁵⁴ *The National Irrigation Policy and Strategy* of 2000 summarized the tenets of the Malawi Government’s philosophy behind the new management of its irrigation schemes. The policy empowered irrigation smallholders to own, develop and

run the schemes using more effective irrigation technologies that would promote water resources conservation.⁵⁵ It further emphasized organization of irrigation farmers into Water Users Institutions. The understanding behind it was that the poor were not to be looked at as helpless victims in need of handouts and passive recipients of trickle-down growth but rather as masters of their own destinies.

The adoption of irrigation reforms was further reinforced with the country's adoption of multiparty democracy in the early 1990s. The advent of democracy, so it has been argued, witnessed the rejection of several works and regulations instituted during the Dr. Banda era (1964-1994) as authoritarian and illegitimate.⁵⁶ Farmers rejected the formal authority structures governing the smallholder irrigation schemes as illegitimate and unacceptable in a democratic dispensation. As such it was important not just to involve farmers in the management of the schemes, but also to review all the rules and regulations governing the schemes.

The last problem was lack of adequate government resources to run the schemes. This problem was compounded by the withdrawal of the Chinese Technical Assistance in the late 1980s and early 1990s. Right from the early 1970s, the Chinese had provided both financial and Technical support to government irrigation schemes. Their withdrawal placed a heavy financial burden upon the government in the operations of the schemes such that it became imperative to call for a cost sharing strategy if the schemes were to be sustainable.

It was in September 1996 however that the issue of handover in Malawi first came to public debate when a Technical Corporation Project (TCP), financed by the Food and Agricultural Organisation (FAO) and DANIDA, recommended the handover of sixteen irrigation schemes.⁵⁷ The process was however to start with a pilot project of three irrigation schemes, namely, Domasi in Machinga, Nkhande in Chikwawa and Wovwe in Karonga Districts. However, before any form of handover took place, the schemes were first to be rehabilitated, farmers properly trained in the management of the schemes, and Water Users' Associations firmly established in readiness for an eventual take-over of management from the government. Such attempts were however inconclusive. Among other reasons, the withdrawal of DANIDA affected the entire project as there were no enough funds to implement the project successfully.⁵⁸

Such plans were resuscitated later in 1998 when the government managed to secure a loan of USD15.5 million from International Fund for Agricultural Development (IFAD). With this loan, the Smallholder Flood Plain Development Programme (SFPDP) was launched to carry out the software and hardware rehabilitation of the schemes before handing them over to the beneficiaries.⁵⁹ The loan was later supplemented by a grant of USD12, 459,076 from the Irish Trust, and financial support of USD1, 091,076 from the Malawi government.⁶⁰

Unlike the first project that stalled, this project targeted a number of government schemes which included Wovwe, Hara and Lufira schemes in Karonga, Bua and Kasitu in Nkhotakota and Salima, Zumulu in Machinga, and Domasi in Zomba. It also set out to

develop about 220 hectares in three model irrigation schemes, with the possibility of using these as pilot schemes for later replication. These included Miyombo in Karonga, Kaombe in Salima and Khwisa in Balaka. The project ran up to 30th June 2005. However, it was given a one-year extension to complete civil works.⁶¹

The transfer of the already established government schemes to the WUAs was to be based on agreement, specifying tenure, operation and maintenance responsibilities. After the transfer, all operations, maintenance and replacement costs were to be the responsibility of the local organizations, and hence of the farmers on each and every scheme.⁶² In view of this, formation of registered farmer organizations (the WUAs) remained a necessary condition for scheme development.

Conclusion

This chapter has looked at the dominant schools of thought that have guided scholarly work on irrigation farming both in Africa and Malawi. It has been noted that the emergence of these schools of thought was largely a response to the poor performance of small-scale irrigation schemes that African governments developed with an overall aim of uplifting the socio-economic life of the rural poor. Indeed, in the 1970s, scholars observed that the modernisation thinking that characterised the establishment and management of the schemes had not been successful at all. Consequently, from the 1980s African countries, including Malawi, adopted neo-liberal ideas of irrigation reform in the management of these schemes in order to revamp small-scale irrigation farming. Malawi,

however, adopted these reforms later in the mid 1990s but against a sketchy background of the challenges of the schemes in the previous phase. At best, poor performance of the schemes was explained through the top-down approach that was employed in the management of the schemes which, in turn, justified the implementation of neo-liberal reforms in the schemes. On the other hand, studies on the contemporary experiences of the schemes in Malawi have concentrated on the Southern Region of Malawi, particularly the Chilwa basin. It was therefore deemed useful to draw lessons from other areas as well. Using the case study of Wovwe Rice Scheme, Northern Malawi, this study employs the two schools of thought as discussed above to analyse the challenges that locked up the schemes in both phases. Despite their significance, the study demonstrates that the challenges of the schemes could not be simplistically conflated into such broad explanations as some challenges do not necessarily fit into such frameworks.

Endnotes

¹ See D.W Nabudere, “Beyond Modernization and Development, or Why the Poor reject Development” *Geographiska Annaler*, Vol. 79B, No. 4 (1997), pp. 203-215; Gavin Williams, “The World Bank and Peasant Problem” in J. Heyer and G. Williams (eds.) *Rural Development in Tropical Africa* (Hampshire and London: The Macmillan Press Ltd., 1981), pp. 16-51

² For a detailed discussion of these concepts see Williams, “The World Bank and Peasant Problem”, pp. 17-51; W.O Jones. “Economic Man in Africa” *Food Research Institute Studies*, Vol. 1 (1960), pp. 107-134.

³ Williams, “The World Bank and Peasant Problem”, 1981, p. 30

⁴ Colonial attempts in Malawi to develop settlement/irrigation schemes have been extensively documented by E.C. Mandala, *Work and Control in a Peasant Economy: A History of the Lower Tchiri Valley in Malawi 1959-1960* (Wisconsin: University of Wisconsin Press, 1990), pp.207-217; Nkhoma, 2004, pp. 20-29. Mandala in particular observes that the failed Shire Valley Project whose primary objective was to claim inundated marshes for cultivation was equally an attempt to control the ‘irrational’ peasants for effective management of resources such as land and water.

⁵ Robert Chambers, *Settlement Schemes in Tropical Africa: A Study of Organization and Development* (London: Routledge and Keegan Paul, 1969), p. 32

⁶ See W.C Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, *Development Southern Africa*, Vol. 19, No. 2 (2002), p.309

⁷ For a detailed discussion on the success and failure of post-colonial Agricultural/Irrigation schemes in the 1970s see: J. Moris, “Irrigation as Privileged Solution in African Development”, *Development Policy Review*, Vol. 5, (1987), pp. 99-123; J. Dey, “Development Planning in the Gambia: The gap between Planners’ and Farmers’ Perceptions, Expectations and Objectives, *World Development*, Vol. 10, No. 5, (1982), pp. 377-96; W.M Adams and A.T Grove, (eds.), *Irrigation in Tropical Africa: Problems and Problem-solving* (Cambridge: University of Cambridge African Studies Centre, 1984) passim; W. M Adams, “Large-scale Irrigation in Northern Nigeria: Performance and Ideology”, *Transactions of Institute of British Geographers*, Vol. 16, No. 3, (1991), pp. 287-300

⁸ G. Williams “Taking the Part of Peasants: Rural Development in Nigeria and Tanzania”, 1976, pp. 131-151

⁹ See also J. Heyer et al, “Rural Development” in J. Heyer , P. Roberts, and G. Williams (eds.), *Rural Development in Tropical Africa* (Hampshire and London: The Macmillan Press Ltd., 1981), pp. 1-16

¹⁰ See R. Chambers, “The Origins and Practice of Participatory Rural Appraisal” *World Development*, Vol.22, No. 7 (1994), pp. 953-969; C. Bryant, and Louis A., *Managing Rural Development: Peasant Participation in Rural Development*, (West Hartford: Kamarian Press, 1980), p. 13

¹¹ See A.J. Briggs, “Farmers Response to Planned Agricultural Development in the Sudan” *Transactions of Institute of British Geographers*, Vol. 3, No. 4 (1978), p.471

¹² D.L. Vermillion “Property Rights and Collective Action in the Development of Irrigation System Management (1999), www.capri.cgiar.org/status.asp; S.R Perret, Water Policies and Smallholding Irrigation Schemes in South Africa: A History and New Institutional Challenges, Working paper, Pretoria, 2002, p. 6

¹³ See T. Shah, et al, “Institutional Alternatives in African Smallholder Experience with Irrigation: Lessons from International Irrigation Management Transfer” Research Report, No. 60, Colombo, Sri Lanka: International Water Management Institute, 2002, passim; Students of colonial Kenya call this process ‘straddling’. See also E.C. Mandala, *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005), pp. 142-159

¹⁴ G. Williams, “The World Bank and Peasant Problem”, 1981, pp. 17-51

¹⁵ J. Sijm, Agricultural Price Policies in Sub-Saharan Africa: Has the World Bank Knocked-out its critics? A Discussion Paper No. 87, Rotterdam, Centre for Development, Planning 1989, p.31; M. Lipton “Limits of Price Policy for Agriculture: Which way for the World Bank?” *Development Policy Review*, Vol. 5, (1987), p.197-215

¹⁶ See R. Bates, *States and Markets in Africa*, (Barkley: University of California, 1981) ; World Bank documents: Accelerated Development in Sub-Saharan Africa: An Agenda for Action, Washington; Sub-Saharan Africa: Progress Paper on Development Prospects and Programs, Washington, 1983; Towards Sustainable Development in Africa, Washington, 1984.

¹⁷ H. Kloos “Peasant Irrigation Development and Food Production in Ethiopia” *The Geographical Journal*, Vol. 157 (1991), passim

¹⁸ See C.J.A Makato, “Smallholder Rice Irrigation in Malawi: The Role of the Farmer in Irrigated Rice”

in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 287-294; C.U Mphande, “Smallholder Rice Irrigation Schemes: The Role of the Farmer in Irrigated Rice” in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 317-326; Paul Kishindo, “Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi” *Nordic Journal of African Studies*, Vol. 5, No. 1 (1996), pp. 1-10

¹⁹ Ibid

²⁰ See D. Cammack and Chirwa W.C., “Development and Human Rights in Malawi” *Bwalo: A Forum for Social and Human Rights Development*, Issue 1, (1997), pp. 105-119

²¹ G. Jan Veldwisch, et al., “Sand in the Engine: The Travails of an Irrigated Rice Scheme in Bwanje Valley, Malawi”, forthcoming

²² See Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, 1996, pp. 307-327; P. Kishindo “Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi” (1996), pp. 1-10

²³ See J. Kydd, “Malawi in the 1970s: Development Policies and Economic Change”, in *Malawi: An Alternative Pattern of Development, Seminar Proceedings* No 25 (Edinburgh University Press, 1985), p. 351; K.M. Mtawali, “Malawi: Current Status of Reform Proposals for Agriculture” in Alberto Valdes and Kay Muir-Leresche (eds.), *Agricultural Market Reforms and Regional Market Intergration in Malawi, Zambia, and Zimbabwe* (Washington: The International Food Policy Research Institute, 1993), p.154-160; U. Lele, *Structural Adjustment, Agricultural Development and the Poor: Lessons from the Malawian Experience*, Media Discussion Paper 9 (Washington: The World Bank, 1989), pp. 5-11; E.C. Mandala, *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005), pp. 152-159

²⁴ See J. Kydd and Robert Christiansen, “Structural Change in Malawi since Independence: Consequences of Development Strategy Based on Large-Scale Agriculture” *World Development*, Vol. 10, No. 5, p. 368

²⁵ Malawi Government, *National and Shire Irrigation Study Report*, Ministry of Agricultural and Natural Recourses, and Hunting Technical Services Ltd., 1981

²⁶ Veldwisch et al, “Sand in the Engine” forthcoming; A.E. Ferguson and W.O. Mulwafu, “If Government failed, how are we to succeed?”, 2007 pp. 211-227

²⁷ Veldwisch, et al. “Sand in the Engine”, forthcoming, p. 8

²⁸ W.O Mulwafu and B. Nkhoma, “The Experience of Irrigation Management Transfer in two Irrigation Schemes in Malawi, 1960-2002” *Journal of Physics and Chemistry of the Earth*, Vol. 29, (2004), p. 1329

²⁹ P.M. Lubeck, “The Crisis of African Development: Conflicting Interpretations and Resolutions” *Annual Review of Sociology*, Vol. 18 (1992), pp. 525

³⁰ ‘Economy of Affection’ denotes a network of support, communication and interaction among structurally defined groups, connected by blood, kin, community or other attitudes, for example religion. It links together in a systematic fashion a variety of discrete economic and social units, which in other regards may be autonomous – See G. Hyden, *Beyond Ujamaa in Tanzania: Underdevelopment and Uncaptured Peasantry* (London: Heinemann, 1980), p. 10

³¹ Lubeck, “The Crisis of African Development”, p. 259

³² See H.R. Bates, "Some Conventional Orthodoxies in the Study of Agrarian Change", *World Politics*, Vol. 36, No. 2 (1984), pp. 234-254.

³³ Ferguson and Mulwafu, "If Government failed, how are we to succeed?", 2007, p. 225

³⁴ See R. Chambers, *Rural Development: Putting the last first*, (New York: John Wiley and Sons, Inc., 1983), pp. 168-188; C. Bryant, and Louis G. White, *Managing Rural Development: Peasant Participation in Rural Development* (West Hartford: Kumarian Press, 1980), pp. 9-20

³⁵ See T. Shah, et al, "Institutional Alternatives in African Smallholder Experience with Irrigation: Lessons from International Irrigation Management Transfer" Research Report, No. 60, Colombo, Sri Lanka: International Water Management Institute, 2002, *passim* ; D.L. Vermillion., "Property Rights and Collective Action in the Development of Irrigation System Management (1999), *passim* www.capri.cgiar.org/status.asp

³⁶ Ibid, p. 185

³⁷ R.M Dick and Anna Knox, Collective Action, Property Rights, and Devolution of Natural Resources Management: A Conceptual Framework, p.43 <http://www.capri.cgiar.org/pdf>, March, 2008

³⁸ See Shah et al, 2002, pp. 13-17; W.M Adams, *Wasting the Rain: Rivers, People and Planning in Africa* (London: Earthscan, 1992), *passim*

³⁹ Ferguson and Mulwafu, 2007, p. 225

⁴⁰ Shah et al, 2002, p. 1

⁴¹ See S. Berry, "Social Institutions and Access to Resources" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp. 41-55; S. Berry, "Access, Control and Use of Resources in African Agriculture: An Introduction" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp.1-5; Berry, *No Condition is permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa* (Madison: University of Wisconsin Press, 1993)

⁴² Berry, "Social Institutions and Access to Resources", 1989 p. 49; Note that Berry, just like Goran Hyden, view the peasant as a 'problem' in as far as agricultural development in Africa is concerned. This is particularly true with their criticism of the institutions African peasants have forged. For a response to such ideas see E.C. Mandala, *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005), pp. 159-60.

⁴³ S. Berry, "The Food Crisis and Agrarian Change in Africa: A Review Essay" *African Studies Review*, Vol. 27, No. 2, (1984), pp. 59-112

⁴⁴ See Ferguson and Mulwafu, 2007, p. 225; M. Fujita, et al., "The Conditions of Collective Action For Local Commons Management: The Case of Irrigation in the Philippines", p. 21 , <http://www.indiana.edu>, January, 2008

⁴⁵ Bates, "Some Conventional Orthodoxies in the Study of Agrarian Change", 1984, pp. 234-254

⁴⁶ For a discussion on how IMT has been popularized by donors and technocrats see E. Rap, "The Success of a Policy Model: Irrigation Management Transfer in Mexico", *Journal of Development Studies*, Vol. 42, No. 8, (2006), pp. 1301-1324

⁴⁷ B. van Koppen, R. Parthasarathy and Constantina Safilion, " Poverty Dimensions of Irrigation

Management Transfer in Large-scale Canal Irrigation in Andra Pradesh and Gujarat, India”, Research Report 61, International Water Management Institute, Sri Lanka, 2002, p. 2

⁴⁸ N.N. Nizamedinkhodjayev, “Rural Livelihoods and Irrigation Management Transfer: The Case-study of three countries in the Ferghana Valley of Central Asia”, International Water Management Institute, Uzbekistan, *passim*. <http://www.icwc-aryl.uz/15yrs/pdf>, January, 2008

⁴⁹ K.F. Vavrus, “‘A Shadow of the Real Thing’: Farrow Societies, Water User Associations, and Democratic Practices on the Kilimanjaro Region of Tanzania” *Journal of African American History*, Vol. 88, No. 4 (2003), p. 395

⁵⁰ *Ibid*, p. 395

⁵¹ Pro-poor IMT refers to IMT that would benefit the very poor farmers in the schemes; See T. Shah et al., “How Can Irrigation Management Transfer Benefit Poor Farmers Rather than Hurting them?” *Water Policy Briefing Series*, Issue 6, 2003, pp. 1-6

⁵² Malawi Government, *National Irrigation Policy and Development Strategy*, Ministry of Agriculture and Irrigation, Lilongwe, 1998; See also *Smallholder Irrigation Project: African Development Fund Appraisal Report*, OCDS, Sep., 1998, pp. 1-9

⁵³ Malawi Government, “National Irrigation Policy and Development Strategy” (Lilongwe: Ministry of Agriculture and Irrigation, (2000)

⁵⁴ Malawi Government, Act No 16 of 2001, Irrigation Act, Zomba, Government Print, 28 Dec., 2001

⁵⁵ See *Op cit*, p. 5

⁵⁶ A. E. Ferguson, and W.O. Mulwafu, “Irrigation Reform in Lake Chilwa Basin, Malawi: Exploring Critical Land-Water Intersections and Livelihood Strategies”, Final Research Report of the BASIS Project, Oct., 2004, p. 3

⁵⁷ *Ibid*; Ferguson and Mulwafu, 2007, p. 217; Malawi Government, SFPDP Report, Lilongwe, 1999

⁵⁸ See Ferguson and Mulwafu, 2007, p. 217

⁵⁹ Malawi Government, SFPDP Project Completion Draft Report, Ministry of Irrigation and Water Development, 2007, p.6

⁶⁰ *Ibid*

⁶¹ *Ibid*

⁶² Malawi Government, “National Irrigation Policy and Development Strategy”, 2000, p. 7

Chapter Two

THE STATUS OF IRRIGATION SCHEMES IN AFRICA WITH SPECIAL REFERENCE TO MALAWI

This chapter examines the rise of settlement/irrigation schemes in Africa. It goes back to the late colonial period and begins by tracing the ideological reasons for the establishment of the schemes in Africa. This is followed by an examination of the dominant schools of thought which have guided scholarly work on irrigation farming both in Africa and Malawi.

The Development of Irrigation/Settlement Schemes in Post-colonial Africa

The development of irrigation/settlement schemes in Africa dates back to the later colonial period, coinciding with the dominance of modernization-development thinking, which colonial governments embraced in their attempt to develop Africa.¹ This thinking operated against the background of conceptualisations on the ‘peasant problem’ and ‘peasant rationality’.² While the former viewed African peasants as quite averse to progress and hence could only be transformed by removing them from their traditional environments and resettling them in modern schemes under the direction of experts and officials, the latter looked at the peasants as quite rational and as such could only be

improved by providing them with modern inputs, teaching them modern practices and facilitating the marketing of their produce.³ These two explanations provided an ideological justification to the establishment of both the settlement and irrigation schemes in Africa.⁴ Indeed, by the close of the 1960s, Africa was dotted with several colonial settlement schemes where peasants were removed from their original homes and concentrated in such schemes.

Immediately after independence, governments in Africa quickly embraced this thinking. Colonial settlement schemes were rehabilitated and several other new irrigation schemes, both large and small-scale, got established. Again, by the close of the 1970s, the entire region of Africa had been dotted with such schemes. Several reasons justified the rehabilitation and establishment of irrigation/settlement schemes in post-colonial Africa. These included the need to arrest rural-urban migration by making rural life more attractive; the need to achieve high rural agricultural productivity; and the desire to build the nations into unified units.⁵ The reasons were thus social, economic and political in nature.⁶

Immediately after their establishment however, these schemes, along with similar agricultural projects came under intense criticism from scholars and policy framers especially when it was noted that a number of them did not bring forth the envisaged outcomes.⁷ Henceforth, scholarly attention shifted towards finding solutions to the challenges of such schemes. These scholarly explanations fit into two shifting paradigms,

one emerging in the 1970s to the mid 1980s and the other from the mid 1980s to the present. What follows is a discussion of these broad schools of thought.

The Era of Top-down official management of the schemes, 1970s -mid 1980s

During this era, scholars became extremely interested in examining the manner in which the schemes were established and managed in order to explain the reasons behind the failure of such schemes in bringing about positive results. The general argument was that small-scale irrigation schemes were established using a top-down approach, which did not take into consideration the peasant societal structures let alone farming systems.⁸ The schemes were often imposed upon peasant societies that had their own ways of managing land and water resources, their own technologies and their own ways of organizing resources.⁹ However, no attempt was made to involve peasants in the project planning process.¹⁰ And the schemes were marred by infrastructural deficiencies emanating from inappropriate planning and design, and/or poor operational and management structures, absence of farmer involvement and participation, inadequate institutional structures and appropriate land tenure arrangements.¹¹

During this period, the need for rapid, large and small-scale development of irrigation infrastructure created large, powerful bureaucracies whose focus was civil engineering.¹² Mechanized technology, such as the use of tractors, power tillers as opposed to the use of traditional farming implements was employed in both the construction and maintenance of the schemes. Indeed, by 1980, maintenance costs for the mechanized technology and

the irrigation structures in the schemes did not match with the budgetary allocations for the schemes. In view of this, rapid deterioration and poor management of the schemes became widespread. What is more, the schemes registered high rates of farmer turnover as peasants were unwilling to actively participate in the activities of the schemes. Farmers tended to pursue what has been called a ‘hedgehog policy’ of depending on a variety of sources to earn livelihood.¹³

Similarly, because of involvement of mechanized technology, often hired out to farmers on credit, farmer’s earnings were substantially reduced. In view of this, Williams (1981) observed that rural development projects such as irrigation schemes in Africa were strategies for subjecting peasants to the control of the state.¹⁴ Sijm (1989) and Lipton (1987), both agree in their separate studies on the fact that the states often levied high indirect tax on peasant crops through the creation of marketing boards.¹⁵ Besides, prices for peasants’ produce are believed to have been deliberately set very low with the aim of subsidising the urban dwellers.¹⁶ In other words, overvalued exchange rates, heavy taxation of peasant products and expensive marketing margins of monopoly parastatals had substantially reduced peasant produce prices far below other competitive levels on world market. In view of this, peasants in the schemes were unwilling not just to produce crops at prevailing prices but also to deliver surpluses to official agencies.

Consequently a good number of these schemes proved unsuccessful. For instance, criticising the above school, Kloos (1991) observed that Ethiopian government’s attempts to stimulate food production by imposing an irrigation programme upon peasants from

the 1970s to 1980s proved ineffective.¹⁷ Failure to consult peasants in the project planning phase has been cited as one of the factors contributing to the failure.

The case of Malawi

Like the rest of Africa, post-colonial Malawi equally initiated such an ambitious programme, which extended from the late 1960s to late 1980s. Sixteen irrigation schemes were established, largely sponsored by the Chinese Agricultural Technical Mission.¹⁸ As noted above, the aims of these schemes were to promote intensive agricultural production especially for cash crops by modernizing peasant agriculture in the countryside; to increase the volume of rice exports; to promote the utilization of underdeveloped land and inter-ethnic interactions in the country, and above all, to improve the overall living standards of the rural poor.¹⁹

Modernist ideas appear to have had enormous influence over both the establishment and management of these schemes. For example, Cammack and Chirwa (1997) argued that the creation of irrigation schemes in Malawi and their consequent management were marred by a gross violation of human rights through dispossession of rural communities within an authoritarian political context, coercion and threats during implementation, top-down decision making structures and consequent lack of participation by beneficiaries in planning and implementation of programmes.²⁰ Similarly, Veldwish et al.²¹ in their more recent study in the Bwanje Valley of Malawi have shared a similar view. Analyzing the development of small-scale irrigation schemes in Malawi, the authors observed that

designs were based on the perspective of engineers and not the beneficiaries of the schemes. In fact having analysed the recently constructed Bwanje Irrigation Scheme, they observed how the top-down approach was nevertheless employed in its construction.

What is more, in his study of the Limphasa Rice Scheme, Kishindo (1996) noted that the scheme was marred by high rates of turnover, the conclusion that was echoed by Chirwa (2002) in his study in the Wovwe Valley.²² Both scholars were agreed on the fact that irrigation schemes did not retain a considerable number of farmers on the schemes. Among other factors, they observed that the size of plots farmers held in the schemes were too small to support both the subsistence and commercial needs of farmers. As such, farmers tended to straddle between the scheme plots and their own traditional fields, a situation that led to underutilization of water, fertiliser and other resources in the schemes. These scholars also alluded to the fact that many farmers got trapped up in debt circles. As in other parts of Africa, scholars in Malawi noted during the 1970s, how the government, through ADMARC, indirectly taxed the entire smallholder agriculture by setting low prices for peasant products with a view of subsidizing estate agriculture.²³ Kydd and Christiansen (1982) observed that in the 1970s ADMARC's average gross profit per annum was K20.2 million, which amounted to a gross resource extraction from the peasant sector of MK181.2 million over a nine-year period – 1970/71-1979.²⁴ Indeed, ADMARC depots were constructed in a number of government schemes in order to facilitate the disbursement of input on credit and marketing of peasant produce.

In 1980 the Malawi government realized that a number of these schemes did not bring expected results. As a result, it initiated what was called the National and Shire Irrigation Study²⁵ which intended to review the experience with irrigation in Malawi, especially the sixteen irrigation schemes; to assess the potential for irrigation development; and to formulate a strategy for future development of irrigation farming in Malawi. The study observed that a number of schemes were in dilapidated shape and in dire need of rehabilitation. There were other several flaws, ranging from the lack of active farmer participation to the top-down management model. This study went a long way in paving a way for future interventions into irrigation farming in Malawi.

Between 1985 and 1994, the Danish International Development Agency (DANIDA) carried out a rehabilitation programme within the irrigation schemes in two phases.²⁶ The first phase (1985-1989) involved the physical rehabilitation of all the 16 irrigation schemes. The second phase (1989-mid 1990s) involved the preparation of schemes for farmer management through the introduction of Scheme Management Committees replacing the previous Land Allocation Committees.²⁷ However, a number of these changes were ineffective. For instance, in their study of Domasi and Likangala irrigation schemes, Mulwafu and Nkhoma (2003) noted that although farmers were brought on board to participate in the schemes through Scheme Management Committees, their involvement was limited to settling of disputes and allocation of plots and not necessarily the management of the schemes.²⁸ The official top-down management style precluded farmer involvement as active players.

The Era of Irrigation Reform in Africa, mid 1980s – the present

From the 1980s, it became clear that small-scale irrigation farming in Africa needed to be overhauled and the way to do that involved major institutional reforms. The era of irrigation reform should be located within the broader African institutional debate emerging in the 1980s. This debate focused much on the economic and social behaviour of African producers and attempted to understand their motives in terms of their own moral economies and group rationalities.²⁹ This view was very much popularized by Hyden (1980) as the ‘Economy of Affection’.³⁰ It posited that the conservative tendency of the peasantry to retain their household organizations, their situational ethnic and communal identities, and their autonomy from domination by state, capital and foreign interests, have been a stumbling block to any possible improvements to Africa’s rural agriculture.³¹ Africans were perceived to be communitarian by preference hence developmental activities could only succeed once this aspect was taken on board.³²

Such assumptions were later corroborated by neo-liberal development philosophy which put emphasis on private sector initiatives, redefinition and reduction of the role of the state, promotion of new decentralized, stakeholder-driven and community-based management institutions.³³ Henceforth, scholars began to argue for a bottom-up approach in the management of irrigation schemes, coinciding with the general shift in the management of rural development projects in Africa.³⁴ Such reforms were very much popularized through a global discourse on irrigation known as ‘Irrigation Management Transfer’ (IMT), highly influenced by neo-liberalists’ slogans of ‘community

participation' and/or 'local empowerment'.³⁵ It called for the devolution of responsibility for irrigation management to peasants' organizations.

At the heart of the theory of devolution is the argument that local, common users of a resource, who are empowered as a group to take over management of the resource, have the incentive to manage more efficiently and sustainably than does a centrally financed government agency.³⁶

Some reasons behind this assertion have been advanced. First, local users often have intimate knowledge of the resources. Secondly, by living and working in the area, users may also have a comparative advantage over government agents in monitoring resource use and rule compliance. Lastly, because their livelihoods depend on the resources, local users are often assumed to have the greatest incentives to maintain the resource base over time.³⁷

Irrigation Management Transfer therefore was a u-turn from an elaborate top-down command and support system, which proved quite unsustainable in a number of development projects.³⁸ Henceforth, scholars in Africa began to shift their attention from government officials to the local people as expert managers of projects meant at uplifting their socio-economic life.

In view of this, the reforms called for the creation of new forms of social organizations, such as the [Water Users' Associations (WUAs)], formalization of rights and responsibilities and physical renovations of irrigation schemes.³⁹ The basic assumption was that transferring the management of irrigation systems, partly or wholly to Water Users' Associations would result in better organization and management of the systems,

improved water management, conflict resolution, and enhanced productivity of land and also contribute to food and livelihood security of farmers in the schemes.⁴⁰

Even though IMT has been highly celebrated across Africa as a lasting solution to the problems of irrigation schemes, it cannot pass without some criticisms. Berry's works on African social institutions provide a theoretical background to the criticisms.⁴¹ She observed that African rural agricultural performance has been undermined by social institutions, which have not only resisted policy prescription, but also encouraged under-investment towards increased agricultural production and promoted inclusive strategies of management that do little to maximize the use of labour or scarce capital.⁴² More specifically, Berry observed that in a number of African societies, social relations have become objects as well as instruments of accumulation. In other words, the strategies peasants have used to gain resources, such as accumulation of patrons and/or loyal supporters, have often interfered with effective use and management of productive resources such as land and labour. In most cases, the rural elite have equally built up power over resources for continued accumulation.⁴³ Such social networks thus become so crucial in as far as the success of IMT is concerned. From a slightly different angle, Ferguson and Mulwafu (2007), observed that failure to understand history and local contexts before new institutions and social relationships are adopted to local conditions and power relations is the major problem that was observed at Likangala and Domasi Schemes in Malawi. Elsewhere it was recommended that the personnel initiating irrigation reforms should have a clear understanding of farmers' needs under their specific settings if IMT is to be successful.⁴⁴

Indeed, as noted above, the promotion of Water Users Associations has often been based on the assumption that African rural society is communitarian by preference, and anything to do with the entire community would be acceptable.⁴⁵ Little emphasis has often been put on the analysis of the internal politics let alone the social relationships governing the use of resources in these societies. In most cases IMT has been accepted as successful simply because it has been popularised as such by donors and technocrats.⁴⁶

Preliminary experience with irrigation reforms shows that in many smallholder irrigation schemes in Africa, withdrawal of state support has often led to partial or full collapse of the schemes with negative consequences on both productivity and poverty. Citing studies by Narayananurthy et al (1997) in Sudan, Kabutha and Mutero (2001) in Kenya, Manzungu et al (1999) in Zimbabwe, and Shah et al (2002) in South Africa, van Koppen et al (2002) observe that many current modes of IMT have aggravated rural poverty and jeopardised original government goals of irrigation investments.⁴⁷ What is more, in his study of three countries in the Ferghana valley of Central Asia, Nizamedinkhodjayeva observed that the WUAs were seen by the rural poor as another state organisation meant at milking their already low income through the high water fees IMT imposed upon them.⁴⁸ Similarly, Vavrus (2003) in his studies in Tanzania observed that the WUAs were looked at as a ‘Shadow of the real Thing’ in the sense that though they appeared participatory and empowering, farmers did not assume all the political power to manage the resources.⁴⁹ Because of the high impending water charges, the people believed the WUAs were being used by the state to make the ‘unbearable’ more bearable.

Consequently, he concluded that the fact that organisations such as the WUAs encourage a shift away from ‘the developmentalist state’ to the people does not make them more democratic and acceptable. Farmers are always suspicious of such associational forms unless they originate from within the community.⁵⁰ In view of this, scholarly focus in IMT is slowly changing towards the implementation of what has often been called the pro-poor IMT.⁵¹

The Case of Malawi

Malawi, like the rest of African countries has been slowly adopting irrigation reforms. This process was facilitated by several factors. The first one was the desire by the Malawi Government to conform to the broader thinking in the management of irrigation farming. In 1996, for instance, government drafted the National Irrigation Policy and Development Strategy (NIPDS).⁵² Among other things, it aimed at ensuring that irrigation development programmes benefit as many households as possible. This included the development of small-scale irrigation schemes with full participation of beneficiaries at all stages. However even though the policy emphasised the need for cost-sharing in the operations of government schemes, the overall responsibility for the schemes was left in the hands of the Government. In the year 2000, the *National Irrigation Policy and Development Strategy* was redrafted and adopted.⁵³ Its supportive Irrigation Act was later adopted by Parliament in 2001.⁵⁴ *The National Irrigation Policy and Strategy* of 2000 summarized the tenets of the Malawi Government’s philosophy behind the new management of its irrigation schemes. The policy empowered irrigation smallholders to own, develop and

run the schemes using more effective irrigation technologies that would promote water resources conservation.⁵⁵ It further emphasized organization of irrigation farmers into Water Users Institutions. The understanding behind it was that the poor were not to be looked at as helpless victims in need of handouts and passive recipients of trickle-down growth but rather as masters of their own destinies.

The adoption of irrigation reforms was further reinforced with the country's adoption of multiparty democracy in the early 1990s. The advent of democracy, so it has been argued, witnessed the rejection of several works and regulations instituted during the Dr. Banda era (1964-1994) as authoritarian and illegitimate.⁵⁶ Farmers rejected the formal authority structures governing the smallholder irrigation schemes as illegitimate and unacceptable in a democratic dispensation. As such it was important not just to involve farmers in the management of the schemes, but also to review all the rules and regulations governing the schemes.

The last problem was lack of adequate government resources to run the schemes. This problem was compounded by the withdrawal of the Chinese Technical Assistance in the late 1980s and early 1990s. Right from the early 1970s, the Chinese had provided both financial and Technical support to government irrigation schemes. Their withdrawal placed a heavy financial burden upon the government in the operations of the schemes such that it became imperative to call for a cost sharing strategy if the schemes were to be sustainable.

It was in September 1996 however that the issue of handover in Malawi first came to public debate when a Technical Corporation Project (TCP), financed by the Food and Agricultural Organisation (FAO) and DANIDA, recommended the handover of sixteen irrigation schemes.⁵⁷ The process was however to start with a pilot project of three irrigation schemes, namely, Domasi in Machinga, Nkhande in Chikwawa and Wovwe in Karonga Districts. However, before any form of handover took place, the schemes were first to be rehabilitated, farmers properly trained in the management of the schemes, and Water Users' Associations firmly established in readiness for an eventual take-over of management from the government. Such attempts were however inconclusive. Among other reasons, the withdrawal of DANIDA affected the entire project as there were no enough funds to implement the project successfully.⁵⁸

Such plans were resuscitated later in 1998 when the government managed to secure a loan of USD15.5 million from International Fund for Agricultural Development (IFAD). With this loan, the Smallholder Flood Plain Development Programme (SFPDP) was launched to carry out the software and hardware rehabilitation of the schemes before handing them over to the beneficiaries.⁵⁹ The loan was later supplemented by a grant of USD12, 459,076 from the Irish Trust, and financial support of USD1, 091,076 from the Malawi government.⁶⁰

Unlike the first project that stalled, this project targeted a number of government schemes which included Wovwe, Hara and Lufira schemes in Karonga, Bua and Kasitu in Nkhotakota and Salima, Zumulu in Machinga, and Domasi in Zomba. It also set out to

develop about 220 hectares in three model irrigation schemes, with the possibility of using these as pilot schemes for later replication. These included Miyombo in Karonga, Kaombe in Salima and Khwisa in Balaka. The project ran up to 30th June 2005. However, it was given a one-year extension to complete civil works.⁶¹

The transfer of the already established government schemes to the WUAs was to be based on agreement, specifying tenure, operation and maintenance responsibilities. After the transfer, all operations, maintenance and replacement costs were to be the responsibility of the local organizations, and hence of the farmers on each and every scheme.⁶² In view of this, formation of registered farmer organizations (the WUAs) remained a necessary condition for scheme development.

Conclusion

This chapter has looked at the dominant schools of thought that have guided scholarly work on irrigation farming both in Africa and Malawi. It has been noted that the emergence of these schools of thought was largely a response to the poor performance of small-scale irrigation schemes that African governments developed with an overall aim of uplifting the socio-economic life of the rural poor. Indeed, in the 1970s, scholars observed that the modernisation thinking that characterised the establishment and management of the schemes had not been successful at all. Consequently, from the 1980s African countries, including Malawi, adopted neo-liberal ideas of irrigation reform in the management of these schemes in order to revamp small-scale irrigation farming. Malawi,

however, adopted these reforms later in the mid 1990s but against a sketchy background of the challenges of the schemes in the previous phase. At best, poor performance of the schemes was explained through the top-down approach that was employed in the management of the schemes which, in turn, justified the implementation of neo-liberal reforms in the schemes. On the other hand, studies on the contemporary experiences of the schemes in Malawi have concentrated on the Southern Region of Malawi, particularly the Chilwa basin. It was therefore deemed useful to draw lessons from other areas as well. Using the case study of Wovwe Rice Scheme, Northern Malawi, this study employs the two schools of thought as discussed above to analyse the challenges that locked up the schemes in both phases. Despite their significance, the study demonstrates that the challenges of the schemes could not be simplistically conflated into such broad explanations as some challenges do not necessarily fit into such frameworks.

Endnotes

¹ See D.W Nabudere, “Beyond Modernization and Development, or Why the Poor reject Development” *Geographiska Annaler*, Vol. 79B, No. 4 (1997), pp. 203-215; Gavin Williams, “The World Bank and Peasant Problem” in J. Heyer and G. Williams (eds.) *Rural Development in Tropical Africa* (Hampshire and London: The Macmillan Press Ltd., 1981), pp. 16-51

² For a detailed discussion of these concepts see Williams, “The World Bank and Peasant Problem”, pp. 17-51; W.O Jones. “Economic Man in Africa” *Food Research Institute Studies*, Vol. 1 (1960), pp. 107-134.

³ Williams, “The World Bank and Peasant Problem”, 1981, p. 30

⁴ Colonial attempts in Malawi to develop settlement/irrigation schemes have been extensively documented by E.C. Mandala, *Work and Control in a Peasant Economy: A History of the Lower Tchiri Valley in Malawi 1959-1960* (Wisconsin: University of Wisconsin Press, 1990), pp.207-217; Nkhoma, 2004, pp. 20-29. Mandala in particular observes that the failed Shire Valley Project whose primary objective was to claim inundated marshes for cultivation was equally an attempt to control the ‘irrational’ peasants for effective management of resources such as land and water.

⁵ Robert Chambers, *Settlement Schemes in Tropical Africa: A Study of Organization and Development* (London: Routledge and Keegan Paul, 1969), p. 32

⁶ See W.C Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, *Development Southern Africa*, Vol. 19, No. 2 (2002), p.309

⁷ For a detailed discussion on the success and failure of post-colonial Agricultural/Irrigation schemes in the 1970s see: J. Moris, “Irrigation as Privileged Solution in African Development”, *Development Policy Review*, Vol. 5, (1987), pp. 99-123; J. Dey, “Development Planning in the Gambia: The gap between Planners’ and Farmers’ Perceptions, Expectations and Objectives, *World Development*, Vol. 10, No. 5, (1982), pp. 377-96; W.M Adams and A.T Grove, (eds.), *Irrigation in Tropical Africa: Problems and Problem-solving* (Cambridge: University of Cambridge African Studies Centre, 1984) passim; W. M Adams, “Large-scale Irrigation in Northern Nigeria: Performance and Ideology”, *Transactions of Institute of British Geographers*, Vol. 16, No. 3, (1991), pp. 287-300

⁸ G. Williams “Taking the Part of Peasants: Rural Development in Nigeria and Tanzania”, 1976, pp. 131-151

⁹ See also J. Heyer et al, “Rural Development” in J. Heyer , P. Roberts, and G. Williams (eds.), *Rural Development in Tropical Africa* (Hampshire and London: The Macmillan Press Ltd., 1981), pp. 1-16

¹⁰ See R. Chambers, “The Origins and Practice of Participatory Rural Appraisal” *World Development*, Vol.22, No. 7 (1994), pp. 953-969; C. Bryant, and Louis A., *Managing Rural Development: Peasant Participation in Rural Development*, (West Hartford: Kamarian Press, 1980), p. 13

¹¹ See A.J. Briggs, “Farmers Response to Planned Agricultural Development in the Sudan” *Transactions of Institute of British Geographers*, Vol. 3, No. 4 (1978), p.471

¹² D.L. Vermillion “Property Rights and Collective Action in the Development of Irrigation System Management (1999), www.capri.cgiar.org/status.asp; S.R Perret, Water Policies and Smallholding Irrigation Schemes in South Africa: A History and New Institutional Challenges, Working paper, Pretoria, 2002, p. 6

¹³ See T. Shah, et al, “Institutional Alternatives in African Smallholder Experience with Irrigation: Lessons from International Irrigation Management Transfer” Research Report, No. 60, Colombo, Sri Lanka: International Water Management Institute, 2002, passim; Students of colonial Kenya call this process ‘straddling’. See also E.C. Mandala, *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005), pp. 142-159

¹⁴ G. Williams, “The World Bank and Peasant Problem”, 1981, pp. 17-51

¹⁵ J. Sijm, Agricultural Price Policies in Sub-Saharan Africa: Has the World Bank Knocked-out its critics? A Discussion Paper No. 87, Rotterdam, Centre for Development, Planning 1989, p.31; M. Lipton “Limits of Price Policy for Agriculture: Which way for the World Bank?” *Development Policy Review*, Vol. 5, (1987), p.197-215

¹⁶ See R. Bates, *States and Markets in Africa*, (Barkley: University of California, 1981) ; World Bank documents: Accelerated Development in Sub-Saharan Africa: An Agenda for Action, Washington; Sub-Saharan Africa: Progress Paper on Development Prospects and Programs, Washington, 1983; Towards Sustainable Development in Africa, Washington, 1984.

¹⁷ H. Kloos “Peasant Irrigation Development and Food Production in Ethiopia” *The Geographical Journal*, Vol. 157 (1991), passim

¹⁸ See C.J.A Makato, “Smallholder Rice Irrigation in Malawi: The Role of the Farmer in Irrigated Rice”

in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 287-294; C.U Mphande, “Smallholder Rice Irrigation Schemes: The Role of the Farmer in Irrigated Rice” in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 317-326; Paul Kishindo, “Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi” *Nordic Journal of African Studies*, Vol. 5, No. 1 (1996), pp. 1-10

¹⁹ Ibid

²⁰ See D. Cammack and Chirwa W.C., “Development and Human Rights in Malawi” *Bwalo: A Forum for Social and Human Rights Development*, Issue 1, (1997), pp. 105-119

²¹ G. Jan Veldwisch, et al., “Sand in the Engine: The Travails of an Irrigated Rice Scheme in Bwanje Valley, Malawi”, forthcoming

²² See Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, 1996, pp. 307-327; P. Kishindo “Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi” (1996), pp. 1-10

²³ See J. Kydd, “Malawi in the 1970s: Development Policies and Economic Change”, in *Malawi: An Alternative Pattern of Development, Seminar Proceedings* No 25 (Edinburgh University Press, 1985), p. 351; K.M. Mtawali, “Malawi: Current Status of Reform Proposals for Agriculture” in Alberto Valdes and Kay Muir-Leresche (eds.), *Agricultural Market Reforms and Regional Market Intergration in Malawi, Zambia, and Zimbabwe* (Washington: The International Food Policy Research Institute, 1993), p.154-160; U. Lele, *Structural Adjustment, Agricultural Development and the Poor: Lessons from the Malawian Experience*, Media Discussion Paper 9 (Washington: The World Bank, 1989), pp. 5-11; E.C. Mandala, *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005), pp. 152-159

²⁴ See J. Kydd and Robert Christiansen, “Structural Change in Malawi since Independence: Consequences of Development Strategy Based on Large-Scale Agriculture” *World Development*, Vol. 10, No. 5, p. 368

²⁵ Malawi Government, *National and Shire Irrigation Study Report*, Ministry of Agricultural and Natural Recourses, and Hunting Technical Services Ltd., 1981

²⁶ Veldwisch et al, “Sand in the Engine” forthcoming; A.E. Ferguson and W.O. Mulwafu, “If Government failed, how are we to succeed?”, 2007 pp. 211-227

²⁷ Veldwisch, et al. “Sand in the Engine”, forthcoming, p. 8

²⁸ W.O Mulwafu and B. Nkhoma, “The Experience of Irrigation Management Transfer in two Irrigation Schemes in Malawi, 1960-2002” *Journal of Physics and Chemistry of the Earth*, Vol. 29, (2004), p. 1329

²⁹ P.M. Lubeck, “The Crisis of African Development: Conflicting Interpretations and Resolutions” *Annual Review of Sociology*, Vol. 18 (1992), pp. 525

³⁰ ‘Economy of Affection’ denotes a network of support, communication and interaction among structurally defined groups, connected by blood, kin, community or other attitudes, for example religion. It links together in a systematic fashion a variety of discrete economic and social units, which in other regards may be autonomous – See G. Hyden, *Beyond Ujamaa in Tanzania: Underdevelopment and Uncaptured Peasantry* (London: Heinemann, 1980), p. 10

³¹ Lubeck, “The Crisis of African Development”, p. 259

³² See H.R. Bates, "Some Conventional Orthodoxies in the Study of Agrarian Change", *World Politics*, Vol. 36, No. 2 (1984), pp. 234-254.

³³ Ferguson and Mulwafu, "If Government failed, how are we to succeed?", 2007, p. 225

³⁴ See R. Chambers, *Rural Development: Putting the last first*, (New York: John Wiley and Sons, Inc., 1983), pp. 168-188; C. Bryant, and Louis G. White, *Managing Rural Development: Peasant Participation in Rural Development* (West Hartford: Kumarian Press, 1980), pp. 9-20

³⁵ See T. Shah, et al, "Institutional Alternatives in African Smallholder Experience with Irrigation: Lessons from International Irrigation Management Transfer" Research Report, No. 60, Colombo, Sri Lanka: International Water Management Institute, 2002, *passim* ; D.L. Vermillion., "Property Rights and Collective Action in the Development of Irrigation System Management (1999), *passim* www.capri.cgiar.org/status.asp

³⁶ Ibid, p. 185

³⁷ R.M Dick and Anna Knox, Collective Action, Property Rights, and Devolution of Natural Resources Management: A Conceptual Framework, p.43 <http://www.capri.cgiar.org/pdf>, March, 2008

³⁸ See Shah et al, 2002, pp. 13-17; W.M Adams, *Wasting the Rain: Rivers, People and Planning in Africa* (London: Earthscan, 1992), *passim*

³⁹ Ferguson and Mulwafu, 2007, p. 225

⁴⁰ Shah et al, 2002, p. 1

⁴¹ See S. Berry, "Social Institutions and Access to Resources" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp. 41-55; S. Berry, "Access, Control and Use of Resources in African Agriculture: An Introduction" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp.1-5; Berry, *No Condition is permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa* (Madison: University of Wisconsin Press, 1993)

⁴² Berry, "Social Institutions and Access to Resources", 1989 p. 49; Note that Berry, just like Goran Hyden, view the peasant as a 'problem' in as far as agricultural development in Africa is concerned. This is particularly true with their criticism of the institutions African peasants have forged. For a response to such ideas see E.C. Mandala, *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005), pp. 159-60.

⁴³ S. Berry, "The Food Crisis and Agrarian Change in Africa: A Review Essay" *African Studies Review*, Vol. 27, No. 2, (1984), pp. 59-112

⁴⁴ See Ferguson and Mulwafu, 2007, p. 225; M. Fujita, et al., "The Conditions of Collective Action For Local Commons Management: The Case of Irrigation in the Philippines", p. 21 , <http://www.indiana.edu>, January, 2008

⁴⁵ Bates, "Some Conventional Orthodoxies in the Study of Agrarian Change", 1984, pp. 234-254

⁴⁶ For a discussion on how IMT has been popularized by donors and technocrats see E. Rap, "The Success of a Policy Model: Irrigation Management Transfer in Mexico", *Journal of Development Studies*, Vol. 42, No. 8, (2006), pp. 1301-1324

⁴⁷ B. van Koppen, R. Parthasarathy and Constantina Safilion, " Poverty Dimensions of Irrigation

Management Transfer in Large-scale Canal Irrigation in Andra Pradesh and Gujarat, India”, Research Report 61, International Water Management Institute, Sri Lanka, 2002, p. 2

⁴⁸ N.N. Nizamedinkhodjayev, “Rural Livelihoods and Irrigation Management Transfer: The Case-study of three countries in the Ferghana Valley of Central Asia”, International Water Management Institute, Uzbekistan, *passim*. <http://www.icwc-aryl.uz/15yrs/pdf>, January, 2008

⁴⁹ K.F. Vavrus, “‘A Shadow of the Real Thing’: Farrow Societies, Water User Associations, and Democratic Practices on the Kilimanjaro Region of Tanzania” *Journal of African American History*, Vol. 88, No. 4 (2003), p. 395

⁵⁰ *Ibid*, p. 395

⁵¹ Pro-poor IMT refers to IMT that would benefit the very poor farmers in the schemes; See T. Shah et al., “How Can Irrigation Management Transfer Benefit Poor Farmers Rather than Hurting them?” *Water Policy Briefing Series*, Issue 6, 2003, pp. 1-6

⁵² Malawi Government, *National Irrigation Policy and Development Strategy*, Ministry of Agriculture and Irrigation, Lilongwe, 1998; See also *Smallholder Irrigation Project: African Development Fund Appraisal Report*, OCDS, Sep., 1998, pp. 1-9

⁵³ Malawi Government, “National Irrigation Policy and Development Strategy” (Lilongwe: Ministry of Agriculture and Irrigation, (2000)

⁵⁴ Malawi Government, Act No 16 of 2001, Irrigation Act, Zomba, Government Print, 28 Dec., 2001

⁵⁵ See *Op cit*, p. 5

⁵⁶ A. E. Ferguson, and W.O. Mulwafu, “Irrigation Reform in Lake Chilwa Basin, Malawi: Exploring Critical Land-Water Intersections and Livelihood Strategies”, Final Research Report of the BASIS Project, Oct., 2004, p. 3

⁵⁷ *Ibid*; Ferguson and Mulwafu, 2007, p. 217; Malawi Government, SFPDP Report, Lilongwe, 1999

⁵⁸ See Ferguson and Mulwafu, 2007, p. 217

⁵⁹ Malawi Government, SFPDP Project Completion Draft Report, Ministry of Irrigation and Water Development, 2007, p.6

⁶⁰ *Ibid*

⁶¹ *Ibid*

⁶² Malawi Government, “National Irrigation Policy and Development Strategy”, 2000, p. 7

Chapter Four

WOWWE RICE SCHEME DURING DR. BANDA ERA, 1968-1994

The previous chapter looked at the process by which the scheme was established. This chapter discusses the official administration of the scheme from the late 1960s to 1993. It also highlights some challenges that locked up the scheme during this period. Among other challenges the chapter observes that the general set-up of the administrative structure, and government pricing policies implemented from time to time, especially in the 1980s, grossly undermined both the operations and the proper utilisation of the scheme. Besides, the introduction of mechanized technology at the scheme and the subsequent over-reliance on the credit scheme precluded attempts on the part of peasants to make long-term investments in the rice industry. The last part looks at the economic, social and technological impact of the scheme on the peasants in the valley. In this section, it is argued that the economic impact of the scheme upon the peasants was highly differentiated. Such a differentiation came in mostly as a result of the creation of two official groups of irrigators at the scheme – the full-time and part-time irrigators.

Administration of the scheme

Right from the late 1960s, the post-colonial government developed an elaborate administrative structure in order to successfully manage the sixteen irrigation schemes and indeed upland settlement schemes. This structure encompassed three main groups, that is, government officials drawn from different government departments, political and traditional leaders who came to form the Land Allocation Committees, and lastly, Farmers' Committees, which were basically made up of farmers cultivating in the schemes. It should be noted that this administrative structure was not static. It kept on changing depending on the particular situation. What follows is a detailed discussion of each of these groups.

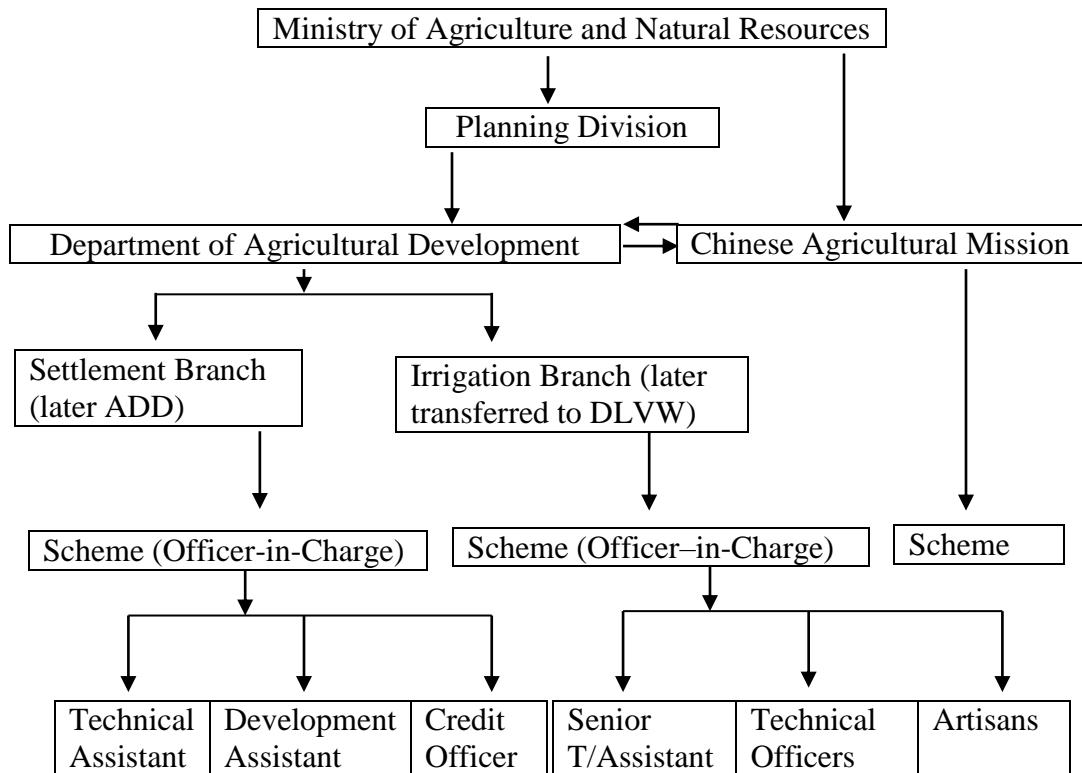
To begin with, the official management of the scheme was under the Ministry of Agriculture and Natural Resources, particularly the Department of Agricultural Development (DAD). This was true with the rest of the schemes. Operating under the Planning Division in the MANR, the DAD was responsible not only for the establishment and operation of the existing schemes, but it also had the responsibility over all Rural Development Projects.¹ The DAD had two main branches, namely the Settlement Branch, which was responsible for the overall management of all irrigated and upland schemes, particularly with the settlement of farmers and all other agronomic practices, and the Irrigation Branch, responsible for designing, construction and engineering, operation, and maintenance of the irrigation schemes.² In 1979, the Settlement Branch was dissolved and its responsibility was officially passed on to the Agricultural Development Divisions

(ADDs) on 1st April, 1982.³ In 1975, the Irrigation Branch was transferred to the Department of Lands, Valuation and Water (DLVW).⁴ What this meant is that the MANR no longer had the capacity to initiate the construction of the schemes, let alone operate and maintain the schemes.

The other group is that of the Chinese Agricultural Mission (CAM) which had since 1967 been intimately involved in the development of rice irrigation schemes in Malawi. Once a scheme had been developed, it was temporarily monitored by the Chinese and eventually handed over to the MANR.⁵ While the CAM was free to communicate directly with the MANR Headquarters, the DAD was the local counterpart organisation to the CAM.⁶

At the scheme level, there were two Officers-in-Charge. One was from the Settlement Branch (later from ADD) and was responsible for the general management of the scheme. He or she was also responsible for agricultural extension, credit disbursement as well as collection.⁷ The other was from Irrigation Branch. These offices operated independently. Each Officer-in-Charge was assisted by other officials under him. For instance, the one under the Settlement Branch had a number of Technical Assistants (TAs) and Development Assistants (DAs) whose chief tasks were extension and farmer supervision. Similarly, the Officer-in-Charge under Irrigation Branch had a Technical Officer (TO), and Senior Technical Assistant (STA) under him, responsible for irrigation at the scheme. In addition, he had water guards, artisans for maintenance work such as bricklaying, drivers, foremen and a large number of labourers.⁸ When the Irrigation Branch was transferred to the DLVW, the two offices had to operate under different financial

budgets. In addition to the two Officers-in-Charge, there was an MYP Discipline Officer whose responsibility was to ensure that all the MYP farmers complied with the set rules and regulations. He was responsible to the District Headquarters of the MYP Organisation. The following is a diagrammatic illustration of this administrative structure.



This administrative structure was kept intact until the early 1980s when it received enormous criticisms from the National and Shire Irrigation Study Report. Among other things, the Report observed that the transfer of Irrigation Branch from the MANR to the DLVW affected the effective irrigation planning, implementation and operations due to coordination problems. Part of the report reads,

At present, no single body appears to have overall responsibility for irrigation sub-sector and project planning.

[In view of this] project planning and proper project documents are not prepared.⁹

Consequently, there was confusion as to who was to take the responsibility for funding and the execution of the engineering, operation and maintenance work at the schemes.

Secondly, the report observed that the presence of two Officers-in-Charge at one and the same scheme was unsatisfactory. The problem was complicated in the sense that the two offices operated independently. In view of this, it was proposed that there was a need to create the office of the Scheme Manager across all the schemes. The Scheme Manager would have the overall responsibility over the scheme. Indeed, the mid 1980s witnessed the creation of such an office.¹⁰

The second group the government used was the Land Allocation Committees (LAC). These committees comprised representatives of political and traditional leaders of the areas surrounding the scheme. No elections were held to choose members into this committee but the Member of Parliament (MP) for the constituency where the scheme was located became the chairperson to the LAC upon confirmation by the Minister of Agriculture and Natural Resources who, at the time, was Dr. Banda.¹¹ The MP was charged with the responsibility of electing other members into the LAC which had about 15 members. Such a committee included the Officer-in-Charge from the Settlement Branch who had a permanent membership and served as a secretary of the committee.

The main duties of the LAC were first and foremost to allocate plots to both local and settler farmers. However, much as it allocated plots to both groups of farmers, it had

limited control over the selection of MYP farmers as this was duly controlled by the government.¹² The MYP settlers were selected by the MYP Organisation which sent them to the various schemes in Malawi. If the committee felt that the MYP settler was unsuitable for the allocation of a plot within the scheme, all it did was to write the Principal Settlement Officer who would in turn liaise with the MYP Headquarters.¹³

Secondly, the role of the LAC was that of liaison. It liaised with administrators from both Irrigation Branch and MANR over matters of management within the scheme area.¹⁴ This involved the cooperation of the committee to persuade the farmers to begin preparing their plots and grow their crops as led down by the management; to ensure that all farmers abided by the set administrative rules, and where necessary, to authorise the dismissal of the non-compliant farmers. Equally limited were the powers of the LAC to dismiss MYP farmers unless authorization was sought from the higher office of MYP Organisation.¹⁵

Indeed, in the year 1970, the first LAC was established at Wovwe Rice Scheme and comprised the following members: Honourable A.W Mwafulirwa, MP, who was also the chairman of the committee; Officer-in-Charge (From the Settlement Branch); MCP Chairman, Wovwe Branch; MCP Chairman, Fulirwa Branch; MCP Chairman, Kasangamala Branch; and 7 Village Headmen drawn from Wovwe catchment area.¹⁶ Lastly, the government also used the ‘Farmers’ Committees’. Members of this committee were farmers elected amongst the plot holders in the scheme. Members of the LAC who had plots in the schemes were also eligible for election into this committee, but purely as

farmers and not on account of their being members of the LAC.¹⁷ The Farmers' Committee chairman was elected by members of the LAC. The Technical Officer of the scheme and the Committee's elected secretary together became joint secretaries for the Farmer's Committee. Among other duties, the Farmers' Committee worked hand in hand with both management officials and the LAC in the management of the scheme. However, a committee of this nature never existed at Wovwe Rice Scheme in the 1970s.¹⁸

A closer examination of such an elaborate administrative structure with respect to Wovwe reveals a few points worth highlighting. Firstly, that it was generally devoid of active farmer participation, reflecting a top-down approach to the management of the schemes. The major administrative bodies that existed at the scheme did not necessarily include farmers. The body that could have possibly increased farmers participation in the decision making process was the 'Farmers' Committee'. This is so because unlike the other bodies, which included government as well as political figures, Farmers' Committees were highly dominated by farmers themselves. This observation should be understood within the general context of politics of the day where every person that represented the government, let alone serving under the ministry that was headed by Dr. Banda himself, was likely to be highly feared or respected.

Secondly, the dominance of political figures in the LAC in the name of the MP, MCP area chairmen, and indeed Traditional Leaders might have forestalled the effective attainment of socio-economic objectives of the scheme. For instance, in 1971, the

Technical Assistant bemoaned the behaviour of members of this committee, observing that,

I have been greatly disappointed with the Land Allocation Committee of this scheme. The members of the LAC never come for meetings whenever they have been asked to. I have found out that they are only present when the chairman of the Committee who is the MP is present. This tells me that they are not interested in running the scheme and are just forced by the MP... The farms [plots] of the LAC members are never up to date... [not properly taken care of]. This only tells you that the LAC members are the most lazy farmers in the scheme.¹⁹

What this demonstrates is that the LAC members were very much concerned with their continued recognition as loyal members to the MP and not with the successful management of the scheme as was required of them. This allegiance to the MP was only to safeguard their positions in the LAC because the MP had a great influence over their positions. He had the powers to recommend their dismissal in the event that they underperformed in their duties.²⁰

Similarly, the LAC evolved into a powerful force that had the capacity to veto some of the set rules and regulations of the schemes in order to satisfy some political agendas under the guise of assisting farmers. For instance, in 1979, the LAC bargained for the provision of credit inputs to credit defaulters.²¹ This was against the background that any farmer who defaulted credit repayment was not supposed to get any further inputs on loan until the payment was made. In his letter to the Project Manager, Karonga ADD, the Vice Chairman to the LAC cited the following reasons: firstly, that farmers' defaulting was due to bad weather; secondly, that the members constantly monitored the concerned farmers such that they would eventually pay back the previous loan; and lastly, that His

Excellency the President, Dr. Banda was about to visit the scheme hence it would reflect so badly upon the committee if rice in some plots did not do well. Consequently, the concerned farmers got the inputs.²² An analysis of the above reasons demonstrates that first and foremost, the LAC was bent at defending its good image in the eyes of the President. Whether the way to attaining that compromised the achievement of the scheme's objectives was of secondary importance. Through LAC, therefore, there was created a parallel administrative structure at the scheme that became so concerned with personal objectives rather than those of the scheme.

The late 1980s however witnessed the formation of several farmer committees aimed at promoting farmers' participation in the operations of the scheme. This was partly a response to the findings of the NSIR which among other things, observed that the administrative structure of the government schemes did not involve many farmers hence the farmers rarely patronised the scheme.²³ It also corresponded with the growing sentiments over the need to bring forth irrigation reform in the schemes, hence the need to let the beneficiaries participate actively in the management of the scheme. It is also worth mentioning that this happened at a time when the Chinese Agricultural Mission had just withdrawn from the scheme. Before their withdrawal, the Chinese were wholly responsible with the operations of the new scheme.²⁴ This meant that the government had a double work load, to take care of both Wovwe I and II. Consequently, there was a need to add work force to the scheme and this was easily done through the involvement of farmers.

The Wovwe situation demonstrates that these committees were grouped into two layers. The first layer encompassed the main committee which was called the ‘Scheme Management Committee’. This committee was made up of 16 members, with a good number of them being farmers. Even though the position of chairperson was given to a farmer, the Scheme Manager retained the position of Secretary. Among other duties, this committee was responsible for land allocation, settlement of land disputes, drafting, implementation and interpretation of the constitution governing rice cultivation in the scheme, inculcation of self-help spirit among the farmers, and constantly served as a link between irrigation management and extension officers on the one hand, and farmers on the other in policy issues.²⁵ No traditional leader, let alone MCP area Chairman ever got a position in this committee. This was so because the Management Committees were actually replacing the LAC to pave way for active farmer participation. However, traditional leaders could be called upon from time to time to offer advisory services to such committees on pertinent issues such as those to do with misunderstandings between the farmers and the scheme officials.²⁶

The second layer comprised the sub-committees. The first was the ‘Credit Sub-committee’, which was responsible for the supervision of credit at the scheme, including disbursement and recovery of credit.²⁷ This committee worked hand in hand with the Credit Officer. The second was the ‘Cultural Practices and Training Sub-committee’, responsible for the supervision of crop management activities and recruitment of course participants on irrigation farming and scheme management. One of the Field Assistants was an advisor to this committee. The third was the ‘Scheme Maintenance Committee’.

With the assistance of the Irrigation Assistant, it had the duty of supervising all maintenance work in the scheme. The last category was that of the ‘Farmers’ Clubs’. The previous clubs were reorganised and grouped into smaller groups of about 10-30 farmers. While in the past clubs were formed essentially to act more or less as a surety to the credit inputs farmers got, this time around some other duties such as those to do with monitoring and evaluation of all agronomic aspects in scheme blocks were emphasised as well. Besides, farm clubs were categorised into 15 groups to facilitate training and demonstrations.²⁸

This administrative structure was indeed a departure from the previous one. It established a very strong link between the scheme officials and farmers in management issues. One would have expected farmers’ patronage of the scheme to be enhanced tremendously since they identified themselves with it. However, as the later sections will demonstrate, ‘farmer patronage’ at the scheme still remained a challenge up until the mid 1990s. What this demonstrates is that the challenges of the scheme could not only be explained through the general set-up of the administrative structure. Other factors should also be taken into consideration. The following section looks at the administration of credit to farmers and the problems associated with it.

The Credit Scheme

Smallholder agricultural credit in Malawi dates back to the colonial era although serious interventions in rural financial markets began 10 years after independence in 1964.²⁹

Prior to independence, agricultural credit under the colonial regime targeted large-scale commercial farmers especially the political elite. Rural small-scale farm production was neglected.³⁰ This equally influenced post-colonial credit policies such that before the 1970s, farm credit was basically limited to the ‘Master Farmers’ (known as Achikumbe after independence) and other large indigenous farmers. From 1970s, however, farm credit was extended to small-scale farmers who were usually grouped in clubs. Among other reasons, such a change was facilitated by the need to provide access to agricultural inputs to resource poor households; to enhance agricultural productivity of smallholder farmers; increase food production thereby ensure food security; and promote the adoption of improved agricultural technology.³¹

Indeed, in 1971, ADMARC (previously known as Farmers’ Marketing Board) was set up not only to provide marketing services to smallholder farmers, but also to act as a channel through which the government could offer credit to farmers. In 1987, Smallholder Agricultural Credit Administration (SACA) was established with the sole purpose of disbursing credit to farmers. In the early 1990s, SACA was privatized largely under the influence of Structural Adjustment Programmes. Instead, its functions were absorbed by the Malawi Rural Finance Company (MRFC).³² All these bodies in one way or the other had a bearing on the issuing of credit in government schemes.

Farm credit at Wovwe Rice Scheme, and indeed the rest of the government schemes was divided into two categories, namely, ‘medium-term credit’ and ‘seasonal or short-term credit’.³³ Medium-term credit was meant for the purchase of labour saving technology

such as work oxen, ploughs and other farm equipment. Seasonal credit was meant for the purchase of seasonal inputs such as fertiliser and seed. Of the two, the latter was accessed more frequently than the former. In both cases, however, an interest of 10% was charged.³⁴

Two types of funds existed at the scheme. One was called ‘Development Fund’. This was a special fund for the MYP farmers. For the purposes of aiding MYP properly settle in the schemes, the government issued out £40 to each MYP settler for allowances, uniforms, tools, temporary housing, transport and food. The MYP farmers paid it back over a period of 5 years with a 5% interest giving rise to a total of £47. This amount could be paid back in 5 instalments as follows: £3, £8, £12, £12, £12.³⁵ The other fund was called the ‘Scheme Revolving Fund’. This was open to MYP, non-MYP settlers and local farmers. It issued out both medium-term and seasonal credit to farmers.

Apart from credit offered under the ‘Development Fund’, where a portion was offered in cash, no farmer was allowed to access hard cash. Through these funds, the required inputs or equipment were bought and later distributed to farmers through ADMARC. Even at a time when SACA was operational, these Funds remained intact in the schemes and farmers still accessed the requested facilities through ADMARC. In fact, by 1971, ADMARC had already erected a shed at the scheme for such purposes in addition to buying farmers’ rice.

Until 1979, farmers at Wovwe accessed these facilities as individuals. However, in 1980, farmers were told to get into groups as a condition for accessing seasonal credit.³⁶ The formation of clubs did not just facilitate the disbursement of credit, but also enhanced farmers' participation in the scheme activities, the responsibility that could otherwise have been achieved through the formation of 'Farmers' Committees'. Clubs were supposed to be free associations. Members were supposed to join freely having understood the reasons for club formation. In essence, however, almost all members joined the clubs in order to access seasonal credit. Secondly, each club was supposed to have an executive committee. Among other duties, the executive committee was given the mandate to draft a constitution that was to guide the operations of the club; to be cooperative with the Field Assistants and the irrigation staff; and lastly to fight against default element amongst members.³⁷ In fact, if one member defaulted payment, the entire club was no longer eligible for further credit. In practice, however, such rules were easily broken. It is clear that the need to fight credit defaulters was by far the most important reason behind formation of farmers' clubs. The farmers' clubs could at best be described as loan collateral.

A few observations are worth highlighting with respect to the credit scheme. The first one has to do with the discriminatory nature of the credit scheme. Even though it was very clear that both the MYP and local farmers were to access inputs at the same time, in most cases the MYP farmers had an upper hand in the sense that the priority was accorded to them.³⁸ Reasons for the same remain obscure; however, some informants indicated that the MYP farmers were the 'children' of Dr. Banda hence they could enjoy some

privileges citing among other benefits, the allowances they got for resettlement purposes in their very first year.³⁹ Their association with Dr. Banda might have specially positioned them for such privileges.

Secondly, even though there was medium-term credit scheme for the purchase of labour-saving technology such as work oxen, ploughs and farm-carts, very few farmers purchased such farm implements. Statistics on the number of farmers that benefited from the medium-term loan in the 1970s remain obscure. However, the following table best summarises the number of farmers that benefited from this loan scheme in the 1980s:

Table 2: Wovwe Rice Scheme Medium-term Loan Performance, 1981-1991

SEASON	LOAN (MK)	LOAN PLUS SUR-CHARGE	TOTAL NO. OF BORROWERS	PERCENTAGE RECOVERY
1980/81	1280.89	1848.12	5	100
1981/82	661.95	695.95	6	100
1982/83	931.38	1045.09	6	100
1983/84	1497.77	1596.23	5	100
1984/85	-	-	-	-
1985/86	-	-	-	-
1986/87	1153.68	1186.87	6	100
1987/88	241.26	-	1	100
1988/89	7307.84	7375.45	6	46
1989/90	4072.84	4072.84	4	94
1990/91	3530.97	3530.97	6	6

Source: KRDP/Wovwe Rice Scheme Basic Data, 1980-1993

Even though the table is silent on the type of labour-saving technology that could be purchased, it is clear that not many farmers benefited from the credit scheme. Indeed, between 1981 and 1991 only forty-five farmers accessed loans from this credit scheme. It is quite doubtful that farmers benefited extensively from this credit scheme in the 1970s. Two reasons explain this. Firstly, the process involved in securing loans was quite

rigorous. For instance, the loan application forms were first sent to the Ministry of Agriculture and Natural Resources headquarters where processing took a number of months.⁴⁰ One farmer said, “I did not bother myself applying for such a loan [medium-term loan]. You apply for it today you get a response after a year.”⁴¹ Much as the waiting period might have been exaggerated, farmers might have been discouraged by such a long period of waiting before they accessed the loans.

Secondly, between 1970 and 1979, all farmers wanting to purchase farm implements through this credit scheme were supposed to pay 25% of the loan before medium-term credit application form was submitted for approval.⁴² Many farmers failed to apply due to lack of such an initial deposit fee. One informant stated:

The system was discriminatory. You see, those of us in the schemes were asked to pay a cash deposit before our forms were submitted but our colleagues operating under the project credit fund in upland agriculture never paid this amount. Their loans were easily processed.⁴³

In most cases farmers compared themselves with the ‘Project Credit Fund’ which assisted those smallholders in the rain-fed agricultural activities. Under this fund, farmers were not expected to pay 25% of the loan in advance before the processing of the loan forms. In fact, in 1979, the Project Manager of Karonga-Chitipa Rural Development Programme (KCRDP) wrote the Smallholder Credit Committee in Lilongwe explaining that farmers in the schemes in Karonga were at a disadvantage as the two systems operated differently.⁴⁴

Consequently, in the 1980s things changed as no farmer was expected to pay cash deposit before the loan was processed. However, once the number of labour-saving technology farmers acquired at the scheme is weighed against the total number of farmers by 1988, that is 805 farmers (see table 7), one gets an impression that not many farmers had effectively utilised the medium-term credit scheme in the 1980s despite the synchronization of the credit funds for both irrigation/settlement schemes and rain-fed smallholder agriculture. Besides, some of the frequently cited problems compromising the productivity of the scheme were ‘late land preparation’ which itself was a product of lack of adequate work-oxen, leading to late planting of rice⁴⁵; few hired implements during summer crop; lack of cash on the part of new comers to hire implements such as work-oxen that did not belong to the government.⁴⁶

Failure to purchase labour-saving technology despite the availability of funds for such a purpose in the 1980s could be explained through the introduction of mechanized technology at the scheme. It should be noted that between 1970 and 1984, land preparation was mostly done manually through the use of a hand-hoe. Although the scheme did have a tractor, it was essentially used for maintenance work of the scheme infrastructure. The scheme however did have work-oxen and farm-carts which were hired out to farmers on credit.⁴⁷ To this end, farmers were encouraged to utilise the medium-term credit scheme to purchase their own farm implements. Besides, it was observed that such technology as the use of work-oxen would not damage the canals, hence its preference over mechanized technology.⁴⁸ In fact, one of the operational objectives of

Wovwe Rice Scheme was to encourage the use of work oxen against mechanized technology, such as power tillers.⁴⁹

The advent of the Chinese in 1983, however, witnessed the introduction of mechanized technology in the form of power tillers to the scheme. In the first place, the power tillers were essentially used for the development of Wovwe extension (Wovwe II). However, later on, the power tillers could be hired out to farmers in both schemes only to be debited at the point of rice sale just like it was the case with seasonal credit. The Chinese became very popular with the introduction of technology. One of the interviewed farmers stated:

We never had problems with the preparation of our plots when the Chinese were here. Their *agrimas* [power tillers] assisted us so much. Land preparation was no longer an issue in those days.⁵⁰

This arrangement remained in place even after the Chinese had pulled out in 1988.

However, with the withdrawal of the Chinese, the mechanized technology became unsustainable especially with the rising costs of fuel and maintenance. For instance, by 1991, the scheme had 8 power tillers and out of these only one was operational, the rest had broken down due to lack of spare parts.⁵¹ Similarly, at this time, the scheme had 6 ploughs and out of these, only 2 were in use.⁵² By 1994, the remaining power tiller broke down marking the end to the use of mechanized technology at the scheme.⁵³ The following picture is a display of abandoned machinery in dilapidated shape at the scheme.

Photograph 1: Showing some pieces of mechanised technology abandoned in the early 1990s.



These pieces of mechanised technology have been in this shape since 1994. (Photograph captured in Oct., 2007).

It appears that from 1985/86 farmers became so dependent on mechanized technology and not on a hand-hoe or work-oxen. Paradoxically, even at a point when some power tillers were operational, not all farmers were served at one and the same time. The problem became intense during summer season since the few available work-oxen owned by farmers in the valley were used both in the scheme and rain-fed area. It is tempting to want to suggest that the presence of mechanized technology undermined farmers' initiative and self management. Farmers remained dependent on scheme management for land preparation. There was created a culture of complacency among farmers which prohibited them to invest in labour-saving technology despite the availability of loan facility for such a purpose. Similarly, since such technology was hired out to farmers, what it means is that farmers lost out a portion of their income that could have otherwise been retained if they had their own labour saving technology.

Related to the above is the effect of ‘seasonal credit scheme’ on farmers’ self-initiative. By making farmers continuously rely on seasonal credit scheme, there was created a culture of debt which forestalled farmers’ self initiative.⁵⁴ Farmers never dared to make long-term investments let alone buy the agricultural inputs on cash. “Farmers did not access fertiliser in time” was the answer frequently cited in monthly reports as a contributing factor to poor yields in the scheme.⁵⁵ This had some implications. For instance, when credit facilities were withdrawn due to the closure of ADMARC and of MRFC later in the 1990s, many farmers did not have the capacity to purchase such facilities. This has remained a very big problem to date. It could be argued that debt withdrawal was done abruptly, at a point when the culture of business had not yet been inculcated in farmers. It still remains unclear which point could have been the most appropriate considering the fact that at the time when the credit scheme phased out, the scheme had serviced farmers for more than 20 years. However, looking at the net income farmers got from the scheme which far outweighed the total seasonal loan individual farmers had to pay back (see appendix II), one is tempted to argue that even by 1970s farmers were ready to purchase irrigation inputs on cash. All they required was to instil in them a business culture. A discussion on the credit scheme however would be incomplete without making a reference to the way farmers utilised the scheme. The following section looks at how the scheme was utilised in different seasons, especially with special focus on summer seasons.

Utilisation of the scheme

Right from the 1970s to 1993, the scheme was never fully utilised during the summer seasons. The total hectarage cultivated during the summer seasons was always less than that of winter seasons. The following table illustrates this situation:

Table 3: Seasonal Utilisation of Wovwe Rice Scheme, 1970-1989

Season	Total Ha.	Ha. Planted	Season	Total Ha.	Ha. Planted	Season	Total Ha.	Ha. Planted
W 1970	-	-	W 1977	160	160	W 1983	160	122
S 1970/71	76	57.4	S 1977/78	160	138.4	S 1983/84	160	80
W 1972	-	-	W 1978	160	160	W 1984	160	158
S 1972/73	88.4	88.4	S 1978/79	160	100	S 1984/85	160	37
W 1973	120	93.2	W 1979	160	160	W 1985	208	116.2
S 1973/74	120	68	S 1979/80	160	74	S 1985/86	254.8	108
W 1974	135	134	W 1980	160	158	W 1986	287.8	183
S 1974/75	160	100	S 1980/81	160	154.8	S 1986/87	287.8	136
W 1975	160	135.2	W 1981	160	160	W 1987	336.2	262
S 1975/76	160	100	S 1981/82	160	137	S 1987/88	365.4	210
W 1976	160	154	W 1982	160	160	W 1988	365.4	332
S 1976/77	160	100	S 1982/83	160	81	S 1988/89	365.4	211

Source: KRDP/Wovwe Rice Scheme Basic Data, 1970-1989

From the table, it is clear that more hectares were cultivated during winter than summer seasons. Several factors explain this situation at different periods. However, at the centre of such factors was the presence of other alternative sources of income or livelihood during summer season which equally demanded farmers' labour. What follows is a discussion of such factors.

To begin with, underutilisation of the scheme between 1970 and 1979 during summer seasons was heavily influenced by the low price that rice fetched on the market. The following is a price list for the major peasant crops in the 1970s.

Table 4: History of the Produce prices of major crops in KRDp in the 1970s (in Malawi tambala per Kg)

CROPS	1972/ 1973	1973/ 1974	1974/ 1975	1975/ 1976	1976/ 1977	1977/ 1978	1978/ 1979
Maize	2.75	2.75	3.85	4.95	4.95	4.95	4.95
Rice	5.5	5.5	6.6	7.7	7.7	7.7	7.7
Cotton	9.9	9.9	12.1	13.2	14.3	18	18

Source: KRDp, Produce Prices for Smallholder crops, 1972-1979

Looking at the table, it is clear that the price of rice was relatively lower than that of cotton and higher than that of maize, the principal crops grown within Wovwe area. Irrespective of such differences, rice price was considered very low such that returns to rice farmers were quite minimal. This was so because of the very demanding work and high cultivation standards required for irrigated rice. For instance, while rice requires 215-255 days per hectare, maize requires 125-140 days per hectare; and cotton is rather on the higher side requiring 271-344 days per hectare.⁵⁶ In most cases farmers complained about the low prices that rice fetched on the market. One member of the defunct Allocation Committee asserted that the problem of low prices for rice was one of the major challenges farmers faced in the production of rice in the 1970s.⁵⁷ That farmers' complaints were genuine cannot be disputed. For instance, in 1977 the Secretary for Agriculture wrote the General Manager of ADMARC in Limbe stating,

I have received reports of agitations among the rice growers in Karonga. I understand they are not happy with the current price of 7.70 tambala per kilogram. The growers are therefore urging government to consider

raising the price. Since ADMARC is the main purchaser of rice from these growers, I would appreciate your comments on the financial implications of raising the price above the current one.⁵⁸

It appears many farmers were not happy with the producer prices that rice fetched on the market.

Indeed, such poor prices in the 1970s have often been attributed to ADMARC's policy of subsidising estate agriculture by indirectly taxing smallholder farmers.⁵⁹ The general perception is that if producer price for rice was raised by 50%, net income would be more or less doubled.⁶⁰ In this case returns per farmer would be higher than most of the other major crops which won the heart of farmers during summer season.

Much as ADMARC acknowledged the poor prices rice fetched on the market, it attributed the problem to international variation in rice prices.⁶¹ In the 1970s, average international price for rice had generally followed a declining trend. For instance, the average international price for rice in 1970, 1974, 1975/76, 1977 was US\$ 584, US\$439, US\$295 and US\$275 per metric tonne respectively.⁶² In other words, circumstances prevailing in the international rice markets did not make rice trading a profitable exercise. In fact, ADMARC argued that the price of rice that was paid out to farmers was heavily subsidised by revenue from other profitable crops.

For instance, responding to the queries raised by farmers, the Financial Controller to ADMARC wrote the Secretary for Agriculture stating,

In light of prevailing trend in the rice market at present, it would be inadvisable to recommend increases in producer prices for rice at the moment until we are able to negotiate with our contracting partners' prices which would give reasonable profit margin that could as well be passed on to the producers.⁶³

One would conclude that while it could be true that on average ADMARC was generally used to milking the smallholder sector in the 1970s in an attempt to subsidise estate agriculture, the low producer price of rice was heavily influenced by international variations in the price of rice. If it was not for the subsidy, farmers could have been getting far much less than what they got. Whatsoever the reasons behind such prices, the impact was the same. Farmers might have opted for crops that looked more profitable –in this case maize and cotton.

Between 1980 and 1989 the low producer prices for rice were compounded by the lopsided producer price increments which the government implemented mostly under the influence of the Structural Adjustment Reforms. This period witnessed the adoption of Structural Adjustment Reforms as a condition to accessing loans from the Bretton-Woods institutions.⁶⁴ Among other things, the reforms emphasised the need to improve producer prices for peasant commodities. For instance, in 1980, maize producer price was raised by 27%. In 1981, it was raised by 68%.⁶⁵ In 1987, the government effected a 26% producer price increase for maize⁶⁶ and again during the 1988/89 growing season, the government raised the producer price for maize by 44%.⁶⁷ Between 1984/85 and 1986/87 growing seasons, the producer price for groundnuts was raised as well.⁶⁸ The rest of the crops had the usual price increments. The raising of producer price for maize reflected

Dr. Banda's objective of achieving food self-sufficiency. Ironically, it appears the definition of food was that of 'maize'.

Such lopsided producer price increments for peasant crops appear to have adversely affected the utilisation of the scheme. The following table best illustrates this view:

Table 5: Rice Sales to ADMARC since 1980, Wovwe Rice Scheme (Summer seasons)

SEASON	1980-1981	1981-1982	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988
METRIC TONS	287	212	83	133	135	336	238	361.5

Source: KRDP/Wovwe Rice Scheme Rice Purchases, 1980-1988

From the table, it can be noted that by 1980/81, the total number of metric tons sold to ADMARC stood at 287. However, after price adjustments, it dropped to 212 hitting the lowest point of 83 metric tons during the 1982/83 season. It is not difficult to make sense of the 1987/88 figure. Rice sells to ADMARC increased despite changes in maize price because by 1987, total hectarage of the scheme had equally increased. However, looking at the experience in the previous years, it becomes clear that whenever the producer price of maize was raised, production in summer decreased in the scheme. This trend could have been properly substantiated if official records on production of other crops such as maize and cotton in the Wovwe Valley were available. However, these records were not available in ADMARC documentaries in Karonga and Mzuzu, nor were they found in the Malawi National Archives. ADMARC officials indicated that all local records are destroyed after every ten years. This may explain the absence of these records. Despite

their limitation, however, production figures at national level come closer in substantiating this trend as the following table demonstrates,

Table 6: ADMARC National Crop Purchases (metric tonnes), 1979-1988

	MAIZE	GROUNDNUTS	COTTON	RICE
1979-80	82,404	24,296	22,411	20,634
1980-1	91,205	31,484	23,096	16,863
1981-2	136,591	19,490	21,740	14,629
1982-3	246,086	10,620	14,629	12,623
1983-4	244,916	10,218	13,370	8,810
1984-5	296,443	9,665	32,122	10,201
1985-6	272,275	18,251	32,717	10,799
1986-7	111,331	53,051	21,033	12,073
1987-8	113,409	49,064	19,454	7,821

Source: Harrigan (1991), p. 225

Looking at the table, when maize producer price was raised during the 1981/82 season, the sales of crops such as rice and groundnuts to ADMARC dropped, while that of maize went up. When the producer price of groundnuts was raised in 1986/87 season, that of maize went down and rice registered a minimal improvement. Similarly, when maize producer price was raised in 1987/88 season, rice sales to ADMARC dropped tremendously.

That the drop at Wowwe rice scheme was affected by such price changes is further reinforced by the absence of other factors that might well have affected rice production in the scheme. Ecological factors fall into this category. However both written and oral evidence point to the fact that Wowwe Rice Scheme was never affected by drought let alone floods in the 1980s. For instance, in 1981, the *National and Shire Irrigation Study Report* observed that while a good number of schemes had suffered setbacks as a result of water shortage or floods damaging the schemes and headworks, Wowwe rice scheme was

the only lakeshore scheme that was left unaffected.⁶⁹ This was so because of the presence of a large dambo, the Kasangamala Marsh upstream (see map No. 3). The Marsh acted not only as a natural sediment trap, but also as a natural water reservoir thereby ensuring the steady flow of water downstream. Similarly, oral tradition has it that the problem of droughts and floods at the scheme emerged later in the 1990s, a subject that is explored at length in the next chapter.⁷⁰

In his analysis of the peasant response towards market forces, Lipton (1987)⁷¹ argued that peasants are able to shift land and labour towards production of goods whose relative price have or are expected to increase. Similarly, Sijm (1989)⁷² observed that when the price of one crop goes up, a farmer would simply switch to that particular crop at the expense of the other. As noted above, since labour demand for maize was always on the lower side, it would only be logical for a ‘rational’⁷³ peasant to shift resources and labour towards its cultivation and away from the cultivation of rice in the scheme once the price of maize was raised. Indeed, it appears there was a shift of labour to upland areas corresponding with the declining hectarage under rice cultivation during summer season every time maize price was raised. The following table illustrates such a shift of labour.

Table 7: Rice cultivation during summer seasons, 1980-1988

SEASON	1980-1981	1981-1982	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988
TOTAL HA.	160	160	160	160	160	254.8	287.8	365.4
HA. CULTIVATED	154.8	137	81	80	37	108	136	210
LOCAL FARMERS	285	249	168	183	106	306	477	628
MYP	83	70	52	61	39	54	70	181
TOTAL	341	319	220	244	145	360	517	805

Source: KRDP, Basic Data, Wovwe Rice Scheme, 1980-1989

When maize price was raised in 1980, the total number of farmers cultivating in the scheme stood at 341 and the cultivated hectarage stood at 154.8. However, when the price of maize was raised again in 1981/82, the hectarage under cultivation dropped to 137 hitting the lowest figure of 81 during the 1982/83 season.

The same is true with farmer population. During the 1981/82 season, it dropped to 319 hitting its lowest point of 220 during the 1982/83 season. It is easy to account for the stable farmer population in the later years because the total hectarage in the scheme started increasing steadily. However, the trend demonstrates that each time producer price of maize was raised, the production of rice in the scheme dropped as farmers might have switched both their labour and resources towards the cultivation of maize.

This trend too could have been properly substantiated if official records on production of maize and cotton in the Wovwe Valley were available. However, there are some traces in oral tradition pointing to the fact that farmers really switched towards maize cultivation

every time price for maize was raised. For instance, a number of informants indicated that it was in the 1980s that the habit of borrowing plots in the upland areas on the part of settler farmers became so intense.⁷⁴ That this land was predominantly used for cotton production is doubtful as there is no evidence pointing to the fact that cotton prices were raised substantially during this period. Besides, as observed earlier on, cotton production is more rigorous than maize production.

What this demonstrates therefore is that farmers appear to have successfully responded to market forces at the scheme. However, such a response affected the production of rice in the scheme. It could therefore be argued that the lopsided price increments implemented in the 1980s seem to have contributed towards the underutilisation of the scheme during summer seasons.

Between 1990 and 1993, there emerged yet another factor that tended to reinforce underutilisation of the scheme during summer season. This was the rise in farmer population which in turn tremendously reduced the size of plots farmers cultivated. Between 1970 and 1989, the size of plots farmers held in the scheme kept on fluctuating. However, despite such fluctuations, the average stood at 0.5 hectares per household, with the majority having landholdings of above 0.5 hectares. The highest number of registered farmers in the above period was 829 during the winter season of 1989.⁷⁵ Between 1990 and 1993, farmer population rose tremendously. For instance during 1991/92 season, the population was 896. However by 1993 it was 1166.⁷⁶ The sudden rise in farmers' population has been attributed to the disbanding of MYP by the Malawi Army whereby

many people flocked to the schemes to occupy the plots left by the MYP farmers.⁷⁷ This reduced the landholding size to an average of 0.3 hectares per household where the majority had landholding size of below the average size. On the other hand, the average landholding size in the Wovwe catchment area stood at 1.5 hectares per household.⁷⁸ This had one broad implication. During winter seasons, almost all the plots in the schemes were occupied and indeed the scheme was effectively utilised. This is so because of the absence of other agricultural activities as most of them were carried out during summer season. As such, the scheme became the major source of income. However, during summer season, the scheme was not effectively utilised. This is so because of the presence of alternative forms of livelihood outside the scheme where landholding size was large enough to support an average family. Besides, crops such as maize and groundnuts mostly grown in the valley are not labour intensive relative to rice production.

What this demonstrates is that factors that contributed to the underutilisation of the scheme were not static. It would be wrong to argue that the landholding size for instance has been at the centre of the factors driving farmers away from summer cultivation in the scheme ever since the scheme was established, just as it would be equally wrong to advance a similar argument with respect to low prices and pricing policies, let alone the administrative set-up of the scheme. What is clear however is that at the centre of all these factors was the presence of other alternative forms of livelihood more promising than what the scheme offered. Similarly, it would be wrong to argue that the scheme was underutilised in both seasons throughout the above period. As noted above, it was only

during summer seasons that the scheme was not effectively utilised. The following section therefore looks at the impact the scheme had on peasants in the valley.

Impact of the scheme on the peasant society

Despite the various challenges the scheme faced, its impact on the peasants in the Wovwe valley cannot be overemphasised. Such impacts are divided into three categories, namely, economic, social, and technological impacts. What follows is a discussion on each of these categories.

Economic Impacts

The scheme, to a certain extent, revolutionised the economic life of people in the Wovwe Valley. For instance, before the establishment of the scheme, the major cash crop of the area was cotton. Rice was not grown on a larger scale in the area. However, with the establishment of the scheme, a number of people came to rely mostly on rice during winter seasons. This was particularly because apart from market vending and other means of livelihood, the most viable source of income during winter was rice as opposed to cotton which was only grown in summer seasons. This is also substantiated by the net income individual farmers got from the scheme during winter seasons (see Appendix no. II). Although the given figures do not span a long period of time, they do however shed light on the economic returns farmers got from the scheme especially in the early years. In fact one farmer said,

Not many of us ever ran away from the payment of tax in those days.
We easily got it from the scheme. Besides, I for one was able to send

my children to a boarding school. The current president of the Association [his son] got educated out of the same rice proceeds.⁷⁹

What this demonstrates is that the scheme became a direct source of income to farmers.

Similarly, some farmers managed to acquire labour-saving technology through the medium-term loan scheme which could equally be hired out to other farmers. Indeed, as noted in table 2 above, between 1981 and 1991 a total of forty-five farmers managed to buy labour-saving technology out of the scheme fund. Oral tradition indicates that the mostly acquired labour saving technology included ploughs and work-oxen. For instance, out of the fifty farmers that were interviewed, five farmers indicated that they had acquired both the plough and a pair of work-oxen; and ten indicated that they had managed to acquire a pair of work-oxen, while three managed to acquire an ox-cart in the period 1981-1991. The scheme also indirectly became a source of income to local farmers who managed to acquire farm implements. As noted above, the scheme did not have adequate work-oxen or power tillers. A number of these were hired from farmers outside the scheme thereby providing a source of income to the owners.

Additionally, some farmers also indicated that they had afforded decent housing through rice proceeds. For instance, one informant said,

It will be unrealistic to say that in the past we never benefited from the scheme. I, for one, constructed my brick house with the money I accumulated out of the rice sales. I was able to mobilise some people who assisted me mould the bricks for my house...I also hired an ox-cart to ferry firewood in order to bake my bricks.⁸⁰

Another informant stated,

Kamuzu [Dr. Banda] should be highly praised for bringing us this gold mine [scheme]. You see, before the scheme, a number of us had houses constructed out of poles and mud.⁸¹

Statistics on the number of households that might have managed to construct such houses prior to the 1990s remain obscure. However, by the time the researcher went into the field, out of 1,500 households cultivating rice in the scheme, 360 households had houses roofed with iron sheets and cemented, representing 24% of the total farmer population in the scheme.⁸² The above figures, however, do have their own weaknesses rendering them less reliable. Firstly, the figures do not tell us the exact number of such houses constructed prior to 1994 or after 1994. Secondly, there are traces in the oral tradition indicating that the construction of such houses was achieved through multiple sources of income ranging from rice production, cotton production, livestock rearing (cattle, goats and pigs), mat making and other crafts, carpentry, beer brewing, tinsmith, fishing, support from kinsmen living in towns, to market vending. However, what is clear from the oral testimonies is that the scheme appears to have been the principal source of income and could as well provide initial funding for other economic activities.

While acknowledging the economic significance of the scheme among farmers in the valley, equally important is the need to understand the level of economic variations among the peasants in the period prior to the 1990s. The following section is an examination of this view.

Economic variations among peasants

The establishment of the two groups of irrigators within one and the same scheme appears to have been the dominant force behind economic variations among the peasants in the valley. Essentially, it was in the plan of the government to settle two groups of farmers in its schemes, namely a group of full-time irrigators, largely made up of MYP settlers and other non-MYP settlers from other districts; and that of part-time irrigators made up of local farmers.⁸³ This was true with Wovwe rice scheme. Surprisingly, even though these groups were created at Wovwe, they both merged into one group of part-time irrigators. Of more importance are the reasons for such a ‘natural merger’.

To begin with, it is important to note that a good number of settler farmers had never been dependent on rice both as a food and cash crop. In the earlier years, a number of MYP settlers for instance, struggled to get maize and other food products despite the allowances they got from the Development Fund. One informant said,

Much as our counterparts [local farmers] admired us for the allowances we got, they did not know how much we struggled. With the same we had to buy maize, relish which we could easily find in our home areas. On top of that we had some people to support in our homes.⁸⁴

Another informant said,

When I was coming into the scheme I thought we would be allowed to cultivate other crops apart from rice. I later observed that this would not be possible. We had to buy maize out of the same cash we earned from the scheme. Life became unbearable. We then decided with my husband to borrow a plot of maize outside the scheme so that we might support ourselves.⁸⁵

The above sentiments demonstrate the harshness of the environment to which settlers were exposed through the scheme. The situation in the 1970s was exacerbated by the low price rice fetched on the market. Despite some special benefits the settler MYP farmers enjoyed, they were easily offset by the higher economic demands they needed to respond to. The situation however weighed so heavily on the non-MYP settlers who did not have the privileges enjoyed by their counterparts.

Berry (1984) observed that what specialisation does is to increase aggregate production but renders people dependent on market exchange to meet basic consumption needs and therefore vulnerable to adverse changes in price or limitations in access to market opportunities.⁸⁶ By creating a group of full-time irrigators at Wovwe rice scheme, the government ran such a risk. Farmers were not used to the production of a single crop nor had they ever been completely dependent on market exchange to meet their basic needs. It would be wrong to argue that no study was ever done with respect to farmers' economic background. However, it would be fair to argue that farmers' previous economic background had been ignored. What happened was consequently against the tenets of settler's economic life. Consequently, while it is true that the scheme brought some economic benefits on the peasants, it should be born in mind that not all groups benefited the same way. It appears in the early years, a group of full-time irrigators struggled economically and even within this group, non-MYP settlers struggled much more than the MYP settlers. The emergence of a single group of part-time irrigators later on offset the differences.

In the 1970s and 1980s farmers appear to have responded to such a situation in two ways. To run away from poor prices rice fetched on the market, famers simply switched to crops that appeared more profitable. Similarly, to make sure that they earned higher price for their rice, they sold it to external markets and defaulted payment of irrigation input loans. In a number of reports, the Field Assistants (F/As) indicated that one of the problems for which farmers could not pay back their credit was that they sold their produce to some local outlets.⁸⁷ One informant said:

ADMARC prices have never been good. In most cases we secretly sold our rice during the night to some businessmen from Karonga and Mzuzu whose prices were relatively fair than what ADMARC offered.⁸⁸

The price at which farmers sold their rice to such businessmen remains unclear. For instance one informant stated:

The price of rice at the black market wasn't stable. However we could only allow selling it if the price was slightly higher than what ADMARC offered.⁸⁹

Such assertions demonstrate that there existed an informal market for rice at the scheme. However, the authority did not have control over it since it only operated during the night.

Furthermore, straddling which characterised summer cultivation in the valley ever since the scheme was established, especially by a group of full time irrigators, could as well be taken as a form of seasonal strategy on the part of farmers to free themselves from the uncertain opportunities and constraints they came to experience. Berry (1993) observed that farmers in Africa have responded to instability of economic decline by attempting to

diversify their options.⁹⁰ Indeed in the 1980s in particular, ‘full-time’ rice irrigators soon became ‘part-time’ as they managed to borrow some fields in the rain-fed area to supplement what they earned from the sales of rice. Officials looked at this as the major problem as it affected the utilisation of the scheme. Consequently several attempts were made to ensure that farmers cultivated in the scheme during summer season. Such attempts ranged from indirect coercion by offering threats of eviction should farmers fail to cultivate in a given season to peaceful negotiations.⁹¹ Farmers who failed to survive often dissented, a good number of them with unpaid credit. Paradoxically, non-MYP settler farmers were mostly renowned for such desertions.⁹² The following table best illustrates this situation:

Table: 8 MYP and Local Settlers Desertions, Wovwe Irrigation scheme, 1974-1985

YEAR	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
MYP	-	8	-	4	5	-	-	15	16	-	21
LOCAL	9	7	-	3	1	-	31	2	21	-	15

Source: MNA/23/13/8, Deserts, Wovwe Settlement Scheme, 1985

From the table, it is clear that in the ten-year period, 1975-1985, 69 MYP farmers and 89 local settlers deserted the scheme, giving a total of 158 deserts. A good number of them deserted essentially because of the above reasons.

Social Impact

Socially, the scheme fostered the interaction between different ethnic groups thereby achieving one of its principal objectives –that of national building. Prior to the establishment of the scheme, the area was predominantly inhabited by the Ngonde and

the Tumbuka. However, the establishment of the scheme witnessed the settlement of different groups of people within the area. The Ngoni from Mzimba, the Yao from Mangochi and Balaka, and different ethnic groups from Chitipa district, all came to settle in the area. A number of these intermarried with each other thereby establishing a strong social and cultural cohesion between and among themselves. All these have tended to share one and common language –Tumbuka. In fact, such an interaction was forged through many ways. For instance, the formation of farmers clubs and other committees on the scheme went a long way in cementing these relationships. Furthermore, there were established on the schemes several religious groupings that in the process fostered ethnic interaction. For instance, by the close of the 1980s the scheme boasted the presence of over 10 religious groups, ranging from Catholics, Presbyterians, Seventh Day Adventists, Pentecostals, Anglicans, to Muslims.

Secondly, the scheme elevated the role of traditional leaders in the area. This was achieved through the involvement of the traditional leaders in the management of the scheme through the Land Allocation Committee. By empowering chiefs to take an active role in allocation of plots and settlement of disputes, the scheme made chiefs strong social figures and guardians of the scheme. Even though such powers were later reduced through the formation of farmer-centred Management Committee in the late 1980s, their advisory role still made them overseers of the productive resource – the scheme.

The establishment of the scheme was also a milestone to the achievement of what could loosely be described as ‘integrated rural development’ within the area. This is largely

viewed through the different social amenities that came to the area. For instance, until the early 1980s, there was no health centre in the area. Farmers had to travel to *Nyungwe*, the nearest centre to access health services. In the mid 1980s, however, farmers, supported by the Christian Service Committee, initiated a self-help project that witnessed the construction of a Health Centre.⁹³ The MANR had very little involvement in it, apart from providing moral support to farmers and where necessary provision of building materials which farmers could not find anywhere else.⁹⁴ Despite its significance, the health centre did not run without challenges. Since it was initiated by farmers, there were problems as to who was to take the responsibility of running it. The MANR, which was responsible for the running of such centres in other areas, shifted the responsibility to Ministry of Health arguing that the health centre was not their brainchild. On the other hand, the Ministry of Health shifted it to the MANR arguing that all Health centres in the schemes were under the MANR.⁹⁵ Consequently, there were delays in the provision of staff, medicine and other facilities. Surprisingly, today, the Health Centre has been reduced into an under five clinic thereby letting farmers revert to the problems they met in the 1970s in as far as access to health services is concerned.⁹⁶

Secondly, the advent of the scheme led to the construction of a primary school in the early 1980s. Pupils that previously went to Wovwe Primary School easily accessed their primary education within the scheme vicinity. What is more, boreholes were sunk in the area. In the past the inhabitants of the area drunk from River Wovwe and wells dug around the area. This came to an end with the advent of boreholes.

Furthermore, the construction of ADMARC depot in the 1970s around the area went a long way in easing the problems of the people around the area. Farmers no longer travelled long distances to purchase agricultural inputs, maize and other products. Everything was brought within their vicinity.

Technological Impacts

Technologically, the scheme transformed the way rice production was managed in Wovwe Valley in two main areas. The first one has to do with the methods employed in rice production. Before the establishment of the scheme, farmers did not irrigate their rice. In fact, it was simply grown in swamps. Besides, rice was planted through broadcasting method. All this changed through the development of the scheme. For the first time, farmers learnt the skills of irrigating their rice and using rice nursery as opposed to broadcasting it. The development of self-help schemes in the Kasangamala area, modelled after that of the government scheme downstream attests to this. In fact before the development of such self-help schemes, many farmers occupied some plots in the government scheme, a practice which became so uncommon after farmers managed to develop their own scheme.⁹⁷

Secondly, the development of the scheme transformed the implements used for farming. Before the scheme was established, many farmers relied on a hand-hoe in as far as the cultivation of their crops was concerned. However, with the advent of the scheme, many farmers started relying on work-oxen for the cultivation of rice and other crops in the

upland areas. As noted above, one of the problems experienced with rice production had to do with lack of adequate farm implements. This means that farmers came to rely more and more on ploughs and not a hand-hoe.

Conclusion

The foregoing chapter has discussed the challenges of the scheme at a time when the general management of irrigation schemes in Malawi was influenced by top-down approach to irrigation farming. The chapter has observed that during this period the scheme's operations were undermined by an interplay of challenges. Administratively, the scheme was devoid of active farmer participation right from the 1970s to late 1980s. Even though the Management Committees established in the late 1980s slightly enhanced farmer participation in the running of the scheme, the primary purpose for which they were instituted - to attract farmers to the scheme was not necessarily achieved. The problem of farmer patronage in the scheme especially during summer seasons still persisted, an indication that some challenges of the scheme went beyond the top-down approach to the management of the scheme. Indeed, the chapter has demonstrated that the utilisation of the scheme in summer seasons during this period was affected by several factors. While in the 1970s low prices were central to the underutilisation of the scheme, during the 1980s, the lopsided government pricing policies drove the course of scheme utilisation. In the early 1990s the ever growing farmer population in the area became so dominant. Additionally, the routine provision of credit facilities to farmers and the introduction of mechanized technology in the scheme combined to undermine farmers'

initiative in as far as long-term investment in irrigation farming was concerned. The chapter has also noted that the scheme brought about some economic variations among farmers, essentially because of the creation of two groups of irrigators at the scheme. An attempt has also been made to show how farmers reacted to the economic environment of the time. The emergence of two groups of irrigators – part-time and full-time irrigators – into one in the 1980s attests to this point. The next chapter departs from this chapter by looking at the challenges of the scheme when the management of small-scale irrigation farming was driven by neo-liberal ideas of irrigation reform.

Endnotes

¹ Malawi Government, *National and Shire Irrigation Study Report*, Ministry of Agricultural and Natural Resources, and Hunting Technical Services Ltd., 1981, p. 198

² MNA/23A/1, Settlement Schemes, 1979-1986

³ *Ibid*

⁴ *National and Shire Irrigation Study Report*, p. 199

⁵ O. T., Mr. H Rhumbey, Ex-Scheme Manager and Irrigation Engineer, KRADD, 5th Nov., 2007

⁶ *National and Shire Irrigation Study Report*, 1981, p. 40

⁷ *Ibid*, p. 41

⁸ *Ibid*, p.41

⁹ *Ibid*, p. 194

¹⁰ OT, Rhumbey, 5th Nov., 2007

¹¹ KRDP/WV/32, Responsibility of Allocation Committee in Settlement Schemes 1972,

¹² OT, Mr. Jenya, Ex-Land Allocation Committee Vice Chairperson, Bunganilo Village, T/A Wasambo, Karonga.

¹³ MNA/23A/1, Settlement Schemes, 1976

¹⁴ KRDP/WV/32, Responsibility of Allocation Committee in Settlement Schemes 1972,

¹⁵ OT, M. Ng’oma, Ex-Scheme Manager, Wovwe Rice Scheme, 28th Oct, 2007

¹⁶ MNA/10/7, Irrigation working paper, Wovwe rice scheme, 1979,

¹⁷ MNA/23A/1, Settlement Schemes, 1976

¹⁸ OT, Mr. P. Jere, Bunganilo Village, T/A Wasambo, Karonga, 11th Oct., 2007,

¹⁹ MNA/15D/1/4, Wovwe Dambo Irrigation Scheme, 1969-1976

²⁰ OT, Mr. Jenya, Bunganilo Village, T/A Wasambo, 12th Nov., 2007, Karonga

²¹ KRDP/WV/32, Wovwe Rice Scheme Monthly Reports, 1970-1979; KRDP/WV/32, From the Vice Chairman, Wovwe LAC to the Project Officer Karonga, 1979

²² OT, Mr. M. Panje, Ex- LAC Vice Chairman, Bunganilo, Village, T/A Wasambo, Karonga, 10th Oct., 2007

²³ *National and Shire Irrigation Study Report*, 1981, p.101

²⁴ OT, R.Z. Mwangonde, Ex-Technical Assistant, Wovwe Rice Scheme, 29th Oct., 2007

²⁵ KRDP/ ID/WV/3/150, Notes Prepared by H.D Rhumbey, Ex-Scheme Manager, Wovwe Rice Scheme 1994

²⁶ OT, Senior GVH Kapiyira, T/A Wasambo, Karonga, 27th Oct., 2007

²⁷ Op cit, 1994

²⁸ OT, M. Ng’oma, Ex-Scheme Manager, Wovwe Rice Scheme, 28th Oct, 2007

²⁹ J. Milner, “Agricultural and Rural Development in Malawi: Africa Research Series, No 11 (2004), p.49

³⁰ See F.L. Pryor, *The Political Economy of Poverty, Equity and Growth: Malawi and Madagascar* (London: OUP.,1990), p. 111

³¹ Op-cit, p. 49

³² Ibid

³³ OT, M. Ng’oma, Ex-Scheme Manager, Wovwe Rice Scheme, 28th Oct, 2007

³⁴ MNA/23/14/13, Settlement Credit Fund,1979

³⁵ MNA/23A/1, Settlement Schemes, Irrigation Branch Report, 1976

³⁶ KRDP, WV/11 Wovwe Day Learning Centre Lesson Notes, 1984

³⁷ KRDP Wovwe Day Learning Centre Lesson Notes, 1984

³⁸ OT, M. Ng’oma, Ex-Scheme Manager, Wovwe Rice Scheme, 28th Oct, 2007

³⁹ OT, A Nyamonje, Ulaha Village, T/A Wasambo, Karonga, 10th Oct, 2007; Mr. Lackson Msukwa, Kalimunda Village, T/A Wasambo, Karonga, 27th Oct., 2007

⁴⁰ MNA/23/15/13 Settlement Credit Fund, 1979-1986

⁴¹ Mr. P. Jere, Bunganilo Village, T/A Wasambo, Karonga, 11th Oct., 2007

⁴² MNA/23/15/13, Settlement Credit Fund, 1979

⁴³ OT, Mr. Mwizakwacha, Bunganilo Village, T/A Wasambo, Karonga, 26th Oct., 2007; T. Nyondo, kapiyira Village, T/A Wasambo, Karonga, 25th Oct., 2007

⁴⁴ MNA/23/15/13, Settlement Credit, General, 1979

⁴⁵ KRDp/WV/22 Wovwe Irrigation Scheme, 1976-1989

⁴⁶ KRDp, Project Seminar, Wovwe rice scheme, 1986, Wovwe Irrigation Scheme paper, 22/9/86

⁴⁷ OT, Mr. M.W Kapanda, Ex-Extension Officer (Irrigation section), Wovwe Rice Scheme, 25th Oct., 2007

⁴⁸ Ibid

⁴⁹ KRDp/ WV/32/1, Annual Work Plan for Wovwe Irrigation Scheme, 1988/1989,

⁵⁰ OT, A Nyamonje, Ulaha Village, T/A Wasambo, Karonga, 10th Oct, 2007

⁵¹ Handover notes, out-going Manager, Wovwe scheme, Mr. S.L. Thindwa to Successor, Mr. P. Savilo, 9th August, 1991

⁵² Ibid

⁵³ KRDp, Hand-over notes: From the Scheme Manager, to Acting Scheme Manager, Wovwe Scheme, 13th February, 1994.

⁵⁴ While not doubting the significance of farm credit in uplifting smallholder farmers, the credit is aimed at empowering farmers to the level where they can sustain themselves, not that they should continually rely on it.

⁵⁵ MNA/23A/2, Monthly Reports, Wovwe Rice Scheme, 1970-1989

⁵⁶ *National and Shire Irrigation Study Report*, 1981, p. 48

⁵⁷ Mr. Jenya, Ex-Land Allocation Committee Vice Chairperson, Bunganilo Village, T/A Wasambo, Karonga, 13th Oct., 2007

⁵⁸ MNA/12/11/07/Correspondence: The Secretary for Agriculture to the General Manager, ADMARC, 1977

⁵⁹ See J. Kydd, "Malawi in the 1970s: Development Policies and Economic Change", in *Malawi: An Alternative Pattern of Development, Seminar Proceedings* No 25 (Edinburgh University Press, 1985), p. 351; J. Kydd and Robert Christiansen, "Structural Change in Malawi since Independence: Consequences of Development Strategy Based on Large-Scale Agriculture" *World Development*, Vol. 10, No. 5, (1982), pp. 355-375; K.M Mtawali, "Malawi: Current Status of and Reform status for Agriculture" in Alberto Valdes and Kay Muir-Leresche (eds.), *Agricultural Policy Reforms and Regional Market Integration in Malawi, Zambia and Zimbabwe* (Washington: The International Food Policy Research Institute, 1993), p. 154; G.C.Z Mhone, "Agricultural and Food Policy in Malawi: A Review" in Naceur Bourenane and Thandika Mkandawire (eds.), *The State and Agriculture in Africa* (London: CODESRIA

Book Series, 1981), pp. 59-86

⁶⁰ *National and Shire Irrigation Study Report*, 1981, p. 48

⁶¹ MNA/12/1-107/42138, Rice Production and Marketing, 1977

⁶² *Ibid*

⁶³ From Financial Controller, ADMARC (Limbe) to Secretary for Agriculture (Lilongwe), 1977, MNA/12/1-107/42138

⁶⁴ Uma Lele, *Structural Adjustment, Agricultural Development and the Poor: Lessons from the Malawian Experience*, Media Discussion Paper 9 (Washington: The World Bank, 1989), pp. 4-10

⁶⁵ Kydd, "Malawi in the 1970s", 1987, p. 341

⁶⁶ Jane Harrigan, "Malawi" in P. Mosley, et al., (eds.), *Aid and Power: The World Bank and Policy-Based Lending, Case Studies*, Vol. 2, (London: Routledge, 1999), p. 22

⁶⁷ Uma, Lele *Structural Adjustment, Agricultural Development and the Poor*, 1989, p.11

⁶⁸ *Ibid* p. 9

⁶⁹ Malawi Government, *National and Shire Irrigation Study Report*, Ministry of Agricultural and Natural Recourses, and Hunting Technical Services Ltd., 1981, p. 43

⁷⁰ OT, Senior GVH Kapiyira, T/A Wasambo, Karonga, 27th Oct., 2007; Y. Chipezayani, Bunganilo, T/A Wasambo, 14th Oct., 2007

⁷¹ Michael Lipton, "Limits of Price Policy for Agriculture: Which way for the World Bank?" *Development Policy Review*, Vol. 5, (1987), p. 199

⁷² Jos Sijm, "Agricultural Price Policies in Sub-Saharan Africa: Has the World Bank Knocked-out its Critics?" A Discussion Paper No. 87, Rotterdam, Centre for Development, Planning 1989, p.40

⁷³ The word 'rational' here is used in a very loose sense as denoting the capacity of peasants to make the right choices depending on the circumstances surrounding them

⁷⁴ Mrs. M. Panje, Bunganilo Village, T/A Wasambo, Karonga, 10th Oct., 2007; Mr. P. Jere, Bunganilo Village, T/A Wasambo, Karonga, 11th Oct., 2007; Mr. Lackson Msukwa, Kalimunda Village, T/A Wasambo, Karonga, 27th Oct., 2007

⁷⁵ KRDP/WV/22 Wovwe Irrigation Scheme, 1976-1989

⁷⁶ Chirwa, *Land Use and Extension Services at Wovwe Rice Scheme*, 2002, p. 315

⁷⁷ *Ibid*

⁷⁸ *Ibid*

⁷⁹ Mr. T.M Mbeye, Kalimunda Village, T/A Wasambo, Karonga, 13th Oct., 2007

⁸⁰ Mr. B. Msukwa, Bunganiro Village, T/A Wasambo, Karonga, 11th October, 2007

⁸¹ Mr. L. Mwachipoka, Kapiyira Village, T/A Wasambo, Karonga, 27th Oct., 2007

⁸² These figures were collected physically through the assistance of the Agricultural Extension Development Officer, Mr. M. Mwalungira, Nyungwe EPA, between Oct. and Nov. 2007.

⁸³ MNA/23A/1, Settlement Schemes, 1976; *National and Shire Irrigation Study Report*, 1981, p. 96

⁸⁴ OT, Mrs. M. Panje, Bunganilo Village, T/A Wasambo, Karonga, 10th Oct., 2007

⁸⁵ OT, Mrs. L. Jenya, Bunganilo Village, T/A Wasambo, Karonga, 12th Oct., 2007

⁸⁶ See S. Berry, "The Food Crisis and Agrarian Change in Africa: A Review Essay" *African Studies Review*, Vol. 27, No. 2, (1984), pp. 72-82

⁸⁷ KRDP/WV/33, Monthly Reports, Wovwe Rice Scheme, 1970-1979

⁸⁸ Miss. M. Mulera, Gangamwale Village, T/A Wasambo, Karonga, 15th Oct., 2007

⁸⁹ Mr. T. Nyondo, Kapiyira Village, T/A Wasambo, Karonga, 25th Oct., 2007

⁹⁰ See S. Berry, *No Condition is permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa* (Madison: University of Wisconsin Press, 1993), pp.64-65

⁹¹ *National and Shire Irrigation Study Report*, 1981, p.210

⁹² OT, M. Ng'oma, Ex-Scheme Manager, Wovwe Rice Scheme, 28th Oct., 2007

⁹³ MNA/23/6, Wovwe Irrigation Scheme, 1970-1987

⁹⁴ Ibid

⁹⁵ Ibid

⁹⁶ OT, Mbeye, WWUA President, 11th Oct., 2007

⁹⁷ OT, M. Harawa, Fulirwa Village, T/A Wasambo, Karonga, 27th Oct., 2007

Chapter Five

WOWWE RICE SCHEME IN THE POST-BANDA ERA, 1995-2007

The previous chapters looked at the challenges of the scheme at a time when the general management of the scheme was influenced by top-down approaches to development. This chapter analyses the challenges of the scheme at a time when small-scale irrigation farming in Malawi was driven by neo-liberal ideas of irrigation reform. This was also the time when the general political administration of the nation became more democratic. Several changes took place during this period ranging from the type of administration, the rules governing the use of the scheme, to the mode of access to markets and agricultural inputs. All these were attempts made to let farmers become more active managers of the scheme. In view of this, the dominant theme during this period was the devolution of management of the scheme from the government to the beneficiaries through the Water Users' Associations.

It is argued that the era of Water Users' Association witnessed the emergence of several challenges that were uncommon to the previous era. For instance, the delayed process of official hand-over of the scheme created an administrative vacuum leaving the maintenance of the scheme infrastructure and other facilities in a moribund state. In addition, the full impact of structural adjustment reforms carried out in the late 1980s was

heavily felt during this period. Similarly, there erupted various ecological problems during this period that grossly undermined the capacity of the Association to effectively run the scheme. Consequently, this period witnessed the growing resentment among the peasants, which in the process affected their cooperation in the administration of the scheme. In light of such challenges, it is suggested that the capacity of peasants as 'experts' capable of managing small-scale irrigation schemes is likely to be questioned unless some other challenges, external to the peasant environment are addressed. The chapter concludes by highlighting the achievements of the Wovwe Water Users' Association.

The formation of Wovwe Water Users' Association (WWUA)

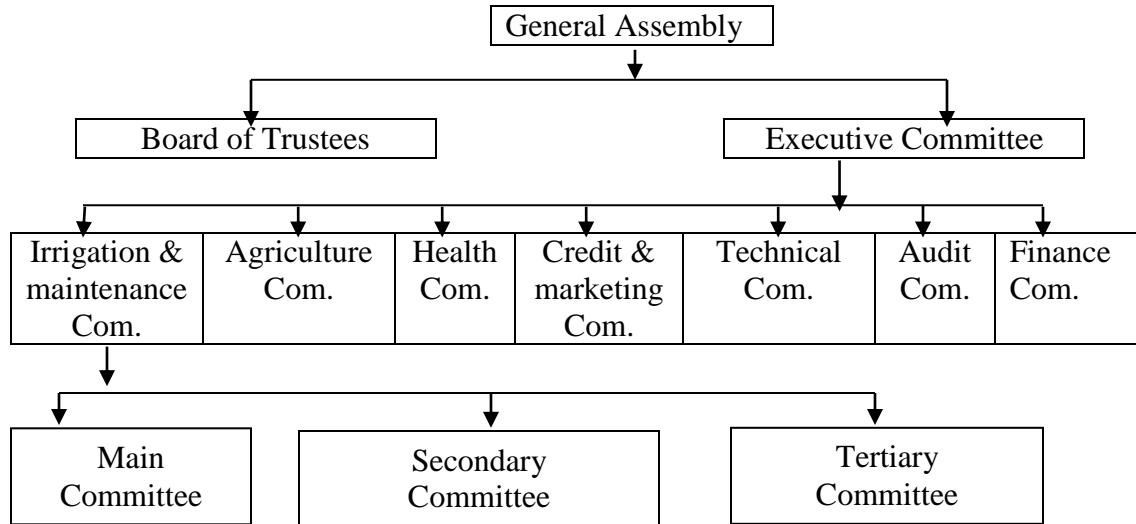
Attempts to bring about irrigation reforms at Wovwe Rice Scheme started as early as 1990s. In 1996, for instance, Wovwe Rice Scheme was earmarked as one of the schemes to be used in a pilot phase of IMT in Malawi. Indeed, with funding from FAO and DANIDA, preparatory work started at Wovwe. Unfortunately, the project stopped with minimal achievements. However, it managed to offer training to the different sub-committees that were set up during the previous era.

Such plans were resuscitated in 1998 through the Smallholder Flood Plain Development Programme (SFPDP), a special programme that aimed at rehabilitating the schemes in order to finally hand them over to beneficiaries. Through Concern Universal, SFPDP started its work at Wovwe Rice Scheme and was to run up to 2004.¹ Five areas were

targeted. The first one was ‘capacity building and institutional support’. This included the formation of the Water Users’ Association, farmer training and coaching mostly in areas dealing with leadership skills, roles and responsibility of farmers, market research, general accounts, book keeping and accounting, legal framework to mention but a few. The second targeted area was ‘irrigation development’. This was to deal with issues of how irrigation development or extension of the already developed schemes could be done. The third area was ‘improved irrigation agronomy and marketing’, whose objectives ranged from improving crop husbandry practices in the scheme through various demonstrations and trials, promoting use of low cost technologies, to promoting use of labour saving technologies in irrigation schemes. The fourth area was ‘community infrastructure and support service’ where farmers were to be trained on how to take care of other scheme facilities such as boreholes. The last targeted area was ‘rural financial services’ where farmers were to be trained to be conversant with concepts on collective fund procurement, Savings and Credit Cooperative (SACCO) development, innovative technology fund, scheme maintenance fund, to mention but a few.²

Indeed, the Wovwe Water Users’ Association was immediately formed and its Constitution was approved in 2002 by the Registrar General, with the main objective of promoting the economic and social interests of its members by ensuring that the scheme was efficiently used and maintained.³ Among other prescriptions, it provided for the first time in the history of the scheme, the payment of membership fee and water fee for any participating member. The Association then procured the Water Abstraction Rights from the National Water Resources Board. It also acquired a Land Lease from the

Commissioner of Lands and Valuation so as to use land freely without interference from external forces.⁴ The following is a schematic representation of the final structure of the Wovwe Water Users' Association:



This structure gave much power to the farmers themselves to decide on their own affairs, and it was a complete departure from that of the previous era. All members in the executive committee and the other committees were answerable to the farmers. Apart from the Board of Trustees, which was an independent body, all members in the other committees were farmers. This reflected the tenets of IMT - that of letting farmers become managers over their own resources.

Challenges to irrigation farming

Much more important however were the challenges to irrigation farming during this era. These challenges could be located in four main categories namely, administrative,

economic, ecological challenges, marred by those that have to do with tenure security. Each one of these categories is discussed at length below.

Administrative Challenges

To begin with, the handover of the scheme was a prolonged or /and delayed exercise which, in the process, created power vacuum in the management of the scheme. As noted above, the policy of the Government of Malawi in as far as the handover of the schemes was concerned was to transfer ownership through a participatory approach that would enhance farmers' responsibility and obligation towards the management of the schemes. Similarly, the handover of the schemes to the beneficiaries was supposed to be a phased process. The first phase was to start with the physical rehabilitation of the schemes.⁵ This phase was supposed to run concurrently with the formation and training of the WUAs. The second phase constituted the actual handover of the schemes to the Associations. December, 2004 was the set date for the handover of Wovwe Rice Scheme to the beneficiaries. Evidence from Wovwe has it that by 2002, Concern Universal, under SFPDP, carried out rehabilitation work and achieved a great portion of its set goals.⁶ By 2004, the Association had already been set and rehabilitation work was almost complete. The first phase was thus complete such that the scheme could well have moved into the second phase – official handover of the scheme to the farmers' association. Surprisingly, the handover never took place and by the year 2007 it was a forgotten story.⁷ No serious attempts were made to speed up the official handover of the scheme. This created some administrative problems in the sense that there was no one who took the administration of

the scheme with commitment. Government officials argued that it was the responsibility of the Association to take care of the scheme save for a few areas such as headworks – where the water is diverted from the river into the main canal, requiring continued government support.⁸

In their analysis of the success of the reforms in smallholder irrigation schemes, Samakande et al (2006) list several rights which must quickly be granted to members if such schemes are to be properly utilized.⁹ For instance, they state that members ought to enjoy infrastructure use rights, where members have the right to operate, repair, modify, or eliminate structures. This reflects one of the tenets of IMT – that it is expected to increase the control local associations have on irrigation infrastructure. Without this right, the members are unable or unwilling to invest in long-term maintenance and repair of the irrigation infrastructure and have to wait for the national agency to come in and undertake repairs. This is true for the Wovwe situation. Because the Association was not fully empowered in the sense that the scheme had not yet been officially handed over to farmers, the scheme was still considered as a government property.

Paradoxically, by 2002, the Government had succeeded in withdrawing almost its entire irrigation staff from the scheme even before any assessment was made as regards the capacity of the Association to manage the scheme.¹⁰ Those that were left were specifically responsible for the management of rain-fed agriculture in the entire Nyungwe Extension Planning Area (EPA) and were under the Department of Agriculture and not Irrigation.¹¹ This created an administrative vacuum in the sense that the caretakers of the

scheme (government officials) had completely withdrawn even before the new administration (the Association) had been sworn in.

Consequently, the role of the Association was reduced to that of previous Management and Farmers committees – that of land allocation, conflict resolution and the more recent responsibility of fee collection, leaving the scheme maintenance work in a moribund state and increased deterioration of the scheme infrastructure. The once rehabilitated canals never seemed to have been rehabilitated at all. The Head works (water in-take point) were also left unattended to as the following picture illustrates:

Photograph 2: Showing the Head works (Captured in Oct., 2007).



This is where the water for irrigation is channelled to the scheme. Despite its importance, due to the power vacuum that existed, the structure could not be maintained.

What is more, the main river that passes through the two schemes and whose silt should have been removed from time to time to prevent any possible floods was almost filled up with silt as can be attested from the following picture:

Photograph 3: Showing Bridge linking Wovwe I and II (Captured in Oct., 2007).



This picture shows the bridge linking the two schemes, Wovwe I and II. In the past, the river was quite deep and it remained so because, among other reasons, the silt was removed from it from time to time. However, with the power vacuum that existed, no one took the challenge to mobilize farmers to remove silt from it.

On the other hand, the delay in the official hand-over of the scheme to the beneficiaries could be viewed as a blessing in disguise. This is so because it appears not many farmers had received adequate training in scheme management. For instance one informant said that “Somebody [the president of the WWUA] who has only attended a three-month training could not easily manage the scheme that was previously managed by someone with a minimum qualification of a diploma in irrigation farming.”¹² The president of the Association had this to say,

The idea of training us was good. But the problem with it is that it was done for a short period of time and targeted a few individuals. A number of people still do not know what it means for the Association to manage the scheme. They think the executive has to do everything by itself or at best use the water fees to hire people to clean the canals.¹³

The following table complements such sentiments:

Table 9: Training of 11WUAs, 1999-2005

Description	WUA Leaders			Members		
	Male	Female	Total	Male	Female	Total
Roles &Responsibility	40	17	57	22	14	36
Basic Finances I & II	42	15	57	0	0	0
General Management	51	24	64	63	23	86
Record Keeping	47	28	75	0	0	0
Constitutional Review & amendment	108	34	142	227	89	316
Elections of Irrigation system Leaders	131	61	192	197	62	259
Water management	13	6	19	40	14	54
Handover Process	10	5	15	45	8	53
Operation and Maintenance	18	5	23	0	0	0
Legal Framework	21	14	35	0	0	0
Gender &HIV/AIDS Mainstreaming	51	16	67	0	0	0
Leadership	15	5	20	0	0	0
Planning and Budget	34	10	44	0	0	0

Source: Malawi Government, Project Completion Draft Report, 2007

The table summarizes the various training components the SFPDP, through Concern Universal, carried out in eleven schemes with a total farmer population of 5,972, where Wovwe alone had 1500 farmers.¹⁴ From the table, it could be observed that once the number of trained leaders and farmers is weighed against the total farmer population of all the schemes, let alone that of Wovwe, the targeted number of farmers becomes quite insignificant. As a result, in areas such as Basic Finance, Record Keeping, Operation and Maintenance through to Planning and Budget, emphasis was more on leaders than mere members, a situation which was likely to be problematic in as far as the performance of

the future leaders of the Association was concerned. The Wovwe situation alone demonstrates that even when SFPDP was given a one year extension, not many farmers were targeted as the following table illustrates:

Table 10: Training of WUA, Wovwe rice scheme, 2006

Description	WUA Leaders			Members		
	Male	Female	Total	Male	Female	Total
Understanding WUA	13	3	16	101	40	141
Leadership Skills	15	8	23	0	0	0
WUA Reorganisation (II)	23	3	26	96	32	128
Planning and Budgeting	24	6	30	0	0	0
Total	75	20	95	197	72	269

Source: Malawi Government, Project Completion Draft Report, 2007

Indeed, the table shows that the training targeted just a few ordinary farmers.

The situation at Wovwe was further worsened by lack of a solid monitoring strategy in the activities of the Association. The coordination among government officials, Concern Universal and farmers was a loose one. The original plan was that at the point of rehabilitation, these groups should work hand in hand for the sake of sustainability once SFPDP checked out.¹⁵ However, because the government irrigation staff had already been withdrawn, it was deemed the responsibility of the District Irrigation officer from Karonga Rural Development Programme to work hand in hand with Concern Universal officials.¹⁶ While officials from Concern Universal could have been motivated by field allowances and readily available transport facilities, those from the Karonga Rural Development Programme lacked such incentives.¹⁷ As a result, Concern Universal officials were in most cases working alone.

Besides, the operations of the scheme were segmented into two separate government departments. While the Association was part of the Department of Extension, operating under the Ministry of Agriculture and Food Security, the irrigation infrastructure was under the Department of Irrigation, operating under Ministry of Irrigation and Water Development. Consequently, there was confusion as to which officers were responsible for the monitoring of the activities of the Association. In most cases it was those officials under the Irrigation Department at the Karonga RDP who attempted to work hand in hand with SFPDP.¹⁸ However, they too were not convinced whether they were the rightful officials to do so. In view of this, the government neither properly monitored the activities of the Association, let alone of the scheme, nor was it able to continue where SFPDP had stopped.

One could argue that the whole idea of monitoring the activities of the Association as proposed by the *National Irrigation Policy and Development Strategy* (2000) was faulty in that it characterised peasants as a people without the capacity to properly manage the scheme without assistance from the Government. This lack of confidence in farmers was based on the fact that the scheme was constructed using western knowledge and as such could best be maintained by people with such knowledge. The Government felt the need to temporarily monitor the activities of the Association, something they did not do satisfactorily. Little wonder, therefore, even though Association members were trained in specific fields, they were unable to put into practice the acquired knowledge and skills without further reinforcement.

For instance, the 2007 Audit Report indicated that MK1, 600,000 belonging to the Association treasury had gone unaccounted for.¹⁹ The Report observed that the money had not necessarily been embezzled, but that a school dropout treasurer could not properly compute and balance the book accounts. Ordinary farmers became so uninterested in the activities of the Association many of them started boycotting the payment of both water rights and membership fees. One farmer said:

We cannot continue paying water fees. We don't see the benefits of it all. The executive simply misuses our money. All they do is to attend to senseless meetings in Lilongwe and Blantyre.²⁰

Indeed, the Executive, along with its various sub-committees grew so unpopular that the Association could not successfully reinforce its activities among its members. Peasants were unwilling to pay water rights not because they felt that water was a free commodity as observed elsewhere,²¹ but rather because they had lost confidence in the way the Association handled their finances.

It could be argued that the Executive Committee lost its moral authority to enforce constitutional rules. Thus, although the rules made it clear that all those refusing to pay for water rights and membership fee should not be allowed to cultivate in the scheme,²² the Executive Committee rarely enforced such rules. Many farmers felt free to break some rules taking advantage of such a situation. For instance, some farmers were free to transplant their rice at their own time of convenience and not necessarily as prescribed by the constitution.²³ The following picture best illustrates this situation:

Photograph 4: Showing variations in the planting of rice at Wovwe rice scheme (Captured Oct., 2007)



While rice in the other plots is nearing maturity, the other plot appears to have been recently transplanted.

Perhaps the greatest test to the authority of the Executive Committee was made in 2007 when the Annual General Meeting failed to convene twice simply because the Traditional Authority (T/A) did not turn up for the meeting on both occasions.²⁴ It should be noted that the WWUA's constitution stipulates that a selected number of chiefs should be part of the Board of Trustees (BOT) alongside religious and political leaders who do not own plots in the scheme. Even though the constitution does not stipulate who is to be the chairperson of the BOT, naturally, the T/A emerges as the chairperson based on the principle of seniority. The constitution however grants powers to the Executive Committee, and not to the Board of Trustees (BOT), to call and preside over all Annual General Meetings.²⁵ In October 2007, the Executive Committee called for an Annual General Meeting but because the T/A did not turn up, no meeting took place. When asked why this was the case, the president said,

This is a very important meeting. We cannot preside over it in the absence of the T/A. Doing this is tantamount to a vote of no confidence on our offices. If the T/A does not turn up, we will keep on postponing the meeting.²⁶

However, it appears farmers did not want the Executive Committee to preside over the meeting. As one farmer admitted:

We do not want to listen to the Executive Committee. They [members] have eaten [embezzled] our money. What we want is the T/A to address us and explain how the money has been used. If the T/A does not turn up for the meeting, we will not allow the meeting to take place.²⁷

It appears the Executive Committee had indeed lost moral authority among members of the Association which in turn called for the wisdom of not just members of the BOT but the T/A who, traditionally, is held as the final authority of the area.

Two central observations could be made from the above situation. The first has to do with the whole idea behind the existence of the Association as a stable formal structure. The Association is essentially supposed to function as a formal and not an informal structure. Formal structures are those that are openly codified in the sense that they are well established and communicated through channels that are widely accepted as official. Informal structures are those governed by widely shared rules, usually unwritten, that are created, communicated, and enforced outside officially sanctioned channels.²⁸ Formal structures are desirable in the sense that rules could not be arbitrarily flouted hence a better management of the resources.²⁹ The constant flouting of constitutional rules in Wovwe is a serious check on the stability of the Association as a formal structure.

The second one pertains to problems associated with the conceptualisation of the notion of Water Users' Associations. To take care of the challenges to rural accumulation in Africa as observed by Berry earlier on – those to do with African institutions, chiefs and traditional leaders have often been sidelined possibly because they are usually looked at as guardians of African traditions and enforcers of African social relationships which are deemed detrimental to development of agriculture in Africa's rural areas. As the Wovwe constitution demonstrates, traditional leaders and chiefs do not have an 'active' role in the day-to-day running of the Association.

In as far as conceptualisation of WUAs is concerned, the presence of the T/A as an ultimate authority was a breach of the constitution which empowers the farmers as the ultimate authority over their own affairs through their duly elected leaders. However, it is important to note that the T/A played an arbitrative role which the constitution did not readily provide. This situation demonstrates two issues. The first is the role that traditional leaders play over effective management of the schemes, and also the degree of confidence farmers have in them. To ignore them is to move one step towards the failure of the reforms. This also constitutes an oversight of the local context as highlighted by Ferguson and Mulwafu (2007) above. Secondly, the above case demonstrates the complementarities existing between formal and informal structures of authority in the management of the schemes. This disapproves the notion that informal structures of authority are always hostile to formal structures of authority.³⁰ It could therefore be argued that while the implementation of the reforms was marred by some administrative

shortfalls, equally problematic could be the conceptualisation of the Water Users' Associations in Malawi.

Economic Challenges

Economic challenges centre on the Structural Adjustment Reforms implemented in the late 1980s. Of particular interest are the market and price liberalization reforms implemented in 1987.³¹ It should be noted that prior to 1987, ADMARC monopolized the purchase of rice at the Wovwe Scheme. This was irrespective of the fact that some private individuals could also be allowed to purchase rice from farmers but not on a large scale. The same was true with the provision of credit facilities to farmers. The advent of the 1990s, however, witnessed the proliferation of a number of buyers and input providers, heavily influenced by market liberalization reforms. For instance, apart from ADMARC, farmers could also sell their rice to Cargill, which replaced National Oil Industry Limited (NOIL). In 1995, Malawi Rural Finance Company (MRFC) started disbursing credit facilities to farmers through ADMARC. Chirwa (2002) has extensively documented how farmers fared under Rural Finance Company.³² Among several issues, he noted that while many farmers got irrigation loans, they could not easily access the loans. He also noted that apart from delays in accessing inputs due to long bureaucracies involved, farmers were asked to pay a 40% service fee on the input loans.

The benefits of the early 1990s proved to be short-lived. By 1996, almost all the buyers, including the input providers had virtually stopped operating at Wovwe Scheme.

ADMARC had also stopped buying rice and disbursing credit to farmers, and never did so again until 2006 when the State President, Dr. Bingu wa Mutharika, having visited Wovwe Rice Scheme, ordered ADMARC to buy rice from farmers. However, this was but for one growing season.

The closure of ADMARC services could be explained through the so-called ‘state minimization’, a slogan highly popularized in the Structural Adjustment Reforms of the late 1980s.³³ Just like ADMARC, by 1995, the MRFC had virtually stopped disbursing inputs to farmers. The reason provided was that farmers failed to pay back their loans. The extent to which such assertions are true is not clear. However, failure of the private sector to continually operate in rural areas was once observed by Lele (1989), who argued that lack of access to finance, marketing information and transportation, among other factors, undermined the capacity of Malawian traders to engage in active trade in rural areas.³⁴ It still remains unclear whether the MRFC, with over 90 percent of its shares owned by the government at the time, lacked such capacity. It is not surprising then that due to lack of substantive evidence, some scholars have often highlighted lack of political will on the part of decision makers, particularly Bakili Muluzi’s anti-Banda political syndrome where every project that represented Dr. Banda’s political oppression had to be dislodged.³⁵ For instance, Mulwafu and Nkhoma (2002) observed that the presence of the MYP Farmers in the schemes made them to be associated with Dr. Banda’s political oppression.³⁶ It is equally difficult to wholly adopt this view since the first three years of Dr. Bingu wa Mutharika’s administration brought to light symbols of Banda’s achievements which Muluzi tried to conceal.³⁷ Indeed, Mutharika’s

administration did not have problems with projects that appear to have once represented Banda's political oppression. However, even the highly celebrated Agricultural Input Subsidy Programme (under Mutharika) has essentially targeted maize and tobacco smallholder farmers despite the importance of rice in addressing food security.³⁸

Of more significance, however, is the impact the withdrawal of such traders had on the Wovwe farmers. Firstly, farmers did not have markets for their produce. A good number of them could sell their produce to traders from Tanzania who tended to underpay them. One farmer lamented,

We can't sell to ADMARC. In most cases vendors from Tanzania come with their big tins, which are not equivalent to our 20kg tin. Much as we try to avoid them, we have no option but to sell them our rice at a giveaway price.³⁹

One Group Village Headman reiterated,

We usually sell our rice right in the field before harvest to Tanzanian traders. At times we lose it because of failure to pay back *katapira* [a practice of paying back the loan twice the original amount]. How we wish we were in the old days of Dr. Banda markets for our rice were readily available. Our friends growing tobacco are better off because they have readily available markets.⁴⁰

These sentiments could have been substantiated with statistical data on production and farmer patronage in the scheme. However, the closure of ADMARC and the withdrawal of Government staff from the scheme equally affected the compilation of such data. Nevertheless, the above sentiments demonstrate the effects the closure of ADMARC and other companies had on the peasants in Wovwe, posing a great challenge to the Association. Helplessly, the Association attached itself to NASFAM, yet another

Association, for purposes of accessing inputs and marketing its produce. In most cases the results were not all that satisfactory as NASFAM was first and foremost concerned with the affairs of her own individual smallholders grouped in small but manageable clubs. Consequently, the government claimed that it was the responsibility of the Association to find markets for its products.⁴¹ Yet the Association felt the government had the responsibility to search markets for farmers just like it did with tobacco farmers, claiming that it did not have the bargaining power to convince buyers to purchase farmers' rice.⁴² The SFPDP project had attempted to solve the problem of markets. For instance, it tried to establish some contacts with different buyers such as NASFAM, DARO enterprises, ADMARC, Development Trading Limited, Fadamz and Tambala Food Products. However, none of the above buyers ventured into large-scale rice business in Wovwe.⁴³ There are no clear reasons explaining lack of interest on the part of buyers in the recent years. One would have expected a number of buyers in Wovwe during winter seasons when rice is relatively on a higher demand since there are few producers. Perhaps buyers' preferences over specific rice varieties come closer in offering an explanation to their lack of interest. During the winter season, villagers under the scheme do not grow Faya, Kilombelo, and other varieties that are in high demand. Peasants say that these crops do better during the summer season, as the following table shows:

Table 11: Rice Production and Yield, Wovwe Rice scheme, 2002 (winter season)

VARIETY	HA. GROWN	YIELD(kg)/HA	TOTAL YIELD (MT)
Zambia	52.3	3500	183
Faya	37.1	3500	130
Kilombelo	9.5	2500	24
TC G10	141	5000	705.0
Pussa	60.8	4000	243
Mulogole	3.5	2500	9
Others	15.8	2500	39
TOTAL	337.8		1423

Source: KRD/P/ Wovwe Rice Scheme, 2002

On the other hand farmers indicated that the varieties that do well during the winter season, such as Zambia, TC G10 and Pussa, are not however on high demand on the market. The scheme does not provide the preferred varieties during the winter season when rice is in high demand.

In an attempt to solve the problem of input provision, SFPDP, through Concern Universal attached some farmers to Karonga Teachers Savings and Credit Cooperatives (SACCO).⁴⁴ However, a number of farmers were unwilling to be part of it, citing among other reasons, long distance they had to travel to process their loans at Karonga Boma.⁴⁵ By the close of 2007, the very few farmers attached to Karonga Teachers SACCO had withdrawn. Consequently, the problem of markets and access to credit facilities undermined the ability of the scheme to improve peasants' socio-economic life, and posed a great challenge to the entire management of the scheme by the beneficiaries. The Association could find itself helpless to handle problems that were largely beyond its control. One quick conclusion one would make is that the market liberalization policies

implemented in the late 1980s negatively impacted peasants in the scheme in that the economic benefits farmers got from rice sells were substantially reduced, although such a conclusion does not confirm Kishindo's (1996) expectation that liberalization would bring forth several buyers into the rice industry which in turn would lead to the increase in the price of rice giving higher returns to farmers.⁴⁶ The opposite actually happened.

Ecological Challenges

Ecological challenges equally undermined the capacity of the Association to effectively manage the scheme. Two of them are worth examining at length –water shortages and floods. As observed in the previous chapter, these challenges were quite uncommon in the previous era. This was due to the presence of the large Kasangamala Marsh upstream which acted not only as a natural sediment trap, but also as a natural water reservoir thereby ensuring the steady flow of water downstream (see map on Wovwe catchment area).

Things begun to change in the late 1990s. The scheme started experiencing serious water shortages and floods. For instance, both oral testimony and official evidence have it that in 2002, the scheme experienced serious floods where the plots at the tail of Wovwe I were completely submerged. It was reported that one of the drain pipes had been swept. Other secondary canals were also swept. In addition, 72 hectares of net irrigable land in Wovwe I had been washed away.⁴⁷ This had been a recurrent problem and each time the scheme experienced floods, crocodiles could infest the feeder canals, making it virtually

impossible for any work to be done on the plots.⁴⁸ The same was true with the problem of water shortage. In fact, by the year 2002 some plots located at the tail of Wovwe II could not be irrigated during winter season and have since been abandoned for cattle grazing. The following picture shows the plots in question:

Photograph 5: Showing plots not irrigated due to water shortages (Captured in Oct., 2007).



These plots are located at the tail of Wovwe II. They are simply used for grazing animals in winter.

Of great significance however are the reasons behind such challenges deemed to have been uncommon in the past. The establishment of local schemes around Kasangamala area is one factor. It should be noted that up until the 1990s, rice around the Kasangamala area was grown, but not on a large scale.⁴⁹ However, having grasped the importance of irrigation farming, farmers around this area developed an irrigation system modelled after that of Wovwe Rice Scheme in order to irrigate their crop. This created competition and

contributed to the problem of water shortage in two ways. Firstly, the level of water going downstream supplying the Wovwe rice scheme was reduced as it was channelled into these local plots first before being released back into the river. Besides, the type of drainage system in these plots was not efficient enough to allow a quick discharge of water back into the Wovwe River.⁵⁰ Secondly, the potential of the Kasangamala Marsh, which once acted as a natural reservoir, had been undermined by heavy deforestation. Trees had been cut around the area so as to pave way for rice plots. This contributed to high siltation not only of the Marsh but also of the Wovwe River thereby undermining the capacity of the river to carry enough water for irrigation downstream during winter season.

High rates of deforestation upstream contributed not only to the siltation of River Wovwe but also that of canals downstream and gave rise to the problem of floods. Previously, the problem of siltation was easily dealt with through the use of mechanised technology such as power tillers, which quickly lifted sand out of the river and canals thereby containing the pressure of water. With the collapse of such technology, however, it became the responsibility of the Association to mobilize farmers for such an activity. Unfortunately, the Association, as noted above, often lacked the capacity to do so.

Ecological challenges however contributed to the eruption of some serious social problems. For instance, conflicts arose among the water users in the Wovwe Valley.⁵¹ More specifically, conflicts arose between farmers in the Wovwe Rice Scheme and those around the Kasangamala Dambo. For instance, in 2006, it was reported to the farmers

downstream that their counterparts upstream had closed the entire Wovwe River during the winter season leading to serious water shortages at the rice scheme.⁵² Consequently, farmers downstream armed themselves with axes and spears threatening to open the river by force. One member commented, “We buy this water, yet our colleagues up there do not. Why then should we be deprived of the water we buy?”⁵³ The Associations’ executive committee members however, professionally handled the issue by consulting the District Commissioner, the Member of Parliament, officials at the Rural Development Programme in Karonga and Chiefs who jointly resolved the issue until the river was reopened.

Secondly, water shortages and floods often contributed to the intensification of farmers’ resentment at the scheme. In their paper “Coping with Asymmetries in the Commons”, Ostrom and Gardner (1993) observed that the relationship between and among water users is marred by asymmetries where those close to the headworks benefit much more than those at the tail end in the distribution of water.⁵⁴ This was true with Wovwe where the plots that could not receive water in Wovwe II were located at the tail of the scheme. The same was true with the plots that were prone to the floods in Wovwe I. This brought about resentment on the part of the affected groups when it came to making contributions either financially or in terms of labour. One affected member said,

Why should we contribute in the same way as though we yield equal benefits from the scheme? Our point has been simple. We get to contribute depending on the benefits we get from the scheme.⁵⁵

Farmers resented because the Association could not make any distinction when it came to reinforcing contributions. So long as one cultivated in the scheme, he/she was supposed to contribute just like the rest irrespective of the location of their plots in the scheme.

Tenure security

Tenure security was another challenge farmers at Wowve faced during this era. This becomes an issue of concern especially if it is examined in the light of *Malawi National Land Policy* of 2002, whose overall objective is to ensure equal opportunities for the acquisition, use and enjoyment of land for all its citizens,⁵⁶ and the *National Irrigation Policy and Development Strategy* of 2000 which, among other things, aims at increasing farmers' tenure security be it on an individual level or group level.⁵⁷ Part of the *National Irrigation Policy and Development Strategy* of 2000 stipulates that:

The governing principle in irrigation management will be the full ownership of irrigation schemes by the beneficiaries through their legally constituted local organizations that will oversee all matters related to operation and maintenance of these schemes.⁵⁸

In other words, it was envisaged that the formation of the Associations would not only increase farmer participation in the activities of the scheme, but also reinforce tenure security of individual plot holders and hence motivate farmers to make long-term investments. As we shall shortly see, however, much as the Association enjoyed the 'informal'⁵⁹ ownership of the scheme and its associated tenure security as a group, the individual farmer did not.

The importance of tenure security cannot be overemphasized. Irrespective of the debates surrounding it, one thing is clear. Where peasants/farmers do not have or are uncertain about their security to land, they lack any motivation to properly take care of the productive resource or to venture into long-term investments on the productive resource.⁶⁰ Okali (1989) for instance, observed that where individuals do not have exclusive rights of control over the land, even if they may enjoy the rights to use a given piece of land (usufruct), there would be little interest to make long-term investments, let alone successfully utilise the productive resource.⁶¹

Paradoxically, Wovwe situation demonstrates that much as the Association as a whole assumed ‘informal’ ownership of the scheme land and its infrastructure, individual farmers still lived in perpetual fear of being evicted out of the plots once they breached some rules or failed to cultivate in one particular growing season without convincing reasons.⁶²

The problem of tenure insecurity could be explained through the observation made by Pauline Peters (2004). She noted that despite some slight variations, the land policy documents have treated all customary land as equivalent, yet there are different categories of land within customary land.⁶³ Where wetlands are mentioned for instance, the issues of tenure are not treated seriously. The implicit assumption in the land policy documents is that access to and control over flooded areas, including wetlands (dambos) could easily be treated in the same way as that in the dry land gardens.

Indeed, the Wovwe experience demonstrates that while farmers at the scheme did have the right to ‘access’, they did not have that of ‘control’⁶⁴ which was not the case with those in the dry land gardens. This had one broad implication – farmers cultivated not necessarily to maximize production but rather to maintain continued access to the land. Much emphasis could be placed on their rain-fed fields where they had absolute powers of both ‘access’ and ‘control’. Cultivation in the scheme was taken more or less like a part-time activity where farmers could earn some fast money before turning to their food production activities.⁶⁵ Continued cultivation in the scheme was often made out of the desire to safeguard their continued access to the plots. Consequently, tenure insecurity on the scheme plots might as well have contributed to farmers’ loss of interest in the scheme. This observation responds to the question raised by Ferguson and Mulwafu (2007). They asked,

Are the reforms [irrigation reforms] likely to provide smallholder farmers, especially the disadvantaged, with equitable and secure rights to land and water resources as the policies espouse? ⁶⁶

The above preliminary assessment demonstrates that this is far from being attained.

On the other hand, one would argue that despite the negative effects tenure insecurity is associated with at the scheme, it is actually a surety against the dissolution of the Associations. Assuming that farmers gain permanent control over the plots, the implication is that farmers will be at liberty to manage their plots in the manner they want since they have total control over them. This freedom would question the whole idea behind the existence of the Association itself, an overall body charged with the

responsibility to supervise production activities in the scheme. Apart from the explanation provided by Pauline Peters above, partial ownership of plots in the schemes could as well be explained in this manner.

Achievements of the Wovwe Water Users' Association

Despite operating within a challenging environment, the WWUA played a pivotal role – that of ensuring that the scheme achieves its objective of not only turning the scheme area into a nucleus of a rural town, but also bringing a socio-economic change in the lives of individual farmers. First and foremost, through its initiative, it managed to secure a rice mill for the scheme. In 2004 the Association, through the Member of Parliament of the area, wrote the then President, Mr. Bakili Muluzi requesting for assistance with respect to the rice mill. The major arguments the Association raised included the need to ensure that farmers sold polished rice which would then fetch higher prices on the market, and the need to let the rice mill fundraise for the Association. Unfortunately, instead of donating a rice mill, the President sent a maize mill. However, later on the problem was directed to One Village One Product (OVOP) programme,⁶⁷ and indeed in September 2005, OVOP sold the Association a rice mill on loan amounting to MK521,000.00.⁶⁸ This amount was to be paid back in two instalments beginning the year 2007. By the year 2006, the mill started operating. By the close of 2007, the Association had managed to pay back two thirds of the loan amount. Consequently, for the first time farmers began selling well-polished rice. Farmers no longer relied on the traditional motor to polish their rice. The Association

henceforth spearheaded the project of packing farmers' rice into small sack bags of about 10 kgs to facilitate the marketing of their product, a project which was only hamstrung by lack of promising buyers.

Related to the above is the role the Association played in bringing electricity to the area. At the time the Association requested for the rice mill from Muluzi, it equally wrote, through the Member of Parliament of the area, the Electricity Supply Commission of Malawi (ESCOM) Regional Headquarters in Mzuzu requesting it to supply the Association with electricity to drive their mill.⁶⁹ By the time the maize mill was planted, electricity had been supplied to Wovwe. The electric lines that passed within the vicinity of their backyards from Wovwe Hydro Electric Power Station to Karonga Boma had finally been diverted to the area. This went a long way in lifting the socio-economic status of farmers. Some farmers managed to tap electricity for their mini-shops at the scheme market place. For instance, at the time the researcher was collecting data to this study, two mini-shops belonging to farmers had been electrified. Such shops had been equipped with electric appliances such as refrigerators and battery chargers. It has now become possible for some farmers to buy luxurious products such as cellular phones since they are able to charge them once the batteries go flat but at a small fee. Similarly, two farmers had opened television rooms at the market place where people could get entertained at a small fee. The once deserted market place looked lively and entertaining. Additionally, one farmer had managed to extend electric lines to his house. Indeed, much of this is owed to the Association's initiative.

Furthermore, the Association, through its executive has been central in mending the social relationship among the people in the Wovwe Valley, especially between those in the Kasangamala Marsh and those settled within the scheme. For a long time, the two groups had lived peacefully. In fact some farmers from the Kasangamala area could cultivate in the scheme down the valley. However the relationship as noted above was strained due to water shortages down the valley. Having noted the negative effects such conflicts would have on the operations of the scheme, the Association's executive committee professionally handled the issue. In other words, the Association has tried to see to it that the attainment of the scheme's objectives should not be compromised by social conflicts in the valley.

Conclusion

This chapter has discussed the challenges of the scheme at a time when the general management of the scheme was influenced by neo-liberal ideas of 'Irrigation Reform'. The dominant theme of this chapter was the hand-over of the scheme to farmers through the formation of Wovwe Water Users' Association. The chapter has observed that in the course of implementing the reforms, several challenges arose that undermined the operations of the scheme. Chief among these challenges were: the government's failure to quickly hand-over the scheme to the Water Users' Association. The delay created an administrative vacuum which, in its turn, led to the deterioration of the scheme infrastructure since the Association did not take an active role in the administration of the scheme. This situation was further complicated by the

government's quick withdrawal of its staff from the scheme, a move that was largely driven by officials' desire to save money. They ignored the potential negative impact of their action on the management of the scheme. In addition, the impact of Structural Adjustment Reforms implemented during the late 1980s was highly felt during this period. State-controlled markets were closed. Input providers withdrew their services at a time when farmers appeared not to have been ready for such a withdrawal. The chapter has also observed that during this time, there emerged several ecological challenges which gave rise to social conflicts between and among farmers. Lastly, it has also been noted that the Association attempted to turn the scheme into a real force of rural development. Through its initiative, farmers managed to buy their own rice mill and were able to sell polished rice which fetched higher prices. Unfortunately, the benefits of the mill were hamstrung by lack of markets for rice. Similarly, the scheme also brought electricity to the area thereby giving rise to the new amenities which were hitherto uncommon. Indeed, the Association became central in turning the scheme area into a nucleus of a rural town.

Endnotes

¹ Malawi Government, SFPDP Report, Lilongwe, 1999, p. 1

² Ibid, pp. 2-3

³ Wovwe Water Users' Constitution, Section 1, sub-section 1.4, 2002

⁴ Malawi Government, *SFPDP Project Completion Draft Report*, 2007, p. 7

⁵ OT, H. Rhumbey, Irrigation Engineer, KRADD, 5th Nov., 2007; Malawi Government, *National Irrigation Policy and Development Strategy*, 2000

⁶ OT, C. Kayira, Irrigation Officer, KRDP, 31st Oct., 2007

⁷ OT, H. Rhumbey, Irrigation Engineer, KRADD, 5th Nov., 2007

⁸ Ibid

⁹ See I. Samakande, et al, “Smallholder Irrigation Schemes: A Common Property Resource with Management Challenges” August, 2006 pp. 1-4,
<http://dlc.dlib.indiana.edu/archive/00000919/00/samakandei040402.pdf>

¹⁰ OT, M. Ng’oma, Ex-Scheme Manager, Wovwe Rice Scheme, 28th Oct., 2007, see also MNA/43/1/20 Retrenchments: Wovwe Irrigation Self Help Extension, 1981-1998

¹¹ OT, Ng’oma, 28th Oct. 2007

¹² OT, S. Msiska, Kalimunda Village, T/A Wasambo, 15th Oct., 2007

¹³ O.T., Mr. T. Mbeye, WWUA president, Karonga, 11th Oct., 2007

¹⁴ Malawi Government, SFPDP Project Completion Draft Report, 2007, p. 23

¹⁵ Malawi Government, SFPDP Report, Lilongwe, 1999, p. 1

¹⁶ OT, Kayira, Irrigation Officer, KRDP, 31st Oct., 2007

¹⁷ Ibid

¹⁸ OT, Mr. Kanyimbo, Assistant DADO, KRDP, 31st Oct., 2007

¹⁹ The Audit Report, Wovwe Water Users’ Association, 2007

²⁰ OT, M. Nyamulera, Gangamwale Village, T/A Wasambo, 15th Oct., 2007

²¹ See W.O Mulwafu and B. Nkhoma, “The Use and Management of Water in Likangala Scheme Complex in Southern Malawi” *Journal of Physics and Chemistry of the Earth*, Vol. 27, Nos. 11/12 (2002), p.843

²² WWUA Constitution, Section 2.5, sub-section 2.5.2, 2002

²³ Ibid, Section 2.4.2, Sub-section c, 2002

²⁴ Researcher’s personal observation while collecting data to this study, Wovwe Rice Scheme, Karonga, Oct-Nov., 2007

²⁵ WWUA’s Constitution, Section 5.1, Sub-section 5.1.1

²⁶ Mr. T. Mbeye, WWUA president, Karonga, 31st Oct., 2007

²⁷ Mr. W. Mlenga, Gangamwale Village, T/A Wasambo, Karonga, 31st Oct., 2007

²⁸ G. Helmke, and S. Levitsky, “Informal Institutions and Comparative Politics: A Research Agenda”, Working paper No. 307, 2003, pp. 1-9 <http://kellogg.nd.edu/publications/workingpapers/WPS/307.pdf>.

²⁹ Ibid

³⁰ For a detailed discussion on the conflict between the two see, G. Helmke, and S. Levitsky, “Informal Institutions and Comparative Politics: A Research Agenda”, Working paper No. 307, 2003, <http://kellogg.nd.edu/publications/workingpapers/WPS/307.pdf>

³¹ See K.M. Mtawali, “Malawi: Current Status of Reform Proposals for Agriculture” in Alberto Valdes and Kay Muir-Leresche (eds.), 1993, p. 162

³² See W.C., Chirwa, “Land Use and Extension Services at Wovwe Rice Scheme”, *Development Southern Africa*, Vol. 19, NO. 2 (2002), p. 322

³³ See U. Lele, Structural Adjustment, Agricultural Development and the Poor: Lessons from the Malawian Experience, Media Discussion Paper 9 (Washington: The World Bank, 1989), p. 10

³⁴ *Ibid*, passim, 1989

³⁵ Mr. Bakili Muluzi was the successor to Dr. Banda and ruled for two consecutive 5 year terms, from 1994-2004. Dr. Banda’s political leadership was largely dictatorial.

³⁶ Mulwafu, and Nkhoma “The Use and Management of Water in Likangala Scheme Complex in Southern Malawi”, 2002, p.844

³⁷ Dr. Bingu wa Mutharika is the current president of the Republic of Malawi. He succeeded Mr. Muluzi. During his reign, the Kamuzu stadium, named after Banda’s middle name –Kamuzu, and renamed ‘Chichiri stadium’ by Muluzi reverted to its original name; Kamuzu international Airport, which was renamed Lilongwe International Airport by Muluzi also reverted to its original name.

³⁸ AISP is a programme whose main aim has been to address food security by boosting smallholder food production through the provision of fertiliser and seed at a subsidised price. For further details see B. Chinsinga and Ao O’Brien, *Planting Ideas: How Agricultural Subsidies are working in Malawi* (London: African Research Institute, 2008), pp. 31-34

³⁹ OT, M. Nyarwani (nee Ngware), WWUA Treasurer, 26th Oct., 2007

⁴⁰ OT, GVH Mphangwyanjini, T/A Wasambo, 27th Oct., 2007

⁴¹ OT, Kanyimbo, Assistant DADO, KRDP, 31st Oct., 2007

⁴² OT, P.S., Mang’umbi, WWUA Executive Member, 11th Oct., 2007

⁴³ OT, T. Mbeye, WWUA president, 11th Oct., 2007

⁴⁴ Malawi Government, SFPDP Project Completion Draft Report, p. 17

⁴⁵ OT, Mbeye, WWUA President, 11th Oct., 2007

⁴⁶ See P. Kishindo, ‘Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi’ *Nordic Journal of African Studies*, Vol. 5, No. 1 (1996), p. 9

⁴⁷ KRDP, Hand-over notes by out-going scheme Manager, Mwangonde, Wovwe Rice scheme, KRDP, 07/11/01

⁴⁸ OT, Y. Chipezayani, Bunganilo Village, T/A Wasambo, 14th Oct., 2007

⁴⁹ OT, GVH E. Mwafulirwa Jumbe, T/A Wasambo, 25th Oct., 2007; M. Harawa, Fulirwa Village, T/A Wasambo, 27th Oct., 2007

⁵⁰ OT, M. Mwalweni, Fulirwa Agricultural Extension Officer, Nyungwe EPA, 27th Oct., 2007

⁵¹ This conclusion has also been reached at elsewhere, See W.O. Mulwafu, and B. Nkhoma, “The Use

and Management of Water in Likangala Scheme Complex in Southern Malawi" (2002), pp. 839-844

⁵² OT, Mbeye, WWUA President, 11th Oct., 2007

⁵³ OT, W. Mlenga, Gangamwale Village, T/A Wasambo, 13th Oct., 2007

⁵⁴ See E. Ostrom and Roy Gardner, "Coping with Asymmetries in the Commons: Self-Governing Irrigation Systems can Work" *The Journal of Economic Perspectives*, Vol. 7, No. 4 (1993), p. 96

⁵⁵ OT, B. Msukwa, Bunganiro Village, T/A Wasambo, 11th October, 2007

⁵⁶ See Malawi Government, *Malawi National Land Policy*, Ministry of Lands, Physical Planning and Surveys, January, 2002; P. Kishindo, "Customary Land Tenure and the New Land Policy in Malawi", 2004, p. 218

⁵⁷ Malawi Government, *National Irrigation Policy and Development Strategy*, Ministry of Agriculture and Irrigation, June 2000, *passim*

⁵⁸ *Ibid*, p. 1

⁵⁹ 'Informal' in the sense that at the time of data collection, the scheme had not yet been officially transferred into the hands of the Association.

⁶⁰ See M.R. Mkandawire, "Customary Land, the State and Agrarian Change in Malawi: The case of the Chewa Peasantry in Lilongwe Rural Development Project" *Journal of Contemporary African Studies*, Vol.3, No. ½ (1983/84), pp. 109-128; A. Mafeji, "The Agrarian Question, Access to Land, and Peasant Responses in Sub-Saharan Africa", Civil Society and Social Movements Programme, Paper No., 6, United Nations Research Institute for Social Development, 2003; pp. 1-23

⁶¹ C. Okali, "Issues of Resource Access and Control: A Comment" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), p.2

⁶² See WWUA Constitution, Section 2.5, *Termination and Suspension of membership*, 2002

⁶³ See P. E. Peters, Informal Irrigation in Lake Chilwa Basin: Stream-bank and Wetland Gardens, BASIS Collaborative Research Program, Oct., 2004, pp.15-18

⁶⁴ Right to 'access' denotes the right to use or benefit from a productive resource, and the right to 'control' denotes the effective exercise of such rights, See S. Berry, "Access, Control and Use of Resources in African Agriculture: An Introduction" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), p.1

⁶⁵ See also Chirwa, "Land Use and Extension Services at Wovwe Rice Scheme", 2002, p. 312

⁶⁶ W.O Mulwafu and A.E. Ferguson, "Irrigation Reform in Malawi: Exploring Critical Land-Water Intersections" in Barbara van Koppen, Mark Giordano and John Butterworth (eds.), 2007, p. 119

⁶⁷ This is a programme initiated by the Muluzi administration to boost up local industry by promoting farmers producing the same product but on a larger scale

⁶⁸ OT, M. Ngware, WWUA Treasurer, 26th Oct., 2007

⁶⁹ OT, WWUA President, 11th Oct., 2007

Chapter Six

CONCLUSION

This study was carried out in an attempt to unearth the challenges of small-scale irrigation farming in Malawi from 1964 to 2007. Using the case study of Wovwe Rice scheme, the study has provided a historical analysis of such challenges, falling into two dominant phases. The first phase was driven by modernisation ideas and characterized by the top-down approach to the management of the scheme. This phase spanned the period 1964-1993. Some conclusions could be drawn from this phase. The first one has to do with the administration of the scheme, arguing that the scheme was devoid of active farmer participation between 1969 and late 1980s. An analysis of the administrative bodies the government instituted during this period demonstrates that no single body ever took on board the active participation of farmers in the management of the scheme. Besides, despite its significance in the allocation of plots and settling of disputes, the Land Allocation Committee's operations in this period affected the achievement of some of the scheme's set objectives. Through it there was created a parallel administrative structure that became so concerned with personal objectives rather than those of the scheme.

In the late 1980s however, farmer participation was enhanced through the establishment of management committees. This kind of participation in management issues, however,

did not necessarily address problems to do with ‘farmer patronage’ at the scheme. This was so because some challenges went beyond the top-down approach to the management of the schemes. For instance, utilization of the scheme during this period was affected by a number of factors during summer seasons. At the centre of such factors was the presence of alternative forms of livelihood in the area which created problems of labour allocation. During the 1970s, poor utilization of the scheme was reinforced from time to time by the low prices rice fetched on the market. During the 1980s, it was reinforced by lopsided pricing policies government implemented from time to time with the aim of enhancing food self-sufficiency in the country. Unfortunately such pricing policies worked against the production of rice as many farmers left the scheme for the cultivation of more attractive rain-fed crops. In the early 1990s the growing farmer population was yet another factor that affected the utilization of the scheme during summer season. While the scheme was highly patronised during the winter season, the same was not true of summer season. Farmers’ plots were tremendously reduced in size such that cultivation in the scheme no longer became attractive relative to other agricultural activities off the scheme where landholding size was large enough to support an average peasant household.

Secondly, the study has demonstrated that the combination of the credit scheme and mechanized technology introduced by the Chinese at the scheme might have precluded attempts on the part of farmers to make long-term investments in the rice industry. In the 1980s, farmers became so dependent on seasonal credit and power tillers that despite the presence of Medium-term loan scheme designed to assist farmers acquire labour-saving

technology, very few farmers managed to acquire them. This created problems at a time when such facilities were withdrawn, problems which spilled over to the other era of irrigation reforms.

Lastly, the study has observed that the scheme impacted peasants differently during this era. Economically, it has been observed that in the early years, even though some farmers benefited, others did not. The creation of two official groups of irrigators – the full-time and part-time irrigators – gave rise to this differentiation. Those who settled in the scheme from other areas were greatly affected economically as they rarely met the economic demands of the new life. The combination of the two groups in the late 1980s is thus considered as peasant reaction against the harsh economic conditions to which they were exposed by virtue of being full-time irrigators. Socially, the scheme elevated the role of traditional leaders in the area by incorporating them into the Land Allocation Committee. Through this committee, government recognized the crucial role of the local leaders in the organization of rural economic activities. Additionally, several social amenities were brought to the area which went a long way in uplifting the social welfare of peasants in the entire Wovwe Valley. Technologically, the scheme transformed the agricultural methods farmers employed in the production of rice in the area.

The second phase has looked at the challenges of the scheme during the era of irrigation reform spanning the years 1995 to 2007. This was a time when neo-liberal ideas drove the course of irrigation management in Malawi. This phase witnessed the formation of Wovwe Water Users Association which was to take over the management of the scheme

from the government. Some few conclusions are drawn from this era. Firstly, the delayed official handover of the scheme created an administrative vacuum which, in turn, affected the maintenance of the scheme as there was nobody that took the maintenance of the scheme seriously. The study has also observed that farmers had not been adequately trained such that delays can be looked at as a blessing in disguise. This situation was further complicated by the government's quick withdrawal of its staff from the scheme, a move that was largely driven by officials' desire to save money. The government ignored the potential negative impact of its action on the management of the scheme. Secondly, the chapter has observed that farmers suffered from the shocks of the Structural Adjustment Reforms implemented in the late 1980s. State-controlled markets were closed. Input providers withdrew their services at a time when farmers appeared not to have been ready for such a withdrawal. The study has also shown that this era was equally affected by ecological challenges in form of floods and water shortages. Such challenges gave rise to social conflicts between and among water users in the valley that equally challenged the operation of the Association as a stable formal structure. Lastly, the study has observed that despite operating in such a challenging environment, the Association attempted to turn the scheme area into a nucleus of a rural town. The electrification of the area, the purchase of a rice mill, both arising out of the initiative of the Association, were slowly turning the scheme area into an attractive commercial centre.

In summary, a few broad conclusions could be drawn from the study. Firstly, the challenges of Wovwe Rice Scheme between 1968 and 1994 could not be simplistically

explained through the manner in which it was established or the top-down management style which appears to have been generally devoid of active farmer participation. As noted above, some challenges do not necessarily fit into such broad explanations. Secondly, a change in the management style of the scheme could not be regarded as a blue-print solution to challenges of the scheme. The study has shown that the implementation of irrigation reforms from the mid 1990s did not necessarily arrest all the challenges of the scheme. Some new challenges emerged which neither the officials implementing the irrigation reforms, nor farmers envisaged. In view of this, the success of neo-liberal irrigation reforms at Wovwe will depend on how well the highlighted challenges are addressed. Finally, the findings of the study demonstrate that scholars and commentators alike should not quickly judge irrigation schemes as a failed modernization attempt without seriously examining the challenges of the schemes. Lessons from Wovwe Rice Scheme demonstrate that the schemes have faced diverse forms of challenges, and such challenges explain the failure of the schemes to yield the intended socio-economic benefits.

One area that has not been explored at length in this study, which is so crucial to our understanding of small scale irrigation farming in Malawi, is an examination of the impact as well as the extent to which the irrigation reform programme is sustainable in Malawi. This would require future scholars never to take IMT as successful simply because it has succeeded elsewhere but to analyze it on the basis of the benefits it has brought to Malawi's small scale irrigation farmers. This area has not been explored in

this study due to the fact that by the time the study was undertaken, the irrigation reform programme in Malawi was far from maturity.

Given that irrigation farming in Malawi is now viewed not only as a key to ensuring food security but also a strategy for reducing rural poverty, it is important to conclude this study by making a few suggestions of the interventions to be considered in light of the highlighted historical problems.

To begin with, while acknowledging the significance of letting irrigation farmers secure irrigation inputs and other facilities, including markets for their irrigated crop on their own (as this would be in tandem with the current reforms), it would be equally important to accommodate external intervention. The Wovwe situation shows that farmers have often lacked the bargaining power to convince buyers and other input providers to engage in serious business with them. As a result, lack of irrigation inputs and markets has often contributed to their loss of interest in irrigation farming.

On the other hand, the provision of irrigation inputs (on loan terms) should go hand in hand with special training aimed at inculcating a business culture in farmers. At present, not much has been done in this respect. The training that has been offered to farmers is basically on how farmers associations should be run and has often targeted leaders of the associations. As observed above, failure to offer this kind of training would only entrench the culture of debt in farmers, the problem which needs not to be repeated. It would thus be appropriate if such facilities were offered in a phased

process, in which the amount of loan provided is reduced with each succeeding phase. This would in time break the debt cycles on the part of farmers.

The provision of markets to farmers should be a straight forward issue given the fact that similar interventions have already been applied elsewhere (the case in point being that of cotton farmers). This, however, would only be a short term solution. Of greater significance is the need to invest into research to find out how rice varieties that are highly demanded on the market and yet low yielding could be improved. This would then address the interests of buyers while not compromising the quest for food security at household level.

Secondly, Government should quickly hand over the schemes that are loosely managed by farmers. At present, farmers do not enjoy the full rights in the operations and management of the schemes. As observed above, this has compromised the maintenance of the scheme infrastructure. Government's complete withdrawal, however, should be followed by a constant monitoring strategy that would ensure continuity. At present, such a monitoring strategy only exists on paper. The assumption has been that once Government withdraws from the schemes, there would be tremendous improvement in the operations of the schemes. On the contrary, this study has demonstrated that the implementation of the neo-liberal reforms did not arrest all the previous challenges of the schemes. Some new challenges emerged which were not necessarily envisaged. Without a solid monitoring strategy, it would be difficult to break a cycle of challenges in Malawi's small-scale irrigation farming.

APPENDICES

Appendix 1: Smallholder Irrigation Schemes in Malawi

(Constructed between 1966 and 1987)

SCHEME	YEAR	NET AREA(HA)
Bua	1975-80	230
Chiliko	1968	20
Domasi	1972-75	475
Hara	1968-70	275
Kaombe	1969-72	200
Kasinthula	1968-71	195
Khanda	1970-72	70
Likangala	1968-72	400
Limphasa	1969-74	400
Lufira	1973-76	320
Mpamantha	1969-71	60
Muona/Thangadzi	1969-72	365
Njala	1966	53
Segula	1968	30
Nkhate	1979-82	210
Wovwe	1969-74/ 1982-87	365
TOTAL		3, 668

Source: Nkhoma (2004), p. 34

Appendix II: Net Income (MK) in selected plots, 1971-1975 (Winter Seasons)

	1971				1972				1973				1974				1975			
Plot No.	Sales	Credit	Net Income																	
P1	115.63	20.35	95.28		114.60	21.44	93.16		116.25	23.66	92.59		118.12	29.00	89.12		126.01	31.67	94.34	
P2	76.95	15.46	61.49		78.10	14.54	63.56		76.60	14.22	62.38		81.34	17.20	64.14		91.56	23.28	68.28	
P3	91.30	24.04	75.30		90.20	22.23	67.99		92.10	26.14	65.96		108.41	28.66	79.75		118.95	32.01	86.94	
P4	178.65	23.76	154.89		180.25	24.24	56.26		181.61	22.76	158.85		187.64	25.76	161.88		198.64	29.96	168.68	
P5	195.44	19.64	175.80		187.56	20.66	66.90		197.50	21.11	176.40		197.45	19.22	178.23		211.11	22.01	189.10	
P6	194.38	18.76	175.62		193.45	19.68	73.77		189.61	16.22	170.39		198.64	20.22	178.42		218.11	30.10	188.01	
P7	197.10	19.25	177.85		192.50	18.24	174.26		195.50	18.82	179.68		201.72	25.66	176.06		215.62	31.22	184.40	
P8	126.05	20.41	105.64		127.26	19.66	107.60		125.75	22.12	103.63		138.94	29.22	10.72		148.75	28.22	120.53	
P9	90.98	20.30	70.68		89.45	21.50	69.95		91.28	19.78	71.50		99.78	23.01	76.77		112.10	21.00	91.10	
P10	50.75	13.15	37.60		53.75	14.38	39.37		49.02	15.02	34.00		55.67	18.26	37.41		72.02	17.67	54.35	
<hr/>																				
M1	95.07	13.42	81.65		97.10	14.54	82.56		102.01	15.04	86.97		106.22	22.11	84.11		112.12	26.10	86.02	
M2	47.90	13.59	34.31		45.58	12.64	32.94		42.25	12.21	30.04		56.01	15.14	40.87		61.20	15.76	45.44	
M3	65.79	10.73	55.06		71.27	9.11	62.16		67.78	9.66	58.12		79.99	12.63	67.31		85.15	13.11	72.04	
M4	144.07	14.96	129.11		150.75	16.76	133.99		151.10	11.22	139.88		158.95	21.22	137.73		162.62	26.00	136.62	
M5	144.84	17.16	127.68		138.95	18.75	120.20		142.90	15.66	127.24		149.05	21.11	127.94		151.22	22.01	192.21	
M6	15.64	6.00	9.64		14.84	8.56	6.28		17.23	9.72	7.51		19.65	8.66	10.99		26.22	7.26	18.94	
M7	49.50	6.05	43.45		51.50	7.76	43.74		53.44	10.22	43.22		55.12	12.03	43.09		66.11	11.01	55.10	
M8	24.68	11.66	13.02		22.72	14.78	7.94		24.79	10.76	14.03		32.18	9.62	22.56		38.75	10.25	28.50	
M9	175.05	17.93	157.12		181.50	15.98	165.52		178.88	21.28	57.60		186.97	22.66	164.37		193.16	29.06	164.10	
M10	137.22	15.59	121.27		140.21	16.42	123.79		142.12	18.22	23.90		148.76	23.07	125.69		155.13	27.09	128.04	

Table continued.

	1971				1972				1973				1974				1975			
Plot No.	Sales	Credit	Net Income																	
L1	80.34	22.66	57.68		78.56	23.85	54.71		85.05	23.72	61.33		92.01	28.11	63.90		102.26	31.03	70.96	
L2	92.37	24.53	67.84		93.10	25.00	68.10		93.99	25.62	68.37		105.26	27.55	77.71		110.66	33.26	77.40	
L3	46.64	8.36	38.28		45.21	7.96	37.31		47.26	10.01	37.25		108.25	16.13	92.12		113.76	19.27	94.49	
L4	82.41	17.88	64.53		88.56	18.89	69.67		83.11	18.88	64.23		97.66	15.62	82.04		102.11	18.22	83.89	
L5	124.30	17.16	107.14		131.22	15.16	116.06		126.20	10.66	115.54		131.17	13.22	117.95		137.66	14.52	123.14	
L6	142.44	17.93	124.57		139.41	19.96	119.45		145.78	22.11	126.67		152.89	27.11	125.78		166.72	31.00	175.72	
L7	56.80	17.27	39.53		51.22	19.86	31.36		58.02	16.34	41.68		66.12	14.26	51.86		71.21	17.00	54.21	
L8	170.09	20.30	149.79		173.11	21.75	151.36		171.21	15.22	155.99		188.88	17.99	170.89		198.06	21.06	177.00	
L9	18.65	6.45	12.20		21.02	8.54	12.48		22.67	9.12	14.57		35.26	10.04	25.22		41.21	18.26	22.99	
L10	84.74	15.46	69.28		79.13	13.44	56.69		86.25	21.27	64.98		96.35	25.75	70.76		102.67	31.26	77.41	
J1	85.71	16.12	69.59		88.99	15.32	73.67		91.26	18.66	72.60		99.27	21.22	78.05		110.01	26.11	83.90	
J2	49.57	21.78	27.79		53.21	23.89	29.32		85.22	2.14	83.12		66.25	25.66	40.58		72.12	19.22	59.90	
J3	104.62	15.18	89.44		111.05	14.09	96.96		109.10	13.21	90.89		112.26	10.11	102.15		116.13	13.66	102.47	
J4	93.51	20.41	73.10		99.22	18.56	80.66		96.00	21.21	74.79		101.26	23.21	78.05		109.13	21.27	87.86	
J5	156.52	14.14	142.38		152.11	17.19	134.92		160.12	17.01	143.11		165.65	15.02	150.63		169.12	16.11	153.01	
J6	46.70	12.60	34.10		51.00	18.65	32.35		47.01	10.22	36.79		53.75	16.26	37.49		56.11	20.22	35.89	
J7	114.43	14.08	100.35		117.21	16.10	101.11		115.27	16.18	99.09		122.62	10.22	112.40		131.02	12.10	118.92	
J8	205.90	23.82	182.08		211.99	26.56	185.43		215.15	27.22	187.93		221.05	33.66	187.39		228.06	41.22	186.8	
J9	41.71	16.17	25.54		47.66	19.11	28.55		45.67	18.19	27.48		52.11	17.98	34.13		54.56	15.46	39.10	
J10	155.57	26.79	128.72		142.88	23.89	118.99		158.28	23.26	135.02		163.75	28.88	134.87		168.28	31.26	137.02	

Source: MNA/ 23/21/6 Wovwe Irrigation Scheme, 1970-1986

REFERENCES

A. ORAL INTERVIEWS

Government officials

Mr. H. Rhumbey, Ex-Scheme Manager, Wovwe rice scheme; Irrigation Engineer, KRADD, 5th Nov., 2007

Mr. M. Ng'oma, Ex-Scheme Manager, Wovwe Rice Scheme, Karonga, 28th Oct, 2007

Mr. R.Z. Mwangonde, Ex-Technical Assistant, Wovwe Rice Scheme, 29th Oct., 2007

Mr. M.W Kapanda, Ex-Extension Officer (Irrigation section), Wovwe Rice Scheme, 25th Oct., 2007

Mr. C. Kayira, Irrigation Officer, KRDP, Karonga, 31st Oct., 2007

Mr. Kanyimbo, Assistant DADO, KRDP, 31st Oct., 2007

Mr. M. Malweni, Fulirwa Agricultural Extension, Nyungwe EPA, Karonga, 27th Oct., 2007

WWUA Officials

Mr. T. Mbeye, WWUA president, Karonga, 11th Oct., 2007

Mrs. M. Ngware, WWUA Treasurer, Wovwe, 26th Oct., 2007

P.S., Mang'umbi, WWUA Executive Member, 11th Oct., 2007

GVH E. Mwafulirwa Jumbe, (BOT member), T/A Wasambo, Karonga, 25th Oct., 2007

Mr. J. Msiska, WWUA Secretary, Karonga, 14th Oct., 2007

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GVH Mphangwiyanjini, T/A Wasambo, Karonga, 27th Oct., 2007

GVH Kalimunda, T/A Wasambo, Karonga, 27th Oct, 2007

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Mr. T. Nyondo, Kapiyira Village, T/A Wasambo, Karonga, 25th Oct., 2007

Mrs. M. Panje, Bunganilo Village, T/A Wasambo, Karonga, 10th Oct., 2007

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Mr. S. Msiska, Kalimunda Village, T/A Wasambo, Karonga, 15th Oct., 2007

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Mr. Y. Chipezayani, Bunganilo Village, T/A Wasambo, Karonga, 14th Oct., 2007

Mr. W. Mlenga, Gangamwale Village, T/A Wasambo, Karonga, 13th Oct., 2007

Mr. B. Msukwa, Bunganiro Village, T/A Wasambo, Karonga, 11th October, 2007

Miss. Malita Nyalwanda, Kapiyira Village, T/A Wasambo, Karonga, 19th Oct., 2007

Mr. T.M Mbeye, Kalimunda Village, T/A Wasambo, Karonga, 13th Oct., 2007

Mr. L. Mwachipoka, Kapiyira Village, T/A Wasambo, Karonga, 27th Oct., 2007

B. ARCHIVAL SOURCES

MNA/121/22/6, Wovwe Rice Scheme Working Paper, 1979

MNA, 23/21/6, Wovwe rice scheme, 1970-1971

MNA/23/21/6, Wovwe Irrigation Scheme, 1970-1987

MNA/23A/1, Settlement Schemes, Irrigation Branch, 1976

MNA/23/15/13, Settlement Credit Fund, 1979-1986

MNA/12/1-107/42138, Rice Production and Marketing, 1977

MAN/74/007, Technical Cooperation Agreement, Republic of China and Republic of Malawi, 1981

MNA/23/6, Wovwe Irrigation Scheme, 1970-1987

MNA /10/7, Wovwe Extention SchemeWorking Paper, 1981

MNA/15D/1/4, Wovwe Dambo Irrigation Scheme, 1969-1976

MNA/23A/2, Monthly Reports, Wovwe Rice Scheme, 1970-1989

MNA: Malawi Government, *Wovwe Extension Irrigation Scheme*. Project Appraisal Document, Submitted by the Chinese Agricultural Mission, Lilongwe, 1982

MNA: Malawi Government, *Irrigation Ordinance*, 1971

MNA: Malawi Government, *Irrigation Ordinance*, 1969

MNA/43/1/20: Retrenchments: Wovwe Irrigation Self Help Extension, 1981-1998

KRDP/ Ref/WV2/Wovwe Rice Scheme Basic data 1970-1988

KRDP/ Ref/WV3/Wovwe Rice Scheme Basic Data, 1980-1993

KRDP/WV/32, Responsibility of Allocation Committee in Settlement Schemes, 1972

KRDP/ ID/WV/3/150, Irrigation Scheme Notes, 1988

KRDP/WV/11 Wovwe Day Learning Centre Lesson Notes, 1984

KRDP/WV/22 Wovwe Irrigation Scheme, 1976-1989

KRDP/22/9/86, Project Seminar, Wovwe rice scheme, 1986

KRDP, Handover notes, out-going Manager, Wovwe scheme, Mr. S.L. Thindwa to Successor, Mr. P. Savilo, 9th August, 1991

KRDP/ ID/WV/3/150, Notes Prepared by H.D Rhumbey, Ex-Scheme Manager, Wovwe Rice Scheme 1994

KRDP/WV/32, Wovwe Rice Scheme Monthly Reports, 1970-1979

KRDP/ WV/32/1, Annual Work Plan for Wovwe Irrigation Scheme, 1988/1989

KRDP, Hand-over notes: From the scheme Manager, to Acting Scheme Manger, Wovwe Scheme, 13th February, 1994

KRDP, Wovwe Water Users' Association Constitution, 2002

KRDP/07/11/01, Hand-over notes by out-going scheme Technical Officer, Mr. R.Z Mwangonde, Wovwe Rice scheme, 2001

KRDP, The Audit Report, Wovwe Water Users' Association, September, 2007

C. SECONDARY SOURCES

Adams, W.M., *Wasting the Rain: Rivers, People and Planning in Africa* (London: Earthscan, 1992)

_____, "Large-scale Irrigation in Northern Nigeria: Performance and Ideology, *Transactions of Institute of British Geographers*, Vol. 16, No. 3, (1991), pp. 287-300

Adams W., M and A.T Grove, (eds.), *Irrigation in Tropical Africa: Problems and Problem-solving* (Cambridge: University of Cambridge African Studies Centre, 1984) Bates Robert, *States and Markets in Tropical Africa*, (Barkley: University of California, 1981)

Alvin So Yo, *Social Change and Development: Modernisation, Dependency, and World-system Theories* (London: Sage Publications, 1990)

Berger, T.M., "Decolonization and Nation-Building: Political Development Theory and the Appeal of Commission in Southeast Asia, 1945-1975" *Journal of Southeast Asian Studies*, Vol. 34, No. 3 (2003), pp. 426-448

Berry Sara, "The Food Crisis and Agrarian Change in Africa: A Review Essay" *African Studies Review*, Vol. 27, No. 2, (1984), pp. 59-112

_____, "Social Institutions and Access to Resources" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp. 41-55

_____, "Access, Control and Use of Resources in African Agriculture: An Introduction" *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp.1-5

_____, *No Condition is permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa* (Madison: University of Wisconsin Press, 1993)

Black, C.E., *The Dynamics of Modernisation: A Study in Comparative History* (New York: Harper Torch books, 1966)

Briggs, A.J., "Farmers Response to Planned Agricultural Development in the Sudan" *Transactions of Institute of British Geographers*, Vol. 3, No. 4 (1978), pp.464-475

Brown, C.P., "Aspects of Smallholder decisions regarding the allocation of farm resources in Malawi" *Rhodesia Journal of Economics*, Vol. 4, No. 3 (1970), pp. 38-49

Bryant, C., and Louis G. White, *Managing Rural Development: Peasant Participation in Rural Development* (West Hartford: Kumarian Press, 1980)

Dean, T. C., "Modernisation Theory and Comparative Study of Societies: A Critical Perspective" *Comparative Studies in Society and History*, Vol. 15, No. 2 (1973), pp. 199-226

Cammack Diana and Chirwa W.C., "Development and Human Rights in Malawi" *Bwalo: A Forum for Social and Human Rights Development*, Issue 1, (1997), pp. 105-119

Chambers Robert, *Settlement Schemes in Tropical Africa: A Study of Organization and Development* (London: Routledge and Keegan Paul, 1969)

Chambers R., "The Origins and Practice of Participatory Rural Appraisal" *World Development*, Vol.22, No. 7 (1994), pp. 953-969

Chilivumbo, A., "The Response to Planned Change: A Study of the Rice Scheme in Chief Mwambo's Area, Lake Chirwa, Zomba, Malawi" *Society of Malawi Journal*, Vol. xxii, No. 2 (1969), pp. 38-56

Chinsinga B., and Ao O'Brien, *Planting Ideas: How Agricultural Subsidies are working in Malawi* (London: African Research Institute, 2008)

Chirwa, W.C., *Wovwe and Adjacent areas: A Baseline Study*. Report for the World Vision International, Zomba: Chancellor College, 1995

_____, "Land Use and Extension Services at Wovwe Rice Scheme, Malawi", *Development Southern Africa*, Vol. 19, No. 2 (2002), pp.307-327

Cliffe L., "Rural Political Economy of Africa" in Peter C.W. Gutkind and Immanuel Wallerstein (eds.), *The Political Economy of Contemporary Africa*, (California: Saga Publications, Inc., 1976), pp. 112-130

Coquery-Vidrovitch C., "The Political Economy of the African Peasantry and Modes of Production" in Gutkind and Wallerstein (eds.), *The Political Economy of Contemporary Africa*, (California: Saga Publications, Inc., 1976), pp. 90-111.

Dey, J., "Development Planning in the Gambia: The gap between Planners' and Farmers' Perceptions, Expectations and Objectives", *World Development*, Vol. 10 No. 5, (1982), pp. 377-96

Dick, R.M., and Anna Knox, Collective Action, Property Rights, and Devolution of Natural Resources Management: A Conceptual Framework
<http://www.capri.cgiar.org/pdf>, March, 2008

Eisentadt, S.N., *Modernisation: Protest and Change* (Englewood Cliffs, N.J.,: Prentice-Hall, 1966)

Ferguson, A. E., and Mulwafu, W., "Irrigation Reform in Lake Chilwa Basin, Malawi: Exploring Critical Land-Water Intersections and Livelihood Strategies", Final Research Report of the BASIS Project, Oct., 2004

_____, "If Government failed, how are we to succeed? The importance of History and Context in the present-day irrigation reform in Malawi" in Barbara van Koppen, Mark Giordano and John Butterworth (eds.) *Community-based Water Law and Water Resources Management Reform in Developing Countries* (CAB International, 2007) pp.211-227

Fujita, M., et al., The Conditions of Collective Action for Local Commons Management: The Case of Irrigation in the Philippines, <http://www.indiana.edu>, January, 2008

Griffiths C.A., *Land Tenure in Malawi and the 1967 Reforms*, A Thesis submitted for the degree of Master of Laws of the University of Malawi, Zomba, 1983

Harrigan Jane, "Malawi" in P. Mosley, J. Harrigan and J. Toye (eds.), *Aid and Power: The World Bank and Policy-Based Lending, Case Studies*, Vol. 2, (London: Routledge, 1999), pp.201-270

Hartwich, O. M., "Neoliberalism: The Genesis of a Political Swearword", CIS Occasional Paper 114, The Centre for Independent Studies (CIS), St Leonards, NSW 1590, Oxley, May, 2009.

Helmke G., and S. Levitsky, Informal Institutions and Comparative Politics: A Research Agenda, Working paper No. 307, 2003,
<http://kellogg.nd.edu/publications/workingpapers/WPS/307.pdf>

Heyer, J., et al, "Rural Development" in J. Heyer , P. Roberts, and G. Williams (eds.), *Rural Development in Tropical Africa* (Hampshire and London: Macmillan Press Ltd., 1981), pp. 1-16

Huntington, S.P., *Political Order in Changing Societies* (New Haven: Yale University Press, 1968a).

Hyden Goran, *Beyond Ujamaa in Tanzania: Underdevelopment and Uncaptured Peasantry* (London: Heinemann, 1980)

Kishindo Paul, "Farmer Turnover on Settlement Schemes: The Experience of Limphasa Irrigated Rice Scheme, Northern Malawi" *Nordic Journal of African Studies*, Vol. 5, No. 1 (1996), pp. 1-10

_____, "Customary Land Tenure and the New Land Policy in Malawi," *Journal of Contemporary African Studies*, Vol. 22, No. 2 (2004), pp. 213-225

Kloos Helmut, "Peasant Irrigation Development and Food Production in Ethiopia" *The Geographical Journal*, Vol. 157 (1991), pp. 295-306

Kydd, J., "Malawi in the 1970s: Development Policies and Economic Change", in *Malawi: An Alternative Pattern of Development*, Seminar Proceedings No 25, Edinburgh University Press, 1985, pp. 293-381

Kydd J. and Robert Christiansen, "Structural Change in Malawi since Independence: Consequences of Development Strategy Based on Large-Scale Agriculture" *World Development*, Vol. 10, No. 5, (1982), pp. 355-375

Lawrence N.W., (ed.), *Social Research Methods: Qualitative and Quantitative Approaches* (4th ed.), (London: Allyn and Bacon, 2000)

Lele Uma, *Structural Adjustment, Agricultural Development and the Poor: Lessons from the Malawian Experience*, Media Discussion Paper 9 (Washington: The World Bank, 1989)

Lerner, D., *The Passing of Traditional Society: Modernising the Middle East* (New York: The Free Press, 1958)

Lipton Michael, "Limits of Price Policy for Agriculture: Which way for the World Bank?" *Development Policy Review*, Vol. 5, (1987), pp. 197-215

Lubeck, P.M., "The Crisis of African Development: Conflicting Interpretations and Resolutions" *Annual Review of Sociology*, Vol. 18 (1992), pp. 519-540

Mafeji, A., "The Agrarian Question, Access to Land, and Peasant Responses in Sub-Saharan Africa", Civil Society and Social Movements Programme, Paper No. 6, United Nations Research Institute for Social Development, 2003. pp. 1-23

Makato, C.J.A., "Smallholder Rice Irrigation in Malawi: The Role of the Farmer in Irrigated Rice" in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 287-294

Malawi Government, *SFPDP Project Completion Draft Report*, 2007

Malawi Government, *SFPDP Report*, Lilongwe, 1999

Malawi Government, *Act No 16 of 2001, Irrigation Act*, Zomba, Government Print, 28 Dec., 2001

Malawi Government, *National Irrigation Policy and Development Strategy*, Ministry of Agriculture and Irrigation, June 2000

Malawi Government, *Malawi National Land Policy*, Ministry of Lands, Physical Planning and Surveys, Lilongwe, 2002

Malawi Government, *National Irrigation Policy and Development Strategy*, Ministry of Agriculture and Irrigation, Lilongwe, 1998

Malawi Government, *National and Shire Irrigation Study Report*, Ministry of Agricultural and Natural Recourses, and Hunting Technical Services Ltd., 1981

Mandala, E.C., *The End of Chidyerano: A History of Food and Everyday Life in Malawi, 1860-2004* (Portsmouth, NH, Heinemann, 2005)

_____, *Work and Control in a Peasant Economy: A History of the Lower Tchiri Valley in Malawi 1959-1960* (Wisconsin: University of Wisconsin Press, 1990)

Mhone G.C.Z., “Agricultural and Food Policy in Malawi: A Review” in Naceur Bourenane and Thandika Mkandawire (eds.), *The State and Agriculture in Africa* (London: CODESRIA Book Series, 1981), pp. 59-86

Milner J., “Agricultural and Rural Development in Malawi,” *Africa Research Series*, No 11 (2004), pp. 49-61

Moris, J., “Irrigation as Privileged Solution in African Development”, *Development Policy Review*, Vol. 5, (1987), pp. 99-123

Mphande, C.U., “Smallholder Rice Irrigation Schemes: The Role of the Farmer in Irrigated Rice” in Blackie, M., (ed.) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984), pp. 317-326

Mkandawire, M.R., “Customary Land, the State and Agrarian Change in Malawi: The case of the Chewa Peasantry in Lilongwe Rural Development Project” *Journal of Contemporary African Studies*, Vol. 3, No. ½ (1983/84), pp. 109-128

Mtawali, K.M., “Malawi: Current Status of Reform Proposals for Agriculture” in Alberto Valdes and Kay Muir-Leresche (eds.), *Agricultural Market Reforms and Regional Market Integration in Malawi, Zambia, and Zimbabwe* (Washington: The International Food Policy Research Institute, 1993), pp. 154-168

Mulwafu, W.O and Nkhoma B., “The Use and Management of Water in Likangala Scheme Complex in Southern Malawi” *Journal of Physics and Chemistry of the Earth*, Vol. 27, Nos. 11/12 (2002), pp. 839-844

_____, “The Experience of Irrigation Management Transfer in two Irrigation Schemes in Malawi, 1960-2002” *Journal of Physics and Chemistry of the Earth*, Vol. 29, (2004), pp. 1327-1333

Nabudere, Dani, W., “Beyond Modernization and Development, or Why the Poor reject Development” *Geographiska Annaler*, Vol. 79B, No. 4 (1997), pp. 203-215

Ngwainmbi J.M., “The Persistence of the Farm and the Economy of Affection: The Cameroonian Case” *Journal of Social Development in Africa*, Vol. 15, No. 1 (2000), pp. 93-108

Nizamedinkhodjayev, N.N., “Rural Livelihoods and Irrigation Management Transfer: The Case-study of three countries in the Ferghana Valley of Central Asia”, International Water Management Institute, Uzbekistan, <http://www.cwc-ral.uz/15yrs/pdf>, March, 2008

Nkhoma, B.G., “The State Peasants and Irrigation Farming in Malawi, 1964-2002” An MA Thesis Submitted to the History Department in Partial Fulfillment of Master of Arts in African Social History, Zomba, Chancellor College, (2004)

Okali Christine, “Issues of Resource Access and Control: A Comment” *Journal of the International African Institute*, Vol. 59, No. 1 (1989), pp.56-60

Ostrom E and Roy Gardner, “Coping with Asymmetries in the Commons: Self-Governing Irrigation Systems can Work” *The Journal of Economic Perspectives*, Vol. 7, No. 4 (1993), pp. 93-112

Pachai B., *Land and Politics in Malawi*, 1875-1975 (Ontario: Limestone Press, 1978)

Pazvakawambwa, G.T., and P. Van der Zaag, “The Value of Irrigation Water in Nyanyadzi Smallholder Irrigation Scheme”, *Value of Water Research Report Series*, No. 4, Zimbabwe, (2001)

Perret Sylvain and Emilie Touchain, “A Simulation-based Approach to assess the Economic Viability of Smallholding Irrigation Schemes in South Africa: Conceptualization and first Implementation” CIRAD Teramim, Feb., 2002

Perret, S., “Water Policies and Smallholding Irrigation Schemes in South Africa: A History and New Institutional Changes” Working Paper 29, University of Pretoria, 2002

Pryor, F.L., *The Political Economy of Poverty, Equity and Growth: Malawi and Madagascar* (London: OUP., 1990)

Rap, E., “The Success of a Policy Model: Irrigation Management Transfer in Mexico”, *Journal of Development Studies*, Vol. 42, No. 8, (2006), pp. 1301-1324

Rydewski J.R., "Irrigation: A Viable Development Strategy?" *The Geographical Journal*, Vol. 156, No. 2, (1990), pp. 175-180

Samakande, I., et-al, "Smallholder Irrigation Schemes: A Common Property Resource with Management Challenges",
<http://dlc.dlib.indiana.edu/archive/00000919/00/samakandei040402.pdf>, December, 2007

Shah, Tushaar, et al, "Institutional Alternatives in African Smallholder Experience with Irrigation: Lessons from International Irrigation Management Transfer", Research Report, No. 60, Colombo, Sri Lanka: International Water Management Institute, 2002

Short, P., *Banda* (London: Routledge and Keegan Paul, Ltd., 1974)

Sijm Jos, "Agricultural Price Policies in Sub-Saharan Africa: Has the World Bank Knocked-out its Critics?" A Discussion Paper No. 87, Rotterdam, Centre for Development, Planning, 1989

Smallholder Irrigation Project: African Development Fund Appraisal Report, OCDS, Sep., 1998

Smelser, N., "Towards a Theory of Modernisation", in Amitai Etzioni and Eva Etzioni (eds.), *Social Change* (New York: Basic Books, 1964)

van Koppen B., R. Parthasarathy and Constantina Safilion, "Poverty Dimensions of Irrigation Management Transfer in Large-scale Canal Irrigation in Andra Pradesh and Gujarat, India, Research Report 61, International Water Management Institute, Sri Lanka, 2002

Vavrus F. K "A Shadow of the Real Thing": Farrow Societies, Water User Associations, and Democratic Practices on the Kilimanjaro Region of Tanzania" *Journal of African American History*, Vol. 88, No. 4 (2003), pp. 393-412

Veldwisch, G. Jan, et al., "Sand in the Engine: The Travails of an Irrigated Rice Scheme in Bwanje Valley, Malawi", forthcoming.

Vermillion Douglas, L., "Property Rights and Collective Action in the Development of Irrigation System Management" (1999), www.capri.cgiar.org/status.asp

Williams, G., "The World Bank and Peasant Problem" in J. Heyer and G. Williams (eds.) *Rural Development in Tropical Africa* (Hampshire and London: The Macmillan Press Ltd., 1981), pp. 16-51

Williams, G., "Taking the Part of Peasants: Rural Development in Nigeria and Tanzania" in Gutkind and Wellerstein (eds.), in *The Political Economy of Contemporary Africa* (California: Saga Publications, Inc., 1976) pp. 131-154

Bank, *Towards Sustainable Development in Africa*, Washington, 1984

World Bank, *Sub-Saharan Africa: Progress Paper on Development Prospects and Programs*, Washington, 1983

World Bank *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*, Washington, 1981