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Review

Success factors for sustainable irrigation development in Sub-Saharan Africa

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Majority of farming in sub-Saharan Africa depend solely on rainfall for food production. This results in low productivity and famine, especially during the dry season when there is little or no rainfall. Owing to its far reaching benefits, irrigation systems have been identified and adopted globally as a key approach to addressing agricultural water challenges. However, the annual growth rate of irrigation systems in sub-Saharan Africa, particularly large-scale public schemes, has rather decreased since the late 1970s and currently at 2%, is the slowest in the world. This study examines the factors that influence its development. Secure access to land and water, efficient technologies, stable input/output markets, favorable policies, effective institutions and reliable farmer support environment were identified as vital factors for sustainable irrigation development in the region. A suitable relationship was developed between these factors as a chain of shackles with the chain as strong as the weakest shackle. This theory has been tested on some irrigation systems across sub-Saharan Africa with various degrees of success, and has proven to reveal the sources of success and failure. In the reviewed cases, the weakest factors were secure access to land and water, effective institutions and favorable policies.

Key words: Sustainable irrigation development, sub-Saharan Africa, factors affecting growth, irrigation systems.

INTRODUCTION

Irrigated agriculture has been a major solution to the water challenges affecting food production in areas with unreliable rainfall patterns. Historically, irrigation had a large positive impact on poverty reduction in both rural and urban areas, producing relatively cheap food and providing employment opportunities for the landless poor (Hussain, 2005). Irrigation produces secondary benefits for the economy at all levels; increased productivity of rural labour, promotion of local agro-enterprises, and stimulation of the agricultural sector as a whole (Faurès et al., 2007).

Investments in irrigation development in sub-Saharan Africa have been driven by government policies, multinational donor agencies, private investors, markets, technology and innovations. As a result, several types of irrigation systems have been introduced in sub-Saharan

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Africa over time. This study reviews the scientific and professional literature on irrigation development in sub-Saharan Africa by looking at the trends of irrigation, the challenges facing irrigation development and analyses factors that have contributed to successful irrigation development in sub-Saharan Africa.

The aim is to gain an improved understanding of the conditions under which irrigation development is successful and sustainable in sub-Saharan Africa, based on existing literature and publications.

TREND OF IRRIGATION DEVELOPMENT IN SUB-SAHARAN AFRICA

The last 50 years have seen massive investments in large-scale public surface-irrigation infrastructure as part of a global effort to rapidly increase staple food production and avoid devastating famine. Investment in irrigation accelerated in the 1960s and 1970s, with area expansion in developing countries at 2.2% per year reaching 155 Mha in 1982 (Carruthers et al., 1997). According to Rosegrant and Svendsen (1993) and Kikuchi et al. (2002), unprecedented high food prices during the two food crises in the 1970s induced huge irrigation investments in developing countries as shown in Figure 1.

The decline in annual growth rate for irrigation development as reported by Faurès et al.(2007) has been attributed to underperformance (Chambers, 1988), reduced donor interest (Merrey et al, 1997), concerns over negative social and environmental impacts, changes in competing water uses, and declining cereal prices. These factors have slowed growth in input use and investment in infrastructure (Rosegrant and Svendsen, 1993; Carruthers et al., 1997). In view of the above mentioned factors, more rehabilitation projects of large-scale irrigation schemes were implemented by governments and international donors during the late 1970s (Innocencio et al., 2007).

The advent of affordable drilling and pumping technologies in India and Pakistan in the mid-1980s, led to rapid development of shallow tube-wells and conjunctive use of surface and groundwater (Shah, 1993; Palmer and Mandal, 1987). These technologies were successfully applied in private development of groundwater irrigation when public and international donor funding declined in the 1990s in sub-Saharan Africa. This development has spread in rural, urban and peri-urban areas in response to higher demand for fresh fruits and vegetables by growing cities (FAO, 2005).

Various studies conducted on the scale of development of irrigation in Sub-Saharan Africa give different figures of irrigated areas. According to FAO (1995a), the sub-region has an irrigation potential of approximately 42 Mha out of which, only 13.33% (5.6 Mha) is actually irrigated. More recent data from FAO shows that in 2003 (after 8 years), actual irrigated area in the sub-region had increased by 1 Mha. This increases the fraction of actual irrigated land to 15.71%, reflecting a growth rate of approximately 0.2975% per annum (FAO, 2005).

CHALLENGES OF IRRIGATION DEVELOPMENT IN SUB-SAHARAN AFRICA

Possessing 42 Mha of irrigable land with the slowest rate of irrigation development in the world, sub-Saharan Africa has the highest potential in accelerating irrigated agriculture. However, FAO (2003) projects a much slower rate of expansion (0.6% per year) over the next 2 to 3 decades. This is 1% less of the annual growth rate recorded between 1960 and 1990. In a study on small-scale irrigation systems across sub-region, Barnett (1984) identified six problems affecting small-scale irrigation development: (1) Balancing social benefits, national economic strategies and perceived producer benefits; (2) Control (over decision-making, marketing, water use and etc.); (3) Hierarchy and technical requirements; (4) Planning production units and processes; (5) Water use and adaptation to farmer experiences; and finally (6) Planning for change.

In similar studies, Awulachew et al. (2005) and Moris and Thom (1990) reported the high costs of investment and negative rates of return; technical flaws in infrastructural design such as seepage, sedimentation, cracks in dams and silting up of reservoirs; high input costs; pests and diseases; high interest rates on loans; management failures; political difficulties; and marketing problems as contributory factors to broken down machinery and schemes.

Furthermore, mismanagement, high cost of working capital, poor linkages to credit, input and output markets, institutional vacuum, land tenure issues, improper management transfers, damaged soils, expensive and ineffective mechanization, poor farmer capacity and lack of farmer entrepreneurship development were reported by Shah et al. (2002) as inhibiting factors to irrigation development in sub-Saharan Africa. The commonalities between the challenges observed by various studies are identified in Table 1.

High costs of irrigation development

The average cost of a new irrigation scheme in sub-Saharan Africa as reported by Inocencio et al. (2007), is 141.67% higher than costs involved in other developing parts of the world (that is, USD14,500/ha in sub-Saharan Africa and USD6000/ha elsewhere). Namara et al. (2010) attributed this to the lack of local expertise and hence, the involvement of expensive expatriates in planning, designing and construction of irrigation projects. In addition, reports suggest that the best areas for developing irrigation

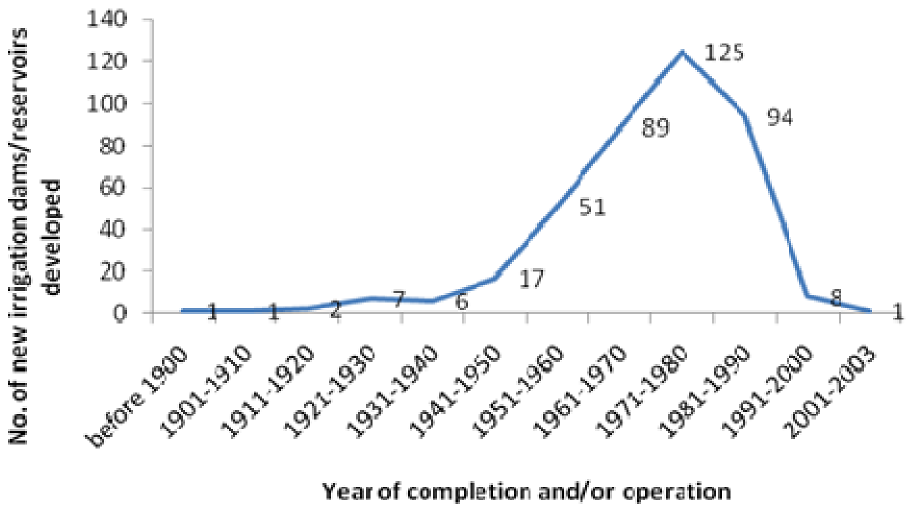

Figure 1. Trend of large-reservoir irrigation development in sub-Saharan Africa. Source: Aquastat, available at: http://www.fao.org/nr/water/aquastat/main/index.stm.

Table 1. Common challenges affecting irrigation development in sub-Saharan Africa.

Challenges	Authors		
	Barnett (1984)	**Awulachew et al. (2005)**	**Shah et al. (2002)**
High irrigation development cost	New schemes involve huge investment	high costs of investment, high input cost	High cost of working capital
Lack of access to credit	Governments cut down on operation cost by removing credits for farmers	High interest rates on loans	Poor linkages to credit, input and output
Unreliable markets and lack of access	Artificial market pricing by management of public schemes	Marketing problems	Poor linkages to market
Ineffective institutions	the problem of control, balancing social, national and producer benefit; hierarchy and technical requirements; adaptation to farmer experiences	negative rates of returns; management failures; political difficulties	Improper management transfers; land tenure issues; institutional vacuum
Choice of technology and maintenance of infrastructure	Problems with adequate and reliable water supply	technical flaws in infrastructural design, cracks, siltation and seepage in reservoirs; lack of maintenance and spare parts of machinery	Expensive and ineffective mechanisation
Low productivity	problems with production units and processes	Pests and diseases, high fertilizer cost	Damaged soils, poor farmer capacity

schemes in sub-Saharan Africa are nearly exhausted. This according to Faurès et al. (2007) will further increase the construction cost of future irrigation projects. Some governments set up administrative structures to manage irrigation schemes by compelling the direct producers to comply with enforced artificial pricing of commodities. This however, creates challenges where social, economic and producer benefits cannot be balanced and eventually result in low productivity due to lack of farmer interest (Barnett, 1984).

Lack of access to credit

In line with severe international economic crisis in the 1980s, developed countries adopted series of policies to adjust their capital flows (Edwards and van Wijnbergen, 1992). Introduction of the Structural Adjustment Program (SAP) changed the paradigm of irrigated farming in general and that of the poor in particular. There was a drastic drop in government support to inputs and credit. In Ghana the budget share of agriculture dropped from

12 to 2% in the 1990s. This resulted in huge cuts in formal credit and input supply programmes, and reduction in subsidies for fertilizer, credit, and animal traction equipment (Reardon et al., 1994). Loans to small-scale farmers have virtually evaporated after the liberalization of interest rates by the banks. According to Evans and Ngau (1991), Reardon et al. (1994) and Schrieder and Knerr (2000) in cases of credit constraints and a risky environment, farmers may use off-farm income to invest in agriculture and thus increase the farm productivity. Even in cases where some credit markets exist, off-farm income may serve as collateral for example in Benin (Hoffman and Heidhues, 1993).Under such circumstances agricultural communities are forced to resort to activities that secure a more stable income stream. These include rural-urban migration or local non-agricultural employment (Yilma et al., 2004).

Marketing and access to markets

The unreliability of input and output markets limit the benefits obtainable from irrigated agriculture. Marketing of irrigated products in sub-Saharan Africa at local, regional and global markets have numerous challenges for example in Ghana, national vegetable market channels are controlled by highly organized women trader organizations which exert a large degree of control on commodity prices, and frequently manipulate prices to the farmer's disadvantage (Laube et al., 2008). Factories could process perishable vegetable crops such as tomatoes to help save losses and stabilize the market. Local farmers face huge competition from European and Asian countries such as Italy, Holland, Spain and China, where the production of vegetables is highly subsidized, and large quantities of vegetables and vegetable products (such as tomato pastes) are dumped on the Ghanaian market. Artificially low world market prices negatively affect local prices and marketing chances (Laube et al., 2008).

Ineffective institutions

Effective institutions are required from the farm level, catchment level to the national level. These institutions are responsible for planning of irrigation development, managing of impacts due to irrigation development, formulating and implementing policy directives and funding towards sustainable irrigation development. Within the past 15 to 20 years there have been some institutional reforms in many countries in sub-Saharan Africa with a focus on withdrawing government from management. Management responsibilities have therefore been transferred from centralized bureaucratic management to lower levels (FAO, 1997). However, effective institutional arrangements for irrigation still remain a challenge (Faurès et al., 2007).

Samad and Merrey (2005) and Merrey et al (1997) pointed that, sustainable institutional reforms have the following characteristics: They give legal recognition to farmers and farmer groups, clearly recognize sustainable water rights and water service, specify management functions, provide compatible infrastructure with water service, create effective accountability and incentives for management, have viable arrangements for conflict resolution, mobilize adequate resources for irrigation and ensure that farmer investments are proportional to benefits. According to Merrey et al(2007), institutional reforms backed by strong political commitment are needed for sustainable irrigation development in sub-Saharan Africa.

Choice of technology and maintenance of infrastructure

Experience in many parts of Sub Saharan Africa has shown that with adequate community involvement in planning, design and management, small scale irrigation schemes can be more viable and sustainable than conventional large-scale schemes (Merrey et al., 2002). Top-down implementation process mostly leads to non-acceptance of irrigation schemes by farmers. A classic example is the Meki-Ziway Scheme in Oromia, Ethiopia, which failed largely because farmers could neither get spare parts for the imported pumps nor afford the electricity fees to run the pumps. For sustainable schemes, irrigation technologies must match the capacity of the users (Awulachew et al.,2005). In addition, designs must fit other user conditions such as climate, soil types, crops to be cultivated and method of management of irrigation infrastructure. One of the biggest constraints is that there are few experts who can fine-tune all these elements in a design to actually work in practice.

The reasons for poor maintenance as identified by Sijbrandij and van der Zaag (1993) are; (1) restrictions on cost of maintenance of irrigation schemes; (2) neglect of duty by maintenance sections; (3) lack of accountability; (4) lack of channels for expressing water users opinion on canal maintenance problems; (5) informal participation of farmers in maintenance and (6) apathy from water users due to the perception that they are not responsible for care of the facilities. Lessons need to be drawn from these challenges to create functional maintenance culture and strategies among management and water users to sustain irrigation projects.

Low productivity

According to statistics by FAO, productivity in Africa lags far behind other regions of the world and is well below the growth required to meet food security and poverty reduction goals set forth in national and regional plans. Lower use of fertilizer is one of the major factors

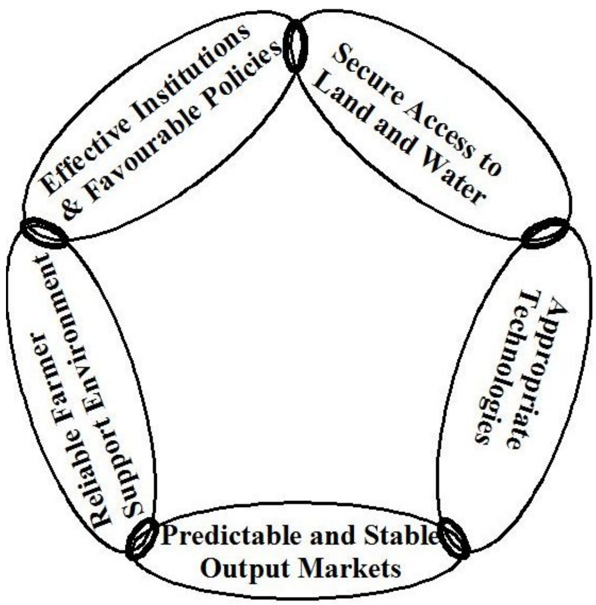

Figure 2. Chain of Success Factors for sustainable Irrigation Development. Source: modified from Vishnudas et al., 2007.

explaining lagging agricultural productivity in Africa. In 2002, the average fertilizer use in Sub-Saharan Africa was only 8 kg ha^{-1} of cultivated land which was low in comparison with records for other developing regions (e.g. 78 kg/ha in Latin America, 96 kg/ha in East and South-East Asia and 101 kg/ha in South Asia) (Morris et al., 2007). There are numerous challenges facing improving fertilizer application in Africa. For example in Ethiopia, organized input supply through government or government-supported channels are often available only for the major rainy season. Farm inputs, especially fertilizer, are scarce and relatively expensive during the irrigation season which leads to lower yields. In some instances, farmers attempt to substitute mineral fertilizers with farmyard manure but this is often not available in desired quantities (Awulachew et al., 2005). Policies and programmes must encourage fertilizer use in a sustainable manner (Morris et al., 2007) to ensure that Sub-Saharan Africa meets its agricultural targets. Also, horticultural crops that are highly vulnerable to pests and diseases must be introduced together with programs for pest and disease management. This will reduce losses associated with such diseases and pests (Awulachew et al., 2005).

SUCCESS FACTORS FOR ACHIEVING PRODUCTIVE AND SUSTAINABLE IRRIGATION DEVELOPMENT IN SUB-SAHARAN AFRICA

Irrigation productivity relates to the net socioeconomic and environmental benefits achieved through the use of water for irrigation. One of the necessities that demands increased irrigation productivity is the need to meet rising food demand for a growing, wealthier and increasingly urbanized population. Improved irrigation productivity will therefore contribute to poverty reduction, productive employment and economic growth (Molden et al., 2003). Achieving productive and sustainable irrigation development hinges on enabling factors which according to Penning De Vries et al. (2005) present the five 'capitals'; (1) human capital (skills and knowledge, labor, health), (2) natural capital (water, land, genetic resources), (3) social capital (organization, regulations, policies, trust and security, gender equity), (4) financial capital (savings, loans, markets) and (5) physical capital (infrastructure, technology, equipment). However, these capitals are far too broadly defined to be of much conceptual help-sharper definitions of relevant aspects of these capitals are required.

Success factors for sustainable irrigation development

The following success factors have been identified as vital for sustainable irrigation development in sub-Saharan Africa: (1) Secure access to land and water; (2) Appropriate technologies; (3) Predictable and stable input/output markets; (4) Favorable policies and effective institutions; (5) Reliable farmer support environment. A suitable relationship between these five factors is a chain of shackles, where the chain is as strong as the weakest shackle (Penning De Vries et al., 2005; Vishnudas et al., 2007) as shown in Figure 2. The factors identified under this study are not very different from what Namara et al. (2014) identified as inhibiting the wider application of small-scale water lifting technologies (poorly developed supply chains, lack of access to finance, high operational and maintenance costs, high output price risks and lack of institutional support).

Secure access to land and water

The prevailing land tenure system is a challenge usually associated with accessing land and the security over the landholding. Often, lack of clarity among the plot-holders about what their rights precisely are with respect to their plots seems more problematic than the absence of ownership (Shah et al., 2002). Acquisition of land for irrigation is done in consideration with accessing potential water sources for irrigation such as groundwater and surface water. Institutional arrangements must therefore allow and protect water access to help promote irrigation development.

Appropriate technology

Irrigation development involves technology for abstraction, transportation, distribution and application of water. Infrastructural and technological development forms the most expensive aspect of irrigation development and as such, requires investment from both government and private initiatives. There is the need to invest in new irrigation systems and technologies as well as improvements in existing ones to enhance productivity.

The nature of investments should promote innovative and appropriate technologies which empower users and also, fit into their local context (socio-economy, geography, soils, crops and sources of water). Different technologies enable and/or constrain certain types of organization of irrigators (centralized/de-centralized) and coalesce with different modalities of investment. New technologies may unlock some entrepreneurial investments that are so far unexploited (Ofosu et al., 2010).

Reliable and stable input/output markets

Markets are key in irrigation development, particularly output markets. Output markets can either be the driving force behind several irrigation developments or the reason for their collapse. Produce markets that are predictable and reliable produce markets enhance the economic viability of irrigation farming and as such, is a pre-requisite for successful irrigation development. Unfavorable market conditions such as artificial low pricing by governments and market fluctuations or failure are detrimental to successful irrigation development in sub-Saharan Africa (Aw and Diemer, 2005).

Effective institutions and favorable policies

In order to ensure sustainability, there is the need for institutions to effectively take care of the public interests through leadership and management of resources. The characteristics of effective irrigation management institutions as studied by Perry (19950), Merrey et al. (2007) are: (1) A defined boundary (e.g. hydrological); (2) Provision of incentives for stakeholders; (3) Adequate infrastructure to deliver services in terms of rules and allocations; (4) Has the capacity to adapt to changing circumstances; (5) Employs cost recovery mechanisms and is equipped with legal instruments for implementing and enforcing policies and laws; (6) Has decentralized, integrated and transparent functions; and (7) Involves stakeholder participation by creating a platform that represents all interest groups at all levels.

Policies that improve credit accessibility of farmers, stimulate entrepreneurship abilities of farmers and/or reduce the capital cost of the producer will contribute positively to irrigation development.

Reliable farmer support environment

The accessibility and reliability of farmer support services can boost farmer confidence and lead investment in irrigated agriculture. Farmers also depend on information on markets, seeds, soil requirements and fertilizer for their produce. The availability of affordable credit facilities gives farmers the opportunity to improve and expand production.

Farmers have sometimes been introduced to certain irrigation technologies without technical support for maintaining them. As a result, productivity dropped because farmers could not find spare parts and skilled labor to repair their broken down equipment. Availability of reliable technical advisory services such as extension services or farmer advisory centers are crucial. An enabling environment where all these supports are accessible by farmers is important for sustainable irrigation development.

IMPACT OF SUCCESS FACTORS ON SOME IRRIGATION SCHEMES/SYSTEMS IN SUB-SAHARAN AFRICA

The five success factors identified in the previous section have been tested on selected irrigation schemes across sub-Saharan Africa including; the Office du Niger irrigation scheme under two different periods (1932-1982 and 1982-present), the Niger Valley irrigation schemes, the Sakassou Rice irrigation system in Cote d'Ivoire, the Ng'uuru Gakirwe irrigation system in Kenya, the Mukuria-Kyambogo group irrigation scheme in Kenya, the Community Empowerment Irrigation Project in Northwest Somalia and, finally, the Usangu irrigation system in Tanzania. These success factors were tested on a scale of weak, intermediate and strong. The factor is classified as weak if the contribution of the factor is adversely affecting the productivity and sustainability of the irrigation scheme. The factor is classified as intermediate if its contribution to the success of the scheme is not sustainable. Finally, the factor is classified as string if it is sustainable and also contributes positively to the productivity and sustainability of the scheme.

The results as summarized in Table 2 show that, (1) these five factors are relevant; and (2) the irrigation schemes/systems are as successful as the weakest of the five factors identified. The successful irrigation schemes and systems have been tagged as bright spots of irrigation development across sub-Saharan Africa (Penning de Vries et al., 2005).

Conclusions

The rate of irrigation development in sub-Saharan Africa is the slowest compared to other regions of the world and

Table 2. Measure of success factors on some irrigation systems in Sub-Saharan Africa.

Irrigation project	Type	Secure access to land and water	Appropriate technology	Predictable and stable input/ output markets	Reliable farmer support environment	Effective Institutions and favourable policies	Measure of success
Office du Niger in Mali (1932-1982) (Source: Aw and Diemer, 2005)	Government-led scheme	Land security absent – (*weak)*	Government investment – (*strong)*	poor output market - (*weak*)	Heavily indebted farmers, lacked incentives to raise yields couldn't hire labour *(weak)*	Government monopolised management, Artificial market prices for products (*weak*)	*Weak*
Niger Valley Irrigation Schemes in Niger (Source: Abernethy et al., 2000)	Government-led scheme	Secured by government for farmers - issues of landownership prevailing (*intermediate)*	Developed by Government and Donors but Farmers pay high fees for services and maintenance (*intermediate)*	High demand for products from local market *(strong)*	accessible credits for farmers payable in a year *(strong)*	Managed by Cooperatives overseeing Irrigator Organizations, Both institutions lack management skills due to illiteracy and Ineffective management transfers, *(intermediate)*	*Intermediate*
Sakassou Rice Irrigation System in Côte d'Ivoire (Source: Hundertmark and Abdourahmane, 2003)	Government-led scheme	Land availability with accessibility constraints and poor water services during peak periods (*intermediate*)	Irrigation system developed by government *(intermediate)*	The Farmer Cooperative assists farmers with Inputs and marketing (*strong*)	Farmers are assisted with inputs payable at the end of the season, abundant labour for farmers *(strong)*	Managed by Farmer groups and Water Management Committee with Technical Assistance provided by public agency (*strong*)	*Intermediate*
Office du Niger in Mali (1982 – Present) (Source: Aw and Diemer, 2005)	Government-led scheme reformed by Water User Association	Farmer-friendly land-tenure security (*strong*)	Government and Donor Investment (*strong*)	Vibrant Private sector participation in input and output markets; doubling of rice price (*strong*)	Farmers access credit from private sector, abundant labour *(strong)*	Farmers have access to credit, no price controls, Farmers unions involved in management (*strong*)	*Strong*
Ng'uuruGakirwe irrigation in Kenya (Source: Mati and Penning de Vries, 2005)	Private-led system with government intervention	Land owned by farmers, water is easily accessible by all. Water limitation factor for expansion *(intermediate)*	Farmers converted a water supply-system into irrigation. Later government loaned farmers to expand system (*strong)*	Farmers have their own processing and packaging factory. Products are sold to European Markets *(strong)*	Farmers get inputs and credits from the processing company owned by farmers, abundant labour *(strong)*	Farmers have organised union. Special training package is organised for farmers by the European Markets *(strong)*	*Intermediate*

million hectares out of which only 13.33% is developed, making sub-Saharan Africa a potential bread-basket for the future global population. This potential can be realized if the identified success factors are present, that is, (1) secure access to land and water, (2) appropriate technology, (3)

Table 2. Contd.

Mukuria-Kyambogo Group Irrigation Scheme in Kenya (Source: Mati and Penning de Vries, 2005)	Outgrower small-scale farmers	Land tenure is individual ownership with title deed, adequate water supply controlled by farmers *(strong)*	Started with a loan secured by a group of 15 farmers *(strong)*	Are outgrower farmers for large-scale commercial farmers who provide inputs and markets *(strong)*	Credit is accessed by the group on-behalf of members *(strong)*	Organised farmer group having effective collaboration with commercial farmers. Small-scale farmers are trained by commercial farmers *(strong)*	*Strong*
Community Empowerment Irrigation Project in Northwest Somalia (Source: Omar and Yonis, 2005)	Government-Led with Donor (IFAD) Support	Farm plots are owned by the farmers *(strong)*	Farmers were given loans by the project to develop shallow wells *(strong)*	Farming communities gain access to market through rehabilitation of feeder roads *(strong)*	Farmers are given credits in ploughing and in cash and can also access credit through rural financial services instituted by the project *(strong)*	Comprehensive program for strengthening local institutions, agricultural extension services for farmers *(strong)*	*Strong*
Irrigation in Usangu in Tanzania (Source: Lankford and Beale, 2007)	small-scale private individuals irrigation system	Control of land is generally inflexible, governed by money, location prestige and time occupied, unreliable water source *(weak)*	Private individuals secure loans to investment in technology. *(intermediate)*	Capital-rich farmers have good access to markets than the poor farmers. *(intermediate)*	Accessible credits from a small credit union, however capital-rich farmers have good access than poor farmers *(intermediate)*	Weak institutions, resulting in competition for land and water. Unresolved downstream impacts from upstream irrigation *(weak)*	*Weak*

can be linked to the following unresolved challenges: High development cost of irrigation, lack of access to credits for farmers, unreliable and unpredictable markets, ineffective institutions, low productivity, and finally inappropriate technologies coupled with poor infrastructural maintenance.

The potential irrigable area of sub-Saharan Africa is 42 predictable and stable input/output markets, (4) reliable farmer support environment, and (5) effective institutions with favorable policies. These factors function as a chain of shackles, the chain being as strong as the weakest shackle. This theory has been tested on some irrigation systems across sub-Saharan Africa with various degrees of success and has proven to reveal the sources of success and failure. In the reviewed cases the weakest aspects were insecure access to land and water, ineffective institutions and unfavorable policies.

Conflict of Interest

The author(s) have not declared any conflict of interest.

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