



**Dissertation By
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**History Department in
Partial Fulfillment of the
Degree of Master of Arts in
African Social History**

**THE STATE AND IRRIGATION
FARMING IN MALAWI, 1946 - 2002**

March 2005



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M.A. AFRICAN SOCIAL HISTORY

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A Thesis Submitted to the History Department in Partial Fulfillment of the
Degree of Master of Arts in African Social History

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DECLARATION

I declare that this thesis is a product of my own effort and the guidance I received from my supervisors and that it has not been already submitted elsewhere for another award. Other sources used in this thesis have been acknowledged.

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DEDICATION

This thesis is dedicated to my parents who, through toil and pains, fully bore the cost of bringing me up to what I am today. May God richly bless them!

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ABBREVIATIONS AND ACRONYMS

AD	Anno Dommini
ADD	Agricultural Development Division
ADMARC	Agricultural Development and Marketing Corporation
BASIS	Broadening Access and Strengthening Input Market Systems
CATM	Chinese Agricultural and Technical Mission
CCAP	Church of Central Africa Presbyterian
CDC	Colonial Development Corporation
CRSP	Collaborative Research Support Programme
DANIDA	Danish International Development Agency
DC	District Commissioner
DO	Discipline Officer
DWUA	Domasi Water User Association
ESAURP	East and Southern Africa University Research Programme
FAO	Food Agricultural Organization
GVH	Group Village Headman
HIPC	Highly Indebted Poor Country
IFAD	International Fund for Agricultural Development
IMT	Irrigation Management Transfer
IMF	International Monetary Fund
LAC	Land Allocation Committee
LADD	Liwonde Agricultural Development Division
MNA	Malawi National Archives
MCP	Malawi Congress Party
MYP	Malawi Young Pioneers
MP	Member of Parliament
NIB	National Irrigation Board
NGO	Non Governmental Organization
NRDP	National Rural Development Programme
SAP	Structural Adjustment Programme
SFPDP	Smallholder Floodplains Development Programme
SMC	Scheme Management Committee
SVP	Shire Valley Project
TA	Traditional Authority
TCP	Technical Cooperation Project
TOT	Trainer of Trainers
UDF	United Democratic Front
USAID	United States Aid for International Development
VH	Village Headman
WUA	Water User Association

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ABSTRACT

The study was attempted against the background of inadequate study of the history of irrigation farming in the agricultural historiography of Malawi. Using the case studies of Likangala and Domasi irrigation Schemes in the Lake Chilwa basin of southeast Malawi, Central Africa, the study examines the efforts the colonial and post-colonial state made to promote irrigation farming through the development of irrigation schemes in the country between 1946 and 2002.

Evidence from the Lake Chilwa basin, and Malawi in general, suggests that the state attempted to develop irrigation schemes in response to ecological, political, economic and ideological changes of the time. For example, the colonial state developed irrigation schemes to improve peasant production in the face of drought, rapid population growth and land scarcity. Similarly, the post-colonial state developed irrigation schemes to utilise undeveloped land, to demonstrate to rural communities the methods and benefits of intensive cash cropping, increase the volume of rice production, form a nuclei for rural towns, and to promote inter-ethnic cooperation and nationhood. From the mid-1990s, the hand over of irrigation schemes to farmers was adopted as an adaptive strategy against economic crisis and the desire to conform to ideas of stakeholder participation and irrigation management transfer which preoccupied scholars and development planners, the world over.

Important also to note is the fact that farmers, both local and settlers, exercised their independent choices to participate in the irrigation schemes. Acting as individuals or as a group, they had the freedom to join the schemes or not. Their joining of irrigation schemes was usually dependent upon the realisation of the dividends of irrigation farming. They were far from being passive participants in the development of irrigation schemes.

It is also clear from this study that the development of irrigation schemes had both a positive and negative impact in the Lake Chilwa basin. However, the study notes that the development of irrigation schemes brought more harm than good to the societies where they were established. But the degree to which the societies were affected varied with time, location, social class and gender. Irrigation schemes, on the one hand, for example, increased the production of rice, expanded income sources, and improved the infrastructure development of the Lake Chilwa basin. On the other hand, irrigation schemes led to loss of ancestral land to some farmers, exposed farmers to irrigation related diseases such as cholera, typhoid, and bilharzias. However, prior to 1994, irrigation schemes were relatively well organised and productive, and this has been attributed to the serious commitment the state of the time had on agriculture. Furthermore, the study noted that privileged farmers such as committee members, Young Pioneers and state officials were among the groups that benefited from the development of irrigation schemes in the Lake Chilwa.

Chapter One

INTRODUCTION

Malawi's economy is predominantly based on agriculture. Comprising the estate and smallholder sectors, agriculture accounts for nearly 90% of Malawi's foreign exchange. Agricultural production is done on rain-fed and irrigated farming through which crops such as tea, cotton, rice, maize, and tobacco, among others, are grown on smallholder and estate farms across the country. Of the two forms, despite its significance in increasing agricultural production in the face of drought and land scarcity, irrigation farming has been mostly a neglected theme in the agricultural historiography of Malawi. Historians have concentrated on the experiences of farmers on rain-fed agriculture in the country.

However, it should be noted that irrigation farming has become an important agricultural system in the face of drought, rapid population growth and climatic changes which started to affect the country from the mid – 1940s. From this time, the state adopted the development of irrigation schemes as a means of promoting irrigation farming and also modernising peasant agriculture in the country. It is against this background that we need to study the history of irrigation farming in Malawi, and the impact this had on the political, economic and social development of the country. Such a study enhances our understanding of the origins of irrigation farming, and also the factors that accounted for the successes and failures of the development in the country.

The present study, therefore, examines the efforts the state (colonial and postcolonial) made to promote irrigation farming through the development of irrigation schemes in Malawi, and the responses the farmers made towards this development between 1946 and 2002. In developing irrigation schemes in Malawi, the study argues, the state was responding to political, economic, ideological and ecological changes of the time. Apart from improving peasant production in the face of drought, rapid population growth and land scarcity, both the colonial and post-colonial state wanted to conform to ideas of smallholder farming, stakeholder participation and irrigation management transfer which preoccupied scholars and development planners, the world over.

By focusing on the efforts that the state in Malawi made towards developing irrigation schemes and the impact this had on the development of the local communities surrounding irrigation schemes, the study locates itself in the development and underdevelopment thesis.¹ The development and underdevelopment thesis is based on the view that the introduction of a capitalist economy in most parts of the Third World, and in Africa, in particular, worked towards the impoverishment of the local people. The expansion of capitalist economy resulted in the alienation of the rural communities from the basic means of production such as water and land, disrupted the local economies, transferred rural resources to feed the urban bourgeoisie and western industries.² The

¹ For details about the underdevelopment thesis see for example N. Long, *An Introduction to the Sociology of Rural Development*, (London: Tavistock, 1977); J. McCracken, "Underdevelopment in Malawi: The Missionary Contribution," *African Affairs*, Vol. 76, No. 303 (1977); W. Rodney, *How Europe Underdeveloped Africa*, (London: Bogle- L' Overture, 1972); J. Samoff, "Underdevelopment and Its Grass Roots in Africa," *Canadian Journal of African Studies*, Vol. 4 (1980) pp 5- 36.

² See also S. Amin, "Underdevelopment and Dependence in Black Africa- Origins and Contemporary Forms" in *The Journal of Modern African Studies*, Vol 10, No 4 (1972), pp 503 - 524

state, both the colonial and postcolonial state, played a decisive role in the reproduction of capitalist production and in the extraction and accumulation of surplus value.³

This study conceives the development of irrigation schemes as an attempt by the state to promote capitalist production in the rural areas of the country. The process, the study argues, worked towards the displacement of the rural communities from their ancestral lands to give way to the construction of irrigation schemes. Furthermore, it brought the peasants from the Lake Chilwa basin into the production of commercial farming at the expense of food crop production. As farmers began to work in the schemes, they became vulnerable to water-borne diseases such as cholera, bilharzia and malaria. It is in this context that the impact of irrigation schemes has been understood. In fact, the study shows that the development of irrigation schemes brought more harm than good to the societies where they were established.

However, the study goes beyond the underdevelopment thesis by drawing attention to the challenges both the colonial and post-colonial state in Malawi faced in developing irrigation schemes, the variations in which irrigation schemes affected the rural communities, the positive impact irrigation schemes had on the Lake Chilwa basin and the farmers in the area, and also the role the farmers played in the development of irrigation schemes in Malawi.⁴ Thus, the degree to which the societies were affected

³ Samoff, "Underdevelopment" p. 26

⁴ This idea was also articulated in A. Isaacman, *Cotton is the Mother of Poverty: Peasants, Work and Rural Struggles in Colonial Mozambique, 1938 – 1961* (Portsmouth: Heinemann, 1996). He noted that the underdeveloping impact of the introduction of cotton production in Mozambique varied with class, place and gender. More importantly, the peasants were not passive victims of the process: rather they actively developed a variety of ways of coping with the development and where this was impossible peasants adopted various forms of resistance.

varied with time, location, social class and gender. The evidence from the Lake Chilwa basin also suggests that local farmers exercised their independent choices to register as plot holders in the schemes that were established by the state.

The study begins in 1946 when the colonial state formulated an agricultural policy which advocated the establishment of irrigation schemes to improve peasant productivity in the country. It ends in 2002 when a constitution for Domasi water user association (DWUA) was ratified as a framework for the operation and management of Domasi irrigation scheme after it is handed over from the state to the farmers. Domasi is one of the case studies of the irrigation schemes which the thesis has used.

The Study Area

The study uses the cases of Likangala and Domasi irrigation schemes located in the Lake Chilwa basin in south-eastern Malawi. The basin constitutes a long plain that stretches within the borders of such mountains as Zomba to the west, Chikala to the north, and Mulanje to the south-east and also the Lake Chilwa to the east (See Fig 2). Its annual rainfall averages at 950mm. Together with the Lake, the basin covers the districts of Machinga, Phalombe and Zomba with a total area of 8, 349 km² of which 32% is in Mozambique and 68% is in Malawi.⁵ As a catchment of Lake Chilwa, it has a network of rivers such as Phalombe, Domasi, Songani, Likangala, Naisi, Thondwe and Namadzi. Most of these rivers have their sources from the mountains of Mulanje and Zomba. By

⁵ See Malawi Government, *Lake Chilwa Wetland Management Plan*, (Lilongwe: Ministry of Natural Resources and Environmental Affairs, September, 2001) p.2

1998, the basin boasted a population of over 916, 447 with 144 571 residing in Machinga, 540 428 in Zomba, and 231 448 residing in Phalombe.⁶

Lake Chilwa is the largest inland drainage lake without an outlet in Malawi. The inland drainage nature of the lake was subsequent to a long historical process of drought and drying up. Nearly 8, 000 years ago, the lake underwent a prolonged drought which exposed the alluvial sand on the lake-bed to prevailing strong south-east winds (*mwera*). The wind created a northern sand bar which eventually closed the outlet of Lake Chilwa to Lake Chiuta, Lake Amaramba and the Rovuma River.⁷ Within the last century, Lake Chilwa has experienced eight occurrences of drying up: 1903, 1913-1916, 1922, 1934, 1943-1948, 1967, 1973, and 1995.⁸ While lack of an outlet increased the proneness of the areas around the lake to flooding during the rainy seasons, the recurrence of drought made the inhabitants of the basin to depend on irrigation for the production of crops.

The most outstanding feature of the basin is a wetland which in 1997 became a Ramsar Site, that is, a wetland of international importance according to the Ramsar Convention.⁹ Covering a total area of 2, 300 km², punctuated with open water, typha swamps, marshes, littoral flood plains, and sandy alluvial but hydromorphic soils, the Lake Chilwa wetland is the largest in Malawi, and has become home for birds, bees, people and animals. The nature of the soils often results in water logging during the rainy seasons. The network of water resources, the existence of the largest wetland and the lake constituted the major

⁶ *Lake Chilwa Management Plan*, p 2

⁷ *Lake Chilwa Management Plan*, p 8

⁸ *Lake Chilwa Management Plan*, p 6

⁹ *Lake Chilwa Management Plan*, p 6

geographical factors for the development of irrigation farming in the basin. The rivers, for example, provided water and fertile riverbanks to be used for the cultivation of maize and vegetables especially in the dry seasons. The hydromorphic soils and littoral floodplains, which mostly characterized the Lake Chilwa wetland heavily, favoured the production of rice. The wetland is also favourable for the grazing of livestock.¹⁰

The inhabitants of the basin are predominantly the Nyanja, Yao and Lomwe, who settled in the basin between the 16th and 19th centuries. Oral sources suggest that these groups of people settled in the basin in search of fertile lands, and in order to carry out slave trading activities and also to seek employment opportunities among the settler farmers.¹¹ After establishing themselves in the basin, they specialised in fishing, agriculture, salt making and trade.¹² Originally, fishing was the major economic activity, followed by farming and salt making.¹³ Presently, people from the basin depend on irrigation farming for the production of their food and cash crops.

From the 1880s, the basin saw the settlement of white farmers. For the next half a century, these settlers are remembered for the introduction of a market economy, western religion, a wage economy, and the development of a colonial capital at Zomba *boma* close to the Lake Chilwa basin.¹⁴ Most importantly, these settlers opened estates for the production of coffee, tobacco and cotton. The most outstanding estates in the Lake

¹⁰ Oral Interviews: Mr Kazembe, Mkotima Village, T.A. Mwambo, Zomba, dated 21 October 2003

¹¹ Oral Interviews: Chief Chirombo, Chirombo Village, T.A. Mposa, Machinga, 15 October 2003

¹² K. Phiri, "Yao Intrusion into Southern Malawi, Nyanja Resistance and Colonial Conquest, 1830 – 1900" *Transformational Journal of History*, Vol. 13, (1984), pp 157 - 176

¹³ Megan Vaughan, "Kinship and Class: Stratification in the Zomba-Chilwa Area of Southern Malawi, 1800 – 1914" History Seminar, University of Malawi, Chancellor College, 1978 -1979

¹⁴ For details see B. Pachai, "The Story of Malawi's Capitals: Old and New, 1891-1969," *Society of Malawi Journal*, Vol. 24, No. 1 (1971)

Chilwa basin were Sakata, Mgodhi, Mtengeranjiru, Kachulu, Rathdrum, and Chimpeni established between 1910 and 1918.¹⁵ As they all had to depend on water from the same rivers, the establishment of these estates intensified competition over the use of water for agriculture with the smallholder farmers in the basin.

Against this geographical and demographic background, the colonial state embarked on establishing irrigation schemes in the Lake Chilwa basin in the late 1940s. By the mid-1980s, nine irrigation schemes were fully established in the basin, seven of which were self-help schemes, while the other two were run by the state. The self-help schemes located in the basin included Mposa, Bimbi, Zumulu, Chibwana, Mikoko, Naming'azi and Kamwaza.¹⁶ The two schemes that were run by the state were Likangala and Domasi which drew water through gravity from Likangala and Domasi rivers, respectively. Likangala and Domasi were also among the sixteen state-run smallholder irrigation schemes established in Malawi between 1969 and 1982. They also constitute the case studies for this thesis. I preferred using cases of state-run to self-help irrigation schemes for two reasons. The first one is that unlike, the self-help schemes, the state-run schemes have a relatively longer history. The state started developing self-help schemes only from the early 1980s. The second reason is that state-run schemes provide a wider context of understanding the efforts the state made in promoting irrigation farming in the country. They enjoyed fully the support of the state in their daily operations. This was in sharp contrast with self-help schemes. After constructing self-help irrigation schemes, the state left the day-to-day running of the schemes in the hands of the local farmers.

¹⁵ BASIS Field Observations: *Dimba* Research Site, 20 October 2003

¹⁶ T. Peterson, Report on the Environmental Impact of Self-Help Rice Irrigated Schemes around Lake Chilwa in Malawi, March 1990

Of the sixteen irrigation schemes, Likangala and Domasi are particularly suited for this study on three grounds. The first reason had to do with the size of the schemes in comparison with other irrigation schemes developed in the country. Likangala and Domasi are the largest irrigation schemes in the country. The second reason has to do with their relatively long history. The schemes have been in existence for over thirty years. This time span makes them relevant for the study of the history of irrigation schemes in Malawi. Thirdly, the state intends to hand over the ownership and management of the two schemes to farmers, an idea which came to constitute a major irrigation reform in Malawi from the mid- 1990s.

The two cases were chosen particularly to provide a broader and comparative analysis of the history of irrigation schemes in the country. Likangala, for example, provides a case of irrigation schemes whose development and operation was done by state in the post-colonial period. Domasi, on the other hand, provides a case of irrigation schemes that were established with assistance from the Chinese (Taiwanese) government. Using two such cases provides a broader picture of the development of irrigation schemes in Malawi.

Review of Literature

Much of the literature on the agricultural history of Malawi concentrates on pre-colonial and colonial agricultural production, the impact of capitalist production on African peasantry, labour relations on colonial and post colonial estates, evolution and impact of

agricultural policies in Malawi, the attempts by the colonial state to promote peasant agriculture in the post war period, the impact of the conservation policies on the peasants, and peasant resistance.¹⁷ The theme that has been inadequately studied in this agricultural historiography of Malawi is that of irrigation farming. Very often, historians have mentioned irrigation farming in passing to explain political and economic developments of the country. Megan Vaughan, for example, mentioned in passing the existence of rudimentary forms of irrigation in her study of kinship and class stratification in the Lake Chilwa basin.¹⁸ However, she never gave examples of these forms of irrigation farming that were practised in the Lake Chilwa basin. Similarly, William Beinart and Elias Mandala recognised the existence of irrigation in the lower Shire valley in forms of

¹⁷ For details see R.W. Kettlewell, *An Outline of Agrarian Problems and Policy in Nyasaland* (Zomba: Government Press, 1955); R.W. Kettlewell, "Agricultural Change in Nyasaland, 1945 –1960," *Food Institute Studies*, Vol 9, No. 5, (1965) pp235 –285; M. Channock, "Notes for an Agricultural History of Malawi," *Rural Africana*, Vol. 20, (1973), pp 29-30; B. Pachai, *Malawi: The History of the Nation* (London: Longman, 1973); M. Channock, "Agricultural Change and Continuity in Malawi," in Palmer, R. and Parsons, N. (eds.) *The Roots of Rural Poverty in Central and Southern Africa*, (Los Angels: University of California, 1977) pp 396 -409; M.C. Newbury, "Ubureetwa and Thangata: Catalyst to Peasant Political Consciousness in Rwanda and Malawi" *Canadian Journal of African Studies*, Vol 14, No1, (1980) pp 97-111; J. McCracken, "Peasants, Planters and the Colonial State: The Case of Malawi, 1905 –1940," *Journal of Eastern African Research and Development*, Vol. 12 (1982) pp 21-35; L. Vail, "The State and the Creation of the Malawi's Economy," in Rotberg, (ed) *Imperialism, Colonialism and Hunger*, (Lexington, 1983) pp39-86; K. Phiri, "Production and Exchange in Pre-Colonial Malawi" in *Malawi: An Alternative Pattern of Development*, Seminar Proceedings, No. 25 (Edinburgh University press, 1985) pp5-32; J. McCracken, "Sharecropping in Malawi: The Visiting Tenant System in the Central Province, 1920 –1968" in *Malawi: An Alternative Pattern of Development*, Seminar Proceedings, No. 25 (Edinburgh University press, 1985) pp33-65; W.C. Chirwa, " 'Theba is Power': Rural Labour, Migrancy and Fishing in Malawi, 1890s – 1985" Ph.D. Thesis, Kingston, Queen's University (1990); E. Mandala, *Work and Control in a Peasant Economy: A History of the Lower Tchiri Valley in Malawi* (Madison: University of Wisconsin Press, 1990); W. O. Mulwafu, "The Impact of Capitalist Development on the African Peasantry in Malawi and Kenya" M.A. Thesis, Queen's University, 1990; R. Mkandawire, "The Land Question and Agrarian Change in Malawi" in G. Mhone *Malawi at the Crossroads*, (Harare: Sapes, 1992) pp171-185; W. Chirwa, " 'The Garden of Eden': Sharecropping on the Shire Highlands Estates, 1920-1945," in A Jeeves and J Crush (eds) *White Farmers, Black Labour: The State and Agrarian Change in Southern Africa, 1910 – 1950*, (Portsmouth: Heinemann, 1997) pp265-280; W. Mulwafu, "The State, Conservation and Sustainability in a Peasant Economy in Malawi, 1860 –1964," PhD Thesis, University of Minnesota, December 1999; L. Malekano, "Peasants, Politics and Survival in Colonial Malawi, 1891 –1964," PhD Thesis, Dalhousie University, Halifax, Canada, 1999; W. Mulwafu, "Soil Erosion and State Intervention in Estate Production in the Shire Highlands Economy of Colonial Malawi, 1891 –1964" *Journal of Southern African Studies*, Vol. 28, No 1 (2002) pp 25-43

¹⁸ See Vaughan, "Kinship and Class"

dimba cultivation whereby sorghum, millet, rice and cotton were grown in the marshes along the Shire River.¹⁹

In their attempt to analyse the colonial agricultural policy of 1946, Kettlewell and Nankumba, underscored the development of irrigation schemes as one of the ways the state adopted to improve peasant productivity in the country.²⁰ However, they failed to show the actual policies that related to irrigation, and indeed the attempts the colonial state in Malawi made to establish irrigation schemes and the impact these had on the welfare of the peasants in the country.

Nankumba also draws attention to the adoption of rural development by the post-colonial state as a development strategy against famine and rural poverty.²¹ The idea began from the 1970s with funding from the World Bank. Rural development entailed a planned socio-economic change undertaken by the state with the aim of improving the living standards of the rural poor.²² Its objectives were to increase agricultural production, reduce rural poverty, and increase rural people's contribution to the national economy. According to Nankumba, the development of irrigation schemes was one of the components of this programme.

¹⁹ See W. Beinart, "Agricultural Planning and the Late Colonial Technical Imagination: The Lower Shire Valley in Malawi, 1940–1960" in *Malawi: An Alternative Pattern of Development*, Seminar Proceedings, No. 25 (Edinburgh University press, 1985) pp 93-143; and Mandala, *Work and Control*

²⁰ Kettlewell, "Agricultural Change in Nyasaland" pp. 237-8; J. Nankumba, "Evolution of Agricultural Policy in Malawi and the National Rural Development Programme (NRDP): A Historical Review, 1891-1980," Department of Agricultural Economics, University College of Wales, Aberystwyth, May 1981

²¹ See Nankumba, "Evolution of Agricultural Policy in Malawi"

²² See also, J. Heyer, P. Roberts and G. Williams, (eds) *Rural Development in Tropical Africa* (New York: Martin Press, 1981); and G. Williams, "Rural Development: Partners and Adversaries," *Rural Africana*, Nos 25-26 (1986) pp 1-23

From the late 1970s, there was growing academic interest in studying irrigation farming in Malawi from other disciplines such as geography, anthropology, agriculture, economics, and sociology. The first of these studies was done by Alufeo Chilivumbo in 1978.²³ In his attempt to analyse the state of rural development programmes, Chilivumbo includes the establishment of irrigation schemes as an important component of rural development. He notes that irrigation schemes were only used by Dr Banda to produce rice for the urban communities, and that they were heavily politicised. However, he did not examine how the irrigation schemes came into being, let alone, how they were organised.

Later in 1984, Makato and Mpande carried out studies on smallholder irrigation schemes in Malawi in preparation for the African Regional Symposium held in Zimbabwe on smallholder irrigation scheme.²⁴ To a considerable degree, the studies provide a general overview of the sixteen irrigation schemes constructed in the country between 1968 and 1982, the role of farmers in the schemes, and the problems the schemes were facing at that time. Like Chilivumbo, their studies are sketchy and thus, do not provide details on the development of irrigation schemes in Malawi.

From the mid-1990s, relatively broader studies on smallholder irrigation schemes began to appear. The pioneer of these studies was Paul Kishindo who examined the farmers'

²³ A. Chilivumbo, "On Rural Development: A Note on Malawi's Programmes for Exploitation," in *African Development*, Vol. 2 (1978), pp. 41-55

²⁴ C. J. Makato, "Smallholder Rice Irrigation Schemes 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. Mphande, "Smallholder Irrigation Schemes in Malawi" in Blackie, M. (ed) *African Regional Symposium on Smallholder Irrigation* (Harare: University of Zimbabwe, 1984) pp 317-236

turn over on settlement schemes using the case of Limphasa irrigated rice schemes in 1996.²⁵ His major conclusion is that the rate of turn over on irrigation scheme was very high due to poor social amenities, poor earnings by the farmers, and the introduction of IET 4094 to replace Blue Bonnet rice. In the following year, Cammack and Chirwa, jointly studied the relationship between development and human rights in Malawi.²⁶ They observe that the development of irrigation schemes, like many other development programmes, transformed the resource base of the rural communities at the expense of human rights. Using the case of Wovwe rice scheme, Cammack and Chirwa note that irrigation schemes were associated with land dispossession, lack of participation by the beneficiary farmers, gender discrimination, and use of threats and coercion in the management of irrigation schemes. Encouraged by these findings, Wiseman Chirwa ventured into a fully-fledged study on land use and the provision of extension services at Wovwe irrigation scheme located in northern Malawi.²⁷ Far from being effectively patronised by the farmers, he argues, irrigation schemes were characterised by high turn over rates of farmers, seasonal variations in patronage, under utilisation of some key facilities, incessant political tensions, gender biases in the allocation of land and extension services. He concluded, therefore, that small-scale irrigation schemes could not be regarded simplistically as a panacea to food security and increased agricultural production at the local community levels.

²⁵ P. Kishindo, "Farmer Turn Over 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

²⁶ D Cammack and W Chirwa, "Development and Human Rights in Malawi" in Chilowa, W (ed) *Bwalo: Forum for Social Development*, Issue 1 (Zomba: CSR, 1997) pp105 –121

²⁷ W. Chirwa, "Land Use and Extension Services at Wovwe Rice Scheme, Malawi," *Development Southern Africa*, Vol. 19, No 2, June 2002 pp 307-327

Mulwafu and Nkhoma have also studied how water is used and managed in irrigation schemes using the cases of Likangala scheme complex in the Lake Chilwa basin.²⁸ They argue that the establishment of irrigation schemes intensified competition for water along the Likangala River. The growing number of interest groups in the scheme and the river, they observed, has contributed greatly to this competition and, that in turn, this undermines the economic potential of the schemes. This, they contend, raises the question of the sustainability of the scheme once handed over to the farmers according to the new government irrigation policy.²⁹

Recently, Nkhoma and Mulwafu have managed to study the experiences of irrigation management transfer at Likangala and Domasi irrigation schemes.³⁰ In this study, it has been observed that the concept of irrigation management transfer was adopted in the early 1990s against a background of poor performance of irrigation schemes and the desire of the state to conform to global trends and approaches in the management of irrigation schemes. However, they argued that lack of public awareness and inadequate funds are militating against the success of IMT in the two schemes.³¹

²⁸ W. Mulwafu and B. Nkhoma, "The Use and Management of Water in the Likangala Irrigation Scheme Complex," *Physics and Chemistry of the Earth*, Vol. 27. (2002) pp 839 -844

²⁹ Mulwafu and Nkhoma, "The Use and Management of Water," p. 843. The issue of handover of irrigation schemes has been adopted by the government and constitutes the major irrigation reform in the 2000 Irrigation Policy and Strategies. See also Malawi Government, *National Irrigation Policy and Strategies*, (Lilongwe: Ministry of Agriculture and Irrigation, 2000)

³⁰ B. Nkhoma and W. Mulwafu, "The Experiences of Irrigation Management Transfer in Two Irrigation Schemes in Malawi, 1960s – 2002" *Physics and Chemistry of the Earth*, 29 (2004) pp 1327-1333. Note that this paper was written using data collected for this thesis.

³¹ The idea of hand over of irrigation schemes has been widely discussed in chapter four the thesis. In some areas, the information might be similar because the paper by Nkhoma and Mulwafu is part of the present thesis.

While these recent studies have provided a broad overview of some developments taking place in irrigation schemes, they fail to account for the historical, economic, political and ideological context in which the schemes were developed over time. Mostly, the studies concentrated on irrigation schemes that were constructed by the post-colonial state, and do not provide a link between the colonial schemes and the post-colonial schemes.

Studies done elsewhere suggest that irrigation farming is a socio-economic activity of great antiquity which in time contributed to the social, economic and political development of the world.³² From the ancient times, the practice of irrigation farming evolved from indigenous to large-scale to small-scale irrigation practices.³³ However, Barnett, Cernea and Hogg argue that the development of irrigation schemes did not result in the improvement of the welfare of the peasants in many parts of Africa.³⁴ Often the results were land alienation, displacement of local inhabitants and the disruption of local economies and social systems. In Zimbabwe, the development of smallholder irrigation schemes was meant to benefit more white settlers than Africans.³⁵ Most of the schemes were in the hands of white farmers.

³² See S. Postel, *Pillar of Sand: Can Irrigation Miracle Last?* (London: Norton and Company, 1999)

³³ The evolution of irrigation from indigenous practice, large scale irrigation and small-scale farming has been elaborated clearly in W. Adams, *Wasting the Rains: Rivers, People and Planning* (Minneapolis, 1992), R. Boelens and G. Davila (eds.) *Searching for Equity: Conceptions of Justice and Equity in Peasant Irrigation* (Netherlands: van Gorcum, 1998), and also Postel, *Pillar of Sand*

³⁴ For details see T. Barnett, *The Gezira Scheme: an Illusion of Development* (London: Fran Cass, 1977); M. Cernea, *Putting People First: Sociological Variables in Rural Development* (London: OUP, 1985); and R. Hogg, "Settlement, Pastoralism and the Commons: The Ideology and Practice of Irrigation Development in Kenya" in D. Anderson and R. Grove, (eds.) *Conservation in Africa: People, Policies and Practices* (New York: CUP, 1987)

³⁵ See E. Manzungu, and P. Van Zaag, (eds.) *The Practice of Smallholder Irrigation: The Case Studies from Zimbabwe* (Harare: University of Zimbabwe, 1996) and also E. Manzungu, et al,(eds.) *Water for Agriculture: Policy and Management Options for the Smallholder Sector* (Harare: University of Zimbabwe, 1999)

It is against this background that the present study has been attempted. First, it contributes modestly to the history of irrigation farming which has been inadequately examined in the agricultural historiography of Malawi. Second, it provides a historical dimension to the on-going studies on irrigation farming which began to appear from the 1970s by sociologists, anthropologists, and geographers. Third, the study contributes to the debates on the impact of rural development programmes in Malawi which started in the 1970s with funding from the World Bank. In general, the study provides a historical profile of the efforts the colonial and post-colonial state made to promote irrigation farming from the mid-1940s to 2002 and the impact irrigation had on the development of the country.

Methodology

The thesis draws heavily on a variety of data within the confines of written and oral sources. Oral sources were the primary sources of information for the study. Granted their flaws, oral testimonies were used to capture the life experiences of the farmers in the development of irrigation schemes. In their study on the significance of oral sources, Isaacman, Vansina, Henige, and Phiri agree that oral sources, if carefully collected and rigorously analyzed, improve our understanding of the complexities of rural life by getting an inside view of the impact of irrigation development on the farmers.³⁶

³⁶ See A. Isaacman, "Peasants and Rural Social Protest in Africa," *African Studies Review*, Vol. 33, No 2 (September 1990) pp 1-120; J. Vansina, "Afterthoughts on the Historiography of Oral Traditions" in B. Jewsiewick and D. Newbury (eds) *African Historiographies*, (London: Sage, 1985); D. Henige, *Oral Historiography* (London: Longman, 1982); J. Fage, "The Investigation of Oral Traditions in the Northern Territories of the Gold Coast" *Journal of the Historical Society of Nigeria*, Vol. 1 (1956); K. Phiri "The Collection of Oral Historical Data in Malawi Since 1964" History Seminar Paper, Chancellor College,

Furthermore, they provide first hand information and contain subjective elements that historians would find difficult to capture from written sources.³⁷ Against this background, oral interviews were conducted with farmers, chiefs, ex-MYP members, scheme managers, and state officials. Though farmers were sampled randomly, particular interest was given to those farmers who had been cultivating in the schemes from the time of construction in the late 1960s. These farmers were identified through local leaders in villages surrounding the schemes. From these interviews, data was collected on pre-scheme relations of production, the construction of irrigation schemes, the role the farmers played in the development of irrigation schemes, how the management of irrigation schemes changed over time, the challenges irrigation schemes faced and the impact irrigation schemes had on the development of the country.

Archival sources consulted included government documents on irrigation, land and agricultural policies and laws which I collected from the Ministry of Agriculture and Irrigation, Bunda College of Agriculture, and the irrigation schemes in question. Furthermore, files containing minutes, reports and correspondences on issues related to irrigation development at the Malawi National Archives in Zomba were also examined. These files yielded important information on the official perception on the development of irrigation schemes, irrigation policies and farmers responses. Secondary literature on agricultural and economic development of Malawi from the libraries of Chancellor College and Bunda College of Agriculture of the University of Malawi, and the Malawi

1990; K. Phiri, "Oral Historical Research in Malawi Since 1964" History Seminar Paper, Chancellor College, 1984/85

³⁷ See A. Isaacman, "Peasants and Rural Social Protest in Africa," *African Studies Review*, Vol. 33, No 2 (September 1990) pp 1-120

National Archives were of paramount use. Through these books, existing gaps on the agrarian history, on one hand, and irrigation schemes, on the other, were identified and the major economic and agricultural developments in Malawi traced.

Finally, data collected by the BASIS project³⁸ in which I worked as a Research Assistant was also examined. In the project, baseline surveys, field observations, community profiles, and focus group discussions have been conducted on formal and informal irrigation in the Lake Chilwa basin. From these studies, the researcher has managed to come up with a broader understanding of the socio-economic status of the Lake Chilwa basin such as different perceptions on the development of the schemes among different categories of people in the area, gender relations, changes in the management of irrigation schemes over time, and the preparation for hand-over of irrigation schemes.

Limitations of the Study

The study was attempted under one major constraint: inadequacy of archival and secondary written sources. With regard to archival sources, it was noted that there are no archival documents on Domasi irrigation schemes between 1972 and 1980 when the scheme was under the Chinese Agricultural and Technical Mission.³⁹ The Chinese were not interested in keeping written records of their activities on the scheme. Similarly,

³⁸ BASIS is a collaborative research project funded by USAID. The study involved researchers from Michigan State University, Harvard University and Chancellor College of the University of Malawi. Between 2001 and 2004, the project studied the interface of land and water in the Lake Chilwa catchment area of southern Malawi. In 2001, BASIS granted me a research assistantship to study for an M.A. in African Social History at Chancellor College.

³⁹ The Chinese Agricultural Technical Mission was a group of the Chinese from Taiwan who came to Malawi in the early 1960s to help the country in the development of agriculture.

there are no archival records of both schemes for the period between 1980 and 1993. The documents dealing with this period were destroyed during *operation bwezani* when the Malawi Army was assigned to disarm the Young Pioneers in 1993. Furthermore, there are no archival documents for the period between 1990 and 2002. According to state policy, researchers can only access documents from the Malawi National Archives that are thirty years old. To overcome these problems, I had to depend on oral sources, and I also consulted offices of the Ministry of Agriculture and Irrigation for documents dealing with the most recent period of the study.

On secondary sources, there is a general lack of historical papers on irrigation farming in Malawi. As a result, the study has depended on literature of irrigation farming from other disciplines such as anthropology, economics, and sociology. The greatest task was to historicize this literature to reflect historical perspectives of irrigation farming in Malawi. Thus, ideas from economic, environmental and social history have been used to provide the conceptual framework for studying the history of irrigation farming.

Summary of the Chapters

Besides this introductory chapter and the conclusion, the thesis is divided into four chapters. The second and third chapters examine the establishment of irrigation schemes in Malawi in general and the Lake Chilwa basin in particular. It has been observed that, although the history of irrigation schemes has its roots from the colonial period, irrigation schemes were fully established between 1969 and 1982. It was actually between 1969

and 1982 that the state constructed sixteen irrigation schemes, two of which are Likangala and Domasi located in the Lake Chilwa basin. In developing these schemes, the state depended on the Chinese Government, traditional leaders, and the Young Pioneers. The fourth chapter examines the proposed hand over of irrigation schemes to the farmers which came to characterise the irrigation reforms between 1980 and 2002. The hand over of irrigation schemes was proposed primarily to reduce public expenditure. The chapter observes that, although the hand over of irrigation schemes was adopted in the mid-1990s, its debate began in the early 1980s as the state began to struggle to maintain irrigation schemes amidst financial constraints arising from the economic crisis of the late 1970s, and the SAP of the 1980s. The last chapter discusses the impact of irrigation schemes in Malawi. The chapter observes that irrigation schemes, despite the problems and challenges they faced, contributed greatly to an increase in the production of rice and infrastructure developments of the country. The chapter has also drawn attention to variations in the impact of irrigation schemes in Malawi.

Chapter Two

EARLY COLONIAL ATTEMPTS TO PROMOTE IRRIGATION FARMING IN MALAWI, 1946 - 1964

Introduction

This chapter examines the efforts the colonial state made to promote irrigation farming in Malawi. It begins with a look at the origins of state's interest in irrigation farming which surfaced from the mid-1940s. It then explores various ways the colonial state in Malawi adopted to promote irrigation farming and the impact these efforts had in the country. Thereafter the chapter discusses the challenges the state faced in the development of irrigation projects in Malawi towards the beginning of the 1960s.

The Origins of State's Interest in Irrigation Farming in Malawi in the Mid-1940s

Despite the existence of some rudimentary forms of irrigated farming, it was not until 1946 that the colonial state in Malawi began to systematically promote irrigation farming in the country. Prior to 1946, irrigation was mildly practised by the white settlers and peasants without official recognition. In the pre-colonial times, peasants in Malawi

carried out irrigation in the form of flood cropping, and *dimba* cultivation in the existing wetlands and along river banks where vegetables, maize, rice, and others were grown using residual moisture or simple water harvesting techniques such as buckets.⁴⁰ White settlers, on the other hand, practised irrigation for the production of seedlings of tobacco and similar crops.

The post-war period marked the beginning of the state's recognition of irrigated agriculture in Malawi. Immediately after the Second World War, the colonial state realized that the economy of the country lay in smallholder agriculture.⁴¹ Consequently, the colonial state in Malawi formulated an agricultural policy in 1946. The main objectives of the agricultural policy were to:

- conserve the soil,
- encourage the production of more and better food crops,
- develop an agricultural cash economy, and
- promote modern methods of farming.⁴²

In order to achieve these objectives, the state outlined a number of activities which included soil conservation and early land preparation campaigns, establishment of agricultural extension and education institutions, establishment and improvement of agricultural research, credit and subsidies, control and regulation of marketing by the

⁴⁰ See for example, Mandala, *Work and Control in a Peasant Economy*; Vaughan, "Kinship and Class."

⁴¹ See Kettlewell, "Agricultural Change in Nyasaland"; and Nankumba, *Evolution of Agricultural Policy in Malawi*

⁴² See Kettlewell, 'Agricultural Change in Nyasaland,' p.238

state, and introduction of development schemes.⁴³ From the last activity, the state conceived the idea of developing irrigation projects which included the establishment of irrigation schemes in the country. The main reason for the development of smallholder irrigation schemes was the desire to modernise peasant agriculture in order to increase crop production and thereby minimise problems presented by drought, rapid population growth, and land scarcity.⁴⁴ Settled in the schemes, the peasants would effectively be trained in modern methods of farming through the provision of extension services, farm inputs and loan facilities.⁴⁵

A number of factors prompted the colonial state in Malawi to seriously consider shifting towards the promotion of smallholder irrigation schemes in the mid-1940s. The first one was the Economic Depression of 1929-1933. The depression adversely affected the performance of settler agriculture on which the colonial economy was centred. Not only did crops produced by the white settlers lose their international market but the crops also became vulnerable to price fluctuations.⁴⁶ During the times of poor prices, African smallholders became successful in the production of crops such as tobacco and cotton.⁴⁷ The second factor was drought and famine which occurred in the country in the 1948/49 growing season. These disasters encouraged the state to adopt irrigated agriculture as an adaptive strategy that would mitigate the deleterious impact of droughts and floods on the

⁴³ Kettlewell, "Agricultural Change in Nyasaland" pp239-252

⁴⁴ Malawi Government, "Review of Malawi Agricultural Policies and Strategies," Lilongwe: Ministry of Agriculture and Irrigation, October 1999, pp 69 -70

⁴⁵ C. U. Mphande, Opening Speech on a Workshop on Handing Over of Government Irrigation Schemes to Smallholder Peasants, Nkopola Lodge, Mangochi, 4 -6 September 2000

⁴⁶ See E. Mandala, *Work and Control*,

⁴⁷ See W. Mulwafu, "The Impact of Capitalist Development on the Peasantry in Malawi and Kenya"

production of crops.⁴⁸ The other factor was the desire of the state to promote the production of rice in the country. By the early 1940s, rice was becoming the second staple food in the country, and mostly favoured by the white settlers who were not used to *nsima* made from maize. The existence of swamps and marshes in some parts of the country, and also the production of rice by smallholder farmers in the country presented to the state the possibility of increasing the production of rice through irrigation schemes.⁴⁹

The last factor had to do with global ideological shifts from large-scale to small-scale irrigation farming. Until the post-war period, states supported the idea of developing large-scale irrigation characterised by the use of scientific engineers, adoption of Green Revolution principles of crop production, dam construction and heavy financial support from the state.⁵⁰ At the time, the thinking revolved around developing "...large, capital – intensive projects that would substantially raise the productivity of a labour force effectively controlled by the state apparatus."⁵¹

From the mid - 1940s, however, it became clear that plantation farming together with large scale irrigation schemes was less successful in improving the lives of the peasants in the rural communities. It was discovered that large-scale plantations were costly in terms of construction and maintenance, and in most cases these costs exceeded the net

⁴⁸ See Malawi Government, "Review of Malawi Agricultural Policies and Strategies" (London: Ministry Agriculture and Irrigation, October 1999) pp 69- 70

⁴⁹ MNA: Nyasaland Protectorate, Report of the Department of Agriculture for the Year 1950

⁵⁰ S. Postel, *Pillar of Sand: Can the Irrigation Miracle Last*, (London: Norton, 1999), p.40

⁵¹ W. Adams, *Wasting the Rains: Rivers, People and Planning* (1992) p156

profits of the schemes.⁵² Furthermore, large-scale schemes proved to be socially and environmentally destructive to human settlement and existing local economies.⁵³ In as far as equity was concerned, large-scale irrigation schemes worked to benefit those who were already well off thereby increasing class differentiation at local level.⁵⁴ Against these criticisms of large-scale irrigation farming, small scale irrigation came to be considered as more cost effective, manageable, and equitable. Furthermore, it was found efficient partly because it was easy for the donors to identify and target the beneficiaries, and partly being less bureaucratic the delivery service would be fast and enjoy a considerable degree of local ownership.⁵⁵ In addition, small-scale irrigation would improve water productivity, protect the environment, and stem the exodus of rural dwellers to burgeoning cities.⁵⁶ On top of this was the whole notion that ‘small is beautiful, affordable, and efficient.’⁵⁷

The Major Colonial Irrigation Projects, 1948 – 1960

Beginning from 1948, the colonial state in Malawi embarked on a series of irrigation projects across the country. The British Government set up a Colonial Development Corporation (CDC) in 1948 to undertake promising projects in its colonies for which private finance was not available.⁵⁸ With funding from the CDC, potential areas for irrigated rice production were identified along the shores of Lake Malawi in Nkhata Bay,

⁵² Postel, *Pillar of Sand*, p. 202

⁵³ Chirwa, “Land Use and Extension Services” p. 302

⁵⁴ Chirwa, “Land Use and Extension Services,” p. 302

⁵⁵ See W. Chirwa, “Land Use and Extension Services,” p. 309

⁵⁶ Postel *Pillar of Sand*, p. 202

⁵⁷ Adams, *Wasting the Rains* P. 156

⁵⁸ See Kettlewell, “Agricultural Change in Nyasaland” p. 251

the Lake Chilwa basin and the Lower Shire. The existence of littoral floodplains and hydromorphic soils were among the factors that encouraged the colonial state in Malawi to single out these areas for irrigation development. Archival sources also indicate that throughout the colonial period, there were rice growers in the valleys of Limphasa, Lake Chilwa basin and the Lower Shire, and the colonial state wanted to promote these rice growers.⁵⁹

The first step the colonial state took was to promote these rice growers. Immediately after formulating the agricultural policy, the colonial state in Malawi began to distribute high yielding varieties of rice like Faya and Kotakota to rice growers along Limphasa Valley and Chilwa/Chiuta littorals. Small demonstration plots were also established in the Domasi Valley Area in 1948 to show the advantages of using nurseries to the rice growers in the area.⁶⁰ Later in 1954, the state decided to introduce cooperative marketing organisations for rice to be located in the swamps where the rice growers were found.⁶¹

These attempts were followed by the launch of irrigation projects in the Limphasa, Lake Chilwa basin and the Lower Shire. The earliest colonial irrigation project was the establishment of Limphasa rice irrigation scheme in Nkhata Bay district in 1949. The scheme covered 700 acres constructed in the Limphasa dambo. The Department of

⁵⁹ MNA: Nyasaland Protectorate, Annual Report, 1953

⁶⁰ MNA: NSG 1/6/3 Domasi Valley Area, 1943 -1952

⁶¹ MNA: NSZ 4/1/7 Annual Report, Zomba District, 1954

Agriculture cultivated rice in the scheme on trials, and in the following year farmers were allowed to start planting in the scheme.⁶²

The second project was the Shire Valley Project (SVP) which the state attempted between 1952 and 1957. The SVP had three interrelated elements: the construction of a dam in the Upper reaches of the Shire River to regulate the levels of Lake Nyasa, the production of hydro electric power in the middle cataract of the Shire river, and the drainage of the Elephant Marsh in the Lower Shire valley.⁶³ Although the primary reason of the project was to reclaim the Shire River for the purpose of establishing hydroelectric power station, the colonial state in Malawi also wanted to use the project to promote irrigation farming in the Lower Shire Valley.⁶⁴ After the project collapsed due to floods in 1957, the colonial state resorted to more specific small-scale rice irrigation projects at Masenjere, north of Chiromo.⁶⁵

Similar projects were undertaken in the Lake Chilwa floodplains. A Phalombe-Chilwa development project was launched in 1952 to test a variety of crops such as paddy, wheat and fibres. Out of this project, a 100 acre pilot scheme was established to examine the possibility of establishing a 10, 000 acre rice project, irrigated from the Sambani River which flows into Lake Chilwa. The Colonial Development and Welfare Grant was provisionally made available for the project, and by the end of 1953, preparations to

⁶² MNA: Nyasaland Protectorate, Report of the Department of Agriculture, 1950

⁶³ Kettlewell, "Agricultural Change in Nyasaland" p 238; Nankumba, *Evolution of Agricultural Policies in Malawi*, p18

⁶⁴ Beinart, "Agricultural Planning" p.138

⁶⁵ Beinart, "Agricultural Planning" p.138

construct the pilot scheme were started.⁶⁶ During the latter part of 1954, Community for Cooperative Development in collaboration with the Department of Agriculture undertook investigations on the possibilities of increasing rice production in the swamps to the west of Lake Chilwa.⁶⁷ Out of these investigations, a scheme for the production of paddy under controlled irrigation was set up in Njala area of the Sakata section between Mphyupyu hill and Lake Chilwa in 1957. In the same year 40 acres were cultivated with the use of bunds to confine waters from a local stream, and the scheme was extended to cover a total of 430 acres in 1958. The construction of the earth works was done with the use of tractors and ox-drawn ploughs. Local farmers were asked to provide voluntary labour for the construction of the scheme.⁶⁸

After establishing Njala rice scheme, the colonial state decided to construct similar schemes in other parts of the Lake Chilwa basin. Following this decision, a geographical survey was done in the area of GVH Khanda with the objective of establishing a scheme in the area in June 1959.⁶⁹ By the end of August 1959, ridges at six-inch vertical intervals and also a canal to bring water from the Naisi river into the scheme were constructed.⁷⁰ The two schemes, Njala and Khanda, were to become part of the Likangala irrigation scheme complex in the post-colonial period.

⁶⁶ MNA, Nyasaland Protectorate, Annual Report, Department of Agriculture, 1953

⁶⁷ MNA, NSZ 4/1/7 Annual Report, Zomba District, 1954

⁶⁸ MNA NSZ 4/3/7, Monthly Report, Zomba July/ August, 1958

⁶⁹ MNA NSZ, Monthly Report, Zomba District, July 1959

⁷⁰ MNA NSZ 4/3/7 Monthly report, Zomba District, August/September 1959

Challenges of Colonial Irrigation Developments, 1957-1964

The efforts the colonial state in Malawi made to promote irrigation farming did not go without challenges. Beginning from the late 1950s, a combination of ecological, political and economic factors militated against the success of the colonial state to develop irrigation schemes in the country. Some of the ecological factors that frustrated the colonial state were drought and floods. For example, heavy rains and storms in 1956/7 raised the levels of Lake Malawi which breached the flood bunds along the Shire river. As a result, lakeside villages and irrigation plots along the Shire river in the Lower Shire were flooded. The event terminated the desire of the colonial state in Malawi to promote irrigation schemes in the Shire valley.⁷¹ Similar events happened at Khanda whereby the floods from the Lake Chilwa drained the plots close to the lake in 1959. This was, however, followed by drought in 1960 which also affected the flow of water into the scheme. It was reported that:

“Khanda rice scheme is hovering on the edge of failure because of insufficient water coming down the Naisi stream, and it appears unlikely that there will be sufficient irrigation to enable growers on the scheme to produce any worthwhile results.”⁷²

Economically, the colonial state in Malawi realised that the cost of implementing these projects was beyond its reach. More complications resurfaced as the Federal State was

⁷¹ Beinart, *Agricultural Planning and the Late Colonial Technical Imagination*, p.137

⁷² MNA: NSZ 4/3/7 Zomba District Annual Report, 1960

determined to concentrate its finances in the development of the Kariba dam.⁷³ Consequently, funding the development of irrigation schemes in Malawi did not attract much attention by the Federal State.

The situation was compounded by nationalist struggles which characterised the political developments in the country from the late 1950s. Political opposition constrained the colonial state to continue developing irrigation schemes in the country.⁷⁴ When the country attained independence in 1964, most of the irrigation projects were incomplete. It remained the duty of the post-colonial state to continue with projects of the colonial state on irrigation farming.

Conclusion

The forgoing chapter has attempted to examine the efforts the colonial state in Malawi made to promote irrigation farming in Malawi. The development of irrigation schemes, the chapter observed, was conceived from the ecological, economic, political and ideological context of the mid-1940s. To promote irrigation, the colonial state provided high yielding varieties of rice to growers, operated irrigation demonstration gardens, and also constructed irrigation schemes in the country. The chapter has also observed that the colonial state did not develop irrigation schemes without challenges and problems. Ecological, economic and political factors posed a big challenge to the colonial state. The nationalist struggles crippled every desire by the state to continue constructing irrigation schemes in the country.

⁷³ J. Nankumba, *Evolution of Agricultural* p. 18

⁷⁴ MNA, NSZ 4/3/7, Zomba District, Monthly Report, August 1960

Chapter Three

IRRIGATION SCHEMES IN THE POST-COLONIAL PERIOD, 1964 - 1982

Introduction

The preceding chapter noted that, by the time the country attained independence, most of the irrigation projects the colonial state started were incomplete. This chapter observes that the vision of establishing irrigation schemes in the rural communities continued to feature high on the development agenda of the post-colonial state. Beginning from the mid-1960s, the post-colonial state was determined to promote smallholder agriculture through the establishment of irrigation schemes. The chapter begins by examining the regulations and guidelines the post-colonial state formulated to promote irrigation farming in the country. Thereafter, it demonstrates how the state established irrigation schemes in the country between 1969 and 1982, using the case studies of Likangala and Domasi irrigation schemes. The last part highlights some of the problems the post-colonial state faced in its effort to promote irrigation farming in the period of study. The chapter argues that the post-colonial state inherited the colonial vision of irrigation

farming, but this was done with more specific guidelines and regulations, and also funding from the Chinese state and the British Aid.

Irrigation Regulations, Rules and Licence in Malawi, 1964 –1968

Prior to 1965, there were no specific regulations and guidelines on the development of irrigation schemes in the country. The colonial agricultural policy simply outlined the construction of irrigation schemes as one activity of promoting peasant agriculture, but did not provide clear measures, and guidelines on how the schemes were going to be constructed and managed.

The post-colonial state realised that one of the reasons why the colonial state faced a lot of problems in promoting irrigation farming was partly due to the absence of irrigation guidelines and regulations. As a result, between 1964 and 1968, the post-colonial state first concentrated on formulating regulations and guidelines on irrigation farming in the country. The Land Act of 1965 was passed in which Section 34 was wholly devoted to Conditions of Licence on Settlement Schemes in Malawi.¹ Originally irrigation schemes were known as settlement schemes. The section outlined the agreements that farmers were supposed to make before they were given plots on irrigation schemes. It also outlined a list of offences on irrigation schemes. Among other things, the farmers were required to agree to maintain their holdings, field feeders and drainage channels; to comply with all instructions given to them by management; and also to pay to management, on demand, such rates in respect of provision of water, maintenance of

¹ MNA, GRS 13/105/65 Malawi Land Act, 1965

irrigation structures, fencing, canals and other services in respect of their holdings. The list of offences were as follows:

- Unlawful interference with the flow of irrigation water in canals or the opening or closing of control gates within the areas;
- Unlawful use of irrigation water by taking irrigation water out of turn or otherwise;
- Refusing to permit the authorised passage of irrigation water across his holding;
- Wilful damage or obstruction of canals or control works; and
- Refusing to accept or drain off irrigation water when required to do so.

The section made it clear that whosoever was found guilty of these offences would be evicted from the schemes. The section was converted into an Irrigation Ordinance in 1968.²

The Land Act was followed by the formation of the Irrigation Branch in 1967 to deal with matters related to irrigation farming in Malawi. The Irrigation Branch was to operate under the Ministry of Agriculture and Natural Resources.³ A Settlement Branch was formed in 1968 to work with the Irrigation Branch on matters related to the construction of irrigation schemes and the settlement of farmers on these schemes. The aims of the Settlement Branch were to:

² MNA, GRS 2/1/9 Irrigation Ordinance, 1968

³ Mphande, "Smallholder Irrigation Schemes in Malawi," p 317

- identify and select, in association with land use branch, suitable areas for dry land settlement schemes,
- draw up suitable budget to be followed on dry land schemes to form the basis of planning,
- administer the settlement of Young Pioneers and other farmers on dry land and irrigation schemes,
- administer extension work on dry land irrigation schemes,
- provide and administer facilities like credit for settlement schemes,
- encourage the emergence of community settlement schemes to take over the running of the schemes,
- administer licences and leases on the schemes in association with the Ministry of Agriculture and Natural Resources, and
- undertake advice on the settlement of people moved out of areas as a result of specific projects.⁴

Meanwhile, the construction of irrigation schemes was left in the hands of the Chinese Agricultural Technical Mission (CATM) to Malawi which came immediately after independence to promote agricultural production in the country. The CATM was funded by the Taiwan Technical Assistance Programme. In 1966, it took over Njala irrigation schemes which was established by the colonial state, and in 1967, they constructed a similar scheme at Chilikho, to the west of the present Likangala irrigation scheme.⁵ The Chinese schemes were meant to produce rice and vegetables for their consumption, act as

⁴MNA GRS14/20/2/31, Settlement Branch, 1970/71

⁵Oral Interviews: Mr F. Ramusi, Chair of SMC, Likangala Scheme, 17 October 2003

demonstration gardens to the local population on rice cultivation, and later on they became training bases for the Young Pioneers on irrigated rice farming.⁶ Local farmers who were interested in irrigation farming were allowed to join the schemes, and these were given free seeds and fertilizers and had to grow rice under strict supervision of the Chinese. It was actually the success of Chilikho scheme that encouraged the state to establish Likangala scheme, barely a kilometre to the east of Chilikho in 1969.

The Establishment of Irrigation Schemes in Malawi, 1968 –1982

After the formulation of these guidelines and regulations, and the administrative structures, the state embarked on establishing irrigation schemes in the country in 1968. It received technical and financial support from the CATM and the British Aid to accomplish this. By 1982, sixteen irrigation schemes had been constructed across the country. The reasons for the development of the irrigation schemes were to utilize empty undeveloped land, to demonstrate to the local communities' methods and benefits of intensive cash cropping, to increase the volume of rice exports and hence improve the socio-economic status of rural households, to form nuclei for rural towns, and to promote inter-ethnic cooperation and nationhood.⁷

Like the earlier schemes, the post-colonial schemes were smallholder irrigation schemes. Furthermore, the state inherited some of the schemes that were originally developed by the colonial state. Some of the schemes developed from the colonial era were Njala,

⁶Oral Interviews: Mr Kachinangwa, Mkotima Village, T.A. Mwambo, Zomba, 17 October, 2003

⁷ Malawi Government, *National Irrigation Policy and Development Strategy*, Lilongwe, Ministry of Agriculture and Irrigation, 2000

Khanda, and Liphasa. The state also inherited some of the schemes that were developed by the Chinese like Chilikho scheme in the Lake Chilwa basin. Table 1 below shows the sixteen irrigation schemes constructed between 1969 and 1982.

Table 1: Smallholder Irrigation Schemes in Malawi⁸

Scheme	Year	Net Area (ha)
Lufira	1973-76	320
Wovwe	1970-73	170
Hara	1968-70	275
Liphasa	1969-74	400
Bua	1975-80	230
Kaombe	1969-72	200
Mpamantha	1969-71	60
Domasi	1972-75	475
Khanda	1970-72	70
Likangala	1968-72	400
Njala	1966	53
Segula	1968	30
Chilikho	1968	20
Kasinthula	1968-71	195
Muona/Thangadzi	1969-72	365
Nkhate	1979-82	210

Source: C. Mphande, “Smallholder Irrigation Schemes in Malawi” p320

⁸ For the location of the schemes see also Fig 1: Existing Irrigation Schemes in Malawi

The Cases of Likangala and Domasi Irrigation Schemes, 1968-1982

The Lake Chilwa basin was one area where the largest number of irrigation schemes was established in Malawi. Of the sixteen, Likangala and Domasi were located in the basin, and were among the biggest schemes in Malawi. The existence of large wetland, the colonial irrigation schemes and the long experience the inhabitants had of producing rice, made the Lake Chilwa basin favourable for the development of irrigation schemes.⁹

When constructing the scheme at Likangala, the state sought the cooperation and support of the key chiefs from the surrounding villages. The state recognised the customary powers chiefs wielded in the villages as custodians of land. The understanding was that once the idea to construct the scheme was bought by the chiefs, it would be easy for the local population to accept it. The chiefs in the area, T.A. Mwambo, GVH Mbaru, and VH Ramusi, considered the introduction of an irrigation scheme as an important development that would improve the socio-economic status of the people from the area.¹⁰ Together with state officials, the chiefs organized a meeting with the villages around the scheme to inform them on the intention of the state to open a rice scheme in the area in 1968. The attendants included people from Mbaru, Thunya, Chidothi, Mkungwi, Sumani, Makhasu, Mbalame, Ramusi, and Chilikho.¹¹

⁹ Malawi Government, Domasi Irrigation Scheme, 1990

¹⁰ Oral Interviews: GVH Mpheta, Mpheta Village, T.A. Mposa, Machinga, 17 July 2003

¹¹ Oral Interviews: Mr Nyarape, Sumani Village, T.A. Mwambo, Zomba, 22 October 2003

The idea to open the scheme was met with mixed reactions from the people. Some chiefs and villagers were against the idea. They were afraid of losing land to the state.¹² However, the majority of the people accepted the idea. The understanding was that the land which the state wanted was already of less agricultural and settlement value. The land was flood prone, usually water logged, and that from time immemorial these conditions made the area less conducive for settlement and meaningful agricultural production.¹³ In fact, the introduction of the scheme was perceived as one way of controlling the annual floods and also putting the land into productive use.

Similar events preceded the construction of Domasi irrigation scheme. The idea to construct the scheme at Mpheta was born by the Chinese who were staying at Njala and Chilikho near Likangala irrigation schemes in Zomba in the mid -1960s. When Njala and Chilikho were incorporated into Likangala irrigation scheme, the Chinese wanted to introduce schemes they could run on their own. Together with state officials, the Chinese contacted GVH Namasalima for the acquisition of land on which to construct an irrigation scheme in 1970. The long history of rain-fed rice cultivation, the existing sandy-clay soils, and the perennial Domasi River were among the factors that made them to single out the area for the development of an irrigation scheme. However, advised by his subjects, GVH Namasalima refused to grant them land. His subjects had four reasons against the introduction of an irrigation scheme in the area. First, they did not want the Chinese to stay in their area. It was believed that the Chinese ate human beings. Second, they feared that the introduction of an irrigation scheme would result in loss of land and

¹² Oral Interviews: Nyarape, Sumani Village, T.A. Mwambo, Zomba, 22 October 2003

¹³ Oral Interviews: Mr Mwandama, Chilikho Village, T.A. Mwambo, Zomba, 22 October 2003

property. Third, although the subjects were used to cultivating rice, they were not interested in the production of the crop on such a large scale. They wanted to devote much time in the production of maize which was the staple food of the area.¹⁴ Fourth, the farmers were not willing to be exposed to the rigorous discipline of state-controlled irrigation farming in the schemes. From GVH Namasalima, the Chinese contacted GVH Mpheta who also turned down the request. It was only after the intervention of Mr E. Mussa, a Malawi Congress Party (MCP) Member of Parliament and an agricultural official, Mr Chilundu, that GVH Mpheta accepted to grant them land for the construction of Domasi irrigation scheme in 1971. The MP and the agricultural officer had a long ceremony to convince the GVH on the significance of the irrigation scheme to the development of the area. The GVH offered them the valley closer to Domasi River which was flood prone, less fertile and populated. He reserved control over the most fertile *dambos* to the eastern part of the area connecting to Lake Chilwa. From these *dambos*, he continued to abstract *cha dziko* or tribute from the farmers that were allocated plots in the *dambos*. It was finally settled that the scheme be constructed at Mpheta village in T.A. Mposa, in Machinga district.

Through the Customary Land (Development) Act of 1967, the state converted the land from customary to public after the negotiations with the local inhabitants of the Lake Chilwa basin. Thus, the Minister responsible for lands declared Ramusi and Mpheta development areas thereby abolishing the authority the chiefs had over the land. All the people in the area were asked to find settlement places elsewhere.¹⁵

¹⁴ Oral Interviews: GVH Namasalima, Namasalima Village, T.A. Kuntumanje, Zomba, 14 July 2003

¹⁵ MNA, GRS 13/100/5 Control Order, Settlement Scheme, 1969

Although the farmers from both schemes claim that they were not compensated for the loss of their land and property, archival sources indicate that some farmers from Likangala were given money as compensation. In his memo of 7 October 1972, the Director of Technical Services at Liwonde Agricultural Development Division (LADD) attached a letter from the District Commissioner of Zomba concerning compensation for land acquired at Likangala for the construction of a health centre. Two people, Miss. Elias Kado and Atabia Mwatokangaza, whose houses were demolished in the process, were given a total of K46.70. Similarly, Agricultural Development and Marketing Corporation (ADMARC) paid compensation to three individuals whose houses were demolished to give way to the construction of their market depot at Likangala. The individuals included Ebe Mwatokangaza, Awena Mwatokangaza and Nelson Mwatokangaza, all from one family. They were given K18.00, K19.80 and K103.30 respectively. The payments varied depending on the extent and value of the property lost. The property included fruit trees and houses.¹⁶ Since the local farmers were to be granted plots from the schemes, it was felt unnecessary for them to be given compensation for the loss of land for cultivation. State officials working at Domasi scheme said to the farmers who demanded compensation for the loss of land that: “*Mukafunse Kamuzu zimenezo*” (Ask Kamuzu about Compensation).¹⁷ Knowing the harsh political system that characterised Dr Banda’s regime, the farmers had nowhere to report their grievances.

¹⁶ MNA, GRS 13/105/65 Likangala Settlement Scheme, 1969-1973

¹⁷ Oral Interviews: Mai Mabvumbe and Mai Kutengule, Namasalima Village, T.A. Kuntumanji, Zomba, 14 October 2003

However, chief Mtambo refused to move away from the area. The reason given was that he could not leave behind a *nsati* or graveyard and *nsikili* or mosque and settle in a new area. He threatened that ancestral spirits would be displeased with that arrangement and that should care not be taken this would lead to the failure of the irrigation schemes, on one hand, and misfortunes on the part of the whole household. Consequently, the state allowed him to stay together with other households such as Dole and Chisani, who had graveyards near them.¹⁸ Chimbuzi refused to move away because he had a good house in the area. After being surrounded by water, he decided to move away in 1978, leaving behind a well-constructed burnt-brick house.

Likangala irrigation scheme was designed by the state immediately after the formation of the Irrigation Branch in 1967. In 1968 the construction of the schemes was started with additional funding from the British Aid.¹⁹ The work began with the construction of a flood control band, followed by the main canal and then the irrigation blocks and plots. During the construction of the scheme, the state used local labourers who worked as grounds men, watchmen, and drivers. Within the same year blocks A and B were finished and those farmers who had been working with the Chinese at Chilikho were given plots to cultivate in that winter season. Blocks C to block H were completed in 1969 while blocks I to O²⁰ were completed in 1972 covering a total area of 430 ha of which 397 were irrigable in wet season and 100 ha in dry season.²¹ Few plots had to be cultivated in winter due to inadequate flow of water. This presented potential chances for water

¹⁸ Oral Interviews: GVH Mpheta, Mpheta Village, T.A. Mposa, Mchinga, 17 July 2003

¹⁹ Malawi Government, Likangala Irrigation Scheme, 1990

²⁰ A view of the irrigation blocks and canals can be seen from Plate 2.

²¹ Malawi Government, Likangala Irrigation Scheme, 1990

conflicts and the problem of who should cultivate in dry season as not all farmers could cultivate in the schemes.

When the Irrigation Branch headquarters, which was supervising the schemes in the basin, was moved to Lilongwe following the plan of the state to transfer the capital from Zomba to Lilongwe, Khanda, Segula, Chilikho and Njala were confederated into Likangala irrigation complex in 1973.²² The formation of the complex provided the advantage of reducing staff to supervise the schemes. A Scheme Manager based at Likangala properly managed the complex. The duty of the manager was largely to supervise extension workers, also known as Officers in-Charge located in the smaller schemes.²³

The construction of Domasi irrigation scheme started in 1972. The state and CATM officials brought tractors, prisoners from Zomba and Domasi Police to assist with constructing the scheme. In the same year, blocks A and B were completed. Like Likangala, the construction of Domasi took four years. After completing the first phase of the scheme in 1972, His Excellency, Dr Hastings Kamuzu Banda officially opened the scheme in August 1973.²⁴ When it was finished in 1975, the scheme had 505 hectares of which 475 were irrigable. Through gravity-fed system, water from Domasi River was diverted and distributed into plots in the scheme through canals.

²² MNA, GRS 13/105/65 Likangala Settlement Scheme, 1969-1973

²³ Oral Interviews: Mr Chilimbiro, Scheme Manager, Likangala Irrigation Scheme, 31 October 2003

²⁴ Oral Interviews: A. Chapita, Mpheta Village, T.A. Mposa, Machinga, 17 July 2003

At first not many people showed interest to cultivate in the schemes. Even those who had the courage to register applied for very few plots. It was actually after the first harvest that many people began to apply for more plots from the schemes. Since only a few people showed interest to cultivate, people were allowed to own as many plots as possible. In fact, it was actually this reluctance of people to register as plot holders that made Mr Ndema, the then MP for MCP for Zomba East Constituency, to bring party members from town to own plots in blocks B and C of Likangala Irrigation schemes in 1970.²⁵ At Domasi, only 16 farmers took up the challenge and registered as dry season plot holders in 1972. Each one of them was given two acres of land to cultivate. It was only after what came to be regarded as an impressively good harvest that people from the villages around sought to register as plot holders in the scheme.²⁶

After the schemes were fully developed, it remained the task of the state to resettle farmers to cultivate in the schemes. There were four categories of farmers in the irrigation schemes. The first category was that of the local farmers from the villages surrounding the schemes. These were mostly those farmers who lost land during the construction of the schemes. Not only were these farmers given first priority in the allocation of plots but they were also allocated into those blocks closer to their original land. The second category was that of local farmers from the surrounding villages but had not lost land during the construction of the schemes. The third category was that of farmers from other parts of the country. The last category of farmers was that of settlement staff.

²⁵ Oral Interviews: Mr Kachinangwa, Mkotima Village, T.A. Mwambo, Zomba, 17 October 2003

²⁶ Oral Interviews: L. Taibu, Matundu Village, T.A. Mposa, Machinga, 14 July 2003

In allocating plots to the farmers certain conditions were considered. In most cases, the state ensured that plot holders were Malawian citizens, hard working, above 18 years of age, of good social behaviour, cooperative, and that they were not running away from debts from other schemes. However, these conditions mostly applied to local farmers whose behaviour was already known to the allocation committee, which also had the mandate to consider the farmers for a plot. Farmers from other districts were, in theory, supposed to apply for a plot through the District Commissioner of their home district. The allocation of the Young Pioneers was done from the MYP headquarters. After graduating from the training bases, those enterprising enough were encouraged to settle in the irrigation schemes. For these farmers, the allocation committee had no selection power.

Table 2: Settlement Pattern, Domasi and Likangala Schemes, 1969 – 1979

Season	Likangala			Domasi		
	Local	MYP	Total	Local	MYP	Total
1969/70	197	82	279			
1970/71	453	93	546			
1971/72	447	89	536			
1972/73	534	51	585	14	-	14
1973/74	581	89	670	500	73	573
1974/75	629	76	705	492	70	562
1975/76	737	58	795	780	75	855
1976/77	783	76	859	1374	116	1490
1977/78	762	55	817	1280	144	1424
1978/79	731	31	762	1279	104	1383

Source: MNA GRS 600/1/13 Settlement Aspects, August 1979

According to Table 2 above, by 1980, Likangala boasted of 762 farmers and Domasi 1383 farmers. During the 1978-79 growing season, 25% of the farmers from both schemes were female.²⁷ Most of these women were single (unmarried, divorced or widowed) although later on some married women chose to register for plots independently. The registration of married women as independent plot holders can be

²⁷ MNA GRS 600/1/13 Settlement Aspects, August 1975

explained in two ways. First, it was a way of families to own more plots from the scheme. Second, it was subsequent to conflicts over the distribution of income earned from the schemes. Most of the women complained that some men did not want to share with them the incomes from the schemes. Thus, some married women decided to own plots so that they could have full control of the income earned from the schemes.²⁸

When the schemes were constructed, the state used different groups of people to run them. These included state officials from the Irrigation Department and the Ministry of Agriculture and Natural Resources, the Chinese, members of the Malawi Young Pioneers (MYP), and Land Allocation Committees (LAC). Officials from the Irrigation Department were responsible for irrigation structures and the distribution of water in the schemes, while those from the Ministry of Agriculture were responsible for extension services, and mainly provided agronomic advice to the farmers.

Until 1979, the Chinese worked hand in hand with the state on the irrigation schemes. They provided agronomic advice, credit of inputs, and conducted demonstration gardens on the irrigation schemes. The terms of reference for the Chinese were limited to operating nurseries, seed treatment, fertilizer types, transplanting, insecticides, and water control on plots. All inputs provided by the Chinese were to be distributed through the settlement credit fund in accordance with state policy.²⁹

²⁸ Oral interviews: Mai Mulauzi, Mkotima Village, T.A. Mwambo, Zomba, 17 October 2003

²⁹ MNA, GRS 13/105/65, Likangala Settlement Aspects, August 1979

Between 1972 and 1979, the Chinese Agricultural Mission ran Domasi Irrigation scheme. According to the agreement made with the state, they were supposed to run the scheme for one year after completion. But this was extended to 1979. After the CATM handed over the scheme to the state, the Chinese, however, remained in the scheme operating demonstration gardens in the scheme.³⁰ And they are still doing that up to now.

The MYP was originally an agricultural movement of the MCP. Formed in August 1963, the Young Pioneers became a powerful force in fostering agricultural and rural development in Malawi.³¹ In its original stage, the movement operated training bases where primary school graduates received basic training in discipline, civics, agriculture, and community development. Some of the training bases included Nasawa in Zomba, Makhanga in Nsanje, Amalika in Thyolo, Mapanga in Blantyre, Neno in Mwanza, Ngapani in Mangochi, Lipinda in Mangochi, Mwalawoyera in Dedza, Kaporo in Karonga, and Ngerenge in Rumphu. After a 10 months training, some of them returned to their village communities to demonstrate to the peasants modern methods of farming.³²

When the schemes were constructed, the state decided to settle the Young Pioneers in the schemes. Precisely, the Young Pioneers were settled in the schemes to expand their income sources, to act as demonstrators of modern farming methods to the peasants in the rural communities, to foster Dr Banda's objective of nation building, and also to act as MCP watchdogs that ensured that the rural communities were faithfully meeting Dr

³⁰ Oral Interviews: A.Chapita, President, DWUA, 17 July 2003

³¹ Malawi Government, Act No. 23 of 1965, The Young Pioneers Act, Malawi Gazette Supplement, No 4C, 11 May 1965

³² MNA, GRS 14/20/2/31 Vol. I Settlement Branch, 1970-71

Banda's political obligations such as purchase of party cards and abstinence from work during martyrs days.³³ Martyrs day is the day when the people of Malawi remember the people who lost their lives in the fight for independence. On the schemes, they were under the supervision of the Discipline Officer (DO) of the MYP allocated in all the irrigation schemes in Malawi.

The first crop of the Young Pioneers was resettled at Likangala in 1970. The Chinese at Chilikho irrigation scheme trained this group. Upon arrival, GVH Mbaru directed that the Young Pioneers should be resettled at M'bona near where the main canal taps water from the Likangala River. M'bona was an old graveyard also believed to be the residence of ancestral spirits of the people from the area. During times of drought, rainmaking sacrifices were conducted at M'bona.³⁴ According to oral sources, the GVH allocated the MYP here to face the anger of the spirits and to disallow the Young Pioneers from taking some land from them.³⁵ According to the farmers, locating the Pioneers at M'bona would confine their cultural practices especially *gule wamkulu* from interfering with their affairs in other parts of the area.³⁶ Besides, since M'bona was close to Likangala river, it was the most vulnerable area to floods.³⁷ Later on in 1975, due to floods, it was resolved that all the Young Pioneers be resettled at the trading centre near the present Church of Central Africa Presbyterian (CCAP) church.³⁸ At Domasi, the first crop of Young Pioneers was settled in 1973. Originally, the state wanted to settle them around the

³³ Oral Interviews: Mr Simbi, ex-MYP, Likangala Irrigation Scheme, 21 October 2003

³⁴ Oral Interviews: F. Ramusi, Chair, SMC, Likangala Scheme, 21 October 2003. According to Mr Ramusi, there is no connection between M'bona cult of Nsanje and that of Likangala scheme.

³⁵ Oral Interviews: Mr Simbi, Ex MYP, Likangala Scheme, 21 October 2003

³⁶ Oral interviews: Mr Phuliwa, Watchman, Likangala Scheme, 22 October 2003

³⁷ See Fig 3: Likangala Irrigation Scheme Complex

³⁸ Oral Interviews: Mr Phuliwa, Watchman, Likangala Irrigation Scheme, Zomba, 22 October 2003.

scheme offices, but GVH Mpheta protested against this idea. Consequently, they were settled at Chirombo, a village to the northern end of the scheme.³⁹

At first, the Young Pioneers were allocated plots together with the local farmers. However, due to conflicts that emerged between them, the Regional Minister for the South, directed that the Young Pioneers be concentrated in one or two blocks.⁴⁰ One of the causes of the conflicts was the tendency by the Young Pioneers to criticize the local farmers as incapable of growing crops as was required by the agricultural officers.⁴¹ With suitable guidance and control, it was further assumed that the concentration of the Young Pioneers into their own block, especially those around the scheme offices or at the entry point of the scheme, would act as a showpiece and create a good first impression of the scheme (blocks A and B).⁴² When the farmers resisted the idea of locating the Young Pioneers in blocks A and B, it was finally decided that they should be allocated plots in blocks I and J at Likangala and blocks H and C at Domasi.⁴³ The local farmers were not willing to lose their plots in blocks A and B which they argued were located favourably closer to ADMARC market and fertilizer stores.⁴⁴ Besides, the blocks were the first to access water in the schemes. Farmers allocated in these blocks had an advantage of accessing more water during times of inadequate water flow from the Likangala and Domasi Rivers. Although the Young Pioneers were not allocated in blocks A and B, the

³⁹ Oral Interviews: Chief Mpheta, 17/07/03

⁴⁰ MNA: GRS 13/105/4, Monthly Reports, Likangala Settlement Scheme, 1969 -1973

⁴¹ Oral Interviews: Mr Kazembe, Mkotima Village, T.A. Mwambo, Zomba, 21 October 2003

⁴² MNA: GRS 600/1/13, Settlement Aspects, August 1979

⁴³ Oral Interviews: A.G. Chapita, President, Domasi WUA, 17 July 2003

⁴⁴ Oral Interviews: Mr M. Nyarape, Sumani Village, T.A. Mwambo, Zomba, 22 October 2003

blocks were still reserved as demonstration plots for the state at Likangala and Domasi schemes.

Compared to the local farmers, the Young Pioneers were given larger land holdings from the schemes. For example, though a minority in both schemes, the Young Pioneers were allocated about 50% of the holdings of more than 2 acres.⁴⁵ In doing this, the state contended that the Young Pioneers had no other gardens outside the scheme to cultivate, and as such they largely depended on the production of rice for their income.

However, the settlement of the Young Pioneers politicised the development of irrigation schemes in Malawi. Apart from agricultural production, the Young Pioneers fulfilled other political functions in the schemes and the communities around the schemes.⁴⁶ They operated not only as settlers but also as party watchdogs, and thus, presumed to deal with any body that behaved contrary to the ideologies the party was trying to propagate in the country. For instance, the Young Pioneers forced the farmers to attend MCP meetings, patronized the Martyr's day on 3rd March, helped in selling of party cards, etc. Those who failed to purchase party cards were not allowed to cultivate in the schemes, sell their crops at ADMARC market and also get medical services at the health centres introduced in the schemes.⁴⁷ One of the groups of people that suffered terribly at the hands of the Young Pioneers was that of the Jehovah's Witnesses or Watch Tower, a religious movement which renounced the purchase of party cards and participation in political

⁴⁵ MNA, GRS 600/1/13, Settlement aspects, August 1979

⁴⁶ D. Cammark and W. Chirwa, "Development and Human Rights in Malawi" in Chilowa W (ed) *Bwalo: Forum for Social Development*, Issue 1, CRS, Zomba 1997 pp105-121

⁴⁷ Oral Interviews: GVH Mpheta, Mpheta Village, T.A. Mposa, Machinga, 17 July 2003

affairs of the country. The renunciation of party cards did not go well with the MCP regime. As a result a ruling was made that all the members of the movement should go out of the country in 1972. The ruling resulted in massive exile, arrest and slaughter of most of its members. At the time, there were sixteen members cultivating at Likangala irrigation scheme. On 19 October 1972 their plots were declared vacant and immediately reallocated to other farmers.⁴⁸ During this time, the Young Pioneers were in the forefront of chasing them away from the schemes.

The last group that was used by the state to run the schemes was that of the Land Allocation Committees (LAC).⁴⁹ The land allocation committees were groups of selected farmers appointed by the state to assist in the distribution of plots in the irrigation schemes. Before these committees were formed, the state used local chiefs to resettle and allocate plots to farmers in the irrigation schemes. Oral sources agree that TA Mwambo, GVH Mbaru, and VH Ramusi were used by the state to allocate plots to farmers at Likangala irrigation scheme before the actual committee was formed towards the end of 1969.⁵⁰ Similarly, Group Village Head Mpheta was employed to assist the Chinese in the allocation of plots at Domasi irrigation scheme prior to the formation of an allocation committee in 1974.⁵¹ These chiefs were employed largely in recognition of the generosity they showed to the state by offering land on which to establish irrigation schemes.

⁴⁸ Oral Interviews: GVH Mpheta, Mpheta Village, Machinga, 17 July 2003

⁴⁹ Oral Interviews: Simbi, Ex-MYP, Likangala Irrigation Scheme, 21 October 2003

⁵⁰ Oral Interviews: F. Ramusi, Chair of SMC, Likangala Scheme, 21 October 2003

⁵¹ MNA: GRS 600/1/13, Settlement Aspects, Domasi Scheme, 1979

The first LAC was introduced at Likangala irrigation scheme in 1969 and at Domasi irrigation scheme in 1974.⁵² The allocation committee was formed to take over the functions that were previously carried out by the chiefs. Largely, the committee was mandated to allocate and reallocate plots to farmers, evict lazy farmers from plots and those farmers that failed to comply with the rules and regulations of irrigation farming on the schemes, and sometimes they were involved in the settlement of disputes among the farmers.⁵³ However, their functions were confined to dealing with the local farmers. They were not empowered to make decisions nor deal with issues related to the Young Pioneers, the government staff and local leaders.

The Regional Minister for the South who was also Joint Commander of MYP appointed the chairpersons of the committees. The chairpersons were in turn required to nominate the other members of the committees.⁵⁴ Before taking over their positions, names of the members were sent to the President for further scrutiny and approval. Through this process, only those loyal to MCP were chosen. The presence of political leaders, Discipline Officers of the MYP as nominal members of the committee disabled the committees from discussing freely issues affecting the farmers in the schemes.⁵⁵ The incorporation of local and party leaders was meant to ensure that the committees operated within the interests of the MCP regime. The first allocation committee at Likangala composed of Mr G. E. Ndema who was also MCP area chairman, Chief Mwambo, Kapito Ramusi, Mataka Chikwatu, Kunje, Kamtedza, Ayesi Dedza (Miss), Mtambo, G. Phazi

⁵² MNA: GRS 600/1/13, Settlement Aspects, August 1979

⁵³ Oral Interviews: Mr F. Ramusi, Chair, Scheme Management Committee, Likangala Scheme, 21 October 2003

⁵⁴ MNA: GRS 600/1/13, Settlement Aspects, Likangala Scheme, 1979

⁵⁵ D. Cammack and W. Chirwa, "Development and Human Rights in Malawi," p 109

and Thombozi.⁵⁶ The allocation committee at Domasi was first under the chairmanship of Mr Naivi.⁵⁷

The sustainability of membership in the allocation committee was dependent on their loyalty to the MCP regime. Once a member became disloyal to the state, he/she was automatically dismissed from the committees. A good example is that of Mr Ndema. His chairmanship of Likangala allocation committee was withdrawn immediately after he was expelled from MCP in May 1970.⁵⁸ Originally, he was highly reputed as cooperative, helpful and hardworking among all the members of the committee. In his memo of 18 December 1969, the Irrigation Engineer at Likangala commended Mr Ndema for being cooperative as compared to other members of the land allocation committee.

“Mr Ndema in his capacity as chairman of this committee has been most helpful and cooperative, but even he has admitted that the committee is impossible. They don’t carry out what he asks them to do.”⁵⁹

Despite his good record, the state dismissed him from the committee for political reasons. The committee was also dissolved following the dismissal of Mr Ndema. Interestingly, the Principal Settlement Officer at Liwonde ADD recommended the reappointment of Ramsey, Mataka, Chikwatu, Kunje and Kamtedza who he argued were loyal to the MCP

⁵⁶ MNA: GRS 13/105/65, Likangala Settlement Scheme, 1969 - 1973

⁵⁷ Oral Interviews: GVH Mpheta, Mpheta Village, T.A. Mposa, Mahcinga, 17 July 2003

⁵⁸ MNA: GRS 13/105/4 Monthly Reports Settlement Branch, 1969

⁵⁹ MNA: GRS 13/105/65 Likangala Settlement Scheme, 1969-1973

regime.⁶⁰ Honourable E.A. Mussa, who was then M.P. for Zomba East, was appointed Chairman of the committee.

However, due to lack of proper training, the committees failed to effectively carry out their duties. A number of irregularities began to appear in the distribution of plots in the schemes. The officer in-Charge at Likangala scheme, Mr Mwamadi wrote to the Agricultural Technical Service Officer at Liwonde ADD in December 1969 to inform him of the problems related to plot allocation which he observed at the scheme.⁶¹ Some of the problems were:

- some plots were unallocated to farmers,
- some plots were allocated to more than two farmers,
- some names written on the forms did not have number of plots,
- some farmers were allocated plots without signing allocation forms,
- some names of farmers and plots were not true.

The Challenges of Developing Irrigation Schemes

By the early 1980s, the state faced a number of problems in its attempt to promote irrigation farming in the Lake Chilwa basin. The first problem was that of poor response of farmers to register as plot holders especially in the early days of the construction of irrigation schemes. Most of the farmers from the basin were hesitant to apply for plots in the schemes, and those who did only applied for a few plots. It was reported by the

⁶⁰ MNA: GRS 13/105/ 4, Monthly Report, Settlement Branch, 1969-1970

⁶¹ MNA: GRS 13/105/ 4, Monthly Report, Settlement Branch, 1969-1970

settlement officer at Likangala that farmers wanted to start cultivating in January 1970 and not in August 1969 as was planned.⁶² There were several reasons why the farmers showed little interest to participate in the schemes. First, most of the farmers wanted to attend to maize and other gardens outside the irrigation schemes.⁶³ They were not sure of the dividends of rice cultivation, and therefore, they continued to give highest priority to working in their upland fields. Second, the rains of 1969 arrived late. Consequently, farmers became extremely preoccupied with planting maize in their fields outside the scheme. Third, farmers claimed that there was relatively too much work for them in the schemes (leveling, digging, bunding) which had to be done in one month only. Lastly, the land allocation committee is said to have discouraged the farmers from participating in the schemes.⁶⁴ In December 1969, the committee at Likangala scheme demanded that the state should do everything, for example, land preparation, levelling, bunding, carting of fertiliser and seedlings, in order for the farmers to cultivate in the scheme.⁶⁵

It was also noted that the few farmers who registered did not show much commitment to working on their plots. On 9 January 1973, the Director of Technical Services wrote the Secretary for Agriculture informing him on the problems the farmers were causing on Likangala irrigation scheme. He complained that farmers were not showing interest in planting in the scheme. As at the end of 1972, only $\frac{7}{8}$ of an acre had been planted, and that this was planted by two settlers only.⁶⁶

⁶² MNA, GRS 13/105/654 Likangala Settlement, 1969-73

⁶³ MNA, GRS 13/105/65 Likangala Settlement Scheme, 1969 - 1973

⁶⁴ MNA: GRS 13/105/65 Likangala Settlement Scheme, 1969 - 1973

⁶⁵ MNA: GRS 13/105/65 Likangala Settlement Scheme, 1969 - 1973

⁶⁶ MNA GRS 13/105/65 Monthly Reports, Likangala Settlement Scheme, 1969-1973

Similarly, when Domasi Scheme was finally constructed, the farmers were not anxious to apply for plots in the scheme. Soon after its construction, only 14 farmers registered as dry season plot holders at Domasi irrigation scheme in 1972. Although the farmers were given the chance to own even up to two acres, most of them opted for very few plots. What they wanted to do was to put cultivation in the scheme on trial. It was only after the first harvest that most of farmers began to register as plot holders in the scheme.⁶⁷ This is why in the following 1973/4 wet season cultivation over 500 local farmers registered as ploholders at Domasi irrigation scheme.⁶⁸

By 1978, over 25% of the farmers from the irrigation schemes continued to pay more attention to cultivating in their traditional gardens outside the schemes.⁶⁹ Part of the complaint was that land holding on the schemes was far much smaller compared to land holding outside the scheme. For example, the average size of the farmers' gardens outside the scheme was estimated at 2 to 5 acres as compared to 0.5 acre holding they had in the schemes. Consequently, most of the farmers continued to depend on their traditional gardens for the production of food crops.⁷⁰

The Irrigation Engineer from Likangala mentioned that the poor response of farmers was expected with a new scheme. "Therefore, although one could conclude that, agriculturally, Likangala has so far not been successful, the blame should not solely be on

⁶⁷Oral Interviews: Mr. L. Taibu, Matundu Village, T.A. Mposa, Machinga, 14 July 2003

⁶⁸ See Table 2 above

⁶⁹ MNA, GRS 600/1/13 Domasi Irrigation Scheme, Settlement Aspects, 1979

⁷⁰ MNA, GRS 600/1/13 Domasi Irrigation Scheme, August 1979

the management, there was need to give it more time for the farmers to articulate the discipline of irrigation farming,” commented the Irrigation Engineer at Likangala Scheme.⁷¹ The assumption was that with time the farmers were going to develop interest in irrigation farming.

The state did a number of things to improve on farmers’ participation in the schemes. In December 1969, the Minister of Agriculture wrote the Land Allocation Committee at Likangala expressing disappointment over the failure of the farmers to participate in the scheme.

“As you are no doubt aware, your state has spent a lot of money on establishing the Likangala irrigation scheme and will be extremely disappointed if this money is wasted because the farmers do not want to take advantage of the great opportunity offered to them.”⁷²

The Chief Agricultural Technical Service Officer, Mr. G.W. H. Gerrard from Liwonde ADD complained to the President in 1971 about the behaviour of the Young Pioneers at Likangala irrigation scheme. He contended that the Young Pioneers were being sent to the schemes without prior knowledge of what it takes to be a settler farmer. He recommended that Young Pioneers should be given proper training before they were resettled on the schemes and that strict measures should be put in place to bring on schemes only those Young Pioneers with good conduct.⁷³

⁷¹ MNA, GRS 13/105/65 Monthly Reports, Likangala Settlement Scheme, 1969 - 1973

⁷² MNA, GRS 13/105/65 Monthly Reports, Likangala Settlement Scheme, 1969 - 1973

⁷³ MNA, GRS 13/105/65 Monthly Reports, Likangala Settlement Scheme, 1969 - 1973

On 13th January 1973, the Regional Minister (South) with a number of Ministers and the Local MP visited Likangala irrigation scheme with the view to encourage the farmers to utilise the schemes.⁷⁴ In addition, from 1973, the state also began to allow state officers to also have plots in the schemes, who until then, were not allowed to cultivate in the schemes.

It was actually because of the high rate of farmers' turn-over, and the failure of farmers to cultivate effectively in the schemes, that the then Regional Minister for the South who was also the Joint Commander of the MYP, authorized government staff at Likangala scheme and other schemes to own plots on the schemes in order to increase acreages planted for rice in January 1973. However, it was directed that they should use hired labour, wives and children to do the work so that the staff could concentrate on their official work on the scheme. Besides, these government officers were not allowed to access inputs from the Settlement Credit Fund; they were expected to purchase their requirements directly from ADMARC markets.⁷⁵

The second problem was that of default of credit repayment by farmers. When the schemes were constructed, a Settlement Credit Fund was established to provide farmers with credit of fertilizers, seeds, and pesticides. In addition, farmers from other districts, especially the Young Pioneers were compelled to pay a development charge of K94 to meet the costs of their settlement on the schemes.⁷⁶ Repayment of these credits were made at ADMARC markets and were directly deducted from the farmers' earnings.

⁷⁴MNA, GRS 13/105/65 Monthly Reports, Likangala Settlement Scheme, 1969 - 1973

⁷⁵ MNA, GRS 13/105/65 Monthly Reports, Likangala Irrigation Scheme, 1969-73

⁷⁶ MNA GRS 600/1/13 Settlement Aspects, August 1979

However, from the time irrigation schemes were constructed, most of the farmers did not want to repay the credits. Tables 3 and 4 below show the trend of defaults and balances at Likangala and Domasi scheme between 1972 and 1981.

Table 3: Settlement Credit Fund in Malawi Kwacha

Year	Likangala			Domasi		
	Credit Issued	Credit Paid	Credit Balance	Credit Issued	Credit Paid	Credit Balance
1972	8316.5	6257.10	2059.40			
1973	9876.2	3098.2	4778			
1974	8971	Nil	8971	6717	3	6714
1975	20302	17823	3332	27287	23875	3495
1976	9458	Nil	9458	11696	Nil	11696
1977	35156.2	27670	11486.19	53225.66	42844.19	10381.47
1978	32109	Nil	3109	48125	12290	35835

Source: MNA, GRS 631 Settlement Aspects, 1969 - 1978

Table 4: Winter Crop Credit, 1980-81

Scheme	Amount	Recovered	Balance	% Recovery
Likangala	4490.65	980.89	3509.76	21%
Domasi	24 467.55	4.492.20	19,975.35	18%
Total	28 958.20	5 473.09	23.485.11	18%

Source: MNA, GRS 600/1/13 Settlement Aspects, August 1979

There were several ways by which the farmers defaulted credit repayment. One of the ways was avoidance of selling crops through ADMARC. Most of the farmers resorted to selling rice to private traders in local markets around the schemes. The other way was deserting from the schemes. Most often, the farmers deserted the schemes before completing repaying credit on inputs and development charges.⁷⁷ Members of the Land Allocation Committee began avoiding meetings for fear of being reminded of credit. As early as 1973, the Young Pioneers constituted the highest defaulters of credit and also a category of settlers who left the schemes in largest numbers.⁷⁸ And of the 300 Young Pioneers at Likangala, only 40 were still on the scheme by 1979. For Domasi, it was noted that since 1976, the number of the Young Pioneers had been declining steadily. It was recorded that 30 Young Pioneers left the scheme every year.⁷⁹ Though the Young

⁷⁷ MNA: GRS 600/1/13 Settlement Aspects, August 1979

⁷⁸ MNA: GRS 600/1/13 Settlement Aspects, August 1979

⁷⁹ MNA: GRS 600/1/13 Settlement Aspects, August 1979

Pioneers were not obliged to settle in schemes permanently, the rate at which they were leaving the schemes was a cause for concern to the state.

The growing number of Young Pioneer credit defaulters and deserters worked against the success of irrigation schemes in Malawi. Among other things, it discouraged the government officers, the allocation committee and ultimately the local farmers from repaying credit in the schemes.⁸⁰ Despite their failure, the officials were always reluctant to take action against the MYP defaulters due to their association with the MCP government.

Towards the beginning of 1980s, Mr G. Hartman, Senior Extension Coordinator at Liwonde ADD advised the Discipline Officer of the MYP to assist in collecting credit from the Young Pioneers. He also directed that those who deserted from the schemes should not be allowed in any scheme until they provided information on their credit recovery from the previous schemes.⁸¹

The third problem had to do with conflicts between customary and public principles in the management of irrigation schemes in the Lake Chilwa basin. When the schemes were constructed, the state adopted customary laws in the management of irrigation schemes, an approach which again had serious implications for the success of the schemes. For example, the state used chiefs to access land at Likangala and Domasi. The chiefs, who under customary law were responsible for allocation of land to the villagers, were drawn

⁸⁰ MNA, GRS 13/105/65, Monthly reports, Likangala Irrigation scheme, 1969 -1973

⁸¹ MNA GRS 631/11 Settlement Schemes, 1981 -1983

to form farmers' allocation committees.⁸² Besides, the local farmers who had lost land in the process of constructing irrigation schemes were located in those blocks adjacent to their villages or where their land was prior to the construction of the scheme.⁸³ A similar case was also manifested in the inheritance of plots. In the event that a plot owner died, his children and wife were asked to inherit the plots belonging to him. When the successor was below the age of eighteen years, the guardian under customary law would appoint a person to act on his behalf until the successor was of age.⁸⁴

The adoption of customary principles on the operations of irrigation schemes affected the success of the schemes in the Lake Chilwa basin. For example, when the state determined to avoid appointing chiefs to serve on the farmers' committees, most of them felt betrayed, and resolved to keep away from cultivating in the schemes. Furthermore, the location of local farmers to blocks of their original land gave them the impression that the schemes were an exchange for the land which was taken away from them when the schemes were being constructed. This was confirmed when the state argued that the farmers would not be given compensation for the loss of their land because the schemes were meant for them. Thus, farmers were empowered to dislike the allocation of 'outsiders' into the scheme.⁸⁵ The general understanding of the farmers was that the scheme belonged only to those individuals that lost land, and not the others. The idea of inheritance also complicated the whole notion of public land tenure of the scheme. In principle, the farmers were supposed to dispose of their plots to the farmers committee

⁸² Oral Interviews: F. Ramusi, Chairman, SMC, Likangala Scheme, 21 October 2003

⁸³ MNA GRS 600/1/13 Likangala Settlement Aspects, August 1979

⁸⁴ MNA GRS 13/105/65 Proposed Irrigation Regulations/Rules and Licence, November 1968

⁸⁵ Oral Interviews: GVH Mpheta, Mpheta village, T.A. Mposa, Machinga, 17 July 2003

for reallocation every growing season. But the law of inheritance resulted in permanent possession of plots by farmers.⁸⁶

The last problem was lack of adequate funds with which to run the schemes. Towards the end of the 1970s, the state realised that it did not have adequate finances to effectively manage the irrigation schemes. The problem of lack of adequate finances became acute with the withdrawal of the Chinese assistance at Domasi irrigation scheme in 1978. As noted above, the Chinese were given a contract to run the scheme for one year only and after that to hand the scheme over to the government of Malawi. Furthermore, the state was, at the time, undergoing a serious economic crisis. To cope with the economic crisis, the state sought financial support from the IMF, World Bank and other donors who demanded the adoption of structural adjustment programmes (SAP) as a precondition for accessing their financial assistance.⁸⁷ One of the conditions was that the state should reduce its public expenditure on some of its institutions, and irrigation schemes were one of the institutions. Consequently, the state began to reduce the number of grounds men contracted to maintain the schemes. From the early 1980s, the existing irrigation structures were becoming more and more dilapidated and overgrown with grass, as a result of reducing of groundsmen which the state started as a SAP strategy.

⁸⁶ Oral Interviews: Mr Chilimbiro, Scheme Manager, Likangala Irrigation Scheme, 20 November 2003

⁸⁷ W. Chilowa and E Chirwa, "Impact of SAPs on Social and Human Development in Malawi" in Chilowa (ed) *Bwalo: A Forum for Social Development*, Issue 1, CSR, Zomba, 1997, pp 49-68

Conclusion

This chapter has discussed the efforts the postcolonial state made to develop irrigation schemes in Malawi between 1964 and 1982. Three conclusions can be made from this chapter. First, unlike the earlier state, the postcolonial state was more elaborate in its approach to the promotion of irrigation schemes in the basin. It formulated guidelines and regulations to govern the establishment of irrigation schemes. Using this policy, the state successfully constructed sixteen government-run smallholder irrigation schemes across the country. Second, the development of irrigation schemes was a heavily politicised development in the period of study. The state located the MYP in the schemes to fulfil political functions in the rural communities. The membership into land allocation committees in the schemes was dependent on farmers' loyalty to the then ruling MCP regime. Third, the state did not develop irrigation schemes without challenges. Poor farmers' response, default of credit, and inadequate finances were among the major challenges the state faced. The manner in which the state coped with these problems is the major theme of the following chapter.

Chapter Four

THE HAND OVER OF IRRIGATION SCHEMES TO FARMERS IN MALAWI, 1980 - 2002

Introduction

The foregoing chapter has noted that by the early 1980s the state faced a number of problems in its attempt to develop irrigation schemes in the Lake Chilwa basin. The problems included poor response of farmers to participate in the irrigation schemes, default of credit repayment and inadequate finances with which to manage the schemes. By the turn of the 1990s, the state began to develop interest in handing over irrigation schemes to the farmers working in the irrigation schemes as one way of solving these problems. And indeed between 1994 and 2002 the hand over of irrigation schemes to the farmers came to characterise the history of irrigation schemes in the Lake Chilwa basin. This chapter examines the origin and process of handing over of irrigation schemes in the Lake Chilwa basin and the problems the state faced in this process.

The Nature and Origins of the Hand over of Irrigation Schemes

The hand over of irrigation schemes constituted the major irrigation reform in the development of irrigation schemes in Malawi between 1994 and 2004. It included the transfer of ownership, water rights, and management of irrigation systems to the farmers.¹ Originally, the state wanted to privatise irrigation schemes in Malawi. However, this was discouraged for two important reasons. First, the state in Malawi realised that agricultural profits were too marginal to attract private firms to purchase irrigation schemes. Second, like in most developing countries, agriculture in Malawi is the backbone of rural economies. Consequently, the state was afraid that any attempts to sell irrigation systems would attract resistance from the local farmers.²

The handover of irrigation schemes was adopted in the policy to reduce public expenditure, improve irrigation performance, enhance sustainability of irrigation facilities, conserve water resources and reduce resource consumption, improve the maintenance of irrigation systems, and to promote the empowerment of farmers through the development of water user associations to assume the ownership of irrigation schemes in Malawi.³ The IMF and World Bank, on the other hand, encouraged the hand over of irrigation schemes because it was consistent with the structural adjustment programmes (SAP) imposed on the country from the early 1980s. By handing over the schemes to the farmers, Malawi would prudently direct the financial assistance from the International

¹ Malawi Government, Guidelines for the Hand-Over of State Managed Irrigation Schemes to Smallholder Farmers, (Lilongwe: Ministry of Agriculture and Irrigation, September, 2000)

² Oral Interview: J. Chisenga, Director of IFAD project, Lilongwe, 30 May 2003

³ Malawi Government, Opening Speech by C.U. Mphande on the Hand Over of Government Irrigation Schemes to Smallholder Farmers Workshop, Mkopola Lodge, Mangochi, 6 September 2000

Monetary Fund (IMF) to other pressing needs. Although the state argued that the hand over of irrigation schemes was going to help the farmers to gain control over the irrigation schemes and thus, improve the water services, and keep the cost of irrigation from rising; the hand over of irrigation schemes was meant to transfer financial, human and managerial responsibilities from the state to the farmers.⁴

Meanwhile, there was growing interest in the transfer of ownership and management of irrigation schemes to the beneficiary farmers at the global level from the mid-1980s.⁵ The idea began in Asia where the transfer of the ownership of irrigation schemes to commercial farmers was proving to be effective.⁶ Downsizing or withdrawing the role of state in the operation and maintenance, collection of fees, management of water and conflicts, instilled a sense of local ownership, reduced state financial expenditure, and consequently, improved the sustainability of irrigation schemes in Asia.

Although the state began to take radical steps towards the handover of irrigation schemes from the mid-1990s, the idea of increasing the involvement of farmers in the management of irrigation schemes started to gain ground way back in the early 1980s. A Senior Extension Officer at Liwonde ADD, Mr G Hartman recommended to the state in 1984 on the need to form farmers' management committees with minimum political interference to help the state in the management of irrigation schemes.⁷ In response to this, the state

⁴ FAO, "Over View Paper: Irrigation Management Transfer Sharing Lessons from Global Experience" Land and Water Development Division, June 2001, p. 4

⁵ T. Shah, et al "Institutional Alternatives in African Smallholder Irrigation: Lesson from International Experiences with Irrigation Management Transfer," International Management Institute, Research Report, 2002

⁶ Shah, "Institutional Alternatives in African Smallholder Irrigation" pp

⁷ MNA: GRS 636/11- Settlement Schemes, 1984

resolved to reorganise the land allocation committee, this time to focus on the management of irrigation schemes and minimise bringing political and traditional leaders into the committees. The need to involve local farmers in the management of irrigation schemes became strong when the state realized that it did not have adequate financial and human resources with which to effectively manage irrigation schemes, especially at a time when the Chinese had withdrawn its financial support to run the schemes, the country was facing an economic crisis, and that the IMF and the World Bank made the SAP as a prerequisite for financial assistance. Consequently, the state transformed land allocation committees into Scheme Management Committees (SMC) in all the existing schemes in Malawi in 1984.⁸

SMC consisted of farmers working in the irrigation schemes in Malawi.⁹ Unlike the earlier committee, the SMC was elected by the farmers. The committees also had other supporting committees namely: irrigation, livestock and credit committees, though block and club committees were also formed to take care of the farmers in the blocks and clubs respectively.¹⁰ Traditional leaders were no longer brought on board into the committees, but were from time to time called upon to help in the settlement of issues which the committees failed to resolve. Scheme managers acted as General Secretaries of the committees, and prior to 1994, the Discipline Officers of the MYP from the schemes were maintained as nominal members. As secretaries, the scheme managers attended

⁸ Oral Interviews: Mr K Banda, ex-MYP, Domasi Irrigation Scheme, 15 October 2003

⁹ Malawi Government, Constitution of Scheme Management Committee for Domasi Irrigation scheme

¹⁰ Oral Interviews: A. Chapita, Chair of Domasi Water User Association, dated 17 July 2003

meetings in which they wrote reports on the proceedings, mediated when there were conflicts, and reported meeting discussions to the state.¹¹

The functions of the committee were to:

- Allocate plots to farmers,
- Settle disputes among farmers,
- Ensure that farmers were repaying loans,
- Monitor that farmers conformed to the technical rules and regulations of the schemes,
- Coordinate the training of trainer of trainers (TOT)s,
- Ensure that extension workers visit the farmers frequently,
- Facilitate the maintenance and operations of the schemes,
- Ensure that charges for labour, ox-carts etc were uniform in the schemes.¹²

When it began to support the implementation of the smallholder rehabilitation projects in 1986 of which Likangala was one, the Danish International Development Assistance (DANIDA) re-echoed the necessity of the participation of farmers in the management of irrigation schemes.¹³ DANIDA noted that one of the reasons for the dilapidation of

¹¹ Oral Interviews: Mr Chilimbiro, Scheme Manager, Likangala Irrigation Scheme, 31 October 2003

¹² Malawi Government: Constitution of the Scheme Management Committee at Domasi Irrigation Scheme, 1984

¹³ Malawi Government, "Rehabilitation of Smallholder Irrigation Schemes: Review/Appraisal Report Prepared by a DANIDA Mission Visiting Malawi between 9 April and 1 May 1988

irrigation structures was that the state was managing irrigation schemes without the involvement of the farmers. As a result, during this project, DANIDA began to train the SMC on issues related to the management of irrigation schemes at Likangala.¹⁴ However, when the contract ended in June 1988, the idea was also abandoned. Nevertheless, the state laid off most of its labourers and advised the SMC to assume the maintenance of tertiary canals in the schemes.¹⁵

However, with the passage of time, a number of problems overshadowed the success of the SMC to adequately help the state in the running of irrigation schemes. First, the committee members used their powers to make personal gains at the expense of the majority of the farmers working in the irrigation schemes. Corruption and nepotism influenced the distribution of plots among farmers in the schemes.¹⁶ Second and related to the above was that the SMC had a constitution that was discriminatory in some of its clauses and used harsh punishments to those who failed to conform to some of its clauses. For example, the constitution provided that those farmers who had just joined the schemes should not own more than two plots from the schemes. It was assumed that these farmers were not conversant with irrigation farming. The constitution further empowered the committee to evict from plots farmers who were unable to cultivate their plots for whatsoever reasons be it laziness, sickness, or lack of finances. Farmers who also failed to repay loans were also evicted from the schemes. The plots were reallocated to other farmers interested in cultivating in the schemes. This provision gave room to the

¹⁴ Oral Interviews: Mr Chilimbiro, Scheme Manager, Likangala Irrigation Scheme, 31 October 2003

¹⁵ Oral Interviews: Mr Chilimbiro, Scheme Manager, Likangala Irrigation Scheme, 31 October 2003

¹⁶ Oral Interviews: Chilimbiro, Scheme Manager, Likangala, 31 October 2003

accumulation of plots by privileged classes of farmers in the schemes, which included the committee members, settlement staff, and the rich farmers. In addition, the constitution provided that farmers who failed to repay input loans should get their plots taken by those farmers who could pay for the loans. Since the reallocation of plots was in their hands, the members had the advantage of accumulating plots.¹⁷ Thus, ordinary farmers accused the committees of favouring the rich farmers from the schemes.

“The committees more especially Scheme Management Committee favoured those who were rich. With their monies they could easily squeeze their way through and get some plots. For a poor person like me then you needed to have a relative who is serving on that committee who could help you. Even when a rich person’s livestock was found grazing in the scheme nothing was done. In my case I have half of a plot in the scheme but chances that I would get another plot are very slim.”¹⁸

The third problem had to do with conflicts between government staff on the schemes and the committees. From the time they were formed, the committees received training in fertilizer application, weeding, credit recovery, leadership, record keeping, depending on the period in question and activities to be carried out at the time. With passage of time, the training stopped due to poor attendance. The members argued that they stopped due to lack of refreshments, the repetitiveness of the messages, and some were afraid of being reminded of loans obtained from the schemes.¹⁹

¹⁷ Oral Interviews: Mr Kazembe, Mkotima Village, T.A. Mwambo, Zomba, 21 October 2003 and also Mr Chilimbiro, Scheme Manager, Likangala Irrigation Scheme, 31 October 2003

¹⁸ Oral Interviews: Davies Madula, Bakali Village, T.A. Mwambo, Zomba, 19 February 2004

¹⁹ Malawi Government, Likangala Irrigation Scheme, 1990

The last problem was continued politicisation of the activities of the SMC. Influenced by the political atmosphere of the time, the committees used an iron hand to enforce rules and regulations in the schemes. With the assistance of the MYP, the committee used to grab plots from the farmers for any petty offence they committed. The collection of debts was often assigned to the Young Pioneers who used to grab property from the farmers in repayment of debts from the schemes.²⁰ Related to this was the fact that the Disciplinary Officers of the MYP continued to monitor the activities of the SMC. Their presence in SMC meetings crippled the members' ability to freely discuss issues affecting the farmers in the schemes.²¹

The devolution of power from autocratic to democratic systems of state from the mid-1990s marked a watershed in the history of irrigation schemes, and indeed the whole history of the country in general. The process started with a referendum in 1993 from which Malawians opted for a multiparty system of state. In the following year a new multiparty state came into power under the leadership of His Excellency, Bakili Muluzi of the United Democratic Front (UDF). This democratisation affected irrigation schemes in two ways. In the first place, it marked the end of the period of terror and fear which crippled the activities of the SMC in the irrigation schemes in Malawi. Secondly, it brought an ideological shift in the management of natural resources. The first movement that was affected by the democratisation process was the MYP which was mostly associated with the brutality of Dr Banda's regime. Most importantly, as noted above, the

²⁰ Oral Interviews: Mai Mavumbe and Mai Kutengule, Namasalima Village, T.A. Kuntumanje, Zomba

²¹ Oral Interviews: Mr F Ramusi, Chair, Scheme Management Committee, Likangala Irrigation Scheme.

presence of the MYP crippled the activities of the SMC. When the Young Pioneers killed a member of the Malawi Army in Mzuzu in December 1993, Dr Banda declared *operation bwezani* in which the Malawi Army was mandated to disarm the Young Pioneers. Although the Young Pioneers in all the irrigation schemes in the country were allowed to remain in the schemes due to their role of modernizing agriculture in the rural communities, and that unlike others they were not involved in the military operations of the movement, from this time on they could no longer threaten the farmers and the committee members in the irrigation schemes.²²

However, following the rise to power of the UDF in 1994, the farmers from Likangala and Domasi irrigation schemes demanded immediate removal of the MYP from the schemes.²³ Fearing that they might be ill - treated by the ordinary farmers, the Young Pioneers also found it necessary to withdraw from the schemes.²⁴ However, a few of them remained in the villages around the schemes. These included those who got married in the areas and the local people that were trained as Young Pioneers from the villages around the schemes. But the ex-Young Pioneers had to operate as ordinary farmers, and since their camps were destroyed they found settlement from the surrounding villages in the schemes.

In addition to putting an end to the era of terror, democratisation strengthened the ideas of farmers' participation in the management of irrigation schemes. As an ideology,

²² Oral Interviews: Mr Banda, Ex- MYP, Chirombo Village, T.A. Mposa, Machinga 15 October 2003

²³ Oral Interviews: Mr L. Taibu, Matundu Village, T.A. Mposa, Machinga, 14 July 2003

²⁴ Oral Interviews: Mr Simbi, Ex MYP, Likangala Irrigation Schemes, Zomba, 21 October 2003

democracy placed emphasis on local empowerment, community participation and community-based management of natural resources.²⁵ Furthermore, the state believed that decentralization and increased stakeholder participation would improve accountability, good governance, sustainability and local ownership of irrigation schemes. Democracy, in essence, stipulated increasing the voice of the local communities, respect of the rule of law, promotion of equity and justice, participation of the beneficiary communities in decision making.²⁶

It was against this background that the state began to develop interest in revising policies and legislations governing the management of natural resources to reflect the changes of the time. From 1994, the state began to revise its irrigation policy too. By 2000, a new irrigation policy had been completed and adopted.²⁷ The objectives of the policy were to alleviate poverty among resource poor farmers, create a spirit of business culture in the schemes, increase agricultural production, improve the capacity of the farmers in the management of irrigation schemes, extend cropping opportunities, encourage rural communities to manage irrigation projects, and to enhance cost sharing and cost recovery principles.

Three issues stood out from the irrigation policy. First, the state advocated increasing the participation of farmers in the development as well as the management of irrigation

²⁵ See P. B. van Hensbroek, *Political Discourses in African Political Thought, 1860 to the Present* (London: Praeger, 1999) pp 167 - 204

²⁶ See Hensbroek, *Political Discourses in African Political Thought* 167 - 204

²⁷ Malawi Government, National Irrigation Policy and Development Strategy, (Lilongwe: Ministry of Agriculture and Irrigation, June 2000)

farming. Farmers had to provide human and financial resources; and participate fully from identification through planning, design to implementation and operation and maintenance of schemes. The other issue is the hand over of irrigation schemes to the water users or farmers working on the schemes. These farmers would own the schemes on lease with the mandate to transfer title deeds to members of their families. The last issue is that the policy presumed to facilitate irrigation development with equitable involvement of people across gender lines. To encourage the participation of women, the state intended to address the problems women were facing in irrigated agriculture, encourage the incorporation of female members into existing committees on the irrigation schemes, and encourage ownership of plots by women.

The Irrigation Act, which translated the policy into law, was formulated in November 2001. This Act provided for the formation of the National Irrigation Board to advise the state and other stakeholders on policy matters related to irrigation and drainages, and the establishment of irrigation management authority or local community organization that would enhance local community participation in the development and management of irrigation and drainage.²⁸

The idea of handing over irrigation schemes was finally recommended to the state by the Technical Cooperation Project (TCP) in September 1996. With financial support from the Food and Agricultural Organisation (FAO), TCP carried out a study on efficient irrigation management. The study recommended the hand over of 16 state aided irrigation schemes in Malawi to farmers. The process was to start with a pilot project of three

²⁸ Malawi Government, Act No. 16 of 2001, Irrigation Act , 28 December 2001

irrigation schemes, namely Nkhate in Chikwawa, Wovwe in Karonga, and Khanda irrigation scheme, a component of Likangala Irrigation Scheme complex in the Lake Chilwa basin. Farmers and staff from the schemes underwent training in various aspects of hand over process. However, by 1998, these efforts died a natural death due to lack of adequate funds to finalize the rehabilitation of the schemes and other related activities.²⁹

The hand over of irrigation schemes was vigorously revived in late 1999 when the International Fund for Agricultural Development (IFAD) funded a Smallholder Flood Plains Development Programme (SFPDP) which included the preparation of irrigation schemes for hand over to farmers in Malawi. The schemes earmarked included Lufira, Wovwe, Hara, Domasi, Nkhate and Bua. The handover of these schemes was to be preceded by the formation of farmers' associations, rehabilitation of the irrigation structures, the training of the farmers on the running of the schemes and also the reorganization of the management of the schemes.³⁰ Of the six, two were drawn from early pilot schemes identified by the TCP/FAO project. Instead of Khanda, Domasi was taken because it was one of the biggest irrigation schemes in Malawi.

The Cases of Likangala and Domasi Irrigation Schemes, 2000 -2002

The handover process started at Domasi irrigation scheme in 2000 with the formation of Water User Association (WUA), a body of farmers cultivating in the scheme, which had to assume the ownership and management of the scheme once the handover had taken

²⁹ Nkhoma and Mulwafu, "The Experiences of Irrigation Management Transfer." pp1327 -1333

³⁰ Malawi Government, "Guidelines for the Hand-Over of Government Managed Irrigation Schemes to Smallholder Farmers," Ministry of Agriculture and Irrigation, Lilongwe, September 2000

place. The formation of the association was preceded by the orientation of farmers on two management regimes appropriate for irrigation schemes namely: a water user association or a cooperative society. The orientation was done by Concern Universal, a non-governmental organisation which the state contracted with funding from IFAD. After being exposed to the advantages and disadvantages of the two regimes, the farmers opted for a water user association. Unlike a cooperative where farmers operate on shares, an association presented them with the advantage of exercising their autonomy and equal opportunities.³¹ Consequently, the Domasi Water User Association (DWUA) was established on 12 March 2000 with nine committees to help in the management of the schemes. The committees were as follows: executive, discipline, agriculture, health, irrigation, finance, auditing, marketing, and natural resources.³² The executive committee was the overall body charged with the responsibility of running the scheme. The term of office for the executive committee was three years. The committee members were given training on matters related to the management of irrigation schemes.³³

One of the first tasks of the committee was the drafting of a constitution of the association which started in January 2002. The process of drafting the constitution progressed slowly since farmers failed to attend the meetings organized by Concern Universal. Most of the farmers contended that they were busy working in their plots when the drafting of the constitution started in January 2002. Most of them wondered why the state organized such sessions at the peak of agricultural work and without

³¹ Malawi Government, *The Hand Over of Irrigation Schemes to Smallholder Peasants*, Lilongwe: Ministry of Agriculture and Irrigation, September 2002

³² Malawi Government, *Domasi Water User Association Constitution*, 2003

³³ Oral Interviews: Mr Nkhata, Scheme Manager, Domasi Scheme, January 2002

consulting them. This trend was also frustrating on the part of the officials from Concern Universal who had to travel all the way from Balaka to conduct the sessions. Consequently, the drafting took one full year before ratification in January 2003.³⁴

The constitution indicated that the association would ensure efficient operation and maintenance of the scheme and improve food security and incomes for its members. To achieve this goal, the association would mediate disputes among its members; ensure proper operation, maintenance, unity, adequate training and compliance to improved crop husbandry; source funds; promote conservation of natural resources and facilitate the provision of safe water and sanitation.³⁵

The introduction of the Domasi Water User Association was a great departure from the manner in which irrigation schemes were originally managed. First, it marked a change in the ownership and management of irrigation schemes from the state to the farmers. Second, it introduced many committees into the schemes. Third, it marked the beginning of payment of fees by farmers. As members, the farmers were required to pay a membership fee of K100 and also an annual plot fee of K50 for each plot they owned. The fees were meant to instil a sense of local ownership and generate funds for the operations of the WUA. Fourth, the SMC was converted into an executive committee of the association with the office of the chairperson being changed to that of President. However, the executive members of WUA were drawn from the SMC. An understanding was reached to allow them to continue managing the WUA until the scheme was finally

³⁴ Nkhoma and Mulwafu, "The Experiences of Irrigation Management Transfer." pp1327 -1333

³⁵ See Malawi Government, Domasi Water User Association Constitution

handed over to the farmers. Thus, A.G. Chapita was made the first president of the water user association at Domasi irrigation scheme.

After the association was fully established, it embarked on a programme to rehabilitate irrigation structures. The understanding was that the state should not hand over a dilapidated scheme to the farmers. The rehabilitation programme which involved the reconstruction of irrigation canals, the building of wide flood control structure, head works for diverting water, and the maintenance of roads to improve the accessibility of the schemes, started in 2000.³⁶ During the rehabilitation, the state provided cement, bricks and payment for local builders; the farmers were urged to clear the roads and parts of the canals leading to their plots. The builders were drawn from the surrounding villages. Originally, it was planned that they should not be paid; however, considering that their involvement took a long time, they convinced the state to pay for their labour.³⁷

At first, it was scheduled that the scheme would be handed over by 31 December 2002 after completing rehabilitation. However, this failed and in turn was rescheduled to 1 September 2003. The contributory factor was mainly delays in funding, and also heavy rains which crippled the progress of rehabilitation. The rains destroyed the structures that were rehabilitated, and made the builders to discontinue with the work. Farmers too, had to pay serious attention to cultivation in their plots.³⁸

³⁶ Oral Interviews: A Chapita, President, Domasi Water User Association, Domasi Scheme, 17 July 2003

³⁷ BASIS Participant Observations: Likangala Scheme, dated May 2002

³⁸ BASIS Field Observations: Domasi Scheme, November 2002

Ideally, it was arranged that the handover of the scheme be done in phases based on the parts where rehabilitation had been finished. The farmers, however, rejected the plan; consequently, it was agreed that the scheme be handed over at once when the rehabilitation of the whole scheme was completed. Thus, the scheme was to be handed over to the farmers in its totality except for the office buildings which the state had to continue to own.³⁹

Compared to Domasi, the handover of Likangala irrigation scheme advanced slowly. The decision that the scheme should be rehabilitated and handed over to farmers was announced by the Deputy Minister of Agriculture who visited the scheme on August 15, 2002. Funds for the rehabilitation of Likangala Irrigation Scheme were to come from the Highly Indebted Poor Country (HIPC) funds.⁴⁰ Unlike Domasi, no effort was made to train farmers or develop a Water User Association or Cooperative after the announcement of the programme. The rehabilitation work would be supervised by the SMC. At first, it was scheduled that the rehabilitation would begin on 8 November 2002 with the state providing construction materials such as wheel barrows, cement, bricks and quarry stones. On their part, the farmers were to provide free labour except for the builders who had to work on semi-permanent basis. The rehabilitation work was to centre on roads, drains, intake structures and the main canal. A damage assessment exercise was conducted in November 2002 from which a report on areas that needed to be rehabilitated was prepared and presented to the state. However, one contentious issue was the timing

³⁹ Oral Interviews: Mr Nkhata, Scheme Manager, Domasi Scheme, 8 December, 2002

⁴⁰ HIPC funds are funds which instead of being used for the repayment of loans to the IMF and World Bank, they were reallocated to facilitate some of the government's development project since the loans were cancelled.

for the beginning of the rehabilitation work. Farmers argued that the rehabilitation should not affect wet season cultivation.⁴¹ Consequently, an agreement was made that rehabilitation would commence in May 2003. This meant that the farmers in the scheme were not going to cultivate in winter season, until the scheme was fully rehabilitated.⁴² However, to date, that is March 2005, no scheme has been handed over to the farmers.

Meanwhile, conflicting opinions on the hand-over of irrigation schemes emerged. Some farmers at Likangala viewed the hand-over as a process towards getting the scheme from the farmers to the state. They feared that once they failed to run the schemes, they would be taken-over by the state. In addition, the hand-over of the schemes was received with mixed reactions which in most cases depended on class, gender and social position in the scheme. Chiefs, for example, saw the hand-over of the schemes in the basin as an opportunity to get back the land they lost to the state. Some villagers who were equally affected by the construction of the schemes also echoed similar sentiments. For poor farmers, the handover promised an opportunity to access more plots, which apparently had accumulated among the privileged farmers. Those relatively well off, on the contrary, were not in favour of the handover of the scheme. To them, the handover of irrigation schemes, entailed reallocation of their plots to other farmers. Over the years, these farmers had accumulated more plots, which might be difficult to retain after the handover. According to the new constitution, farmers would not be allowed to rent in/out

⁴¹ BASIS Field Observations: Likangala Irrigation Scheme, 8 November, 2002

⁴² Oral Interviews: Scheme Manager, Likangala Irrigation Scheme, 15 April 2003

plots, a tendency through which some farmers accessed relatively more plots from the schemes.⁴³

These conflicting perceptions suggest three things. First, they indicate that accurate information was not passed on to the farmers and hence most of them were operating on hearsay. Such hearsay worked towards demoralizing the farmers who had to actively participate in the preparation for handover of the scheme through rehabilitation and training. Second, farmers were not clear about the process of the handover of the irrigation schemes especially on issues relating to the ownership of the scheme. Most of them were not well informed on the fact that the schemes were going to belong to water user associations and not the chiefs. Worse still, the existing committees seemed less powerful to ensure that law and order was observed in the schemes. With the breakdown of the management structure, conflicts arising from the schemes were often sent to the village heads, when in principle, as public lands, it was the scheme committees that were supposed to resolve the conflicts.⁴⁴

At the same time, farmers were facing the problems of lack of credit of inputs and markets for their produce. From 1994, ADMARC stopped providing input credits to farmers and in 2000 it also stopped buying rice produce from the farmers. The major reason for stopping the provision of loans was the failure of farmers to repay loans to them. Though the state discouraged farmers from selling food crops at a time drought and hunger had become recurrent in the country, the results were not good for the farmers.

⁴³ BASIS Handover Survey: Domasi Irrigation Scheme, January 2003

⁴⁴ BASIS Field Observations: Domasi Scheme, 17 July 2003

For example, farmers began to depend on private traders who, not only came infrequently to the schemes, but also bought rice in low quantities and insisted on buying rice at low prices. In a liberalized economy of the time, there was a lot of haggling for prices and the terms of trade adversely worked to the disadvantage of the farmers. Consequently, farmers lost their bargaining power and resorted to selling crops at low prices. The major result was that their financial gains from agriculture did not favourably correspond to the cost of investment they made in the production of crops. Most importantly, farmers became vulnerable to unstable prices of crops as buyers shunned the schemes.

In order to secure inputs, farmers began to obtain loans from those working with well-established companies to be paid back when harvesting rice. Rice sold through this process was priced at half the normal price on the market.⁴⁵ Some farmers resorted to renting out their plots to other farmers. Contract farming was also used to cope with lack of input loans. Through contract farming, farmers from the schemes were hired by wealthier individuals from urban centres to cultivate their plots. In this contract, the farmers were entitled to a regular payment.⁴⁶ Money obtained through these debts and contract farming was used to purchase farm inputs and meet labour costs for cultivating in the schemes. In seasons of hunger and famine, the money was meant for the purchase of food.⁴⁷

⁴⁵ Field notes: Davidson Chimwaza, Khanda Scheme, January 2002

⁴⁶ This was revealed by our field assistants during an orientation and training workshop held between 15 and 17 January, 2003

⁴⁷ Field notes: Davidson Chimwaza, Food Security, Khanda Irrigation Site, February 2002

In some cases, the farmers from the schemes began to depend on a variety of sources to supplement their meagre farm incomes. The farmers, for instance, developed a variety of livelihood strategies on the schemes such as *ganyi* or casual labour, selling *mandasi* or small local cakes, renting plots, etc. Most of them invested greatly in livestock farming and carried out small businesses in the small towns that developed in the schemes. In some families, irrigation farming was left in the hands of wives and children while the husband maintained permanent jobs in the urban centres or as teachers in the rural communities.⁴⁸

However, this tendency had disadvantages on the success of farmers in the schemes. Among other things, it meant that farmers were not making much gains from the irrigation schemes. As farmers continued to depend on other economic activities to supplement meagre earnings from irrigation schemes, their productivity in the schemes was compromised. The absence of inputs loans and markets raises questions on the ability of the farmers to effectively manage irrigation schemes once they are handed over to them.

Conclusion

The chapter has discussed the genesis and process of handing over of irrigation schemes to the farmers, an irrigation reform which came to characterise the management of irrigation schemes between 1994 and 2002. Although the hand over of irrigation

⁴⁸ Baseline Survey: Domasi Irrigation Site, December 2002

schemes started to feature high on state agenda in the late 1990s, the process had its roots from the withdrawal of the Chinese contract and the economic crisis of the late 1970s. This idea of handing over of irrigation schemes to the farmers was largely adopted in response to economic, political and ideological changes of the time. The goal of the state was to reduce public expenditure, improve the performance of irrigation systems, enhance the sustainability of the irrigation facilities, and improve the maintenance of irrigation systems. In other words, the idea was done in the interest of the state and not the farmers. Since the farmers had to assume the responsibility of financing irrigation schemes, the hand over meant the transfer of financial burden from the state to the farmers. The chapter has also drawn attention to the problems that were challenging the hand over process in the Lake Chilwa basin. The most critical problems were inadequate funds, and the growth of misconceptions of the hand over of irrigation schemes.

Chapter Five

THE IMPACT OF IRRIGATION SCHEMES IN THE LAKE CHILWA BASIN

Introduction

So far, the thesis has concentrated on the development of irrigation schemes in the Lake Chilwa basin between 1946 and 2002. This chapter concludes the discussion by examining the impact irrigation schemes had on the economic development of the Lake Chilwa basin. It begins by examining the impact of irrigation schemes in the basin. In the final analysis, it observes a number of variations by which irrigation schemes affected the development of the basin. It argues that the development of irrigation schemes had both positive and negative effects on the development of the Lake Chilwa basin. Its impact on the farmers varied with time, space and their social class.

Contributions of Irrigation Schemes to the Development of the Basin

The introduction of irrigation schemes has played an important role in the development of the country in general, and the Lake Chilwa basin in particular. Among other things, irrigation schemes increased the production of rice in the country, improved physical infrastructure in the rural communities and the productivity of farmers in the country.

Rice Production

One of the impacts of irrigation schemes had to do with the increase of rice production. Irrigation schemes intensified the production of rice in the country for export and food.

Table 5: Rice Production at Domasi and Likangala Scheme, 1969 – 1978

Year	Likangala		Domasi	
	Production in Metric tons	Purchaser	Production in Metric Tons	Purchaser
1969	129	Admarc		
1970	938	Admarc		
1971	676	Admarc		
1972	565	Admarc		
1973	915	Admarc	330	Admarc
1974	759	Admarc	573	Admarc
1975	1028	Admarc	997	Admarc
1976	1123	Admarc	1278	Admarc
1977	1239	Admarc	1316	Admarc
1978	888	Admarc	1086	Admarc

Source: MNA GRS 13/105/4 Monthly Reports Settlement Branch, 1969-1978

Table 6: Rice Production at Likangala Scheme, 1990 –1999

Year	Production in Metric Tons	Purchaser
1990	1365	Noil/Admarc
1991	1584	Noil/Admarc
1992	1985	Noil/Admarc
1993	1697	Noil/Admarc
1994	1697	Noil/Admarc
1995	1628	Noil/Admarc
1996	1787	Noil/Admarc
1997	1787	Noil/Admarc/Rice Milling
1998	1906	Noil/Admarc/Rice Milling
1999	1787	Noil/Admarc/Rice Milling

Source: Malawi Government, Likangala Irrigation Aspects, 1990 -1999

Tables 5 and 6 above indicate the amount of rice produced at Likangala and Domasi irrigation schemes between 1969 and 1978, and also the amount of rice produced at Likangala irrigation scheme between 1990 and 1999 in metric tonnes respectively. The figures show that the production of rice has been steadily growing with time. But there was an intensification of rice production at Likangala beginning from 1991. Furthermore, the tables show that from 1969 ADMARC has been the main buyer of rice from the

irrigation schemes; it was joined by National Oil Industry Limited (NOIL) in 1990 and then Rice Milling Company in 1997. However, it should be noted that the tables do not portray a complete picture of the amount of rice produced at Likangala and Domasi irrigation schemes. They only show the production of rice that was purchased by ADMARC, NOIL and Rice Milling Company, and also the rice whose production was recorded at the offices of the schemes. The tables do not show the amount of rice produced in the winter seasons, or that which the farmers kept for food at their homes. Neither do they tell us about the amount of rice which the farmers sold to private traders at local markets near the irrigation schemes in order to fetch higher prices and also to avoid paying credits which was directly deducted from ADMARC markets. Perhaps, the schemes produced much more rice than indicated here.

Table 5 also shows fluctuations in the production of rice at Likangala irrigation scheme between 1970 and 1975. A number of factors contributed to this development. The first factor had to do with the unwillingness of the local farmers to participate fully in the production of rice in the scheme. As shown in chapter three, not many farmers from the surrounding villages registered as ploholders in Likangala irrigation scheme. The second factor was the growing number of Young Pioneers leaving the scheme. The production of rice began to increase from 1973. As noted in chapter three, in this year the Regional Minister (South) visited the scheme to encourage the farmers to join the scheme. During the same visit, he gave allowance to state officials working in the scheme to also start

cultivating in the scheme. Consequently, there was sharp increase of rice production at Likangala irrigation scheme.¹

Income Source

The irrigation schemes also constituted the major source of income for the farmers in the Lake Chilwa basin. Of the 123 farmers interviewed in the BASIS baseline survey in 2002, 90% of them indicated that they depended on the schemes for almost all their food and income sources.² People from the surrounding villages also found *ganyu* or casual labour opportunities from the farmers cultivating in the schemes. These people were contracted to such activities as tilling, sowing, birds scaring, and harvesting of rice in the schemes. Using income from the schemes, farmers were able to pay school fees for their children, build iron-roofed houses and also purchased radios, bicycles, etc. The BASIS surveys also show that, by the year 2002, 15% of the farmers had managed to build tin roofed and brick burnt houses.

Infrastructure Developments

Irrigation schemes also contributed towards the infrastructure developments of the basin. The most outstanding is the development of rural growth centres in the places where irrigation schemes were established. Since the schemes were located in the remote parts of the country, it became of greater necessity to create townships as sources of social and medical provisions and regular supply of goods for the settlers engaged in irrigation

¹ MNA GRS 13/105/65 Monthly Reports, Likangala Irrigation Scheme, 1969 - 1973

² BASIS: Baseline Survey, December 2002 to January 2003

farming.³ Furthermore, the towns were to become centres for rural development. In its original plan, 30 acres by the present site office of Likangala scheme were earmarked for the creation of a township in which shops, markets, recreation facilities, banks and houses for the settler community would be developed (See Plate 1, 3, and 4). It was proposed that a tentative plan would be drawn up for submission to Town Planning Office.⁴ At Domasi, the Chinese Agricultural Mission established its headquarters, and this contributed immensely to the infrastructure development of the area. They built houses, offices, a community hall, and workshops. The houses were built with burnt bricks and since then, the community hall has been a centre for wedding reception ceremonies, musical and public celebrations.⁵ Although, the original plans of developing trading centres in the schemes were later abandoned due to inadequacy of land and finances, trading centres with facilities such as groceries, schools, local markets, ADMARC markets, and health centres emerged at Likangala and Domasi irrigation schemes by 1979.

³ MNA: GRS 13/105/ 65, Settlement Scheme, Likangala Irrigation Scheme, 1969 - 1975

⁴ MNA, GRS 13/105/65 Engineering report and Proposal on the Likangala Irrigation Scheme, September 1969

⁵MNA, GRS 600/1/13 Settlement Schemes, Likangala and Domasi Settlement Aspects, August, 1979

Table 7: The Status of Townships at Domasi and Likangala Schemes

Facility	Likangala	Domasi
Shops/Markets	4	4
Clinics	1	1
Church	1	1
Boreholes	1	1
Taps	13	Nil
Houses	80	100
Schools	1	1

Source: MNA GRS 600/1/13 Settlement Aspects, August 1979

However, the development of towns faced a lot of problems in the basin. Most of the towns were poorly located, groceries not well stocked, and health centres were also understaffed. Located near Domasi Bridge, the trading centre at Domasi scheme became vulnerable to annual floods from the Domasi River. In 1978, it is recorded that most of the houses on the town and plots in the schemes were destroyed by heavy floods.⁶ Although a flood control band was constructed, the bridge continued to be over flooded by water making the scheme periodically inaccessible to the farmers from Zomba side. Furthermore, the clinics faced the problems of understaffing and inadequate medicine to make lasting impact on the welfare of the people in the basin. The roads constructed were earth roads, the bridges were made of poles, and with time, the roads became impassable in rainy season and most of the bridges had broken down. The problem was that the state

⁶ Oral Interviews: Henry Chawawa, Village Head, Matundu Village, T/A Mposa, Machinga, 19 July 2003

instituted no mechanism for the maintenance of roads and bridges. Mostly, the maintenance of the roads and bridges was dependent on Youth Week activities in which the people in the country were required to carry out development works, for example, clearing of roads, construction of bridges and clinics, construction of school blocks and teachers' houses, etc. However, these activities became heavily politicised so that by the mid-1990s most of the farmers reluctantly participated in the Youth Week.

Ethnic Tolerance and Nation Building

The establishment of irrigation schemes worked towards promoting ethnic tolerance which was important for nation building and economic development. Farmers from different parts of the country were brought to work together in the irrigation schemes. The state assumed that “.. as farmers from a variety of ethnic backgrounds interacted on the scheme they would develop an understanding and tolerance for one another's culture and practices which is essential for nation building.”⁷ Important to note is the fact that most of the farmers from outside the scheme were the Young Pioneers drawn from different parts of the country, and some party officials from the urban areas of Zomba. Table 8 below shows district and region of origin of the farmers at Likangala and Domasi irrigation scheme by 1979.

⁷ Kishindo, “Farmer Turn Over on Settlement Schemes.” p 3

Table 8: The District of Origin of Settlers, 1978-79

District/Region	Likangala	Domasi
Machinga	7	926
Zomba	711	293
South (rest)	74	24
Centre	13	39
North	10	81

Source: MNA GRS 600/1/13 Settlement Aspects, 1979

The above table shows that, although most of the farmers were drawn from the villages surrounding the schemes, there were a considerable number of farmers who came from districts other than the ones from which the schemes were located. These farmers were drawn from all the regions of the country.

Negative Contributions of Irrigation Schemes to the Basin

Irrigation schemes, it should also be noted, had their own flaws in the development of the Lake Chilwa basin. Irrigation farming, in general had a great deal of social costs on the rural communities. First, the introduction of irrigation schemes resulted in the removal of people from their original lands to resettle elsewhere in the basin or beyond where land for food production was limited. This meant that farmers had to depend on irrigation

schemes for cash and food. Where they settled, there was an intensification of the use of the environment. This was a major cause for environmental degradation in many villages surrounding the schemes. Second, irrigation farming in the schemes subjected the farmers to the growth of new diseases, for example, bilharzia, cholera, malaria and typhoid.⁸ Since the farmers had to work mostly in water, they became vulnerable to water-borne diseases. Though the state constructed clinics in the schemes, inadequate staffing and medicine remained a worrisome problem to the farmers. Third, the construction of schemes disrupted the existing local economies of the basin. Before irrigation schemes were established, the wetlands in the basin were used for a diversity of economic activities equally important for the development of the basin. Among other things, the wetlands were used for hunting, livestock grazing and bee keeping.⁹ When irrigation schemes were constructed, farmers were not allowed to graze livestock or hunt birds in the schemes.

As noted in chapter three, the location of the Malawi Young Pioneers and MCP officials in the schemes, especially during Dr Banda's regime was a major cause of fear and torture to the people in the Lake Chilwa basin. In the process of carrying out party functions, the Malawi Young Pioneers ill treated innocent people in the basin.

The absence of adequate drugs and medical officers in the clinics located in the schemes, the lack of maintenance of the roads and bridges, and the growth of inequity in the distribution of wealth in the schemes overshadowed the sustainability of the contributions

⁸ Fieldnotes: Noel Mbuluma, Likangala Irrigation Site, November 2001

⁹ For details see Malawi Government, Lake Chilwa Wetland Management Plan

of the schemes to the surrounding communities and the farmers. As only a few privileged farmers benefited, the development of irrigation schemes was more of an economic growth without equity. Thus, irrigation schemes failed to adequately improve the welfare of the people in the Lake Chilwa basin.

Variations in the Impact of Irrigation Schemes

However, it should be noted that the impact of irrigation schemes in the Lake Chilwa basin varied with time, place, class and gender and that this can be traced from the way the schemes were organized and run in the period discussed above. Up to 1994, for example, irrigation schemes appeared to be relatively productive and well organized. The reason for the success of irrigation schemes at this point in time was generally the political atmosphere that reigned during this period. The state placed much attention to agricultural production. Thus, it made available to farmers all the resources they needed, for example, farm inputs, markets, and extension services. Not only were farmers working in the schemes given inputs on time, but that the Chinese and the Young Pioneers in the schemes worked hand in hand in the sowing and planting of crops in the schemes. On its part, the state made available sufficient number of extension workers in the schemes. Each block was located an extension worker.

The existence of the Young Pioneers together with the strong leadership of the time ensured the compliance of the farmers to the rules and regulations of irrigation farming in the schemes. Furthermore, the numerous grounds men who worked on clearing the

canals, roads and other irrigation structures ensured that the schemes were in good physical shape all the time. The authority of the committees, again, was highly respected. Farmers could not break rules thoughtlessly.¹⁰

But from 1994, each scheme came to be served with one extension worker; farmers sowed seeds individually, and inputs were no longer made available to the farmers on loan as it used to be the case in the past. The democratisation process led to the break down of law and order in the schemes. Among other things, farmers found it easy to break the rules of irrigation farming; and that the commands of the SMC came to be taken lightly by the farmers. It was actually this break down of order that made ADMARC and other financing companies to stop giving loans to farmers who had developed the tendency of not repaying loans.

The impact of irrigation schemes also varied according to the social classes of the farmers cultivating in the schemes. For example, some classes of farmers benefited from the development of irrigation schemes. These included the rich, committee members, civil servants and the members of Young Pioneers. Those relatively well off, for example, had the opportunity of accessing more plots. There were three ways by which they accessed the plots. First, they rented plots from those who were unable to cultivate their plots due to lack of money to buy inputs or meet the labour costs of irrigation farming. Second, they bought plots from farmers. Third, they redeemed plots from farmers who failed to repay loans. There was a policy in the schemes that if a farmer failed to pay back loans those who had money could pay for them in exchange for plots. The members of the

¹⁰ Oral Interviews: A. Chapita, President of WUA, Domasi Scheme, 17 July 2003

SMC had also the chance of accessing more plots and farm inputs. As the ones responsible for the reallocation of plots, they allocated more plots to themselves. The process by which they acquired more plots was largely from confiscation of plots from those who failed to cultivate in them. In some cases, they took advantage of plots belonging to farmers who died. When the children and relatives failed to come forward to claim the plots, they shared these plots among themselves. The Young Pioneers were also given larger land holdings as compared to the other farmers. It was observed that 50% of the holdings of more than 2 acres were cultivated by the Young Pioneers. In doing this, the state contended that the Young Pioneers had no other gardens outside the schemes to cultivate, and as such they largely depended on the production of rice for their incomes.¹¹

It should also be noted that different places experienced the development of irrigation schemes differently. For example, Domasi irrigation schemes had a different experience from that of Likangala. From the time it was constructed, the scheme had enjoyed donor support. For example, the Chinese Mission established their headquarters on the scheme. During this period, the Chinese donated a rice mill to the SMC as means of generating income. Besides, the Chinese provided financial support to the SMC, fertilizers and seeds to the farmers. From 2000, Domasi was one of the schemes that were selected for funding by IFAD in preparation for hand over.

Furthermore, not every farmer was ill-treated by the Young Pioneers. While the majority of the farmers suffered, women and those in the management of irrigation schemes

¹¹ MNA GRS 600/1/13 Domasi Irrigation Scheme, August 1979

appreciated the presence of the Young Pioneers. Women, for example, found husbands from the Young Pioneers in the Lake Chilwa basin. What attracted some women was that the Young Pioneers were hard working and courageous, qualities which they found attractive for their choice of husband. Besides, being in love with a member of Young Pioneers exempted them from the brutality which they used in patronizing the schemes and the selling of party cards.¹² When the Young Pioneers were removed from the schemes in 1994, 15 of them at Likangala and 12 of them at Domasi remained in the area for marriage reasons. By the time this research was being carried out, ten ex-Young Pioneers were identified at Likangala irrigation scheme, and eight at Domasi. Other Young Pioneers were reported to have passed away.¹³ The Young Pioneers also assisted the state in ensuring law and order, and that farmers conformed to the rigorous discipline of irrigation farming.¹⁴

Conclusion

It can be concluded from this chapter that the development of irrigation schemes had both negative and positive impact. In general, irrigation schemes contributed to the increase in the production of rice, improvement of the productivity of the farmers in the basin, and also contributed to the growth of towns, construction of clinics and markets. It has also been observed that irrigation schemes constituted the major source of incomes to most of the people in the Lake Chilwa basin. The chapter has also observed that the impact of irrigation schemes on the farmers varied with location, time, class and gender. Not all the

¹² Group Interviews: Mr D Tweya, Mai E John, Mai M Mbiri, Mai L Mdoka, Chief Mtambo, Mtambo Village, T.A. Mposa, Machinga, 15 October 2003

¹³ Oral Interview: Mr Simbi, Ex-Young Pioneer, Likangala Irrigation Scheme, 21 October 2003; and E. C. Mnenula, Ex-Young Pioneer, Domasi Scheme, 29 October 2003

¹⁴ Oral Interview: Mr S Phuliwa, Watchman, Likangala Scheme, 22 October 2003

farmers were vulnerable to the development of irrigation schemes. Different farmers had different experiences from the schemes. Those that were privileged benefited from the schemes more than those who were less privileged.

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CONCLUSION

The foregoing account has examined the history of irrigation farming in Malawi from 1946 to 2002. It has focused on the efforts the state in Malawi made to promote irrigation farming through the establishment of irrigation schemes in the country. It has been observed that, in developing irrigation schemes in Malawi, the state was responding to political, economic, ideological and ecological changes of the time. The colonial state in Malawi developed irrigation schemes to improve peasant production in the face of drought, rapid population growth and land scarcity. Besides, the state wanted to conform to the ideas of smallholder farming. The hand over of irrigation schemes which came to characterise the history of irrigation farming from the mid-1990s, was also adopted as an adaptive strategy against economic crisis and the desire to conform to ideas of stakeholder participation and irrigation management transfer which preoccupied scholars and development planners, the world over.

It is also clear from the above account that farmers, both local and settlers, exercised their independent choices to participate in the irrigation schemes. Acting as individuals or as a group, they had the freedom to join the schemes or not. They joined irrigation schemes only after they had noted that rice cultivation was productive. They were far from being passive participants in the development of irrigation schemes.

In assessing the impact of irrigation schemes in the Lake Chilwa basin, the study has depended on the underdevelopment thesis. Although, the schemes registered a number of positive contributions such as increased production of rice, expansion of income sources, and improvement of infrastructure, the development left a lot to be desired. For example, irrigation schemes led to loss of ancestral land by some peasants as they had to give way to the development of irrigation schemes in the Lake Chilwa basin. Besides, working in the schemes exposed farmers to water related diseases such as cholera, malaria, typhoid, and bilharzia. Most importantly, the location of the Malawi Young Pioneers and MCP officials in the schemes, especially during Dr Banda's regime was a major cause of fear and torture to the people in the Lake Chilwa basin.

However, it has been observed that, the extent to which the communities were affected varied according to time, location, social class and gender. The study has noted that farmers and communities were not affected in the same way. Other farmers, especially the privileged farmers such as committee members, Malawi Young Pioneers and state officials, benefited from the development of irrigation schemes. It has also observed that prior to 1994, irrigation schemes were relatively well organised and productive, though at the expense of the human rights of the rural communities. The productivity of the schemes has been attributed to serious commitment the state of the time had on agriculture.

What has not been thoroughly discussed in this thesis, but is of greater significance in understanding the social history of irrigation schemes, are labour relations in irrigation

schemes, and socio-environmental issues related to irrigation development during the period of study. These issues are also important variables in assessing the impact of irrigation in farming in Malawi. The reason for the omission of these relations has to do with the fact that this thesis is about the efforts the state made in the promotion of irrigation farming through the development of irrigation schemes in the country and the responses of the farmers towards this development between 1946 and 2002.

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- L. Taibu. Matundu Village, T/A Mposa, Machinga, 14 July 2003.
- GVH Mpheta, Mpheta Village, T/A Mposa Machinga, 17 July 2003
- A.G. Chapita, President, Domasi Water Use Association, Domasi Scheme, 17 July 2003
- Chief Katanda, Katanda Village, T/A Kuntumanje, Zomba, 14 October 2003.
- Mai Mavumbe, Namasalima Village, T/A Kuntumanje, Zomba, 14 October 2003.
- Mai Kutengule, Namasalima Village, T/A Kuntumanje, Zomba, 14 October 2003.
- Chief Chirombo, Chirombo Village, T/A Mposa, Machinga, 15 October 2003.
- K. Banda, Ex-Young Pioneer, Domasi Scheme, 15 October 2003.
- Dyton Tweya, Mtambo Village, T/A Mposa, Machinga, 15 October 2003.
- Mari Esmeý John, Mtambo Village. T/A Mposa, Machinga, 15 October 2003.
- Mai Masingate Mbiri, Mtambo Village, T/A Mposa, Machinga, 15 October 2003.

Mai Lone Mdoka, Village Headperson, Mtambo village, T/A Mposa, Machinga 15 October 2003.

Witness Kalambula, Katanda Village, T/A Kuntumanje, Zomba, 14 October 2003.

Felix Jenya, Ex-Young Pioneer, Domasi Scheme, 28 October 2003.

E. C. Mnenula, Ex-Young Pioneer, Domasi Scheme, 29 October 2003.

G.H. Phuka, Scheme Manager, Domasi Scheme, 11 November 2003

Likangala Irrigation Site

Rhodrick Mulauzi, Mkotima Village, T/A. Mwambo, Zomba 17 October 2003.

Mai Mulauzi, Committee Member, Likangala Scheme, 17 October 2003.

Mr. Kachinangwa, Mkotima Village, T/A Mwambo, Likangala Scheme, 17 October 2003.

Mr. Simbi, Ex-Young Pioneer, Likangala Scheme, 21 October 2003.

Mr. Kazembe, Block Committee Chair, Likangala Scheme, 21 October 2003.

F. Ramusi, Chair of SMC, Likangala Scheme, 21 October 2003.

M. Nyalape, Sumani Village, T/A Mwambo, Zomba, 22 October 2003.

Mr. Mwasiyamphanji, Ramusi Village, T/A Mwambo, Zomba, 22 October 2003.

Mr. S. Phuliwa, Watchman, Likangaka Scheme, 22 October 2003.

Mr. Mwandama, Chiliko Village, T/A Mwambo, Zomba, 22 October 2003.

Mr. Chilimbiro, Scheme Manager, Likangala Scheme, 31 October 2003.

R. Mafukula, Ex-Young Pioneer, Likangala Scheme, 31 October 2003.

J. Khope. Ramusi Village, T/A Mwambo, Zomba, 28 October 2003.

Chief Chilikho, Chilikho Village, T/A Mwambo, Zomba, October 2003.

Mr. Kabunga, Sumani Village, T/A Mwambo, Zomba, 29 October 2003.

Chief Sumani, Sumani Village, T/A Mwambo, Zomba, 29 October 2003.

Mr. Nansenga, Mbaru Village, T/A Mwambo, Zomba, 29 October 2003.

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Miss Kachuma, Chief Irrigation Officer, Liwonde ADD, Liwonde, 19 November 2002

Mrs Munthali, Land Husbandry Officer, Liwonde ADD, Liwonde, 19 November 2002

Mr Maweru, Irrigation Officer, Department of Irrigation, Lilongwe, 30 May 2003

Mr Khonje, Assistant Irrigation Officer, Department of Irrigation, Lilongwe, 30 May 2003

Mr Kauta, Programme Manager, Lilongwe ADD, Lilongwe, 30 May 2003

Mr J. Chisenga, Director, IFAD Malawi, Lilongwe, 30 May 2003

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