

Project: Analysis of impacts of large-scale investments in agriculture on water resources, ecosystems and livelihoods; and development of policy options for decision makers

Summary of Initial Findings

About the Project

The goal of this project is to analyze the nature and extent of impacts of foreign direct investments (FDI) in agriculture in Africa. The research, which is being conducted on behalf of the African Ministers' Council on Water (AMCOW) by IWMI in partnership with UNEP, GRID-ARENDA and FAO, is specifically investigating how these schemes are affecting water resources and livelihoods of current land users, and what the repercussions are for the natural environment and the ecosystem services these provide, particularly those relating to water resources.

The project was initiated in response to an explicit request from AMCOW for research-based policy options for managing land and water effectively and sustainably. The project aims to support informed decision-making by providing recommendations on leasing agricultural land that will ensure equitable benefits to all parties – investors, current land users and affected communities. The recommendations will also seek to ensure that land and water resources are sustainably managed so as to continue to provide essential ecosystem services.



Figure 1: Countries with large scale agricultural land acquisitions greater than 100,000 ha in Africa. Map source: www.freeworldmaps.net

What are the extent and characteristics of large scale agricultural foreign direct investments (FDIs) in sub-Saharan Africa (SSA)?

What are the opportunities, motives, pressures and drivers of FDIs for both the investors and the host countries?

How do the land and water management policies in selected SSA countries facilitate or hamper the inclusion of water and its various uses and users in FDI contracts?

What regulatory and legal frameworks exist in these countries to ensure that water rights of current land users, their livelihoods and ecosystem services are not negatively affected by FDI in agriculture?

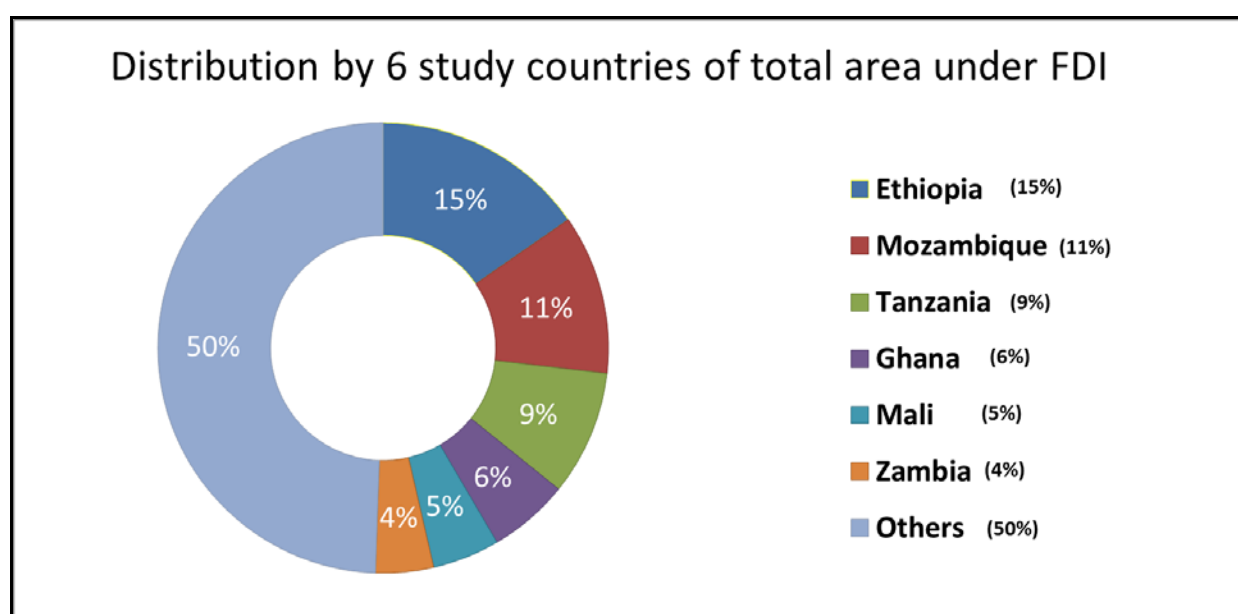
What insights can emanate from modeling the impacts of FDIs on water resources, livelihoods and ecosystems?

What lessons and policy recommendations can be shared to ensure that FDI in agriculture will simultaneously deliver benefits to investors, land users and the environment?

Initial findings

Pan-African

Drawing from the Land Matrix database (www.landmatrix.org), this project's analysis is based on 148 cases of documented and authenticated FDI in agriculture across 22 countries in sub-Saharan Africa (SSA) between 2000 and 2012. Cumulatively, these cases show that FDI in agriculture in SSA has led to the acquisition of at least 3.4 million hectares (ha) of land since 2000. Of this total, 26% was acquired with the intention of growing food crops, 68% for biofuels, 3% for cotton and 3% for livestock. The six countries studied in depth (Ethiopia, Ghana, Mali, Mozambique, Tanzania, and Zambia) accounted for 50% of the total area under FDI, based on available data. However, on average only 5% of the 3.4 million ha of acquired land is presently put into use for production activities due to financial, operational and political reasons.



(Other countries include; Uganda, Central African Republic, Rwanda, Cameroon, Kenya, Senegal, Gabon, Nigeria, South Sudan, Madagascar, Congo, Democratic Republic of Congo, Burkina Faso, Benin and Sierra Leone.)

Figure 1: Percentage distribution by country of total area under FDI investment in SSA

Area in hectares

	Zambia	Mali	Ghana	Tanzania	Mozambique	Ethiopia	Others
Land Area (ha)	140,513	163,245	195,963	304,287	387,657	519,858	1,674,730
Percentage	4%	5%	6%	9%	11%	15%	50%

Although land and water are interlinked resources and water underpins land productivity, water is largely ignored in the majority of the 148 cases of FDI in SSA. Two crops – rice and sugarcane – which cannot be successfully cultivated without irrigation were intended to be grown on 24% of the total land area acquired. Similarly in terms of water use, maize, cotton and even *Jatropha* are also likely to be irrigated by commercial producers in order to obtain maximum potential yield.

Analysis of key factors in FDI schemes

As a first step, this project analyzed three FDI schemes each in Mozambique, Mali and Ghana. The existing land and water governance systems under which these schemes were established, the characteristics of the schemes and their compliance with environmental protection regulations were analyzed.

Land ownership:

Across the three countries, land was owned by either the Traditional Councils or the government. The size and the duration of land leases also varied considerably.

Country	Ownership	Duration of Lease (years)	Size of land (ha)
Ghana	Traditional Councils	50	13,000- 65,000
Mali	Government	30-50	7,400-100,000
Mozambique	Government	25	5,000-10,000

Crops grown:

Jatropha was the main crop in the Ghana and Mali FDI schemes studied. Other crops included food crops such as rice, wheat, maize and soybean. In Mozambique, the primary crops were sugar cane, grown for sugar, and rice.

Water access, use and governance:

Water rights were explicitly included in two FDI schemes in Mozambique. In both, provision was made for paying water fees, but the process was either at an early stage of implementation or payments were slow in materializing.

In Ghana, water rights were explicitly included in the negotiations that led to one of the contracts. The other two schemes did not include water.

In Mali, water rights were included and flat rate water fees were charged as part of the lease in all cases. The analysis indicated a range of actual or potential impacts on water availability in the three schemes studied. For example, in one case the FDI scheme includes potential abstraction of around 4,000,000 cubic meters of water per year. This would likely have considerable downstream impacts in terms of water quantity and quality.

Environmental impact assessment and monitoring:

In Ghana, environmental impact assessments were undertaken and environmental management plans (EMPs) were prepared by all the 3 FDI schemes studied. However, across all 3 countries the analysis revealed that the capacity to enforce environmental regulations and to monitor compliance and implementation of mitigation measures was very limited.

Country	Environmental Impact Assessment	Environmental Management Plan	Enforcement and monitoring of compliance with environmental regulations and mitigation measures
Ghana	Yes	Yes	Limited and very weak
Mali	Not documented	Not documented	Limited and very weak
Mozambique	Not documented	Not documented	Limited and very weak

Impact on livelihoods:

In Mozambique, current land users were not displaced except in one scheme where livestock herders, who had been using an abandoned irrigation facility for more than 20 years, were asked to leave. In one scheme permanent and seasonal labour employment increased by over 100% in 6 years with 40% of the labour force being made up of women. Employment created in the other 2 schemes was limited.

In Mali, farmers were displaced in two of the three FDI schemes, resulting in protests and intra-community conflicts in one case. This was due to payment of compensation considered inadequate by displaced farmers and lack of payment of promised compensation to others.

In two of the schemes in Ghana, existing land users were displaced. Limited employment was created and the displaced farmers employed by the companies complained of significant reductions in income compared to when they were farming.

There was little or no evidence of consultation and information sharing with affected communities prior to the award of land contracts in Mali. In Ghana, consultation between the investor and the Traditional Councils took place in all three schemes but did not include current land users. In all countries, consultation and discussion with land users only took place after the companies that acquired land were about to start production activities.

Modeling impacts of FDIs

A model to simulate the likely impacts of FDIs in agriculture on water resources, ecosystem services and livelihoods is being developed, using Jeldu watershed in the eastern Blue Nile region of Ethiopia as a case study. Jeldu has been chosen because it has a recorded history of land use changes spanning a number of years. The model will simulate the impacts of large scale land use changes due to FDI on local hydrology, livelihood options and ecosystem services.

Gaps in policy and knowledge: towards making FDIs responsive to national development objectives

This study has preliminarily identified a number of gaps that, if filled, could lead to significant improvements in the policy framework and guidelines for large-scale investments in agriculture in ways which will protect water resources, the interests of investors and the welfare of current land users.

Inadequate attention to water allocation, management and pricing in FDI schemes – water is hardly mentioned and where mentioned the amount of water to be allocated is unclear. Water is also provided almost free of charge. Given the amount of water that will be abstracted by some of the studied schemes, water pricing becomes an important mechanism to ensure sustainable use and allocation of water. But questions remain:

- In cases where water fees are not yet being charged what will be the appropriate price to charge?
- Where a flat water rate is charged is there a gap between what is being charged now and what would be optimal given the competing demands for water?
- In all cases, what would be the best way to ensure payment of the relevant charges?

There are few contracts with inclusive “win-win” business models – analysis of the few successful cases will be useful to derive lessons on what constitutes the key conditions that would make FDI schemes advantageous to all concerned and the environment.

Little land actually used - many investments appear to be using only a very small fraction of the acquired land. The data reviewed indicates that only around 5% of the 3.4 million hectares acquired is actually currently being cultivated for productive use. This situation provides opportunities for the development of legislation that enable FDI contracts on agricultural land to be revoked and re-assigned to others who will productively use the land, if it has not been cultivated within a set timeframe. Where such regulations exist they need to be rigorously and consistently enforced.

Coherence and coordination – there is a need for greater coherence and complementarity across existing land, water and environmental policies. Coordination is also needed in the application of these policies to FDI in agriculture. For example, in Ghana, although the analysis revealed the existence of sound and adequate water and environmental protection laws, the relevant agencies charged with the responsibility of implementing these laws only come into play after land had been acquired. Also, monitoring of FDI schemes' compliance with environmental regulations is still a major issue. The capacity of relevant actors, particularly those of national government agencies, needs to be strengthened and funds made available to ensure they are able to effectively perform their oversight functions.

Lack of detailed data on land contracts – The quality of available data on agricultural land contracts is very poor. Reliable information on the size and characteristics of these investments is scarce and sometimes contradictory. This led to the elimination, from our analysis, of land deals that could not be authenticated and even for the remaining deals only limited analysis could be conducted. Full disclosure of information on land contracts is needed to allow for rigorous analysis of the impacts of land acquisitions on water resources, livelihoods and ecosystem services.

Impact

Results and recommendations emanating from this study will provide policy options that will enable decision makers to make informed choices about the water dimensions of FDIs in agriculture and put in place measures to ensure that these schemes lead to positive benefits for both investors and current land users without harming the environment.



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