

# Reconciling food and water security objectives of MENA and sub-Saharan Africa: is there a role for large-scale agricultural investments?

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**Abstract** The attainment of food and water security rank high on the agendas of governments in the Middle East and North Africa (MENA) region and sub-Saharan Africa (SSA). Although the objectives are similar, the underlying drivers, resource endowments and opportunities for achieving them are different. Differences between two regions in natural resource endowment and investment capital stock can, in theory, lead to mutually beneficial trade to achieve desired objectives. Concerns about the recent food crises coupled with the disparity in land and water endowment and investable capital between MENA and SSA have led in recent years to investment in agricultural land in the latter by a number of MENA countries with the aim of producing food. At the same time, many SSA countries seek these investments to infuse capital, technology and know-how into their agricultural sector to improve productivity, food security and rural livelihoods. However, these recent foreign direct agricultural investments have to date performed poorly or have been abandoned without achieving the initial objectives of setting them up. Based on research conducted in selected sub-Saharan countries, this paper analyses the reasons for the failure of these investments. It then reviews a few successful agricultural investments by private sector companies with a long history of operation in SSA. Juxtaposing lessons distilled from failed and successful case studies, the paper argues that large-scale agricultural investments that take advantage of this accumulated knowledge are needed and do have a critical role to play. Such

investments, when they also incorporate ecosystems management practices and smallholder inclusive business models in their operations, can serve as appropriate instruments to reconcile the food and water security objectives of both the MENA region and SSA, while promoting sustainable intensification of agriculture and improved rural livelihoods in SSA.

**Keywords** Land and water resources · Foreign direct investment · Sustainable agriculture · Livelihoods · Business models

## Introduction

Concerns about food and water security remain high in the MENA region and SSA for obvious but different reasons. Internal renewable freshwater resources (IRFWR) are in acutely short supply in MENA with per capita IRFWR availability in 2013 ranging from 84 m<sup>3</sup> in the Arabian Peninsula to 274 m<sup>3</sup> in North Africa. This compares with a mean of 4,143 m<sup>3</sup> in SSA and a global average of 5,996 m<sup>3</sup> (FAO 2014a). Across the region, groundwater has become an important resource for food production but with declining aquifer levels and extraction of non-renewable groundwater, a growing risk to regional food production is emerging and water has become a binding constraint to food production (FAO 2014b). The situation is further compounded by a paucity of arable land. Although the MENA region has achieved high levels of food availability and access, due to policy interventions that have made basic food items available at very low prices and rising income levels, stability remains a challenge as the region is particularly exposed to instability due to its dependency on international food markets and its rapidly growing population.

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In contrast, SSA at a sub-continental level is blessed with ample arable land, water resources and diverse agro-ecosystems. In 2013, arable land area in SSA was about 215 million hectares compared with 50 million hectares in MENA. Freshwater withdrawals as a percentage of IRFWR was 3 % in SSA compared with 176 % in North Africa and 492.6 % in the Arabian Peninsula, partly indicating extraction of water from non-renewable aquifers in the MENA region (FAO 2014a). While the overall SSA land and water endowment statistics mask significant differences between land abundant and land constrained countries (Jayne et al. 2014) and between countries experiencing physical and economic water scarcity (CA 2007), nonetheless, SSA is better endowed in these natural resources than the MENA region. But despite this relative abundance, food security remains a major challenge in SSA. FAO et al. (2014) reported that food availability remains low and slow progress has been achieved in improving access to food due to sluggish income growth, high poverty rates and poor rural infrastructure which hampers physical and distributional access. At the same time the stability of food supplies has deteriorated owing to political instability, civil wars and outbreaks of deadly diseases. Because of these phenomena, one in four people remains malnourished. The region also faces challenges in food utilization, as indicated by the high prevalence of stunted and underweight children, and in improving dietary quality and diversity, particularly for the poor. Other factors contributing to food insecurity include poor land and water governance systems, partly due to conflicting customary and statutory legal frameworks that have led to tenuous and unsecured land and water rights for millions of smallholder farmers, especially women. Furthermore, decades of low public investment in agriculture and irrigation have led to low agricultural productivity and low rural incomes, which further limit access to food. For instance in 2012, irrigated area as a percentage of cultivated area was 3.1 % in SSA, 23 % in North Africa and 48.3 % in the Arabian Peninsula (FAO 2014a). Against this backdrop, the need for investment in SSA to develop and use available land and water resources to improve food and nutrition security, reduce poverty and create employment without ecosystems degradation has never been greater.

In addition to these contrasting regional features, the food crises of 2008, 2011 and 2012 (FAO 2015) and the continuing volatility in food prices coupled with climate change have all combined to highlight the precariousness of the world's food systems and heightened fears about the risk of absolute dependence on world markets for food supplies.

This combination of internal and external factors and the nuanced picture of the state of food and water security in the two regions have raised the possibility of south-south collaboration to reconcile and satisfy the food and water security objectives of the MENA region and SSA. In striving to

achieve these objectives, different pathways exist. For countries with limited options to increase food self-sufficiency due to scarcity of water and arable land but with surplus investable capital, one plausible pathway is to invest in food production overseas in countries where these natural resources are available and there is a need for capital investment to improve agricultural productivity. Based on the theory of comparative advantage as applied to agriculture (Halley and Abbott 1986; Abbott and Thomson 1987) mutually beneficial production and trade can occur under these circumstances. The disparity in land and water endowments between the two regions coupled with availability of investable capital could, in theory, make this collaboration feasible. In reality, other factors including structural disequilibrium in factor markets, the economic and hydrological effects of expanding a given type of production, policy, institutional and legal frameworks and the business environment in an investment recipient country can influence and thwart this collaboration.

The purpose of this paper is to explore options and imperatives for reconciling the food and water security objectives of the MENA region and SSA through mutually beneficial investments, incorporating inclusive business models, which not only allow the objectives to be met but also promote sustainable intensification of agriculture and improved rural livelihoods in SSA. The paper is organized as follows. The next section briefly describes the conceptual framework developed to illustrate the different motivations, pressures and drivers of planned investment outflows (from the MENA region) and inflows (into SSA) to meet the food and water security needs of the two regions. The framework identifies other factors that can influence the performance of these investments and lays the foundation for subsequent discussion in the paper. Next, the history of a number of recent foreign direct investments by MENA countries and companies in agricultural land in various SSA countries is traced and reasons for their poor performance are discussed. The main lessons drawn by other studies from a number of past and on-going successful agricultural investments in SSA are then presented. Based on this analysis, the subsequent section considers policy options and imperatives that will promote the kind of investment and business models that will allow the food and water security objectives of the MENA region to be matched-up with the food and development needs of SSA. The concluding section argues that investments that can lead to 'win-win' scenarios for both regions are feasible, but they will need to be carefully planned and based on a good understanding of the local biophysical, social and institutional contexts. They will also need to be implemented using environmentally-friendly, smallholder inclusive business models that will ensure sustainable intensification of agriculture and equitable sharing of benefits by all parties – investor, communities and government.

## Analytical framework

The conceptual framework developed to underpin the analysis and discussion presented later on in the paper is shown in Fig. 1. Ready availability of land, fertile soil, water and labour and low production costs can partly confer a comparative advantage in agricultural production on a host country or region. The challenges of hunger, poverty and youth unemployment confronting many developing nations create additional pressures on governments to optimally use or develop available resources to improve agricultural productivity to meet the increasing demands of a growing population for food, employment and improved livelihoods. This combination of factors can drive a government to seek capital investment from domestic and foreign sources. Agricultural capital is needed as it complements rather than substitutes for land, water and other natural resources and is necessary for a nation's comparative advantage to be fully realized (Goldin 1990).

Conversely, water scarcity in a region can pose a threat to increased regional food production and act as a driver of investment in food production overseas in regions where resources lacking at home abound and host government policies are favourable. Economic incentives in the form of easy access to state bank credit, loan guarantees and insurance and government backing can provide additional incentives to private sector investors to venture outside national and regional borders. Another driver for private sector investors is the profit motive, i.e., the likelihood of earning higher rates of return on investment due to lower production costs and new market access overseas.

Once an investment is made, its performance (in terms of returns to capital) will be influenced by a number of factors under the control of the host government such as macroeconomic, investment, trade, industrial and agricultural (land, water and environmental) policies. Other factors under the control of the investor and/or its backers, such as technology and agricultural know-how, investment horizon and choice of business model will equally influence the success or failure of the investment project. These feedback loops are often underestimated or not thought through thereby undermining the performance and outcomes of many investment schemes.

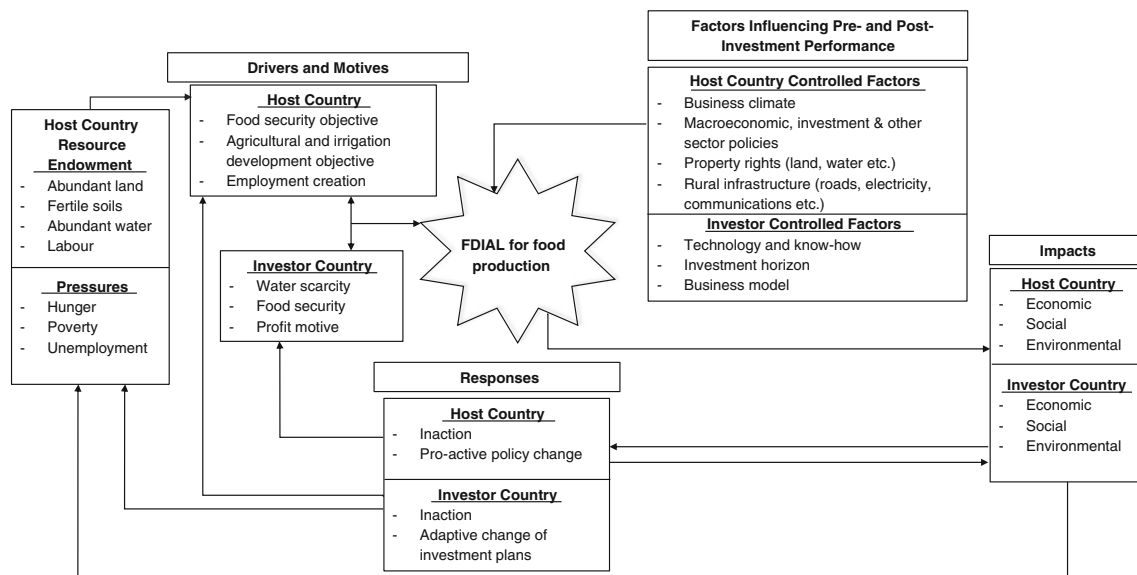
Furthermore, depending on the area cultivated, types of crops grown and the specific land and water management practices undertaken, agricultural production by the investor will lead to positive or negative impacts on food availability, rural livelihoods and ecosystems in both the host- and investor-country. The biophysical effects on land and water ecosystems will be solely and directly felt in the host country, while the socioeconomic benefits and costs will be felt in both the host- and investor-country but may be unequally distributed.

These changes will elicit policy responses from the host-and/or investor-country which, in turn, will provide feedback

loops that will determine subsequent adaptive alterations in investment incentives and plans in the next round.

## Data sources

Information used to analyze the foreign direct investment of MENA countries in SSA was obtained from several sources in four steps. Firstly, a purpose-built database was created out of the "Land Matrix" databank. Several authors, Edelman 2013; Oya 2013; Scoones et al. 2013; Woertz 2013, have commented on the inadequacy and sometimes erroneous data in the initial version of the Land Matrix database which tend to raise reliability and credibility questions about studies based on the database. To overcome this problem and to derive datasets useful for the specific purpose of this study, the following steps were taken. Entries pertaining to MENA investments in SSA for which no reliable information source (e.g., published or grey literature) could be found after an Internet search were removed. For land deals with a source of information, the data recorded in the database were verified to ensure that they were actually in the document cited. Secondly, data obtained this way were supplemented by additional information obtained from the websites of some of the investors (e.g., Qalaa Holdings - <http://www.qalaaholdings.com>; Al Dahra Holding - [www.aldahra.com/en/](http://www.aldahra.com/en/)) and key informants. Thirdly, pertinent information gathered from field-level case studies conducted in Ethiopia, Ghana, Mali, Mozambique, Tanzania and Zambia between 2011 and 2014 as part of a larger IWMI study on the impacts of large-scale agricultural investments on water, livelihoods and ecosystem services (Williams et al. 2015) was also used to enrich the table presented below. The field-level surveys involved key informant and focus group interviews of communities from whom land was acquired or who were impacted and officials of investment companies and government regulatory agencies. These interviews were conducted to gain better understanding of the land acquisition process, the mandatory assessments required by statutory agencies before land acquisition can be approved, the food security and livelihoods implications of land acquisition for existing land and water rights holders, the impact mitigation plans of the investment companies, dispute resolution procedures and monitoring and compliance methods put in place by statutory agencies. Fourthly, a review of government policy documents, legislative acts establishing the agencies charged with the responsibility of administering and managing land and water and other published reports was conducted. This was done to examine the adequacy of current policy and institutional frameworks for guiding and steering foreign direct investments to ensure that



**Fig. 1** Framework for analysis of opportunities and drivers of foreign direct investment in agricultural land (FDIAL), and factors influencing performance of investment schemes

national development objectives are met without discouraging investors and compromising the integrity of ecosystems.

### Analysis of selected agricultural investments by MENA countries in sub-Saharan Africa

Table 1 summarizes key features of ten agricultural land investments in six SSA countries by investors from five MENA countries and one non-MENA country. These investments were partly selected because they met at least two or all of the following criteria: 1) acquisition of at least 5,000 hectares of land for commercial food crop and/or feedstock production, 2) current or future planned use of water resources for irrigation, and 3) land acquisition resulted in the displacement of existing, poor land and water right holders. They were also partly selected due to the range of issues they present and also because they are representative of food crop production investments undertaken by MENA and other countries in SSA since the onset of the food price crises. One investment by a non-MENA investor, the India-owned Karuturi Global Ltd, was included to illustrate an important pitfall (absence of hydrological assessment) in many land acquisition processes, including those made by MENA countries.

The six SSA countries in the table are among the best endowed in Africa either in terms of land<sup>1</sup> or water resources. But they are simultaneously plagued by chronic food

insecurity, poverty and youth unemployment (Table 2) partly due to poor agricultural sector performance arising from poor land and water governance policies and partly due to lack of non-farm economic opportunities in the rural areas, where most of the poor people reside, civil conflict and political instability. The MENA investors are a mixture of public investment agencies and private sector companies backed directly or indirectly by their home governments, and exploiting historical and/or religious ties with investment recipient countries. As Woertz (2013) has pointed out, the state in MENA countries is dominant in formulating foreign agro-investment strategies and in facilitating the investment of state-owned companies and private sector entrepreneurs through negotiation of framework agreements with governments in investment recipient countries.

A closer examination of the status of the ten investments in Table 1 reveals five categories.

- Category 1. Failed investment that never got off the ground (e.g., Foras International Investment Company's rice project in Mali). In this case, the land contract signed earlier by the host government in 2009 was annulled when a new government took power in 2013 due to lateness in starting the project and irreconcilable differences between investor and host government.
- Category 2. Stalled projects that started with preliminary implementation of an agricultural production plan and construction of complementary infrastructure (e.g., irrigation canal and roads) but suddenly stopped due to various problems, including change of government in investor's country (e.g., Libya Africa Investment Portfolio's rice project in Foya, Liberia and Ségou, Mali) and difficulties in acquiring sufficient land area to make the investment

<sup>1</sup> Even though Table 2 refers to total amount of arable land per country, the study countries still rank among those with the largest amounts of underutilized land, excluding forestland, potentially available for agricultural production in SSA (see Chamberlin et al. 2014).

**Table 1** A sample of FDI in agricultural land in SSA countries by location, land size, crops grown and implementation status, 2005–2013

No.	Investor's name & country	Location of investment in host country	Land area planned to be acquired (ha)	Actual or intended crops	Implementation status
1	Saudi Star Agricultural Development Plc, Saudi Arabia	Perbengo & Pukedi Kebeles, Gambella region, Ethiopia	10,000	Rice	Rice grown on 350 ha while irrigation canal is being completed.
2	Foras International Investment Company, Saudi Arabia	Office du Niger, Mali	100,000	Rice	Failed investment; contract signed in 2009 cancelled in 2013.
3	Libya Africa Investment Portfolio, Libya	Foya, Liberia	15,000	Rice	Failed investment; contract signed in 2008 cancelled in 2011.
4	Libya Africa Investment Portfolio, Libya	Ségou region, Mali	100,000	Rice, wheat, soybean	Stalled project due to lack of continuation of implementation plan since the change of government in Libya.
5	Libya Africa Investment Portfolio, Libya and Ubuntu, Mozambique	Bela Vista, Matutuine District, Maputo Province, Mozambique	20,000	Rice	Rice grown on 60 ha. Stalled project due to land acquisition problems.
6	Sabina, Qalaa Holdings, Egypt	Kosti, White Nile State, Sudan	136,000	Sorghum, maize, wheat, rice, sunflower and legumes	On-going, with a planned inclusive business model that is not yet implemented.
7	Concord Agriculture, Qalaa Holdings, Egypt	Bentiu, Unity State, South Sudan	105,000	Sorghum, maize, sunflower	Project activities halted since December 2013 by the civil conflict in South Sudan
8	Al Dahra Agriculture, Abu Dhabi, United Arab Emirates	Blue Nile region, Sudan	34,800	Wheat, barley, maize, sunflower, cotton, sugarcane	Project started. Implementation status unknown and company appears to have pulled out.
9	Qatar Meat and Livestock Company (Mawashi), Qatar	Khartoum, Sudan	5,210	Alfalfa, oil seeds	Project started, but implementation status unknown.
10	Karuturi Global Ltd., India	Jikao and Itang Woredas, Gambella region, Ethiopia	100,000	Cereals, pulses, oil palm	Land in Jikao Woreda (42,000 ha) abandoned as it lies on a flood plain.

Sources: Land matrix database, <http://www.landmatrix.org/en/> accessed 15 February 2014; Case studies conducted in Ethiopia, Mali and Mozambique, April–October 2014; Qalaa Holdings, [www.qalaaholdings.com/](http://www.qalaaholdings.com/) accessed 15 January 2015; Al Dahra Holding, [www.aldahra.com/en/](http://www.aldahra.com/en/) accessed 15 January 2015; and published and grey literature

commercially profitable and viable (e.g., Libya Africa Investment Portfolio and Ubuntu's joint investment venture in Mozambique). Another example is Concord Agriculture in South Sudan whose production activities have been halted since 2013 due to civil conflict in that country.

- Category 3. Abandoned projects. An example of this is the Karuturi Global Ltd investment in the Gambella region of Ethiopia where about 42,000 ha out of the 100,000 ha acquired by the company had to be abandoned because the land lies on a flood plain and is constantly flooded during the rainy season.
- Category 4. Projects on the path to success. These are investments owned by private sector companies that appear to have adequate financial capital, technology and network and have developed or are in the process of developing inclusive business models, involving local farmers and/or communities, that can contribute to long-term success of the investment (e.g., Qalaa Holdings' Sabina in Sudan and Saudi Star Agricultural Development Plc's investment in the Gambella region of Ethiopia). The latter investment started rather controversially though, with displacement of existing local land users and protests by the displaced people. The two projects are still in their infancy and it will take time before it is possible to assess how well they have managed to establish equitable and sustainable agro-investments. However, some authors argue that these investments are nothing but an avenue for financial hegemony and private wealth accumulation, with very little benefits likely to accrue to host governments and existing poor land and water users (Dixon 2014).
- Category 5. Initiated projects with limited information. Al Dahra Agriculture and Qatar Livestock and Meat Company's (Mawashi) investments in Sudan are two examples in this category. They are included in this classification to illustrate the general problem of lack of detailed information on agricultural land investments in many SSA

**Table 2** Biophysical and social indicators in six SSA countries covered

Country/Region	Arable land, 2012		Internal renewable freshwater resources, 2013		Youth unemployment <sup>a</sup> , 2010–2013 (%)		Poverty level	Food insecurity, 2012 - 2014	
	Total (million ha)	Per capita (ha/person)	Flows (billion cu. m)	Per capita (cu. m)	Male	Female	Population below \$1.25 a day <sup>b</sup> (%)	No. of people undernourished (million)	Proportion of total population undernourished (%)
Ethiopia	15.3	0.17	122.0	1,296	4.0	12.0	39.0	32.9	35.0
Liberia	0.5	0.12	200.0	46,576	3.0	6.0	<i>n.a.</i>	1.3	29.6
Mali	6.8	0.46	60.0	3,921	8.0	14.0	51.4	<i>n.a.</i>	5.0
Mozambique	5.7	0.22	100.3	3,883	14.0	15.0	74.7	7.2	27.9
South Sudan	<i>n.a.</i>	<i>n.a.</i>	26.0	2,302	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sudan	21.1	0.44	4.0	81	23.0	28.0	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Sub-Saharan Africa	214.7	0.24	3,857.8	4,120	13.0	15.0	<i>n.a.</i>	214.1	23.8

Sources: World Bank 2015 for arable land, IRFWR, youth unemployment and poverty indicators; and FAO, IFAD and WFP, 2014 for food security indicators

<sup>a</sup> Share of the labor force aged 15–24 without work but available for and seeking employment

<sup>b</sup> Reference year: Ethiopia: 2005, Mali: 2006, Mozambique: 2002

countries. Land contracts are kept confidential, out of the public realm because many governments consider land issues to be very sensitive and they fear that public disclosure of contract details may weaken their political standing. As a result, information put in the public domain is often scanty, incomplete and sometimes contradictory. This hampers thorough analysis of the process of land acquisition and the impacts of these investments.

### Why have so many recent agricultural investments failed?

Although several specific factors may cause an investment to fail, the reasons for the apparent failure of many of the investments listed in Table 1 are grouped and examined below under five rubrics.

#### **Inadequate understanding of the social and institutional milieu in host country and undue reliance on host government's hegemony on land matters**

In the investment recipient countries included in this paper, as in many other African countries, several types of property rights regimes, including common property, private property and state property co-exist and are operated simultaneously. Even in countries where all land is vested in the state such as Ethiopia, Mali and Mozambique, customary tenure and communal use of common property areas for animal grazing and fishing by rural inhabitants is recognized. Under this situation, multiple actors, including the state, communities and individual land and water users, concurrently exercise rights over land and water under separate, but parallel systems of land and water

administration. These multiple property rights regimes and institutions shape the process of land acquisition, the nature of land and water use, the magnitude of benefits and costs and how these are distributed among new and existing resource users (Williams et al. 2012). Due to this complex, often conflicting interplay of interests over land and water use (e.g., communal versus statutory legal land and water rights) and inadequate understanding of this complex setting, many investors acquiring land have inadvertently trampled the rights of current land users and created social unrest that has derailed the approval and/or implementation of a number of projects. For instance, the Bela Vista rice project in Mozambique stalled due to land disputes as the land the investors had hoped to acquire was already occupied, with many people already given the authorization (DUAT, *Direito de Uso e Aproveitamento da Terra*) to use the land. In other cases, the fact that many poor farmers do not have formal title to the land they farm coupled with government's perception of ineffective or inefficient land use, land allocated to large-scale investors sometimes encompass land (and water resources) already being used for various purposes (farming, grazing and fishing) by existing users (e.g., in the case of Malibya and Saudi Star land concessions in Mali and Ethiopia, respectively). This leads to displacement of people, local resentment and covert sabotage of investors' agricultural operations (see also Rahmato 2011). The situation briefly sketched here is in line with the observations of other authors who have noted that land acquisitions in many developing countries by foreign investors do not take due cognizance of the 'complex and messy existing land-based social relations' (Borras and Franco 2010).

### **Inadequate assessment of the biophysical status of leased land and environmental impacts of the agro-investments**

The example of the land leased out to Karuturi Global Ltd. in the Gambella region of Ethiopia that was later found to lie on a flood plain showed a lack of due diligence on the part of the two contracting parties (the host government and the investor) in assessing the hydrological and other biophysical features of the land. This problem also extends to other issues such as environmental and social impact assessments of the investments. In all the investment recipient countries studied, there is clear environmental legislation, which stipulates that all agricultural development activities with possible environmental consequences should be subject to an environmental impact assessment (EIA), including an environmental management plan (EMP) to mitigate negative environmental and socioeconomic impacts. No investor is supposed to start a project without prior approval of the EIA, and the EMP is supposed to be audited periodically. However, due to poor funding and weak human and institutional capacity, the statutory agencies that are mandated to evaluate the EIAs and monitor and audit the EMPs have been ineffective in the discharge of their regulatory duties leaving it to the discretion of the investors to comply or not comply with the regulations laid down. For instance, the Malibya project in Mali started work 8 months before an environmental impact study was conducted and the outcome was never made public as stipulated by law. In sum, when inadequate due diligence does not lead to outright abandonment of an investment, it can create other production and environmental risks that will ultimately affect the performance of the investment scheme and livelihoods of existing land users (see also Rahmato 2011).

### **Ambitious land investment and production plans not backed by technical agronomic knowledge and competent managerial capability**

All the listed investors in Table 1 started out with ambitious land acquisition plans running into thousands of hectares. While many of them were unable to acquire the huge land areas they initially planned to obtain, the analysis conducted showed that the on-going investment projects appeared to be using only very small fractions (approximately 5 %) of the actual land area acquired. The reasons for land underutilization are varied but they include the long time it takes to put the necessary irrigation infrastructure (dams, water distribution canals, farm roads) in place, underestimation of the financial and human capital and managerial outlay needed to cultivate a large area of land, and the unsuitability of the land for the type of crops initially planned to be grown. For example, Qalaa Holdings reported in 2014 a more than 1 year-long halt to land development and planting operations in Sabina, its agricultural investment company in Sudan, to enable additional soil analysis test and a feasibility study of the project to be carried out. Underutilization of acquired land ties up the use of this land by other users and where such

acquisitions have led to the displacement of erstwhile land users, resentment soon builds up against the investor and host government which may eventually derail the investment scheme.

**Inappropriate business models** The failure of some of the listed investments can be directly linked to inappropriate business models that exclude smallholder farmers and other land and water users from benefiting either directly or indirectly from the large-scale investment happening around them. The reality on the ground in SSA is that smallholder farmers dominate the agricultural landscape. Large-scale agricultural investments, rightly or wrongly, are seen by the populace as being in direct competition with smallholders. When such investments are managed as closed, insular plantations and fail to provide benefits (jobs and amenities) to local people and contribute to food security and poverty reduction, pressure will mount on host governments to annul the land contracts. Conversely, when large-scale commercial farms include smallholders and communities as beneficiaries through contract farming and outgrower schemes and integrate them into viable value chains while simultaneously instituting appropriate environmental safeguards for farm operations, they tend to be successful, creating a win-win situation. Such inclusive business models make good business sense, given the opportunity they create for mixing the complementary assets of the two parties – investors with access to capital, technology and access to markets, and smallholders with access to land, labour and local knowledge (World Bank 2013).

**Political instability** State-owned investment companies from MENA that have ventured into large-scale investment in agricultural land in SSA are particularly prone to financial problems created by political instability and change of government in their home countries. The Libya Africa Investment Portfolio projects in Liberia, Mali and Mozambique all collapsed or stalled apparently partly due to the political change in Libya. Civil unrest and political instability in host countries can also stall investment projects of all kinds. Qalaa Holdings reported that operations of its subsidiary company, Concord Agriculture, in South Sudan was negatively impacted by the civil conflict that broke out in that country in late 2013. Similarly a change in government in the host country can equally derail a project. This is because in many cases, land contract agreements are shrouded in secrecy and are often reached on the basis of personality politics that bypass laid down procedures and processes. When the administration that signed the contract agreement is changed, the agreement may unravel as happened in the case of the Foras International Investment Company project in Mali.

## Summary of lessons from failed investment projects

The evidence produced above revealed that MENA agricultural land investments in SSA have generally not fared well. A number of social, institutional, biophysical, economic and political factors have contributed to the lack of success of these investments. The following lessons can be drawn from the failure of these investments. First, detailed knowledge of the host country's property rights institutions is important. Because large-scale land acquisitions will most likely change existing land ownership patterns and rights, it is critical to the success of the new investment projects that the existing rights of heterogeneous land and water users are well understood and respected. Secondly, good agricultural knowledge and managerial capability that is commensurate with the scale of planned investment is a *sine qua non* for success. This knowledge and managerial know how will ensure that detailed pre-investment analyses, including biophysical, social and environmental impact assessments, are conducted and the project implementation phase is well managed. Thirdly, in addition to pursuing their own economic interests, investors need to look at how their investments can benefit smallholder farmers, local communities and host governments without damaging the environment. This enlightened self-interest will create multiplier beneficial effects that will ensure the long-term sustainability of the investment projects. Incipient plans to initiate smallholder and local community inclusive business models are apparent in the announced operational plans of the two investments categorized as being on the path to success in Table 1. For instance, Sabina in Sudan aims to develop a model that is sustainable and profitable for both the company and local communities. It has earmarked an average of 22 % of its agricultural output for the local market and will hand over 33 % of the rehabilitated irrigation schemes and 15 % of the acquired land to local farmers (Qalaa Holdings 2012). In 2015, Qalaa Holdings plans to release US\$ 120,000 to Sabina to allow it provide irrigation water to local farmers (Qalaa Holdings 2014). Similarly, but on a smaller and still limited scale, Saudi Star Agricultural Development Plc as at 2014 has hired 40 local professionals and has promised to give two tractors each to the district governments around the farm for young people to use. While these plans are yet to be fully implemented and can be dismissed as tokenism or not sufficiently big enough to be categorized as inclusive business models, nonetheless, this modest start provides a basis for future expansion of integration of smallholders into the investment scheme. What will be important is for governments and civil society to hold the investors accountable for their stated plans and ensure that intentions are turned into reality and expanded over time.

In sum, the three foregoing lessons call for patient capital from investors. Returns on investment will not come instantaneously, but will take time. Having a long time horizon will

enable the establishment of viable, profitable and sustainable food production projects by MENA countries in SSA. Besides the above-mentioned lessons pertaining to investors, a fourth lesson applies to host governments. Political stability and clear, consistent and coordinated land, water and environmental policies can help to prevent failure of large-scale agricultural investments in SSA.

## Lessons of experience from large-scale commercial agriculture in SSA

After independence in the late 1950s and early 1960s, many African countries attempted to modernize their agricultural sector through large-scale farms owned and managed by the state. These early attempts failed due to low public investment and policy distortions which discriminated against agriculture. But even around this time, some plantation crops such as sugarcane and tobacco grown on large-scale farms (over 100 ha) by independent commercial farmers and commercial firms that are horizontally integrated into larger corporations and also vertically integrated with processing and marketing activities proved successful in Southern Africa (in Swaziland, Zambia and Zimbabwe prior to the seizure of white-owned sugarcane farms in 2002; and in Malawi and Zimbabwe for tobacco (Poulton et al. 2008; World Bank 2009). The perceived success of the sugar industry has led to a move to involve smallholder farmers in sugarcane production as independent outgrowers to large-scale operators, e.g., Illovo Sugar, Africa's biggest sugar producer ([www.illovosugar.co.za/](http://www.illovosugar.co.za/)). Apart from its own large-scale agricultural operations, Illovo has initiated successful outgrower schemes in Malawi, Swaziland, South Africa and Zambia. The business model utilized for the outgrower scheme in Swaziland, which is typical of the approach used in other countries, involves organization of farmers into associations of about 30 landowners each, with an aggregated farming area of 100 hectares or more, to share information and collateral risks, provision of irrigation water to the farmers, joint provision (by company, public service agencies and non-governmental organizations) of agricultural support services and training to farmers to improve their agronomic skills. This, in turn, increased yields, farmers' own financial contribution (through a loan which some associations were able to repay within 2 years of operation) to the operating costs of growing sugarcane, a collaborative arrangement that allowed the government and the EU to provide a grant for the initial upfront investment cost of land development and a mill to process the sugarcane and produce electricity from bio-renewable fuel stock (bagasse and biomass) for its own operations and supply of the excess to the national grid. As a result, these outgrower schemes in 2012/2013 supplied approximately 4.2 million tons or almost 30 % of total sugarcane throughput handled by the company (<http://>



[www.illovosugar.co.za/Strategic-initiatives/Group-Cane-Supply-Initiatives](http://www.illovosugar.co.za/Strategic-initiatives/Group-Cane-Supply-Initiatives)). More recently, medium- and large-scale farms as well as smallholder farmers in Kenya have been involved in successful production and exports of horticultural crops (English et al. 2004). Foreign investors played a critical role in launching and expanding the horticulture industry in Kenya by acting as sources of technical knowledge, opening up new market opportunities overseas and providing contract farming opportunities to smallholder farmers. Experimenting and learning to adapt contracts to suit farmers' changing circumstances were critical. Contracts that complement rather than supplant farmers' other activities proved workable, with less disruption to household food production. A coherent, consistent and supportive approach from the public sector to the private sector input suppliers and foreign investors also helped. This included a commitment to realistic exchange rates and public agencies such as the Kenya Plant Health Inspectorate Service working with the investors and smallholder farmers to help them meet international standards. With respect to food crops, Nakano et al. (2011) reviewed the performance of large-scale irrigated rice schemes in a number of SSA countries including two covered in this paper (Mozambique and Mali) and concluded that rice produced on these schemes could be competitive in local markets if farmers have good access to irrigation water, use adequate inputs and crop management practices.

From this brief review of successful large-scale farms in SSA, seven key lessons can be drawn. Firstly, large-scale commercial agriculture is feasible and can co-exist complementarily with smallholder agriculture. Secondly, a range of crops that are of interest to investors from MENA countries e.g., cereals, fruits and vegetables and sugarcane can be profitably grown under smallholder inclusive large-scale agricultural schemes in SSA. Thirdly, knowledge of agriculture, thorough planning and competent management are factors that have contributed to competitive success of large-scale commercial agriculture in many case studies. Fourthly, providing an enabling environment for large-scale commercial agricultural development is crucial. This includes political stability; improved macroeconomic and sector policies and business climate to promote and facilitate higher returns to investments; a long-run commitment to growth and private investment; functioning and efficient basic infrastructure (roads, electricity, water, communications, port/airport); clarification of existing property rights and ensuring that efficient procedures exist for paying adequate compensation when anyone loses rights to land and water. Fifthly, management of social impacts of agro-investments is also important. Investors that tailor their business models to share the benefits created through commercial agriculture are more likely to be successful in the long run while simultaneously responding to the developmental objectives of local farmers and the host government. In this regard, measures and activities (e.g., improved rural

infrastructure, outgrower and contract farming schemes, development of grades and standards) that improve smallholder farmers access to markets or literally bring the market closer to the farmer to reduce transaction costs will prove useful and rewarding (GDN 2012). Sixthly, management of environmental impacts is equally important. Large-scale commercial agriculture will inevitably impact negatively on some ecosystems and ecosystem services, for example, through abstraction of large volumes of water (the Malibya project at full operation was expected to abstract 4 million cubic metres of water per year) and/or production activities requiring chemical inputs such as fertilizers and pesticides which may affect water quality if not properly managed. But these externalities can be reduced and managed through use of appropriate technologies combined with strict and vigilant monitoring of environmental impacts and effective enforcement of mitigation measures. Lastly, a multi-partner collaborative approach bringing the public and private sectors and international development organizations together in clearly defined complementary roles to help support promising and inclusive agro-investment ventures is equally vital.

## Conclusions

Although the attainment of food and water security is a paramount objective that is equally shared by governments in MENA and SSA, the underlying motives and desirable pathways to achieve this objective are different and need to be reconciled. The analysis presented in this paper suggests that south-south collaboration to reconcile the food and water security objectives of the MENA region and SSA, through the medium of large-scale agricultural investments, is feasible but it is important to be clear-eyed about what needs to be done to make this reconciliation a reality. Essentially, it is about creating a win-win situation that will allow the benefits of large-scale investments in agricultural land in SSA by MENA countries to be equitably shared while simultaneously managing environmental trade-offs that may emerge. In this regard, investors and investment receiving countries both have crucial roles to play. The key concepts of inclusiveness, consultation, transparency, accountability, respect for existing land and water rights, mitigation of negative social, economic and environmental impacts, fair compensation and effective appeal mechanisms emphasized in the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (FAO, 2012) and Principles for Responsible Investment in Agriculture and Food Systems (CFS 2014) need to be adopted by investors and host governments and implemented to serve as building blocks to mobilize action, notwithstanding the considerable debate about the potential of these guidelines to bring about desirable outcomes (Borras and Franco 2010; Zoomers 2010). Patient capital is equally needed and MENA investors can learn lessons from past failed and

successful large-scale commercial agricultural ventures in SSA to guide future investments. Host countries need to create policy and legal frameworks to reduce transactions costs and investors' risks. Civil society can assist in ensuring transparency and accountability of both investors and investment receiving countries. A major challenge is the secrecy surrounding large-scale investments in agricultural land in SSA by foreign investors. Both investors and host governments are equally guilty of casting a cloak of opacity around land investment deals under the guise of confidentiality. The two cases listed in Table 1 of projects initiated but with limited information about agricultural operations exemplify this problem. Nonetheless, full disclosure of information on land lease contracts and production activities will encourage transparent and accountable governance systems and allow for rigorous analysis of the impacts of investments on food security, livelihoods and ecosystems which will ultimately serve the interests of all stakeholders.

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## References

- Abbott, P., & Thomson, R. (1987). Changing agricultural comparative advantage. *Agricultural Economics*, 1, 97–112.
- Borras, S. M., Jr., & Franco, J. C. (2010). From threat to opportunity? Problems with the idea of a "code of conduct" for land grabbing. *Yale Human Rights and Development Law Journal*, 13, 507–23.
- CA (Comprehensive Assessment of Water Management in Agriculture). (2007). *Water for Food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture*. London: Earthscan, and Colombo: International Water Management Institute.
- CFS (Committee on World Food Security). (2014). *Principles for responsible investment in agriculture and food systems*. Rome: CFS.
- Chamberlin, J., Jayne, T. S., & Headey, D. (2014). Scarcity amidst abundance? Reassessing the potential for cropland expansion in Africa. *Food Policy*, 48, 51–65.
- Dixon, M. (2014). The land grab, finance capital and food restructuring: the case of Egypt. *Review of African Political Economy*, 41(140), 232–248.
- Edelman, M. (2013). Messy hectares: questions about the epistemology of land grabbing data. *Journal of Peasant Studies*, 40(3), 485–501.
- English, P., Jaffe, S., & Okello, J. (2004). *Exporting out of Africa – Kenya's horticultural success story*. Washington, DC: World Bank.
- FAO. (2012). *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*. Rome: FAO.
- FAO. (2014a). Aquastat database. <http://www.fao.org/nr/water/aquastat/main/index.stm> (Accessed 12 January 2015).
- FAO. (2014b). *Coping with water scarcity in the Near East and North Africa. Fact sheet regional conference for the near east (NERC-32)*. Rome: FAO.
- FAO. (2015). World Food Situation. FAO Food Price Index. <http://www.fao.org/worldfoodsituation/foodpricesindex/en/> (Accessed 23 March 2015).
- FAO, IFAD, & WFP. (2014). *The State of Food Insecurity in the World 2014. Strengthening the enabling environment for food security and nutrition*. Rome: FAO.
- GDN (Global Development Network). (2012). *Managing agricultural commercialization for inclusive growth in Sub-Saharan Africa. Briefing Paper Number 1. GDN Agriculture Policy Series*.
- Goldin, I. (1990). Comparative advantage: Theory and application to developing country agriculture. OECD Development Centre. Working Paper No. 16.
- Halley, S., & Abbott, P. (1986). *An investigation of the determinants of agricultural comparative advantage. Research Bulletin 984*. West Lafayette: Purdue University.
- Jayne, T. S., Chamberlain, J., & Headey, D. D. (2014). Land pressures, the evolution of farming systems, and development strategies in Africa: a synthesis. *Food Policy*, 48, 1–17.
- Nakano, Y., Bamba, I., Diagne, A., Otsuka, K., & Kajisa, K. (2011). *The possibility of a rice green revolution in large-scale irrigation schemes in Sub-Saharan Africa. Policy Research Working Paper 5560*. Washington, D.C.: The World Bank.
- Oya, C. (2013). Methodological reflections on 'land grab' databases and the 'land grab' literature 'rush'. *Journal of Peasant Studies*, 40(3), 503–520.
- Poulton, C., Tyler, G., Hazell, P., Dorward, A., Kydd, J., Stockbridge, M. (2008). Commercial agriculture in Africa: Lessons from success and failure. Background paper for the Competitive Commercial Agriculture in Sub-Saharan Africa (CCAA) study.
- Qalaa Holdings. (2012). Citadel Capital increases its stake in Wafra to 99.9%. <http://www.qalaaholdings.com/newsroom/news-releases/96> (Accessed 25 January 2015).
- Qalaa Holdings. (2014). Transformative Investments. Annual Report 2014. <http://www.qalaaholdings.com/publications-files/Files/QH-AR14-E.pdf> (Accessed 24 July 2015).
- Rahmato, D. (2011). Land to investors: Large-scale land transfers in Ethiopia. Forum for Social Studies Policy Debates Series No. 1. Addis Ababa.
- Scoones, I., Hall, R., Borras, S. M., White, B., & Wolford, W. (2013). The politics of evidence: methodologies for understanding the global land rush. *Journal of Peasant Studies*, 40(3), 469–483.
- Williams, T. O., Gyampoh, B., Kizito, F., & Namara, R. (2012). Water implications of large-scale land acquisitions in Ghana. *Water Alternatives*, 5(2), 243–265.
- Williams, T. O., Sidibe, Y., Baker, T., Windham-Wright, T., & Gemo, H. (2015). *Analysis of impacts of large-scale investments in agriculture on water resources, ecosystems and livelihoods and development of policy options for decision makers. Final project report to UNEP, GRID-Arendal and FAO*. Accra: International Water Management Institute (IWMI).
- Woertz, E. (2013). *Oil for food. The global food crisis and the Middle East*. New York: Oxford University Press.
- World Bank. (2009). *Awakening Africa's sleeping giant: prospects for commercial agriculture in the guinea savannah zone and beyond*. Washington, DC: The World Bank.
- World Bank. (2013). *Growing Africa: Unlocking the potential of agribusiness. AFTFP/AFTAI*. Washington, DC: The World Bank.
- World Bank. (2015). 2015 *World Development Indicators*. Washington, DC: World Bank. <http://wdi.worldbank.org/tables> (Accessed 20 April 2015).
- Zoomers, A. (2010). Globalisation and the foreignisation of space: seven processes driving the current global land grab. *Journal of Peasant Studies*, 37(2), 429–447.



speaking countries in Africa and 6 countries in the Caribbean and South

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