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***Securing Smallholder Farmers' Land and Water Rights and Promoting
Equitable Land Access in Irrigation and Watershed Management in Malawi,
Rwanda and Swaziland***

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ACRONYMS

ADEMU	Agricultural Development and Environmental Management Unit
AFDB	African Development Bank
CCIs	Community Centres for Innovation
CDP	Chief Development Plan
CDT	Chiefdom Development Trust
CLC	Chief's Letter of Consent
CLGS	Committees For Management And Supervision Of Watershed
DCMP	Comprehensive Mitigation Plan for Development
DIU	District Irrigation Unit
DLM	Department of Lands and Mapping
EFR	Entitlement Framework for Resettlement
ERP	Environmental Review Panel
FAO	Food and Agriculture Organisation
FLSF	Farmer Services and Livelihoods Fund
GDP	Gross Domestic Product
IFA	Inputs for Assets programme
IFA	Inputs for Assets
IFPRI	International Food Policy Research Institute
IMT	Irrigation Management Transfer
IRLADP	Irrigation, Rural Livelihoods and Agricultural Development Project
KDDP	Komati Downstream Development Project
KWAMP	Kirehe Watershed Management Project
LLDP	Lilongwe Land Development Programme
LUSIP	Lower Usuthu Small-holder Irrigation Project
MINAGRI	Ministry of Agriculture and Animal Resources
MOU	Memorandum of Understanding
MSI	Mini Scale Irrigation
MTR	Mid-Term Review
NRDCU	Natural Resource and Community Development Unit
PCU	Project Coordination Unit
RAP	Resettlement Action Plan
RCMP	Comprehensive Mitigation Plan for Resettlement
RNRA	Rwanda Natural Resources Authority
RWF	Rwanda Franc
SNL	Swazi National Land
SSI	Small Scale Irrigation
SWADE	Swaziland Water and Agricultural Development Enterprise
TDL	Title Deed Land
UNECA	United Nations Economic Commission for Africa
USAID	United States Agency for International Development
USD	United States Dollar
VIP	Ventilated Improved Pit Latrine
WB	World Bank
WUA	Water Users Association

ABSTRACT

The paper presents lessons learnt on securing land and water rights of smallholder farmers and ensuring equitable access to land in the Irrigation, Rural Livelihoods and Agricultural Development Project (IRLADP) in Malawi, the Kirehe Watershed Management Project (KWAMP) in Rwanda and the Lower Usuthu Small-holder Irrigation Project (LUSIP) in Swaziland. The experiences from the three countries provide useful lessons on securing smallholder farmers land and water rights for other countries who wish to extend their areas of irrigated land, especially in Africa. Securing land rights of smallholders and providing for equitable access to others whose land is not being irrigated is essential, but this has challenges. So does ensuring that those affected by the development of irrigation infrastructure are adequately compensated and also benefit, as does extending project benefits to users of rain-fed land as part of broader watershed management processes. The various projects mentioned have tried to ensure that issues of land tenure security and equitable access for smallholder farmers are addressed prior to major investments in engineering works, but this has proved difficult to enforce.

Key words: land and water governance, tenure security

I. INTRODUCTION

In recent years, there has been a growing concern about the increased commercial demand for agricultural land in the developing world, especially in Africa. This increased demand is closely linked to water access. Much of the focus of research has been on the demand from large-scale foreign and domestic investors, sometimes acquiring land through illegitimate means, usually referred to as land grabbing. But much of the demand is from smallholder farmers and a significant amount of the land grabbing involves local elites. Many countries in Africa have recently adopted, or are in the process of developing land policies that secure land rights for their citizens while simultaneously encouraging greater commercial use of land. Many countries have also adopted ambitious policies for expanding irrigation. These provide new opportunities for commercialisation but also present new challenges and risks in relation to land grabbing. This report presents lessons learnt on securing land and water rights of smallholder farmers and ensuring equitable access to land in government irrigation and watershed management projects supported by the International Fund for Agricultural Development (IFAD), the World Bank and others in Malawi, Rwanda and Swaziland. The context and policy frameworks and scale of the schemes differs between the three countries.

II. LAND, WATER AND IRRIGATION

A. Land and water resources under pressure

Land and water resources and the way they are used are central to the challenge of improving food security across the world. As indicated in the State of the World's Land and Water Resources for Food and Agriculture (FAO, 2011), the availability of land and water to meet national and global demands for food and agriculture production have been put into sharp relief following the recent rise in commodity price levels (and associated volatility) and increased large-scale land acquisition. The social impacts of rapid food price inflation have hit the poorest hardest. The buffering capacity of global agricultural markets to absorb supply shocks and stabilize agricultural commodity prices is tied to the continued functioning of land and water systems. At the same time, climate change brings additional risks and further unpredictability of harvests for farmers – from warming and related aridity, shifts in rainfall patterns, and the frequency and duration of extreme events. While warming may extend the limit of agriculture in the northern hemisphere, it is anticipated that key agricultural systems in lower latitudes will need to cope with new temperature, humidity and water stresses.

The lack of clear and stable land and water rights as well as weak regulatory capacity and enforcement have contributed to conflict over land access and competition for water use. In particular,

the systematic inclusion of customary and traditional use rights in national legislation is a necessary first step in order to protect rural livelihoods and provide incentives for responsible land and water use. Furthermore, effective collaboration between land and water institutions has lagged behind patterns of use and consumption. Although land and water function as an integrated system, many institutions deal with them separately. While the legal decoupling of land and water is deliberate to avoid resource grabbing, the growing intensity of river basin development and the degree of interdependence and competition over land and water resources require more adaptable and collaborative institutions that can respond effectively to natural resource scarcity and changing market opportunities. Even administrative institutions that are dedicated to integrated regional or basin management deal primarily with either land or water resources and their respective multiple uses, rather than with land and water jointly. National and local institutions regulating land and water use in many countries have come under growing pressure to arbitrate between different uses as competition for land and water has increased. The absence or weakness of trans-boundary cooperation frameworks (both within federated states and between riparian countries) have led to sub-optimal investment and tensions between upstream and downstream users (FAO 2011).

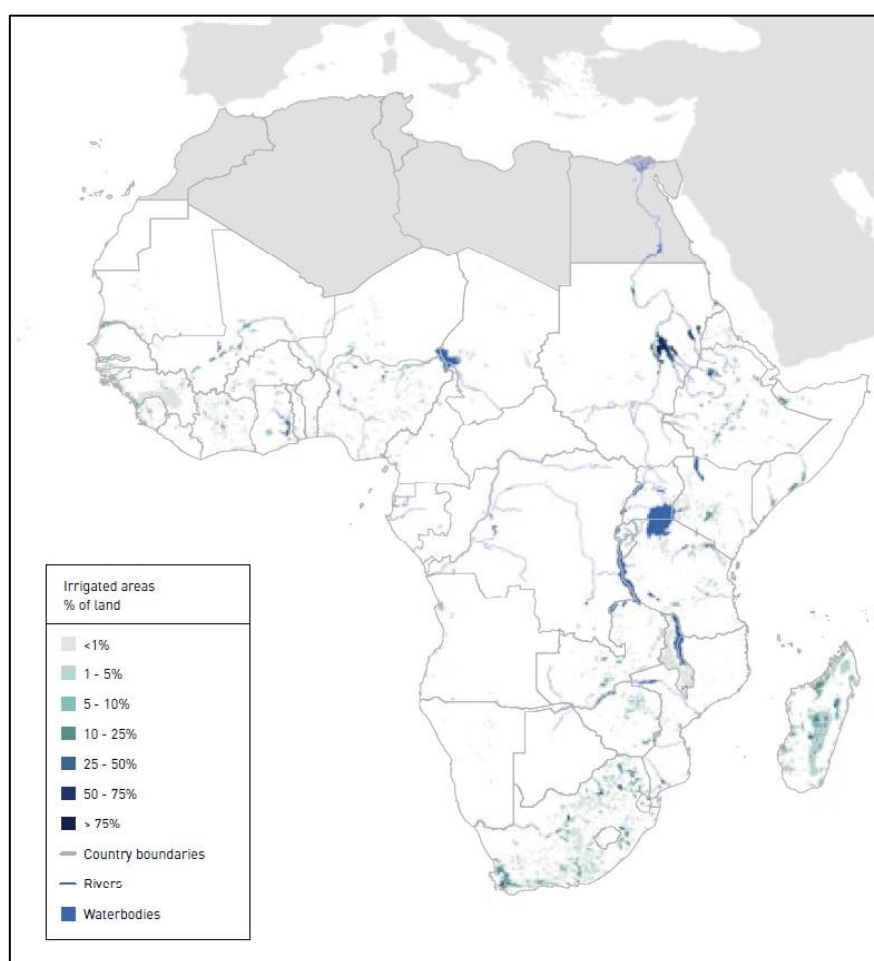
As Hodgson (2004) pointed out, irrigation schemes raise specific issues in relation to both water and land rights. Water rights issues concern two main “levels”: the right to abstract water from the natural source to feed the irrigation scheme, a right held by the irrigation agency usually through a “licence” or “permit”; and water delivery rights, held by individual water users – the farmers – on the basis of a contract with the irrigation agency and in return for a water fee (Hodgson, 2004). To further complicate the picture, over the past few years responsibility for the operation and maintenance of state irrigation schemes has been (partly) transferred to water users. Key water delivery rights issues include farmers’ security of access to water, nature and level of the water fee, accountability mechanisms to ensure timely and effective water delivery, and the responsibilities and functioning of water users associations (Hodgson, 2004).

As to land tenure, irrigation schemes raise three broad groups of issues. Firstly, with regard to the very creation of the scheme – which may entail the expropriation of existing land rights, and the reallocation of land-cum- water rights to new users. Secondly, with regard to the land tenure security enjoyed by farmers on irrigated plots (nature and duration of use rights, etc). Thirdly, with regard to land transactions fostered by the increased land values that irrigation brings about. These issues are closely linked to the water delivery rights issues identified above. For instance, in many schemes non-payment of the water fee entails loss of land use rights – with clear implications for land tenure security (Cotula 2006).

B. Irrigation in sub-Saharan Africa

According to the World Bank (2010), across Sub-Saharan Africa, irrigated agriculture accounts for about 25 per cent of the value of agricultural output. This share is produced on just 3.5 per cent of the cultivated land, confirming the potential of irrigation to improve livelihoods in Sub-Saharan Africa and suggesting that more investment in irrigation would yield substantial benefits. However, Sub-Saharan Africa's agricultural water remains underdeveloped. Of a cultivated area of 197 million hectares, only 7 million hectares is equipped for irrigation, with a further 2 million hectares under some other form of water management. Overall, this area amounts to only 23 per cent of the 39 million hectares that is believed to be physically suitable (though not necessarily economically viable) for irrigation. The share of cultivated area equipped for irrigation in Sub-Saharan Africa varies considerably by country but is generally very low, with only a few countries reaching the 20 per cent mark. In absolute terms, more than 60 per cent of the total area is concentrated in just three countries—Madagascar, South Africa, and Sudan—each with over a million hectares of irrigated area.

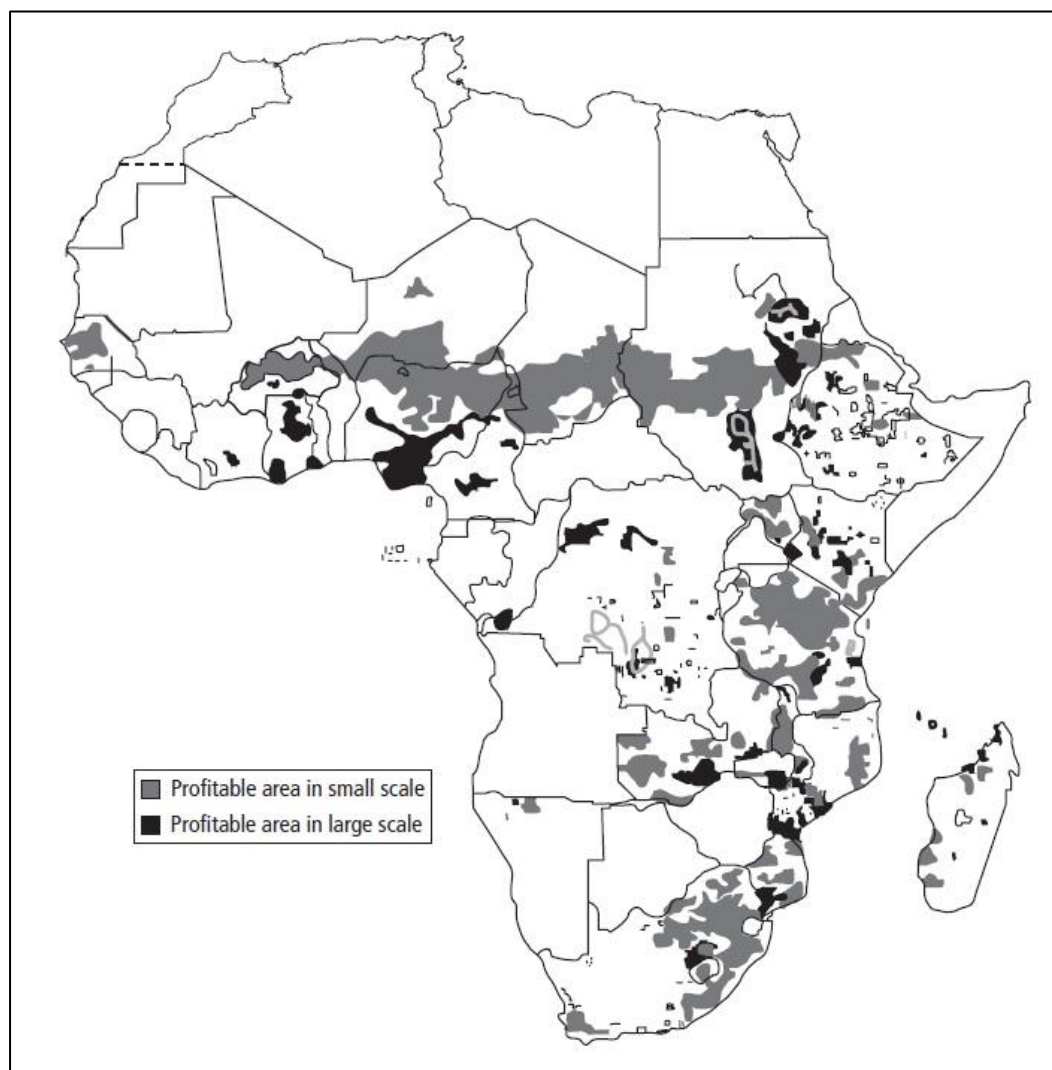
Figure 1. Irrigated areas in sub-Saharan Africa



Source: FAO 2008.

Irrigation carries significant potential to increase agricultural productivity. Most of future growth in crop production in developing countries is likely to come from intensification, with irrigation playing an increasingly strategic role through improved water services, water-use efficiency improvements, yield growth and higher cropping intensities (FAO, 2011).

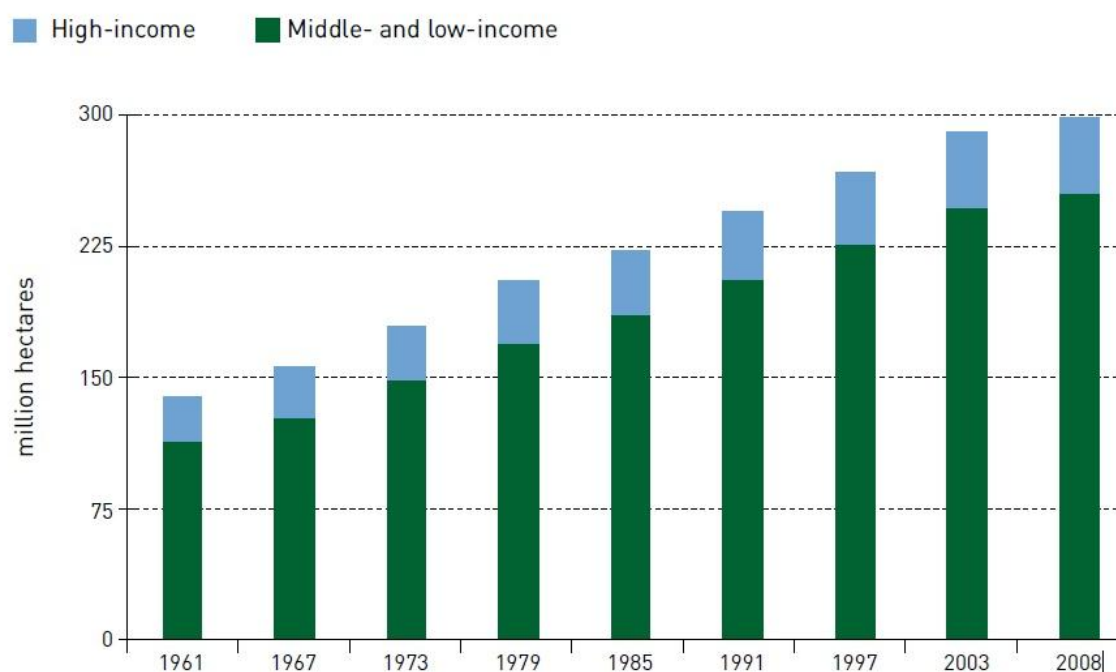
Figure 2. Investment potential for dam-based and small-scale irrigation



Source: AfDB 2011.

Since 1961, while total cultivated land has shown a net increase of 12 per cent to 2009 globally, land under irrigation has more than doubled. While much of the prime agricultural land suitable for irrigation has been developed, the call for on-demand, just-in-time water services is rising and the global area equipped for irrigation continues to expand at a rate of 0.6 per cent per year. Groundwater use in irrigation is expanding quickly, and almost 40 per cent of the irrigated area is now reliant upon groundwater as either a primary source, or in conjunction with surface water (FAO, 2011).

Figure 3. Evolution of area equipped for irrigation



Source: FAO 2011

C. Increased commercial demand for agricultural land

As mentioned by Deininger & Beyerlee (2011), although fairly short-lived, the 2007–08 commodity price boom and the subsequent period of high and volatile prices reminded many import-dependent countries of their vulnerability in food security and prompted them to secure their food supplies overseas. Together with the financial crisis, the boom led to a “rediscovery” of the agricultural sector by different types of investors. One of the more permanent effects of the food and financial crisis was that it prompted some food import-dependent countries to reconsider their policies to reduce vulnerability from what is considered to be an “undue dependence” on imports. Investment in agriculture, while still small compared with other economic sectors, has been growing rapidly (UNCTAD 2009), and land has become the focus of a new wave of long-term investors (de Lapérouse 2010). Highly publicized were the land acquisitions by foreign investors in Africa and Asia, often for speculative purposes, at very low prices, and in ways that appeared to be not conducive to local welfare or inconsistent with basic human rights. Although research is being done, and the picture is becoming clearer, there is still uncertainty as to the nature and scale of the demand for land, and the actual number of acquisitions or long-term leases realized (IFAD 2010).

An important aspect related to the above, is that ‘land grabbing’ does not only involve foreign deals. Indeed, illegitimate foreign land deals may only be a small part of the ‘land grabbing’ occurring in

many countries. More significantly, in some countries, land grabs are carried out by national and local elites, competing land users (pastoralists, crop farmers), and land grabs within families (men from women and, where the incidence of HIV/AIDS is high, from widows and orphans). Focusing only on large-scale land acquisitions by foreigners can divert attention from more serious 'land grabbing' in some societies. Therefore, the response to 'land grabbing' needs to look more broadly at strengthening transparent, accountable and accessible land administration institutions that protect the rights of vulnerable people against all land grabs (Liversage 2010).

At the same time, there has been a general call for an expansion of sub-Saharan Africa's irrigated agricultural land (AfDB 2011; FAO 2011; IFPRI 2010; UNECA 2005; WB 2008). The 2005 Commission for Africa report (2005), for example, called for a doubling of the area of irrigated arable land by 2015. Irrigation development is also a key investment priority for NEPAD (New Partnership for Africa's Development). Many African countries have actually adopted ambitious policies for expanding irrigation. As such, Uganda has developed a Master Plan (2010-2035) promoting irrigation throughout the country in a bid to respond to droughts that have dented the country's food security. Similarly, as part of its irrigation strategy, the Mozambican government will invest over the next ten years about 540 million US dollars in irrigation to boost agricultural production and productivity. In Nigeria, an action plan for irrigation development followed on from the 2006 National Irrigation Policy and Strategy with 12 schemes proposed for development. One of the first developments has been in rice irrigation in Kwara State at Tada Shonga (2,700 ha public private partnership scheme costing US\$49 million) utilising water from the Niger River.

These new opportunities for commercialisation also present new challenges and risks in relation to land and water grabbing. As such, the growing demand for food, feed, fuels, and other commodities, combined with a shrinking resource base and the liberalisation of trade and investment regimes, are among factors driving a new global rush for land. Lands that only a short time ago seemed marginal to the global economy are now being sought by international and national investors and speculators to an unprecedented degree, placing the latter in direct competition with local communities for access to land, water, and other natural resources (ILC 2011). Access to water is one of the key drivers of transnational land acquisitions. Water scarcity is increasingly a key constraint on agricultural production, leading to escalating competition for water resources. This is particularly true for the Gulf States, where declining fossil water reserves, which are not being recharged, have prompted moves to acquire agricultural land overseas. Declining water reserves forced Saudi Arabia to abandon food self-sufficiency in 2007, and wheat production is due to be phased out entirely by 2016. At the same time, mechanisms have been established to promote the acquisition of land for food production overseas (Cotula 2011). Water is a key factor in the location of land acquisitions in some countries, with acquisitions focused in irrigable river basin areas. In most jurisdictions, water is owned by the

government, particularly following reforms in water management in the 1990s. Land deals for irrigation agriculture may grant acquirers priority access to water, or even an entitlement to specified quantities of water (Cotula 2011). Where this happens, water abstraction and enforceable water rights may adversely affect water access for other users.

III. IFAD'S WATER AND LAND INTERVENTIONS

IFAD is a specialized agency of the United Nations, and an international financial institution mandated to contribute to reducing poverty and food insecurity in the rural areas of developing countries. Natural resources is one of the thematic areas of direct relevance to its mandate and comparative advantage. IFAD promotes secure and equitable access to land and water for poor rural women and men and enhance their land tenure security, based on its Strategic Framework. It also helps poor rural women and men to manage these resources more efficiently and sustainably, to make rural livelihoods more resilient to environmental changes, address resource degradation and adapt to growing resource scarcities. IFAD thus helps building the resilience of agricultural supply to meet growing market demand, as well as the resilience of household food security and nutrition strategies, based on non-market oriented small-scale agricultural activities (IFAD 2011).

About two thirds of IFAD's portfolio is related to community-based natural resource management. Poor rural people and their institutions are at the core of this approach. Water is critical to these men and women pastoralists, fishers, farmers, young and old, part- or full-time, urban or rural, indigenous, tribal or otherwise often marginalized people. It is the key entry point for improving their livelihoods. Almost half of all projects involve aspects of water resource management at catchment or watershed levels, and hence beyond the immediate household or community level of use. Water resource management covers the full range of all aspects of the rural water sector, including institutional aspects. Its scope varies from trans-boundary flows, through parts of the river basin and the smaller watersheds, to schemes, fields and –on a limited scale – groundwater and drainage. On the institutional side, support is being provided to international, national and lower-level administrative units, and to communal and household levels through federated or associative group forms.

As IFAD's primary investments are in agriculture, its investment in agricultural water management focuses on financing smallholder irrigation activities, but it also includes investments in soil and water conservation, swamp rehabilitation, watershed management, rainwater harvesting, water for livestock, and inland fisheries and aquaculture activities. The size and scope of its interventions varies significantly. They may vary from a single well or rainwater harvesting system for various household backyards spanning a few hundred square metres through a series of small groundwater or surface irrigation schemes of 5 ha, swamp or bas-fonds of several hundred hectares, smallholder development

in large irrigation schemes of tens of thousands of hectares, or catchment and watershed improvement of several square kilometres to soil and water conservation measures covering several thousand square kilometres. And, usually, development involves more than just one of these options. However, IFAD projects do not focus simply on agricultural production, but on people-focused rural development. Within IFAD's demand-driven approach, poor rural people define their own needs. As a result, 56 per cent of projects include activities for domestic water supply.

IFAD has addressed land tenure issues in most projects and programmes it supports principally through its investments in irrigation, water and soil conservation, forestry and agroforestry, and natural resources management. In all areas of intervention, particular focus has been placed on the land rights of, women, youths, pastoralists and indigenous peoples and on secondary and communal rights. Similarly, emphasis has been placed on strengthening decentralized land administration systems, both statutory and customary.

The key areas of land tenure and access related interventions include: support to pro-poor land policy formulation and implementation at local and regional levels; promotion of access to land through land registration; land redistribution, either through state-led or market assisted approaches; enhancing access to common property resources and multiple user; strengthening security of land tenure; land conflict resolution; strengthening the links between land-tenure security and land use and sustainable management of resources; securing ancestral and customary land rights through collective titling; enhancing women's access and tenure security; strengthening decentralized systems of land administration; developing post-agrarian reform services; access to rangelands by pastoralists; and, promotion of knowledge management.

IV. PROMOTING EQUITABLE LAND ACCESS IN IRRIGATION AND WATERSHED MANAGEMENT

This section will go into the lessons learned on securing land and water rights of smallholder farmers and ensuring equitable access to land in government irrigation and watershed management projects supported by the International Fund for Agricultural Development (IFAD), the World Bank and others in Malawi, Rwanda and Swaziland. The context and policy frameworks and scale of the schemes differs between the three countries.

A. Malawi

1. Context and policy framework

Malawi is one of the more densely populated countries in Africa. Population densities have a major impact on land access and management. At independence in 1964, about 85% of land was under customary ownership with the balance being public or private, freehold and leasehold land. Customary land continues to be allocated mainly through Traditional Authorities with families being allocated land in perpetuity provided they continue to use it.

After independence various land legislation was enacted. The 1965 Land Act provided the overall framework by retaining the 3 categories of land. The 1967 Customary Land (Development) Act regulated customary land, providing for land allocation procedures through land committees under the Tribal Authorities. The 1967 Local Land Boards Act provided for the establishment of Land Boards and the 1967 Registered Land Act and the 1971 Adjudication of Title Act provided for the registration of freehold and leasehold land. The first land registry was opened in Lilongwe in 1971 to issue titles in the World Bank supported Lilongwe Land Development Programme (LLDP) area which was started in 1968 to register customary land as freehold land. By 1981 about 25% of land had been registered in the LLDP area.

The government also embarked on the establishment of settlement schemes on public and customary land from the mid-1960s. Typically the size of leasehold estates varied from 500 to 1,000 ha. From 1964 to 1976, 32 settlement schemes were established with 8,000 settlers. Leasehold estates catered mainly for large national and foreign private investors and companies, mainly to grow tobacco, tea, cotton and sugar. The land reforms of the 1960s to 1980s resulted in the conversion of around 1.1 million ha of customary land (14.5%) to public and leasehold land. By the early 1990s, 18% of land was public (mainly national parks, forests and game reserves), 13% private estates and 69% customary. The land allocations for estates and settlement schemes typically did not consider existing tribal affiliations and land was often allocated to people from outside a tribal area, resulting in many cases in dissatisfaction amongst Tribal Authorities and local residents. Several estates are no longer productive, especially those producing tobacco. In 2008 it was estimated that about 28% of the country's cultivable arable land (about 2.6 million ha) under freehold or leasehold lies idle.

After the introduction of multi-party democracy in 1994, the government embarked on the formulation of a new land policy. A Presidential Commission of Inquiry on Land Policy Reform was established in 1995. Among the main challenges identified were: high rural population densities, the unequal distribution of land with areas of scarcity and areas of under-utilised land, addressing the loss of customary land under colonialism and post-independence titling processes, corruption in land

allocation and illegal encroachments and illegal land allocations in conservation and protected areas, including lakeshores. The commission submitted its final report in 1999 and in 2000 a technical team produced a draft Land Policy. Among other things, the policy aims to improve tenure security by clarifying and strengthening customary land rights and by strengthen formal recognition of the role of traditional authorities in the administration of customary land. It also aims to bring about a more equitable distribution of land by resettling people from crowded to less densely settled areas. In 2003 a Special Commission on the Review of Land Related Laws was established. The Law Commission identified 16 Acts requiring review and possible revision¹.

A Land Bill drafted in 2003 is yet to be passed. Among other things, the Bill proposes the vesting of all land in the people of Malawi and stipulates that all citizens who need land for livelihoods shall be given access. The Bill also provides for the registration of, and transactions in, customary land. Women's rights to own land is recognized. Emphasis is given to the decentralization of land administration. Among the controversial issues that appear to be delaying the Bill being passed into law are: addressing the legacy of the conversion of customary land to government-owned land; the roles of traditional authorities in land administration; and inheritance of land by women. Much of the land that was converted from customary to leasehold land was used for the establishment of government-owned irrigation schemes. Many of these schemes have experienced difficulties due to the allocation of land outside local communities, without the consent of traditional authorities. Schemes have often not been well maintained due to a lack of ownership by farmers and there have been concerns about the accumulation of parcels by some scheme members. The government plans to develop 200,000 to 500,000 of newly irrigated land.

2. Irrigation, Rural Livelihoods and Agricultural Development Project

Lead implementer	Ministry of Agriculture
Implementation period	2006-2012
Goal	Reduce poverty by promoting sustainable pro-poor growth
Total project costs	USD 52.1 million
Co-financing	IFAD, World Bank and Government of Malawi
IFAD contribution	USD 8.0 million
Target	196,550 poor rural households
Components	<ul style="list-style-type: none"> i. irrigation rehabilitation and development; ii. farmer services and livelihoods fund; iii. institutional development; and iv. project coordination, and monitoring and evaluation.

Figure 4: Project area



Source: IFAD

¹ Namely: the Land Act, the Customary Land (Development) Act, the Local Land Boards Act, the Registered Land Act, the Town and Country Planning Act, the Forest Act, the Public Roads Act, the Mines and Minerals Act, the Land Survey Act, the Land Acquisition Act, the Adjudication of Title Act, the Wills and Inheritance Act, the Local Government Act, the Malawi Housing Corporation Act, the Temporary Control of Premises Act and the Investment Promotion Act.

Several land tenure security and land management issues are addressed under the Irrigation, Rural Livelihoods and Agricultural Development Project (IRLADP). Under the first component IRLADP is contributing to: a) Ensuring equitable allocation of land and security of tenure in four existing Government-owned small-scale gravity irrigation schemes covering about 1 800 hectares and 840 hectares of new demand-driven small-scale and mini-irrigation schemes. b) Conservation catchment planning, including the mapping of activities. Mapping is used in assessing impact of conservation interventions on water catchment management and identify areas requiring further attention. c) The establishment of livestock watering ponds. To avoid encroachment of cultivated fields on grazing lands and cattle tracks, consideration is being given to water demand and accessibility of beneficiary livestock in the development of watering ponds and catchment conservation maps are being used to map grazing areas and livestock facilities to ensure better integration of livestock development. Under the second component, land is being allocated by individual land owners and traditional authorities for various Farmer Services and Livelihoods Fund (FSLF) and Inputs for Assets programme (IFA) projects, such as orchards, livestock water ponds, fish ponds, agro-processing and storage facilities, etc. Drawing on experience from small scale irrigation (SSI) schemes, these arrangements are being documented where appropriate.

3. Promoting equitable land access in IRLADP

Other projects supporting the rehabilitation of large-scale government irrigation schemes have faced challenges in transferring ownership and control to WUAs and abuse in the allocation of land parcels by Scheme Management Committees or WUAs. Hence emphasis was placed in the design of IRLADP on resolving land tenure issues prior to the commencement of the project. It was agreed during negotiations that government would grant long-term leases to the WUAs and to facilitate the subsequent sub-leasing by the WUAs to their members². As part of the project covenants and loan agreement it was stipulated that irrigation transfer agreements, including suitable tenure arrangements, would be finalised prior to the commencement of rehabilitation works³. However these stipulations proved difficult to implement. Hence during the Mid-Term Review (MTR) of the Project it was recommended that the relevant covenant be adjusted to allow for the rehabilitation works to continue while discussions on leasing, sub-leasing and other tenure options and safeguards continued. With regard to small scale irrigation (SSI) and mini scale irrigation (MSI) schemes and other rural livelihoods projects to be implemented in rain-fed areas, it would appear that the Project design did not explicitly recommend any actions for addressing issues of land tenure security and land allocation.

² World Bank Project Appraisal Document, October 2005, page 10, third paragraph.

³ World Bank Project Appraisal Document, October 2005, page 18, 5th bullet under “Other Conditions” and Section 3, Schedule IV, paragraph 10 of the IFAD Loan Agreement.

a. Rehabilitation of Government Irrigation Schemes

For all schemes draft lease agreements have been reviewed and the Ministry of Lands has given a lease period of 66 years. However, by then end of 2011, the lease offers have not yet been presented because WUAs have not yet received their registration certificates. As soon as WUAs are constituted, lease offers will be issued and signed lease agreements will be included as Annexes to the irrigation management transfer (IMT) agreements. Once land lease offers have been officially made to the WUAs, discussions will be held with the WUAs to re-sensitise them on the implications of these offers in terms of annual payments by members and budgeting requirements of the WUAs. The lease rate for all schemes is 1000 Kwacha or \$ 6 per hectare. In addition to this, members are expected to pay a water fee of 200 Kwacha per plot and a membership fee of about 500 Kwacha per member (membership fees vary between schemes). Once lease offers are made, scheme members are expected to accept the offer within 60 days and to pay the first year's rent. There is a need for continued sensitization and discussion to ensure that everybody is fully informed about the lease terms.

For one scheme, Muona, the conversion of land from customary to state land has been agreed to by the traditional authorities and documented in a "Consultation with the Chief" form. Existing users retain their original parcel allocations. Provisions for inheritance of land parcels and re-allocation of unused parcels to other family members have been included in IMT agreements.

Allocation of land parcels to members is regulated by the WUA Committees, as has been the practice under the previous Scheme Management Committees. Currently WUAs intend to allocate parcels on an annual basis. Experience suggests that parcel allocations to each member could change from year to year. This could undermine members' land tenure security and willingness to invest in land and farming. However, options are being looked into for providing longer-term, documented rights to particular land parcels for each member. To ensure equitable benefit sharing, minimum and maximum limits on the number of parcels that members can access are set by interim WUAs⁴. Typically plots are about 0.1ha in size. Limits to the number of plots that a member can access seem to vary between schemes. In the case of Limphasa the range is 4 to 12 parcels whereas in Likangala the range is 2 to 4 parcels. Cases of parcel accumulation and absentee owners have been reported and are considered sensitive. It is believed that clarifying the status of land as public land owned by government, lease agreements between government and WUAs, WUAs granting documented rights to actual users and on-going sensitization of members on ownership and user rights would contribute to addressing concerns regarding plot allocations.

⁴ In many cases this practice predates the interim WUAs

Table 1. Land allocation in government schemes

Government Schemes	No. of Members	Ha	Average allocated	land
Likangala	1385	405	0.29	
Limphasa	970	466	0.48	
Khanda	316	77	0.24	
Njala	240	45	0.19	
Segula	128	29	0.23	
Chiliko	137	24	0.18	

b. Small scale irrigation and mini scale irrigation schemes

While no specific activities were identified during the design of the Project with regard to land tenure security issues in small scale irrigation (SSI) and mini scale irrigation (MSI) schemes, the Project has been grappling with these issues. Most SSI and MSI schemes are being established on land already belonging to one or more owner⁵. Typically in SSI schemes being established, land will be shared during the dry season and used exclusively by the owner in the wet season. This is already a widespread practice in Malawi in mini irrigation schemes informally developed by farmers. As with the Government Schemes, land parcels in SSI Schemes tend to be about 0.1 ha in size. Parcels are being surveyed and demarcated during the design of the schemes. In the MSI Schemes, land parcels may be smaller and in some cases not divided but instead operated as group gardens.

For SSI schemes general “in principle” agreements regarding the granting of consent by existing land owners for infrastructural development on their land, the provision of compensation to “owners” or users for the loss of land and land sharing arrangements between owners and other members are indicated in the participatory agreements drawn up during the planning of the schemes. However, specific agreements with individual land owners on these issues have not yet been documented. A set of guidelines and a format for documenting agreements between WUAs and landowners has been developed. The “pro-forma” agreement specifies the conditions and terms for the use of land by WUAs during the dry season and owners in the dry season. It indicates the duration and rental amount for renting the land. The agreement is to be signed by the land owners, WUA, Traditional Authority and District Commissioner and copies are to be kept by the respective parties. The guidelines advise on the process that should be followed for finalizing an agreement. This includes collecting information on owners – whether they are in fact using the land in the wet season, whether they are resident in the area, whether they share the land with family members and whether they will be members of the scheme. Compensation in these cases could include the provision of alternative land and/or participation in the scheme and receipt of rent. Also the current format does not provide for the

⁵ SSI schemes typically involve several owners but smaller MSI schemes in some cases may only involve only 1 owner.

specific conditions and terms of consent and compensation for each owner. In addition to this, specific conditions and terms for each owner may need to be attached to the general agreement. The application of the draft guidelines and agreement format is now being piloted. The number of owners who are sharing land varies significantly between SSI schemes. In some cases the number of owners is quite large. For example, in the Chikumbutso Scheme at Chingale, the scheme is 20 ha, there are 170 members, of which 26 (15%) are land owners. In the Windu Scheme at Dzedze, the scheme is 42 ha, there are 306 members, of which 82 (27%) are land owners. This indicates that IRDLAP is contributing to more equitable land access.

Table 2. Land allocation in small scale irrigation schemes

SSI Schemes	No. of Members	Ha	Average land allocated	No. of LOs	% of LOs
Tiyese	108	17	0.16	n/a	n/a
Tiyese	149	17	0.11	n/a	n/a
Tchetchete	44	10	0.23	n/a	n/a
Chikumbutso	170	20	0.12	26	15%
Windu	306	42	0.14	82	27%

MSI schemes can be divided between mini-scale irrigation schemes (1 – 10 ha) and rain-water harvesting schemes using drip irrigation, which are being financed under the Inputs for Assets (IFA) sub-component of the Project. In the case of the former, WUAs are being established and farmer based organisations (FBOs) for the latter. While the schemes may be small, the number being set up and the total land to be utilized is significant. Consideration has not yet been given to the signing of agreements between land owners and WUAs or FBOs in these schemes. MSI schemes are likely to have fewer owners, hence concerns regarding social equity and potential disputes between owners and non-owning members could also be of concern. For example, in the Chawanangwa Scheme in Nkhata Bay there are 8 members of which 1 member, (the Chief) is the owner of the land. The scheme is a small garden of about 225 m² next to the chief's house, utilising rain water captured from his house in an underground tank. In some cases land owners have been reluctant to participate in SSI and MSI schemes because they fear the loss of their land rights. The documentation of agreements on compensation and conditions and terms for land sharing would assist in addressing land owners' concerns.

Table 3. Land allocation in micro scale irrigation schemes

MSI Schemes	No. of Members	Ha	Average land allocated
Khulo	69	8	0.12
Chipuzumbumba 1	105	5	0.048
Chigwere	150	10	0.067

B. Rwanda

1. Context and policy framework

Rwanda is a small, landlocked, densely populated country with diverse terrain, an abundance of water resources, and one of the world's biodiversity hotspots. The country has made numerous economic policy and regulatory reforms promoting private sector growth, thus helping it to achieve macroeconomic stability and rapid annual GDP growth of 7.5 % from 2005 to 2009. Despite its broad-based economic progress, 56 % of Rwandans still live below the poverty line.

Access to agricultural land is severely limited, and most farmers cultivate small rain-fed plots. Eighty per cent of Rwanda's labour force works in agriculture and produces 36% of GDP. Average landholdings are only 0.3 hectares per household. Furthermore, in spite of formal laws supporting women's rights and the equality of men and women, in some cases women's access to agricultural land remains restricted in practice. Finally, after the genocide and flight of 30% of its population, Rwanda faced the additional challenge of resettling millions of refugees and internally displaced people on limited land for which there were often multiple claims. In order to address its land scarcity and low productivity in agriculture, Rwanda instituted comprehensive land-tenure reform and a systematic land registration program along with a Crop Intensification Programme. Participation in the program requires community agreement to land use consolidation and resettlement. While the program has shown some early success, its continued application in hilly and marshy areas may prove more difficult. Rwanda's natural resources face growing pressures. Only about half of Rwanda's population has reliable access to safe drinking water in spite of abundant water resources. Rwanda is also at the centre of the most biologically diverse region on the African continent. Finally, the country's forest resources are threatened by the expansion of agricultural land and the extensive use of fuel wood (USAID 2011).

In Rwanda the Land Policy was passed in 2005 and the Land Law in 2006. The policy and law emphasise securing of customary land rights while at the same time promoting commercialization and the consolidation of land use. The country has embarked on an ambitious land registration process of family-owned customary land that is widely recognized as being exemplary. However, this process does not cover the registration of land used by farmers in government-owned, "productive marshlands". These cover about 10% of the country and are where many irrigation schemes are being implemented. Access to land in these schemes has been critical for addressing issues of poverty and landlessness. Concerns have been raised that outsiders and local elites are sometimes exploiting opportunities for accessing land in the productive marshlands at the expense of small-holder farmers, in particular the poor. However, allocation of this land to large-scale investors is still relatively limited. Procedures and regulations for regularizing access and use in these areas are still being

developed. This includes transferring management responsibilities to farmer groups, surveying of land and establishing registers to be maintained by Water User Associations (WUAs).

2. Kirehe Watershed Management Project

Kirehe Watershed Management Project	
Lead implementer	Ministry of Agriculture and Animal Resources
Implementation period	2009-2016
Goal	Development of sustainable profitable small-scale commercial agriculture in Kirehe District
Total project costs	USD 49.3 million
Co-financing	IFAD, World Food Program (WFP) and the Government of Rwanda
IFAD contribution	USD 26.77 million
Target	48,000 rural households
Components	local institutional development agricultural intensification feeder roads project coordination

Figure 5: Project area KWAMP



Source: IFAD

Several land tenure security and land management issues are addressed under the Kirehe Watershed Management Project (KWAMP). Under the first component KWAMP is contributing to: a) the further elaboration of the District Development Plans, in accordance with sector-level development plans including the integration of watershed management and infrastructure plans. b) The establishment of three Community Centres for Innovation (CCIs), each covering three sectors. These will provide physical facilities that can serve as a central point for the dissemination and exchange of information, meetings for the co-ordination of watershed management and other development initiatives, and capacity development and learning activities. c) The strengthening of institutional and legal framework needed to achieve effective water and land use planning and management practices in Kirehe to enable agricultural intensification that conserves the natural resource base. Areas of intervention are defined by watersheds rather than administrative boundaries. KWAMP is assisting with the formulation of comprehensive Watershed Management Plans (WMP) and the establishment of permanent public/private institutions (CLGS) to manage the development of each watershed, including the implementation of soil and water conservation activities. Community-led mapping exercises are being conducted to identify the extent and present land use in watershed, including an inventory of physical, economic and social attributes. d) The registration of all land in the district. This is being done by the Department of Lands and Mapping (DLM) of the Rwanda Natural Resources Authority (RNRA) through a MOU between the Ministry of Agriculture and Animal

Resources (MINAGRI) and the RNRA⁶. Under the second component, emphasis is being placed on ensuring equitable allocation of land and security of tenure in the irrigation schemes both on government owned land and on customary privately owned land.

3. *Promoting equitable land access in KWAMP*

Projects such as KWAMP are supporting the development of new approaches for securing land and water rights. The government, with the support of KWAMP and other initiatives is also promoting irrigation schemes on family-owned land. Registration of this land presents new opportunities for commercial development but could restrict the government's ability to provide access for needy small-holder farmers. KWAMP aims to irrigate 1,500 hectares in government-owned marshlands and 1,500 hectares of family-owned customary land. The project is influencing the development of new and innovative irrigation regulations that include provisions for securing small-holder farmers' land rights.

a. *Compensation for infrastructure development*

Marshland⁷ irrigation schemes. KWAMP works with local Water Users Associations (WUA), farmer cooperatives and village committees to ensure that upstream users of government-owned marshlands, that will lose access to this land due to the dams, are fairly compensated and are not left worse off than before the irrigation schemes were implemented. Financial compensation for crops has been paid out at Sagatare and Cynuzi to upstream users affected by the construction of dams. At Sagatare 24 users received a total of about 14.8 million Rwandan Francs (±USD24,700) in compensation – an average of 617,000RWF (±USD1,029) per user. At Cynuzi 24 users received a total of about 4.7 million RWF (±USD7,827) in compensation – an average of 195,687RWF (±USD326) per user. Sagatare was extensively cultivated with bananas whereas Cynuzi was mainly covered by papyrus and poorly drained and hence less cultivated.

In the case of Sagatare, which is a new scheme, the affected upstream users have also been allocated land parcels in the downstream scheme. For Cynuzi, which was already being cultivated, certain affected upstream users seem already to have plots in the downstream scheme but others appear not to have been accommodated. KWAMP has facilitated contact of both communities with a fish-farming cooperative to explore the feasibility of developing similar schemes. There have also been discussions on the possibilities of developing a fish-farming scheme for the benefit of upstream users. The District Irrigation Unit (DIU) and Natural Resource and Community Development Unit (NRDCU) will continue to monitor the involvement of affected upstream users in the downstream irrigation schemes as well as in other development schemes to ensure that they do benefit from these and are not left

⁶ The DLM was formerly known as the National Land Centre (NLC). The NLC merged with the National Forestry Authority and other authorities in 2011 to become the RNRA.

⁷ "Marshlands", sometimes known as productive wetlands refers to private state land that is eligible for productive use. This land is typically under the management of MINAGRI.

worse off than before the schemes were implemented. In particular, DIU and NRCDU with the support of the KWAMP Project Coordination Unit (PCU) will continue to support the establishment of fish-farming schemes at Sagatare and Cynuzi, in which priority will be given to the involvement in the schemes of affected up-stream residents.

In both schemes the 50 metre buffer zones have been established, but in 2011 in some cases there was cultivation of existing crops (for example, bananas) up to the water's edge. The buffer zone encompasses privately-owned land. KWAMP has proposed that the buffer zone is divided in three zones with the first sub-zone from the reservoir edge being planted with elephant grass, the next sub-zone with fodder shrubs, both of which could be utilised for fodder and the last sub-zone planted with trees. It is proposed that the buffer zone would be managed and used sustainably by land owners adjacent to the reservoir who are also the people most affected by the loss of land access in the reservoir area. The DIU and NRCDU will ensure that land owners affected by the reservoir buffer zones are supported in the cultivation of fodder grass and agro-forestry and benefit from their use.

Hillside⁸ irrigation schemes. In 2011 discussions were held in the first four hillside irrigation schemes (Kinoni 1 and 2, Nyamugali and Mahama) regarding compensation of upstream land owners for land lost due to the construction of dams. Affected farmers must be fairly compensated as per the country's expropriation and valuation laws. A total of 240 owners have lost almost 100 hectares of land in the four schemes. The compensation payments, for land and crops, have almost been completed. Almost 200 million RWF has been paid – an average of 78,000 RWF per user. KWAMP emphasises that the process is based on locally-derived agreements between the affected parties, WUAs and other village-level committees. There appears to be a general agreement at village level that the proposed irrigation schemes should go ahead for the benefit of the communities concerned. Owners affected by the construction of dams are being encouraged to purchase alternative land, to the extent that the DIU has recommended that compensation is only paid once affected owners indicate that they have identified and started negotiations to purchase alternative land. It does not seem likely that this land will be acquired in the irrigation command area, although this option could perhaps be explored further.

b. Land allocation procedures

Marshland irrigation schemes. Land allocations to farmer group members have been finalised for Sagatare and at Cynuzi. In the case of Sagatare, since the scheme is new, about 40% of parcels have been surveyed and mapped and a register of WUA members indicating their parcel allocation has apparently been produced. It was foreseen that each farmer would be allocated two, five are⁹ plots (0.1 ha). Preliminary assessments, however, suggests that the distribution may not have been entirely

⁸ "Hillside" refers to privately-owned land and is a bit of a misnomer as the land is typically located in valley bottoms and will most likely be irrigated through gravity-fed schemes.

⁹ 1 are = $\frac{1}{100}$ of a hectare.

equitable. In the case of Cynuzi, where land was being used with rudimentary irrigation prior to the dam construction, certain affected upstream users appear to already have access to plots in the downstream scheme, while others may not. No consideration is being given to accommodating additional users as all plots are already allocated. By 2012, plots had not yet been surveyed. DIU with the support of the KWAMP PCU and MINAGRI will survey all parcels in the irrigation command areas for both Sagatare and Cynuzi and the DIU will receive copies of the registers of beneficiaries in both schemes. The registers will be reviewed to ascertain whether there is an equitable allocation of parcels. A re-allocation of parcels from people with more than two parcels to upstream users affected by the dam at Cynuzi and to other KWAMP's target groups, in particular the poorest households, will be considered by the DIU.

Hillside irrigation schemes. Land parcels that are part of the planned irrigation area for all four of the first hillside irrigation schemes (Kinoni 1 and 2, Nyamugali and Mahama) have been demarcated and adjudicated and titles are being issued as part of the on-going land regularisation process. Mahama is the biggest irrigation scheme with a command area of 400 hectares and 528 WUA members involved. On the other hand, Kinoni I is the smallest scheme (100 hectares) with the smallest amount of people involved (217). The average plot size per member is smallest in Kinoni II, with 0.35 hectares per member and highest in Mahama, with 0.76 hectares per member. At this stage it would seem that the option of including additional beneficiaries in the irrigation scheme is not being considered although, as is pointed out below, there could be opportunities for including more beneficiaries.

A review of Kinoni in September 2011 indicated that there is a significant difference in the amount of land owned by different owners, which implies that a few larger landowners could benefit more from the irrigation scheme. It also raises questions as to whether these owners will have the sufficient resources, in particular labour, to utilise the irrigated land to its fullest potential. There could furthermore be a significant amount of land which is owned by the government or which could be without identified owners for some time (with an estimate of 16% for Kirehe). This implies that there could be some government land and possibly even some privately-owned land available for allocation to KWAMP's target groups. Some of the land under government ownership could be immediately available for reallocation to KWAMP's target groups. In the case of privately-owned land where the identification of owners may take some time, such land would be held by government for up to a 30 year period¹⁰, after which the government would take over ownership and redistribute it to other owners. This raises questions as to whether the land could be utilised in the interim period by others, in particular by KWAMP's target groups. One option could be for land to be leased annually by the

¹⁰ The period relates to the general provisions of ownership by prescription outlined in Part Two, Articles 613, 647 and 648 of the civil law code (code civil livre).

WUA for use by KWAMP's target groups. In cases where there are identified owners with larger amounts of land that they are not able to fully exploit, one option for them could be to employ additional people to work the land or, perhaps preferably from KWAMP's perspective, to lease out parcels or portions of parcels to KWAMP's target groups on a long-term lease basis (for example 3 to 5 years).

C. Swaziland

1. Context and policy framework

Although the Kingdom of Swaziland is a small, landlocked country, it boasts great diversity in landscape, geology and climate. Landforms range from plateaus, hills and mountains, to foot slopes and plains. Swaziland is ranked as a lower middle-income country. Yet income distribution within the country is extremely unequal. The wealthiest 10 per cent of the population account for nearly half of total consumption and there is an ever-widening gap between urban and rural development. There are clear signs that poverty and unemployment are on the rise. About 84 per cent of the country's poor people live in rural areas, where per capita income is about four times lower than in urban areas, and food consumption is two times lower. A large proportion of rural households practice subsistence agriculture. About 66 per cent of the population is unable to meet basic food needs, while 43 per cent live in chronic poverty. When drought hit Swaziland in 2004 and 2005 more than one quarter of the country's population required emergency food aid. In 2007 Swaziland experienced one of its worst droughts which led to major food insecurity.

Arable land accounts for about 10% of the land area; 37% is under irrigation. Land in Swaziland is held or used under two systems of tenure: Title Deed Land and Swazi Nation Land (SNL). The former is individually or corporately owned and is used for commercial farming under irrigation (mostly sugar cane and fruit), ranching and forestry; it covered 527,000 ha in 1992/1993 (latest data) on 359 farms. The latter is held in trust for the nation by the King and is administered by the chiefs. SNL accounts for about 75% of all land in the country and consists of grazing lands, forests and agricultural land. Individual rights of use are held for the last type; communities use the remaining land as a common resource. About 90,400 households live on SNL, of which 78,000 undertake some cultivation. Only 10% of agricultural SNL is used for crop production; the balance is used for grazing. The average rural household has eight members; 32% of these households are woman-headed. Most cultivate a small area of rain-fed crops, and 76% are living below the poverty line (the figure is 69% for Title Deed Land). Production is declining mainly due to a loss of labour force due to AIDS. Households with one AIDS sufferer produce 50% less than normal (as an enterprise employing over 750 rural women, Gone Rural, found in their study in 2005). Holdings are small, and 92% of households cultivate less than 1 ha, and only around 700 holdings are more than 5 ha. Crop production on SNL accounts for only around 8% of agricultural GDP. Swazi Nation Land, unlike

Title Deed Land, cannot be used as collateral. Farmers on SNL therefore generally lack access to commercial finance. However, micro-finance schemes do offer an alternative. Maize dominates the cropping pattern (86%), followed by cotton (5%). Livestock ownership is very skewed and is not a prime activity among IFAD's target group; therefore, livestock is not directly targeted. However, land-use plans, livestock and grazing rights are included as these are a major issue also in policy dialogue.

Despite widespread support, the draft national land policy prepared in 1999 has not yet been approved. The draft land policy would include provision for: (a) gender equity in land allocation and the protection of property rights; (b) the use of Swazi Nation Land as collateral for loans, thereby helping to overcome one of the constraints faced by smallholders, i.e. their inability to access credit to finance agricultural intensification and diversification; and (c) the introduction of an efficient, effective and comprehensive system of land administration, including livestock issues.

2. Lower Usuthu Small-holder Irrigation Project

Lead implementer	Swaziland Water and Agricultural Development Enterprise
Implementation period	2004-2013
Goal	create favourable conditions so that farmers in the lower Usuthu basin will be able to commercialize their activities and develop sustainable, high-value crop production
Total project costs	USD 116.54 million
Co-financing	IFAD, African Development Bank, Arab Bank for the Economic Development of Africa, Development Bank of South Africa, European Investment Bank and International Development Cooperation Fund, European Commission, Taiwan, Republic of China and the Government of Swaziland
IFAD contribution	USD 15.0 million
Target	243,350 people
Components	upstream works and distribution system; downstream development and agricultural commercialization; environmental mitigation; project coordination and management.

Figure 6: Project area LUSIP



Source: IFAD

Land tenure security, equitable land access and resettlement were identified as fundamental to the success of the Lower Usuthu Small-holder Irrigation Project (LUSIP). Three key challenges for the project were highlighted: land tenure security for individuals within groups, the resettlement of people

affected by the scheme and equitable access to irrigable land, in particular by the poorest and most vulnerable in the community.

The project Loan Agreement specified that:

- The completion of a draft Resettlement Action Plan (RAP) was a condition for loan effectiveness.
- The land holding size to be allocated to each resettled family, should not exceed an average area of 2.5 ha and a maximum of 3.5 ha per household.
- Participatory land use planning would be undertaken and would provide the basis for resettlement and land allocation.
- Periodic reviews would be undertaken by an independent Environmental Review Panel (ERP) that would look at, among other things, resettlement, tenure security and land allocation issues
- The detailed designs for the water delivery systems were to take account of the needs and preferences of the Target Group, as expressed through the participatory planning process to be undertaken by the Agricultural Development and Environmental Management Unit (ADEMU) of the Swaziland Water and Agricultural Development Enterprise (SWADE).

3. Promoting equitable land access in LUSIP

LUSIP aims to irrigate up to 6,000 hectares of land in a first phase for use by small-holder farmers. In the absence of a new policy and legal framework, the project has developed practical options for securing equitable access and tenure security within the existing policy and legal framework. Procedures have been developed by the project for land sharing between those whose land is being irrigated and those without access to irrigated land. Initially it was proposed that the project would do this across chieftaincies but this was found to be unworkable. The focus is now on local arrangements. Land rights by customary owners whose land is being irrigated are relinquished through the chief and allocated to water user groups, of which the previous owners are members. This process is being documented through an “enhanced” Chief’s Letter. Consideration is now being given to granting lease titles to these groups. This would better enable them to access credit but there are concerns regarding the administration of leases.

a. Land tenure security

To strengthen tenure security, the project is promoting the use of the “Enhanced” Chief’s Letter with supporting documentation which allocates rights to either a Farmers Group or an individual. About 56 Chief’s Letter of Consent (CLCs) have been issued to farmer groups. Incidents of former owners attempting to reclaim ownership of land despite have relinquished their rights have, however,

persisted. Though a clear conflict resolution mechanism has been implemented, it seems that there is a lack of awareness of the mechanism. Greater efforts are being made to assist farmer groups in resolving conflicts using the appropriate mechanisms. While the CLCs have been an effective mechanism for facilitating the transfer of use rights from customary owners to farmer groups, for large-scale commercial enterprises they are seen as a transitional measure toward the granting of lease contracts. However they could continue to be useful for smaller-scale community-level micro-enterprises where the issuing of leases is not considered, for example, for group commercial gardens, group poultry schemes and other group livestock development schemes. Further consideration is given to granting CLCs to group market garden schemes and possibly even to documenting use rights allocated to individual farmers or households in market garden schemes.

Among other things, the draft land policy highlights the need for strengthening local land administration systems and strengthening security of customary tenure. Developing affordable systems for recording customary familial rights through existing customary institutions would contribute significantly to this. ADEMU is currently investigating the need and possibilities for developing procedures for documenting familial land rights of LUSIP's target groups.

There is a perception that the customary land tenure security system is a major obstacle to people using land as collateral and that the Land Policy should address this obstacle, presumably by either strengthening leasehold or introducing freehold. It was however found that the Chief's Letter serves as evidence of use rights and is sufficient for securing a loan. The key issue then is evidence of land as an asset as part of a business plan that can be used to secure a loan.

b. Resettlement

Resettlement of families due to infrastructural development (the reservoir and main canals) is ongoing. An Entitlement Framework for Resettlement (EFR) was produced in December 2003, a Comprehensive Mitigation Plan for Resettlement (RCMP) was produced in June 2006 and a Development CMP (DCMP) was produced in June 2007. The EFR and RCMP outline the principles, categories and conditions for the resettlement of households affected by the infrastructural development of LUSIP and DCMP for the resettlement of households from irrigable areas.

A total of 157 households were resettled due to the development of the canals and reservoir. Though five of houses had various kind of defects, plans are in place for their rehabilitation. Access roads to resettlement areas has built. Households were compensated for their houses according to square meterage and were constructed with modern materials. Other structures such as sheds were also replaced. Potable water, VIPs, fencing for homestead sites, water tanks and guttering and improved woodstoves were provided. People were also provided transport for the relocation. Households could

choose to get SWADE to contract builders to build their house or to do the contracting themselves. There was an incentive of a 5% saving offered if the latter option was chosen and most people chose this option. The resettlement was financed by the GoS. The original total cost of replacement of houses was estimated at around E36.5 million for 162 housing units. The average cost per household is around E225,000 or USD32,000. Households were also being compensated for the loss of cultivated fields and fruit trees. This includes both people who were resettled as well as those who remained but have lost fields. Alternative agricultural land was found and was cleared. Start-up packs of fertilizer, seed and equipment were provided. It is estimated that about 415 ha of agricultural land and almost 2,000 ha of grazing land will be lost to the canal and reservoir. In addition to receiving alternative land, people were also given E10,000 per ha as compensation for agricultural land. The total cost for compensation of land, inputs and bush clearing is estimated at E11.3 million, of which land compensation amounts to E8.756 million or 78% of the total costs.

The issue of compensatory land for the Shongwe Chieftaincy for land lost due to the inundation of the reservoir has not yet been found despite concerted efforts by ADEMU. It seems that this has become an impediment for the approval and implementation of the Shongwe Chief Development Plan (CDP). During the design of the Project it was indicated that the first choice of suitable compensatory land was the Title Deed Land (TDL) adjacent to the Chieftaincy (owned at that time by the Henwood family). The purchase of TDL land was again identified as the main option in LUSIP's 2006 Comprehensive Mitigation Plan for Resettlement. However, neither ADEMU nor the Shongwe Traditional Authority have been able to secure an agreement to purchase this land, and expropriation of this land appears to be unfeasible. The possibility of acquiring Tibiyo land, which is not adjacent to the Chieftaincy and in some cases is way off, was also explored, though the Traditional Authorities were reluctant to accept this option. It was therefore agreed that the Chieftaincy would be compensated financially, through transfers to the CDF.

So far, although being the chieftaincy most affected by the construction of the reservoir and canals, Shongwe has only benefited from the provision of potable water and VIP latrines. The Project is looking into the possibility of developing an irrigation scheme in Shongwe. A big challenge, however, is that as a big part of the land is disputed with the Gamedze chieftaincy. The Project has therefore involved the Regional Administration in finding a solution.

c. Equitable access to benefits

To ensure that the poorest and vulnerable are not disadvantaged, the notion of equitable access should have been broadened from equitable access to irrigated land to equitable access to the benefits of the Project and a more nuanced approach has been adopted. The following key principles are being considered by the project: (i) all households should be seen to benefit from the Project in one way or

another; (ii) no households should be left worse off as a result of the Project (iii) all households should have the opportunity to access some irrigated land and (iv) preferential treatment should be given to the poorest and most vulnerable members of the community. These suggested principles have certain implications that need to be considered and may require further refinement.

One implication stemming from principle (i) is that a range of livelihoods options is considered. Nevertheless, the focus is still on agricultural options, including rain-fed agriculture and livestock farming, but certain non-farm economic activities and social welfare options are also considered. In this regard, the establishment of feed-lots, the promotion of charcoal production from trees in the reservoir, the development of a service industry to support agricultural production or support in agro-processing industries are all options that have been identified. Training in business development has a wider impact in promoting economic activities in areas not supported directly by the Project. Finally the proposed provision of potable water and sanitation to all households is in keeping with this principle.

Another implication of principle (i) is that communities that may benefit less from access to irrigated land should be prioritised for support in improved rain-fed agriculture and non-farm economic options. Aside from the investment required for the resettlement of people from the reservoir and canal and from irrigable fields, investment in the development of various livelihoods options should be more or less equally spread per capita across the chieftaincies.

Principle (ii) refers to the principle that households resettled as a result of the infrastructural or land development should not be left worse off. A concern that is adequately being addressed.

With regard to principle (iii), the Project has proposed that in addition to all households having access to potable water, they should also have access to a market garden plot of up to 0.5 ha for the production of high value vegetable crops. This would mean, for example in the case of the Shongwe chieftaincy each household would have the opportunity to access a market garden plot of up to 0.5 ha on the approx. 90 ha of available irrigable land but there would be little land left for larger commercial production activities. In the case of the Gamedze and Ngcampalala chieftaincies, sites for market gardens have also been allocated which each household would have the opportunity to access but also all households would have the opportunity to access irrigable land for larger commercial production activities (probably sugar).

Another key implication in the redefinition of equitable access to irrigated land is that there should perhaps be a greater flexibility in the application of minimum and maximum land holding sizes. On the one hand the allocation of 200 ha of land either to the Chief or a limited number of shareholders

could be seen as a speculative land grab by an elite in the community which could be a cause for real concern. In this regard questions are raised regarding ADEMU's ability to impose a maximum land holding limit. On the other hand the warranty that the lessee shall provide employment for at least 400 local people could have a real impact on poverty reduction, depending on the conditions of employment, which are unfortunately not specified. It may well be that the employees would prefer to be such rather than shareholders in a business.

An implication relating to principle (iv) is that in the event that not all people are able to access benefits from the Project, priority should be given to the poorest and most vulnerable and in all cases preferential treatment should be given to these groupings. Hence, for example, if, as may be possible, 10% of households are unable to benefit directly from access to irrigable areas in Ngcampalala, then priority should be given to opportunities for the poorest and most vulnerable. It was noted that while women tend to have "secondary" use rights under customary tenure, they have often been active in the establishment of commercial schemes for the production of sugar. There is an opportunity to strengthen women's use rights in commercial farming, both in the market garden and larger group farming (presumably sugar) schemes.

Another implication could be that priority should not necessarily be given to resettled households. Resettled households are not necessarily amongst the poorest and most vulnerable in the community and that most if not all had already benefited considerably from their compensation packages. In other words the playing field had been levelled. Yet there are many households who may be worse off who were not relocated.

V. CONCLUSION

Land and water are the most essential assets for farmers. Yet, the 500 million smallholder farmers in the developing world, who feed one-third of the world's population, do not have secure access to those basic resources. As a result, in particular in sub-Saharan Africa, they are unable to make the necessary investments in agriculture, and productivity and production remain low.

Until recently, land and water were often treated as separate issues in country policies. However, access to water cannot be considered independently from secure access to land. Water without guaranteed access to the land where it is found will not be sufficient; and vice versa, land without access to water will be useless for a farmer. The approach to development has to take into consideration the interaction between these two crucial production factors. Without secure land and natural resource rights, smallholder farmers are less willing to invest in sustainable natural resource management measures, thus aggravating environmental problems such as land degradation.

Since 2007 a “rediscovery” of the agricultural sector by different types of investors can be witnessed. Irrigation carries significant potential to increase agricultural productivity. Most of future growth in crop production in developing countries is likely to come from intensification, with irrigation playing an increasingly strategic role. These new opportunities for commercialisation also present new challenges and risks in relation to land and water grabbing. Irrigation schemes raise specific issues in relation to both water and land rights.

The experiences from the three countries discussed in this paper provide useful lessons on securing smallholder farmers land and water rights for other countries who wish to extend their areas of irrigated land, especially in Africa. The projects mentioned focus on promoting smallholder agriculture and provide an alternative to large-scale acquisitions by outsiders as a basis for mobilizing investment in rural areas. Securing land rights of smallholders and providing for equitable access to others whose land is not being irrigated is essential, but this has challenges. So does ensuring that those affected by the development of irrigation infrastructure are adequately compensated and also benefit, as does extending project benefits to users of rain-fed land as part of broader watershed management processes. The various projects mentioned have tried to ensure that issues of land tenure security and equitable access for smallholder farmers are addressed prior to major investments in engineering works, but this has proved difficult to enforce.

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