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## **Food Security in a climate perspective: What role could the private sector play regarding investment in smallholder agriculture in Ethiopia, Malawi, Mozambique, Tanzania and Zambia?**

By Maren Elise Bachke and Ruth Haug



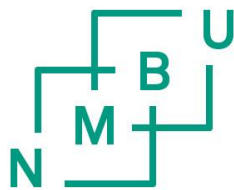
Ethiopia Commodity Exchange (ECX)

*Food security in a climate perspective: What role could the private sector play regarding investments in smallholder agriculture in Ethiopia, Malawi, Mozambique, Tanzania and Zambia?*

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## **SUMMARY**

The purpose of this study is to discuss different ways of implementing the *Food Security in a Climate Perspective strategy 2013-15* in relation to support to private sector development and public-private partnership (PPP) as regards agriculture, climate change and food security in Ethiopia, Malawi, Mozambique, Tanzania and Zambia. We assess eleven different cases of private sector development and their relevance to smallholder investments in agriculture. An important basis for this study is the voluntary *Principles for Responsible Agricultural Investments* (RAI) developed by the Committee on World Food Security (CFS). These guidelines define both business enterprises and smallholders as possible private sector actors, and thereby included in private sector development. The implications of the CFS-RAI guidelines is that investment in, by and with smallholders, and support to such investments, are seen as private sector development. We assess three different approaches to supporting private sector developments: i) promote an enabling environment for private sector development; ii) provision of public goods and services; and iii) direct investment support. In all three approaches, the interests and needs of both business enterprises, such as companies, and smallholders should be recognized. The enabling environment should balance the needs and demands of both smallholders and business enterprises; the public goods and services should address factors affecting both smallholders and business enterprises, and direct support could be provided to both business enterprises and smallholders.

The case studies illustrate that the three approaches are interlinked and that the economic viability of the private sector depends upon the combined effect of the three approaches. The cases also show that private sector development influences smallholder investments in different ways. For example, smallholder driven private sector development does, to a larger degree, directly influence smallholders than business enterprise driven private sector development. The cases also illustrate that the impact of private sector development on food security and climate resilience varies, and that this impact can be both positive and negative. The voluntary guidelines for responsible agricultural investments (CFS-RAI) state that these different factors should be taken into account when deciding what kind of private sector development and agro-investments to support. The case studies also indicate that it is difficult to determine the economic viability of the different companies studied, and thereby to what degree the companies contribute to economic growth. Finally, there is a need for more information to strengthen monitoring and evaluation of private sector development and its impact on poverty reduction, food security and climate resilience.

## 1 INTRODUCTION

The purpose of this study is to discuss different ways of implementing the *Food Security in a Climate Perspective strategy 2013-15* in relation to support to private sector development and public-private partnership (PPP) as regards agriculture, climate change and food security in Ethiopia, Malawi, Mozambique, Tanzania and Zambia. In addition, the purpose of the study is to assess lessons learned from different private sector and PPP initiatives of relevance for agriculture, climate change and food security in the same five countries. The study reviews 11 private sector development case studies to illustrate possible ways of supporting private sector development and public-private partnership (PPP) as regards agriculture, climate change and food security.

The Committee on World Food Security (CFS) has through a process of intensive negotiations, developed guidelines for responsible agricultural investment (RAI). Norway has been supporting the development of these normative and voluntary principles for responsible agricultural investments. When discussing support to private sector development, we regard it as important to relate to these voluntary *Principles for Responsible Agricultural Investments* (CFS-RAI, 2014). Civil society and the private sector as well as States have both taken part in the negotiations and will probably be actively involved in following up on the principles.

As CFS-RAI (2014), this report builds on the definition of men and women smallholders as investors. Usually, people tend to think about private business enterprises such as companies when investment is mentioned. However, according to CFS-RAI (2014) responsible investments include investments *in, by, and with smallholders* recognizing that smallholders are the main investors in their own agriculture. By smallholders we include those that are small-scale producers and processors, pastoralists, artisans, fisherfolk, communities closely dependent on forests, indigenous peoples, and agricultural workers (CFS, 2014). Hence, supporting private sector development involves both business enterprises such as private companies as well as farmers including women and men smallholders.

Private sector growth depends to a large degree upon both national and international frame conditions and institutions, as well as the level of public goods and services provided by the government. It is useful to take note of the *High Level Panel of Experts on Food Security and Nutrition (HLPE)*'s main message that the capacity of smallholders to invest would depend upon other related investments in collective action, in private initiatives and in public goods (HLPE, 2013). In this report, we study three different approaches for supporting private sector development: i) promote an enabling environment for private sector development; ii) provision of public goods and services; and iii) direct investment support.

Private sector development can influence smallholders' livelihoods both directly and indirectly. It is challenging to support the private sector without falling into possible risk traps such as displacement of local people, undermining the rights of local people, increased corruption, reduced food security, environmental damage and social polarization. It is therefore important to promote an enabling environment for private sector development that balances competitiveness and equity (Altenburg 2007). It is also important to support the role of the State regarding its responsibility for ensuring that human rights are respected in their country (CFS-RAI, 2014).

Regarding approach, this study is basically a desk study based on literature review of publically available sources of information. However, some key informants have been contacted and interviewed (Appendix). In addition, the authors have relied on notes from fieldwork undertaken in relation to other projects. The 11 case studies have been purposively selected based on criteria such as geographic diversity, a mix ranging from large companies to smallholder men and women farmers as well as interest from a Norwegian perspective (defined in a meeting with Norad).

## 2 THE AGRICULTURAL SECTOR

### 2.1 Agricultural markets and food security in the five countries

Smallholders represent the main source of employment and food production in most Sub-Saharan African countries. This makes this sector particularly important for poverty reduction and food security. The majority of the smallholders are poor. Improving smallholders' income would contribute significantly to poverty reduction. Research has shown that the agricultural sector's contribution towards poverty reduction is significant since agricultural growth, directly and indirectly, to a larger degree affects the rural poor than growth in the non-agricultural sector (Christiaensen, Demery, & Kuhl, 2011; Diao, Hazell, & Thurlow, 2010; Dorosh & Haggblade, 2003; Johnston & Mellor, 1961; World Bank, 2008)

Agriculture is an important sector in Ethiopia, Mozambique, Malawi, Tanzania and Zambia, and Table 1 shows some key figures on the agricultural sector in these countries.

*Table 1 Key numbers in the agricultural sector and poverty in the five countries in 2012*

	<b>Ethiopia</b> (%)	<b>Mozambique</b> (%)	<b>Malawi</b> (%)	<b>Tanzania</b> (%)	<b>Zambia</b> (%)
<b>AG/GDP</b>	48.60	30.33	30.00*	27.58	19.59
<b>Ag employment</b>	79	80	80	76.5	72
<b>Share of land arable</b>	34.22	62.37	52.77	40.25	30.92
<b>Proportion of undernourished in total population</b>	35.0	27.9	21.8	34.6	48.3

Source: WDI 2014; FAO 2014

Notes: \* This number is from 2011 because the number in 2012 was not available.

The agricultural sector is important in the overall economy as the share of the agricultural sector of the GDP varies from 20 to 48% in these countries, and it seems to be particularly important for the GDP in Ethiopia and less so in Zambia. From Table 1, we see that between 70-80 percent of the population in all these five countries are employed in the agricultural sector making this sector very important for poverty reduction. Furthermore, the majority of the people working in the agricultural sector are smallholders, and a large share is women. An indicator of food security is the *proportion of undernourished in the total population*. Malawi has the lowest and Zambia the highest proportion of undernourished people among the five countries. However, in relation to achieving MDG1c of halving hunger, Ethiopia and Malawi have already met their target, while Mozambique is on track. In Tanzania and Zambia, there is no progress in relation to achieving MDG1c (FAO, 2014).

Generally, the smallholder sector is characterized by low productivity, little use of inputs and other technology, lack of information and low degree of market integration. Furthermore, most of these farmers produce both for their own consumption and to a certain degree for the market. However, many are net food buyers and have limited access to markets due to lack of market information, high transport costs and small marketable volumes (Barrett, 2008).

## **2.2 International and national agricultural markets**

The food price crisis in 2008 contributed to the ongoing agricultural land investments in developing countries and particularly the buying of large land areas in Sub-Saharan Africa. These investments can be seen as “land grabbing” or productive investments

### *Supermarkets, opportunities and challenges for smallholders*

*Since the mid-nineties the supermarkets share of the retail markets have increased in Africa and particularly in Southern and Eastern Africa, and it is mainly South African and Kenyan supermarket chains that expand into the neighboring countries. This development presents both opportunities and challenges for the small-scale farmers. Generally, farmers that manage to sell to supermarkets are somewhat larger, have more capital (irrigation), are more specialized, have higher yields, and use more inputs than the other small-scale farmers. Interestingly, they do not have higher profit rates than the other farmers, and it seems like their preference for the supermarkets is due to lower risk and transaction costs.*

*When supermarkets establish themselves in other countries they initially source most of their products from already established contacts. The probability that they will source produce from smallholders depends upon their procurement systems and the degree of commercialization of the agricultural sector in the hosting country. Supermarket chains prefer to hook up with farmers that already export and already satisfy EUREP regulations. The presence of this type of farmers outside South Africa is not common, thus the South African supermarket chains usually supply from South Africa. In certain cases, they have provided technical assistance to enable smaller-scale farmers to supply to these supermarkets (Reardon & Berdegue, 2002; Reardon, Timmer, Barrett, & Berdegue, 2003; Weatherspoon & Reardon, 2003).*



depending upon whether the investments have followed the rule of law of the country in question (Havnevik, 2014). There is a heated debate on whether these investments represent a development opportunity or threat for the host countries, the national business environment and the local communities.

The spike in international food prices in 2008 and continued volatility of food prices have a large impact on food security. High food prices contributed to increasing food insecurity in many developing countries since many smallholders are net food buyers and food constitutes a large share of their budget compared to the similar share in rich countries. At the same time, it can contribute to higher incomes as many of the poor are smallholders (FAO, 2011a).

International agricultural markets are increasingly dominated by fewer business enterprises and more integrated business enterprises such as supermarket chains (Reardon et al., 2003). The emerging presence of either supermarkets, exporters of non-traditional, high value crops or domestic processors lead to consolidation and new wholesalers in both domestic and international markets. These agribusinesses often demand steady supply with consistent quality of produce, delivered in certain quantities at specific times and places, which are requirements most smallholders struggle to meet. Furthermore, both consumers and agribusiness demand documentation of the production process and certifications. For smallholders to access specific high value markets such as Fair Trade or Organic produce, they need to be able to document their production processes and be certified as Fair Trade or Organic producers. These trends can both be a threat or an opportunity for private sector development.

Domestic markets are generally more important for smallholders in the developing countries than the export markets (Weatherspoon and Reardon, 2003). The spread of supermarkets and their increasing domestic market share is also a trend that influences the investment opportunities of smallholders (see box).

### **3 PRIVATE SECTOR DEVELOPMENT**

The private sector consists of business enterprises and smallholders, which operate with the aim to make profit. Supporting private sector development therefore supports both business enterprises and smallholders.

Value chains can be useful to study private sector development. A value chain represents a complete production cycle for a product from production and sourcing of inputs to the final product to consumers (Kaplinsky, 2000). Analyzing the private sector in a value chain highlights how business enterprises interact and depend upon each other. There is no coherent theory of value chain analysis, but a common idea is the focus on the organization of (international) trade rather than factor endowments (Altenburg, 2007). Value chain analysis can be used to analyze lead business enterprises and their impacts on the trade, the distribution of profits and risks between the actors, transfers of knowledge, and the

power relations between the actors in a value chain (for a detailed overview see Altenburg 2007). All of these issues relate to the development impact of the private sector, i.e. is it inclusive for the poor, are the profits and the risks distributed in a way that support pro-poor development, is knowledge transferred, and do the different actors have potential to influence the development of the value chain.

### **3.1 Supporting private sector development and investments**

For the private sector to develop and grow, it needs to invest. The private sector is responsible for making the investments and finding the investment opportunities, but the private sector does not operate alone. The investment decisions are shaped by the business environment, sector policies and the level of public goods in the area where the private sector actors consider investing. Thus, there are three broad approaches for supporting private sector development and incentivizing their investments: i) promote an enabling environment for private sector development; ii) support public goods and services; and iii) direct investment support (Asian Development Bank, 2006).

Throughout history, the level and degree of interventions by the public sector in the private sector sphere has been and still is being debated. Should governments promote certain industries in their policies, how much public goods and business services should they provide, should it be self-financed (or not), and how much investment support and public insurance should be provided? (Richard M. Kennedy & Hobohm, 1999).

### **3.2 Enabling environment for private sector development and agricultural policies**

The environment for private sector development is important to attract all types of investment in any country. Macro factors that influence private sector development are peace and stability, macroeconomic stability, institutions, governance including corruption, legal framework including business and financial regulations, judicial systems and courts, labor rights, land rights, and environmental standards. Sector policies are also important for investment decisions by private sector actors (Asian Development Bank, 2006; Richard M. Kennedy & Hobohm, 1999). Smallholders and business enterprises might not always agree to what an enabling environment is; they might, for example, have different views on land law legislation. Thus, an enabling environment for private sector development should balance the interests of all investors.

Private sector development can also lead to economic growth and recent research shows that good governance, good institutions and political stability are important both for foreign direct investments and official development aid to contribute towards growth (Arndt, Jones, & Tarp, 2010; Morrissey & Udomkerdmongkol, 2012). Research also indicates that foreign direct investment (FDI) can crowd-out domestic investments in countries with weak institutions and governance (Morrissey & Udomkerdmongkol, 2012), and that public investments in developing countries can crowd-out private investments. This indicates that promoting working on an enabling environment for private sector development is important for both investments and ODA to have the intended impact on growth and poverty reduction.

Agricultural policies such as export and import regulations, and other trade policies, have a direct influence on the profitability of and investment decisions by smallholders and business enterprises. For investment decisions, it is particularly important that the policy is stable and consistent in the long run.

### **3.3 Public goods and services – the business environment**

Private sector development also depends upon the level of public goods and services provided. Public goods include infrastructure such as roads and ports, electricity, cellphone grids, an educated and healthy population. The public sector can also support the development of business services such as market information systems, grading and quality certifications, access to credit, storage, new technology (research and extension) and insurance markets.

Such services are often lacking in rural areas in Sub-Saharan Africa leading to under-investment in the agricultural sector (HLPE, 2013). A reason for the under-investment is that the lack of basic public goods and services increases the transaction costs of doing business. Transaction costs are costs related to market participation and occur when two actors make an exchange (Williamson, 1981). Transaction costs increase when efforts required finding information and business partners, establishing contracts and enforcing contracts increase. High transaction costs reduce the economic viability of the private sector. There is a debate on whether these services should be profitable business services where the users pay for the services or whether these services should be supported or run by the public sector.

### **3.4 Direct investment support to business enterprises and smallholders**

For both business enterprises and smallholders, the level of risk and uncertainty reduces investment levels. It can be argued that both smallholders and business enterprises need different types of support to underwrite risk and mitigate the short time preference they have (Wiggins & Keats, 2014).

There has recently been a surge in funds (such as the Africa Enterprise Challenge Fund, AECF) offering different types of capital such as equity, latent capital, venture capital and investments with grant elements to business enterprises. Many of these funds have their capital base from development aid money, and the earning requirements of the funds vary<sup>1</sup>. Thus, this is a type of subsidized money to be invested in the private sector. The main argument for this subsidy is that the investment will have a broader impact than other investments, in other words it provides something more than a normal investment (Heinrich, 2013b). This might be new physical infrastructure or institutional arrangements (often with smallholders). The infrastructure and the new institutional arrangements (for example contract farming) are seen to create positive externalities leading to development

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<sup>1</sup> Earning requirements refer to the degree these funds can or should deplete their capital, maintain their capital or grow their capital, and therefore to the degree they can take risks in their investments and provide grants.

for the society as a whole, and is why they need the grant or subsidy element for the investment. This will kick start agricultural value chains and stimulate more investment (Keith Palmer, 2010).

Smallholders have traditionally been supported by the public sector through agricultural sector- wide programs and NGO-run development projects. These programs have usually included certain types of direct investment support to smallholders such as subsidized inputs and credits, access to new technologies, provided training and capacity building and supported market access. We find that such support can be classified as direct investment support. These types of direct investment support stimulate the smallholder to investment more in their farms, which again can have a broader impact on society.

### 3.5 Case studies and approach

The three approaches for supporting private sector development and the cases studied are presented in Table 2. In Table 2 each case is classified under one approach only; however, many can be classified in several approaches. We address this in the specific case studies.

**Table 2 Overview over projects, intervention type and source of investment**

Objectives/ reasons for intervention	Type of intervention	Type of foreign investment	Smallholder and business enterprise investment
<b><i>Promote an enabling environment for private sector development</i></b>			
Peace and stability	Policy dialog	ODA	Both
Macro economics	Policy dialog		Both
Trade, investment, tax policies	Sector wide programs with Ministry of finance		
Strengthen legal institutions	<b>Doing business</b>		
Agricultural policies	Agricultural sector wide programs		Both
<b><i>Bwato Agrodealer</i></b>			
<b><i>Agricultural benchmarking</i></b>			
<b><i>Rural public goods and services</i></b>			
Rural public goods	Invest in education, health infrastructure	FDI/ODA	Both
<b>SAGCOT</b>			
	Research and extension	ODA	Both
Market failures: imperfect information, thresholds and externalities	Market information systems	ODA	Both
<b><i>Warehouse Receipts</i></b>			
<b><i>Commodity exchanges</i></b>			
<b>NASFAM</b>			
<b>Musika</b>			
<b><i>Direct investment supports to business enterprises and smallholders</i></b>			

Uncertainties, risk time preferences	Develop insurances	ODA/FDI	Both
High initial costs	Investment support business enterprises	FDI	Business enterprises
Learning thresholds	<b>Africado Ltd</b> <b>AECF</b> <b>Yara</b>	ODA	
	Investment support smallholders	ODA	Smallholders
	<b>Conservation farming</b> <b>Soybean project</b>	ODA	

Adapted from Wiggins and Keats (2014)

### 3.6 The linkages between private sector development and smallholder livelihoods

The private sector is an important contributor to economic growth, and economic growth is a key factor for reducing poverty<sup>2</sup>. This linkage is the core idea behind private sector development and the main explanation for the interest private sector development has received in the development debate. Different types of growth can, to a larger or lesser degree, reduce poverty. Growth in sectors that directly include the poor usually reduces poverty more than growth in sectors that have fewer linkages to the poor. A premise for the private sector to contribute to growth is that the business enterprises earn a normal profit and are economic viable in the long run. If the private sector is unprofitable and unsustainable, this sector will not contribute to growth nor poverty reduction.

For private sector, development to contribute to pro-poor growth it is believed that it needs to have as many direct linkages to the poor as possible. Smallholder driven private sector development will by definition have direct linkages to smallholders, and therefore to their livelihoods and investment decisions. Business enterprise driven private sector development will mainly have direct impact on smallholder livelihoods' through direct linkages such as: offering employment, including smallholders in their value chains (i.e. contract farming) and providing services and goods, and competing with the smallholders for input resources such as water and land. Furthermore, business enterprise driven private sector development will not always lead to more investments among the smallholders.

The actual impact of the linkage between private sector development and smallholders' livelihoods and their investment decisions can be both positive and negative. Thus, there is a need to evaluate the quality of each linkage between private sector development and smallholders' livelihoods. Furthermore, private sector development will not only establish one linkage and therefore only one impact, but several different linkages to smallholders'

<sup>2</sup> The other main factor of poverty reduction is redistribution of wealth from rich to poor. The least developed countries in the world are so poor that they do not have enough wealth to lift the complete population out of poverty only by redistribution of the national wealth (Lind & Moene, 2009). Thus, these countries need both growth and redistribution.

livelihoods. Private sector development can influence among other factors (not an exhaustive list): employment, market access for smallholders, access to land, the business environment, public services and goods, rural livelihoods including income, gender balance, technological know-how, food security and environmental issues. The actual impact of private sector development upon smallholder livelihoods and investments must be evaluated from case to case.

A major challenge for evaluating the impact of any policy or program is to establish the counterfactual; what would have been the situation without the policy, program or investment? This is a missing information problem, it is not possible, for example, to observe the income of a smallholder participating in a contract farming scheme with the income s/he would have had if s/he did not participate. S/he can only either participate or not participate. Because of the missing information problem, most evaluations report on input indicators, process milestone indicators, output indicators, and to a lesser degree on result and impact indicators. An input indicator quantifies the resource used in the policy such as money spent. A process milestone indicator quantifies the activities done to accomplish the project, policy or investment goal, while output indicators indicate the immediate results of the interventions such as people trained. Results and impact indicators are, respectively, medium and long term outcomes or impacts of the policies or programs (Wertz-Kanounnikoff & McNeill, 2012). The lack of proper monitoring and evaluation makes it difficult to get a complete understanding of the development impacts of private sector development on smallholders' livelihoods and income.

## **4 PROMOTING AN ENABLING ENVIRONMENT FOR PRIVATE SECTOR DEVELOPMENT IN THE FIVE COUNTRIES**

In this section, we look at the trends in foreign direct investments, the enabling environment for private sector development and the level of public goods and services in the five countries.

### **4.1 External development financing in the five countries**

Development aid financing is rapidly changing. Traditionally financing for development has been dominated by official development assistance (ODA); however, the share of ODA of total development financing has decreased from 92 to 35 percent of total development financing flows from 2002 to 2012. The main reason is the rapid increase in foreign direct investments (FDI) and remittances (OECD, 2014b). Moreover, ODA remains the largest source of which the main objective is development (OECD, 2013). Due to these changes OECD is working to devise a new and broader definition of ODA, and external sources for development financing will be the focus of this year's OECD flagship report (OECD, 2014a). Table 3 shows the development of ODA and foreign direct investments (FDI) in the five countries between 2000 and 2012.

**Table 3 Key numbers on investment in the five countries**

	<i>year</i>	<i>FDI*</i>	<i>ODA*</i>	<i>Remittance*</i>	<i>FDI/ODA</i>	<i>Remit /ODA</i>	<i>ODA/GNI</i>
<b>Ethiopia</b>	2000	134 600 000	690 000 000	53 158 882	0.2	0.077	8.56
	2012	278 600 000	3 300 000 000	624 400 000	0.08	0.189	7.64
<b>Mozambique</b>	2000	139 200 000	910 000 000	36 799 999	0.15	0.040	22.24
	2012	5 238 000 000	2 100 000 000	220 200 000	2.49	0.105	14.62
<b>Malawi</b>	2000	25 999 996	450 000 000	746 886	0.06	0.002	26.13
	2012	129 500 000	1 200 000 000	28 303 380	0.11	0.024	28.44
<b>Tanzania</b>	2000	463 400 000	1 100 000 000	8 000 015	0.42	0.007	10.52
	2012	1 707 000 000	2 800 000 000	67 383 205	0.61	0.024	10.23
<b>Zambia</b>	2000	121 700 000	790 000 000		0.15		25.66
	2012	1 066 000 000	960 000 000	72 864 000	1.11	0.076	4.73

Source: WDI 2014

Notes: \* in USD

From Table 3 we see that for Mozambique and Zambia FDI is now a more important source of external financing for development than ODA. This is particularly so for Mozambique where the influx of FDI was two and a half times as large as the level of ODA in 2012. The importance of FDI has increased significantly in Tanzania in the period, while both the increase and the level of FDI are moderate in Malawi. Finally, FDI has reduced its importance compared to ODA in Ethiopia in the period, mainly because ODA has increased at a faster pace than FDI in this period. From Table 3, we also see that the share of remittances to ODA are highest in Ethiopia compared to the other four countries, and that remittances actually are larger than FDI in this country. In the other countries, remittances are the least important source of external financing.

The source of the financing can have important implications for development as the objective and grant share vary between the sources. We focus on the differences between ODA and FDI. The main objective of ODA is to reduce poverty while the overall objective of FDI is to make profits for the business enterprises. Furthermore, most FDI is in the form of loans or equity, and the investor expects a return on the money, while development aid, at least from Norway, has largely been in the form of grants. This traditional division is becoming more blurry as a large share of the development funds today, such as AECF, Norfund etc. get their money from development aid budgets. These funds provide partnerships for financing private sector development, which includes both objectives, i.e. supporting the private sector, and its financial viability to achieve both profits for the business enterprise and at the same time development objectives. These funds therefore provide both grants and loan/equity.

Furthermore, the two sources of foreign direct investment focus on different types of support to private sector development. ODA has focused on creating an enabling environment for private sector development and provision of public goods and services,

while FDI has focused on direct foreign investment. Thus, when the source of development funding changes from ODA to FDI, it is important to secure that the ODA is complementary to the FDI and that it ensures that the FDI actually is pro-poor.

Two important sources of investments, formal and informal domestic investments, are not included in Table 3. Domestic investments are crucial for private sector development, and particularly the investments done by the smallholders themselves. The increase in FDI can have important positive and negative impacts on formal and informal domestic investments. First, the increase in FDI can crowd-out domestic direct investments (DDI) (Morrissey 2012), and as a result reduce total investment. Research on this has mainly looked at formal domestic direct investments and not investments by the smallholders themselves. Thus, the impact of FDI on smallholders' investment decisions is partly unknown. However, the increasing literature on large-scale land acquisition including land grabbing e.g. the book *Africa for Sale?* shows that FDI as well as formal DDI have contributed towards smallholders losing their land and thereby obviously reducing their ability to invest in agriculture (Evers, Seagle, & Krijtenburg, 2013).

## 4.2 Doing business in the five countries

The Doing Business 2014 report addresses regulations for domestic small and medium sized business enterprises. Table 4 presents the placement of the five countries in the Doing Business ranking.

*Table 4 The rank of the countries in the study in Doing Business 2014*

Economy	Ethiopia	Malawi	Mozambique	Tanzania	Zambia
Year	2014	2014	2014	2014	2014
<b>Ease of Doing Business Rank</b>	<b>125</b>	<b>171</b>	<b>139</b>	<b>145</b>	<b>83</b>
<b>Starting a Business</b>	166	149	95	119	45
<b>Dealing with Construction Permits</b>	55	173	77	177	57
<b>Getting Electricity</b>	91	183	171	102	152
<b>Registering Property</b>	113	85	152	146	102
<b>Getting Credit</b>	109	130	130	130	13
<b>Protecting Investors</b>	157	80	52	98	80
<b>Paying Taxes</b>	109	81	129	141	68
<b>Trading Across Borders</b>	166	176	131	139	163
<b>Enforcing Contracts</b>	44	145	145	42	120

*Source: Doing Business 2014 (Doing Business, 2014)*

Zambia has the best ranking, while Malawi has the lowest ranking in this index. Looking at the nine different indicators that make up the overall index, we see that Zambia is not consistently the best on all the indicators (see Appendix C for a complete description of all the sub-indicators). This suggests that the different countries need different types of support, and have different types of challenges related to private sector development.



### **4.3 Benchmarking the agricultural sector for small and medium sized producers**

The World Bank has started a pilot project to benchmark the enabling environment for private sector development for agriculture with the objective of making agricultural value chains more inclusive for small- and medium sized farmers. The overall objective is to enhance agricultural production to foster a conducive environment for private sector development in the agricultural sector for these actors as well as to meet the increasing food demand in the coming years. The project will identify and monitor regulations and policies that limit market participation by small to medium-sized producers. In this pilot phase of the project, the project addresses land, finance, rural electrification, information and communication technology, contract farming, seed, fertilizers, agricultural mechanizations, transport and markets. The project aims to expand to cover livestock, environmental sustainability, gender issues and access to water resources (World Bank, 2014). This work is still in an early phase; it might still be possible to influence this benchmarking system. Ethiopia and Mozambique are among the pilot countries in this project.

## **5 CASE STUDIES**

Eleven cases have been purposively selected to address the objectives of the study and to illustrate different private sector development activities. For all cases, we present the background of the project/investment, their place in the value chain and purpose of the project/investment. We also try to identify the level of profitability for all private sector actors including smallholders. Finally, we identify the direct linkages between the investment/project and the smallholders, and assess potential or actual development impacts as related to food security in a climate perspective.

### **5.1 SAGCOT**

The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) is a development corridor launched in 2010, and it represents a multi-stakeholder cooperation to foster rapid agricultural development. SAGCOT is a platform for the stakeholders to coordinate their intentions, investments and address bottlenecks within a geographical area (Jenkins, 2012). The objective of SAGCOT is to: i) foster commercially successful agribusinesses by unlocking the region's potential (tripling agricultural production); ii) create agribusiness value chains open for participation by small-scale farmers (link them to markets and irrigated land); iii) improve food security, reduce rural poverty and ensure environmental sustainability (output indicator set to lift 2 million people out of poverty)(SAGCOT, 2011). SAGCOT is placed in Table 2 as a provider of rural public goods since by creating clusters paralleled with infrastructure investment by the public sector, it should reduce problems and transaction costs related to public goods and transport. SAGCOT is a joint investment between the Government of Tanzania, the donors and the private sector. SAGCOT also has environmental and climate change objectives as stated in the SAGCOT greenprint strategy.

SAGCOT is an investment by donors and the Government of Tanzania with the objective to invite and convince large, often foreign, agribusiness to invest in the geographical area. For SAGCOT to achieve its development goals, the business enterprises need to invest and run with a long-term profit. So far, there is little knowledge about the profitability of the investments due to delays in start-up of activities. However, a Norfund supported large-scale rice estate (Kilombero) situated in the corridor is facing financial problems due to low rice prices (West, 2014). *Big Results Now* (BRN) focusing on amongst others establishing 78 collective rice irrigation and marketing schemes (TDV25, 2014), has partly replaced and partly been combined with the original growth corridor initiative. In Tanzania, substantial land areas have been targeted for investments and some of these transferred to investors (Abdallah, Engström, Havnevik, & Salamonsson, 2014; Kaarhus, Haug, Hella, & Makindara, 2010). Evidence from agro investment in biofuels indicates that few business enterprise investments actually start operating during the first years (1 operating and 2 in advanced stages out of 32 investment enterprises) (Abdallah et al., 2014).

The law in Tanzania is not clear on what will happen to land that is leased by private companies, when the investors fail to develop the land according to their investment plans (Abdallah et al., 2014). Several studies indicate that this negatively impacts on issues such as land users' rights, food security and the environment. Often, compensation for the land has been low if at all been paid (Kaarhus et al., 2010; Oxfam, 2014). Apparently, controversies in relation to land issues and skeptics in relation to large estates as engines of development have made it difficult to secure funding and get activities moving in the SAGCOT corridor.

## **5.2 Yara in Tanzania**

Yara was established as Norsk Hydro in 1905 and demerged as Yara International ASA in 2004 dealing mainly with fertilizers (Yara, 2014). Yara is present with operations and offices in more than 50 countries worldwide and sells to more than 150 countries. An MOU was signed between the Norwegian Ministry of Foreign Affairs and Yara International to work together in promoting the green revolution in Africa where Yara's role is to promote agricultural growth initiatives and to build the Dar es Salaam port fertilizer facility in Tanzania (Masagasi & Skaara, 2009). Yara has been granted a plot at the harbor in Dar es Salaam, a 99-year lease, where it has invested in storage facilities, with the idea to blend, pack and wholesale fertilizer (50, 25 and 1 kg bags) to retailers in the country (Clean, 2013; Kaarhus et al., 2010). Norfund has given US\$ 6 million loan to Yara in 2012 with a contracted total amount of US\$ 36.9 million (Norfund, 2014b). The fertilizer facility will have capacity to handle 150,000 tons fertilizer annually. This is a typical direct investment support type of intervention from Table 2.

The Tanzanian Government invited Yara to Tanzania. The Tanzanian Government wanted partnership with a major international fertilizer business enterprise to reduce fertilizer speculation and monopolistic positions e.g. in relation to the input voucher system, increase competition in order to keep fertilizer prices down, make port handling more efficient, and improve fertilizer supply in the whole country (Kaarhus et al., 2010). Initially, Yara's role was to increase availability of fertilizer in Tanzania and to be involved in the

growth corridor initiative (SAGCOT). However, the investment in Africa is long-term, related to social cooperative responsibility and not necessarily dependent upon development of the SAGCOT growth corridor (Cartridge, 2013; Kaarhus et al., 2010). The use of fertilizer in Tanzania is currently limited as less than half of the farmers use fertilizer and the total average rate is about 8 kg per ha which is below the level in neighboring countries (FAO, 2012). The productivity in Tanzanian agriculture is low with average maize yields of 1.55 tons per ha, but could easily increase to more than 5 ton per ha under conducive rain-fed conditions if appropriate fertilizer is used (Ephraim J. Mtengeti, Brentrup, Mtengeti, Eik, & Chambuya, 2015).

We do not know if the storage facility runs with a profit yet nor whether the use of fertilizers is profitable for the smallholders. If the storage facility does not run with profits and is closed down, the anticipated long-run impacts of the investment will not occur. The profitability of the storage facility depends both on the demand and the supply of fertilizers in Tanzania (including agricultural policies such as subsidies, e.g., to what degree the input voucher scheme (NAIVS) will continue), and whether the fertilizer market in Tanzania will improve. The development impact on productivity and smallholder income will depend upon the uptake of fertilizers among the smallholders in Tanzania. Fertilizer use contributes towards increased production that may improve food security at the household and national levels depending on how the benefits of the increased production are distributed. Regarding climate change, fertilizer production and use can contribute both positively and negatively.

### **5.3 Warehouse receipt system in Tanzania**

The warehouse receipt system is one pillar of the Agricultural Marketing Systems Development program initiated the Tanzanian Government. The project is an investment by the Government of Tanzania and the project is financed by a loan and co-financed by the African Development Fund and Development Cooperation of Ireland (IFAD, 2011). The objective of warehouse receipt system (WRS) is to provide services such as storage and quality control for smallholders, access to credit and postponement of selling the product for the low prices at the time of harvest. The possible positive outcomes are reduced price volatility, improved market access, access to credit and reduced transaction costs in the market leading to higher income for the smallholders (Coulter, 2009). If the WRS is successful, it will provide incentives for investment in agriculture by smallholders, private warehouses and business enterprises. WRS is placed under rural public goods and series in Table 2. The *Big Results Now* initiative includes the establishment of 275 collective warehouse based marketing schemes (COWABAMA) (TDV25, 2014).

For this system to contribute to growth in the long run, farmers need to make a profit from using warehouses and the warehouses need to run sustainably. It has been difficult to find thorough evaluations the level of profitability for smallholders, and also the possible economic viability of the warehouses in Tanzania. According to the IFAD project evaluation report, about 25,000 beneficiaries were reached, farm gate prices increased with up to 300%, interaction between farmers, savings and credit cooperatives (SACCOS Savings and

Credit Cooperative Societies, Ltd) increased, and the interest rate was reduced from 20 to 13%. Coulter (2009) finds that the coffee warehouse system has provided the farmers with profit 3 out of 4 years in the period 2005 to 2009. The system for cashews has been complimented with a set minimum price for cashew and an officially sanctioned buying monopsony by cooperatives provided the farmers with higher prices reducing the possibility for out-grower schemes in cashew production. Despite these alterations, the cashew system has resulted in higher market prices for the farmers partly due to higher world market prices (Coulter, 2009). Aksoy (2012) argues that the WRS for cashews results in higher marketing costs and a lower share of export prices for the farmers than it could have been if it was more liberalized, and that the interest rates charged by the commercial banks from the cooperatives are too high given the level of collateral and guarantees (Aksoy, 2012). The WRS scheme for maize failed as there have been too many government policies influencing the maize price (Coulter, 2009). A similar system for paddy rice was successful until 2013 as the price pattern used to be more stable for this crop (Coulter, 2009). There is a general agreement that agricultural policies, such as unpredictable export bans for maize and imports of rice, reduce the profitability of the WRS for the smallholders, but keep food prices down in the country (Onumah, 2010).

The system has clear linkages to the smallholders and direct impact on their food and livelihood security. The objective is to increase smallholders' income and investment in their own farm by enhancing their market access in product and credit markets through storing the produce until the price of the product recovers from post-harvest dip. The objective has partly been achieved but changing agricultural policies influencing the price patterns, and hence the profitability of the arbitrage, have reduced the profitability of the system for some crops. However, if the government's agricultural policy would be more predictable, the system could work well in the future. There is limited information on the financing and cost of running the warehouses. For this system to contribute to private sector development in the long run, the warehouses must be economic viable whether they are publicly or privately owned. More information is needed to assess the impact of the WRS on smallholders and their food security. However, it is clear that the impact of WRS is strongly influenced by agricultural policies, which is part of the enabling environment for private sector development. Regarding climate change, if the warehouse receipt system improves the livelihoods of smallholders as it has the potential to do, smallholders will be more resilient towards future negative impacts of a changing climate.

#### **5.4 Commodity exchanges in Malawi**

An agricultural commodity exchange is part of a market information system, and farmers have used commodity exchanges to reduce price risks. A commodity exchange provides good price information for farmers. The price information strengthens the smallholders' position in relation to the rural trader, and the information can provide incentives to smallholders and business enterprises to invest more in their farm. There are currently at least three commodity exchanges in Malawi: the Auction Holdings Commodity Exchange (AHCX); the Agricultural Commodity Exchange for Africa (ACE); and the NASCOMEX which is run by NASFAM (Chilongo, 2014). Furthermore, there used to be a MACE – Malawian Agricultural Commodity Exchange, but the status of this exchange is uncertain. The MACE

used to be linked to ACE (AMPRIP, 2007), and NACMEX is linked to ACE. All the commodity exchanges are placed under rural public goods and services in Table 2.

The Auction Holdings Commodity Exchange (AHCX) is a private investment. AHCX is a fully electronic market place where traders can sell and buy commodities with an assurance on quality, delivery and payment. It opened in 2013 and is a subsidiary of the Auction Holding Limited (AHCX, 2014) which is a private tobacco trading business enterprise (Auction Holdings Limited, 2014). The exchange aims at providing the following five services: quality grading and certification, electronic warehouse receipting, trading floor operations, clearing and settlement, market information dissemination. As far as we know, AHCX does not get any economic support, indicating that it is a viable economic undertaking that contributes to private sector development. If the price information reaches the smallholders producing the crops sold in this exchange, then it can have good development impacts. More information is needed to establish the concrete development impact of this exchange and the impact on smallholders' livelihoods.

ACE is a not for profit agricultural commodity exchange providing an online trading platform, a price information system on internet and mobile phone, a warehouse receipt system to allow market participants to access finance and output markets (ACE, 2012). It seems like ACE is mainly a donor investment. ACE is supported by USAID, the EU, the Common Fund for Commodities (CFC), and currently is dependent upon this donor support to be economic viable (ACE, 2012). The objective for ACE is to become economic viable in the long run based on commission on services offered. ACE is making good progress to achieve this, and an important contributor to this end was the World Food Programme (WFP) when it started to procure through ACE in 2010. This procurement increased the demand and interest in the market. According to the ACE 2012 budget, the required support is about 30% for the warehouse recipient system and trade facilitation share; 17% for its price information and IT; and less than 5% for promoting and arbitration (ACE, 2012). There is little empirical evidence of the increase in profits for users of this commodity exchange, but some anecdotal evidence. For example, the members of the Paprika Association of Malawi (PAMA) earned an added net profit of 20% in December and 70% in January from the first ACE issued warehouse receipt (ACE, 2012). More information is needed to assess the development impact of this commodity exchange, and in particular on the relevance and uptake of the information among the smallholders.

The status of MACE is unclear as the project webpage is no longer open, indicating that this commodity exchange is no longer operating. This was an investment initiated by the Malawian Government and supported by the Bill and Melinda Gates Foundation (BMG) and the Rockefeller Foundation. The objective was to facilitate and improve market linkages in the agricultural market in Malawi through providing market information (Erina Africa, 2004; Katengeza, Mangisoni, & Okello, 2010). A study of the contribution of MACE to the market efficiency in rice markets in Malawi, finds that market integration increased in Malawi due to the MACE project. Rice prices are more uniform throughout the country than earlier, indicating that market information systems reduce market volatility and spatial price difference (Katengeza et al., 2010). There are no causal study on the impact of the information on farmers' income as far as we know.

NASCOMEX is the commodity exchange and warehouse receipt system organized by NASFAM. This commodity exchange promotes new crops such as chili, rice, soybeans and beans to encourage the farmers to diversify away from tobacco and maize. NASCOMEX also aims to pay a fair price to farmers at accurate weights for the right quality, including qualities such as GMO free and naturally produced agricultural products. This commodity exchange has direct linkages to smallholders through NASFAM. NASFAM bases their buying prices on advice from NASCOMEX. We have not been able to assess to what degree NASCOMEX is an economic viable operating unit. There is anecdotal evidence of a positive impact on participating smallholders' income (NASFAM, 2014d).

At least one, AHCX, is commercially viable and ACE was closer to becoming financial sustainable in 2012. This indicates that the investments in commodity exchange can have a long-term impact on private sector development. These exchanges all have more or less direct linkages to smallholders, and they all provide market information that can be relevant to improve smallholders' livelihoods including food security and income. There is little representative empirical evidence on the impact on smallholder food, income and livelihoods, but we find that there is a very promising potential in establishing commodity exchange facilities. In particular in contexts where price information has been scarce and farmers have relied on what individual private traders have been willing to pay for their crops. Theoretically, the price information can encourage investments by the smallholders in their own farm as it provides information about market potential. In a climate perspective, if commodity exchange initiatives improve smallholders' income, food and livelihood security, their resilience towards negative impacts of a changing climate will be strengthened.

## **5.5 Soybean production in Mozambique**

The soybean project in Mozambique was initiated by Felleskjøpet (FK) Norway, a farmer owned cooperative business enterprise in Norway. The main motivation for FK Norway to invest in a new business relationship was to source some of its fodder from a least developed country that did not use GMOs, and to apply the zero import tariff for produce from these countries. After an initial evaluation, FK Norway chose to initiate soybean production in the Nacala corridor in Mozambique with the aim to procure the produced soybean at competitive world market prices later. FK Norway required that smallholders produced the soybean, and not big scale production which was recommended by most experts during the initial phase (Gjefle, 2014). They decided to work with IKURU, also a farm owned business enterprise. The main investment made by FK Norway was time, but they also contributed with 10% of the costs of the smallholder soybean production development program implemented by Norges Vel and Clusa. The program was supported by Norad. FK Norway set a guaranteed minimum buying price for the soybean. The soybean project is placed under direct investment support to smallholders in Table 2 as the development aid project focused on supporting smallholder production. However, the guaranteed minimum price would be placed under rural public goods and services in Table 2. The minimum price provides incentives for the smallholders to invest in soybean production as they were secured a market for their produce.

Soybeans from Mozambique were exported to Norway only once as a trial, 90 tons in 2005 (Hennum, 2008). There has been no further export of soybean to Norway because the smallholders and IKURU actually got a better price for their soybeans on the local domestic market, and therefore the smallholders and IKURU do not want to export soybean to Norway<sup>3</sup>. The lack of export is not a problem for any of the partners of this cooperation as they all have better business opportunities elsewhere. IKURU has become the most successful farmer-owned business in Mozambique (Innovation, 2013), indicating that it is economic viable. The domestic prices have been higher than the export market price, and the increased availability of soybeans has contributed to the development of a strong local market and value creation in chicken production. This year IKURU has exported a special variety of soy to Japan, and if the special soy is satisfactory for the very quality-oriented Japanese market (Tofu) the export from local farmers to the Japanese market can become very profitable for the small and emerging farmers involved (Gjefle, 2014).

The initiative by FK Norway to procure soybeans from Mozambique has had many good development impacts despite or maybe even because of the lack of exports. By introducing soy as a smallholder production and making soybeans grow outside the initial project area, there has been a development where smallholders not involved in any NGO program have invested in soybean production. The spread of soybean production and related income increases have been far higher than in most agricultural development programs (Gjefle, 2014). The soybean production has kick started a value chain for soybean and chicken in Mozambique, reducing the need to import both goods. The latest figure indicates that 27% of the demand for soybean is met by national production, up from close to zero, which was the situation before the project (Gjefle, 2014). Moreover, new projects are initiated to develop similar value chains in other districts in Mozambique. FK Norway continues to work with IKURU as a sister business enterprise, and this cooperation includes technical assistance and transfer of competency related to the core competencies of FK Norway: provision of inputs and services to the farmers.

The guaranteed price offered by FK Norway reduced price volatility for the smallholders, and as such gave the smallholders the security they needed to invest time and money in a new cash crop product. As the production has spread to smallholders not supported by any NGO, this indicates that smallholders producing soybean makes a profit. IKURU has developed into a good farmer owned business enterprise and has become a competent business enterprise able to serve its customers – the smallholders. In fact, the soy business operates in Gurue without support from an NGO, thus the value chain seems to be sustainable (Gjefle, 2014). This indicates that IKURU is economic viable as an organization. Overall, soybean production has been successful in improving smallholders' income, food and livelihood security and thereby increasing their resilience in relation to climate change.

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<sup>3</sup> In the beginning the tariff to Norway was substantial, but still including this, the price FK Norway could offer could not compete with the local price for soybean.

## **5.6 NASFAM in Malawi**

The National Smallholder Farmers' Association of Malawi (NASFAM) is the largest independent farmers' organization in Malawi for smallholders. NASFAM was formed in 1997 and it consists of independent, self-governing and financially viable commercial agribusiness associations (NASFAM, 2014c). Currently the organization has more than 100,000 members. The organization works to produce economic and social benefits for its members, and covers a wide specter of services to its members. The vision is to be the *"leading smallholder-owned business and development organization in Malawi"* and it is a democratic organization funded on the principles of collective action (NASFAM, 2014a). Today, NASFAM is supported by USAID and Norad. NASFAM invests in its organization and the services they provide to their members, which again provides incentives for the smallholders to invest in their farms. NASFAM is placed under public goods and services in Table 2.

NASFAM divides its attention to development and marketing efforts, and is registered both as a business enterprise and as an NGO. Both the business enterprise and the NGO have a yearly elected board. It works towards five strategic objectives: increased commercial revenue and profit; improved crop quality and quantity; enhanced Association performance; expanded member livelihoods; expanded influence on policy and enhanced systems performance. The objective of NASFAM is to be financially sustainable, and the objective was to achieve this already in 2006 – a goal that was not met. The financial sustainable principle is that the proceeds of produce sales from NASFAM members would generate funds that can be used to deliver the required technical and social services to its members. This concept has been important to attract foreign donor support (Bie & Lang, 2006). The business enterprise part of NASFAM has reached this goal. There is anecdotal evidence of the income impact from joining NASFAM due to better marketing and transport, and hence a better final price on the product (NASFAM, 2014b). Furthermore, the evaluation report by Bie and Lang (2006), states that they believe that NASFAM through its activities will have a substantial impact on poverty reduction in Malawi.

NASFAM focuses its work on smallholders and support smallholders' investment in their own farms. Thus, NASFAM is inclusive and links directly to the smallholders; however, a study indicates that there is a tendency for more food secure people with higher initial wealth participating in NASFAM commercial activities (Chirwa & Matita, 2012). It seems like membership in NASFAM increases profit for the participating smallholders, and hence this indicates that NASFAM has positive development impacts on food and livelihood security as well as resilience towards climate change.

## **5.7 Conservation agriculture in Zambia**

In the (CFS, 2014) principles, men and women smallholders are defined as investors in their own agriculture, and farmers are categorized both as smallholders and as business enterprises. The principles emphasize the importance of strengthening smallholders' capacity to invest in agriculture. The Conservation Agriculture Program in Zambia, sponsored by the Norwegian Government and implemented by the Conservation Farming



Unit (CFU), is an example of direct investment support through an NGO that helps smallholders to invest in their own agriculture in a way that increases yields and income. Conservation agriculture is climate smart agriculture based on minimum mechanical soil disturbance, crop residue retention and crop rotation (FAO, 2011b). Minimum tillage and zero tillage provide the core foundation of conservation farming and accommodate a wide range of agronomic practices, planting configurations, crops and cropping systems suited to local conditions including rotations, inter-crops, relays, and agro-forestry trees (Conservation farming unit CFU, 2014). As of August 2014, Norad reports that Norway's contribution to the Conservation Agriculture Program has helped 160,000 smallholders in rural Zambia to start using climate smart farming practices, which have increased their food security and income (Norad, 2014).

CFU is an NGO that uses extension officers and lead farmer extension services to train smallholders in how to apply the principles of conservation agriculture. To convert to conservation agriculture, farmers need specific inputs and equipment that are available from the CFU/CA program or from private agro-dealers. However, conservation agriculture can also be practiced without additional inputs but then the results will not be as good as if such inputs were used. CFU works closely with agro-dealers and a network of 80 stockists, and through this collaboration contributes towards an increased market for agricultural inputs such as Chaka hoes, rippers, seed/seedlings, fertilizers and not least herbicides (Conservation farming unit CFU, 2014). CFU has also pioneered E-vouchers as a payment method for Lead Farmer Trainers as well as E-vouchers that can be used by agro-dealers (Conservation Farming Unit CFU, 2013). Conservation farming can be perceived as rather labor demanding if basins are dug only with the help of hoes and weeding undertaken by hand (Umar, 2012). Inputs such as herbicides and ripping by oxen considerably reduce the labor requirement. Some farmers do also use full price or subsidized fertilizer supplied through the FISP system, but the experience with FISP is that the inputs often arrive too late in the growing season to boost yields (Conservation farming unit CFU, 2014).

The Conservation Agriculture Program in Zambia illustrates how CFU is able to contribute towards strengthened farmers' capacity to invest in their own agriculture both in regard to human and monetary resources. For many farmers, there appears to be a gradual investment process e.g., moving from hand hoes to hiring ox-rippers, to purchasing an ox-ripper to a mechanized ripper or ripping by tractor. A more unintended impact of the CFU/CA program is that there is an improved market for private agro-dealer input shops that are establishing themselves in the districts where the program is operating. Hence, in relation to support to private sector development, the Conservation Agriculture Program in Zambia can be categorized as supporting two kinds of private sector enterprises: a) farmers and b) agro-dealers (and *Zoona* formally known as Mobile Transactions through the E-vouchers). Regarding sustainability, farmers can continue to practice conservation agriculture also without CFU as long as they are trained in the CA techniques and the agro-dealers can continue to supply inputs as long as there is a demand from the farmers.

## **5.8 Bwato Agrodealer, Mukuranga District, Southern region, Tanzania**

Lately, Tanzania has experienced an increase in local agro-dealers that are establishing themselves in districts all over the country. Currently, Tanzania has 1,500 registered agro-dealers (ASARECA/KIT, 2014). The voucher system with the aim of distributing subsidized inputs to smallholders, has contributed towards an increased demand for improved seed and chemical fertilizers. This increased demand for inputs has made it possible for agro-dealers to establish input shops that are economic viable at least as long as the voucher system is running. *Bwato Agro: Inputs and extension services* in Mkuranga District in the Southern region of Tanzania is owned by a retired extension officer and employs one additional person. Six different permits are needed to become a certified agro-dealer. The security rules in relation to fire protection, ventilation and other protection measures are strict as chemicals are handled. Capital is needed not only for purchasing the inputs, but also for establishing and running the shop. Some of the seed and fertilizer business enterprises are willing to take back products that have not been sold or wait with half of the payment until the products are sold. Overall, it is difficult for the agro-dealers to raise sufficient funds to be able to establish agro-dealer shops although it is somewhat easier for private businesses to get loans now than before. The owner of the Bwato agro-dealer shop hires a truck and collects inputs directly in Dar es Salaam to cut prices. Donor support to the Tanzanian agricultural sector program and the establishment of the voucher system has indirectly made it possible to establish the agro-dealer business. In addition to improved access to credit to invest in such shops and the input business enterprises' willingness to make it possible for the shop owners to afford purchasing the inputs through different credit arrangements, some agro-dealers in Tanzania have also received direct support from donors such as AGRA, the Clinton Foundation and BMG.

It is difficult for the agro-dealers to monitor input demands, plan and be able to supply the right amount of preferred seed and other inputs. For the agro-dealers to make a profit, the prices of inputs such as seed prices need to be high for both seed business enterprises and agro-dealers to profit. Vegetable seed is a good business for the Bwato agro-dealer and the owner sells, for example, improved tomato seed that he got from the *Nane Nane* agricultural show and that he multiplies himself. In many of the districts, several agro-dealer shops compete for customers. The Bwato agro-dealer finds that competition in price, quality and service is healthy for the input market. However, the prices of inputs are still high and few farmers can afford to buy inputs. Even with the voucher system where targeted smallholders can buy seed and fertilizer for half price, they cannot afford to buy inputs. Agro-dealers may benefit from buying the vouchers from the farmers for a very low price (Aloyce, Gabagambi, & Hella, 2014). Overall, the voucher system has been criticized for different kinds of corruption and for unacceptable high leakage in relation to not reaching the target group (Aloyce et al., 2014). However, a somewhat unintended impact of the voucher system is that this system has contributed towards the establishment of more private agro-dealer shops closer to the farmers. Regarding type of intervention (Table 2), agro-dealers can be categorized in all three groups as the government *promotes an enabling environment for private sector development* through the agricultural sector program (voucher system), *rural services* (supply farmers with inputs) and *direct investment support* as some agro-dealers receive loans from banks/government or grants from donors. Agro-

dealers contribute towards making farm inputs more available in rural areas. To what degree farmers will increase their income and resilience from using such inputs will depend upon production levels and agricultural policies e.g., prices and market opportunities.

## **5.9 Musika in Zambia**

Musika is an NGO working towards linking smallholders to private sector actors in a mutually beneficial relationship, and as such stimulates investment by smallholders in their own farm. Musika follows the philosophy of Making Markets Work for the Poor (M4P), and they offer support and technical assistance to business enterprises that do business with smallholders or other rural poor either as suppliers, producers, customers, clients or employees. Thus, the focus is on business enterprises rather than NGOs or farmers organizations. The objective is to provide information, enhance technology transfers, and mitigate the initial risks that exist when doing business with smallholders. Musika is owned by six key Zambian agriculture-related institutions including the Zambian National Farmers Union, and the NGO was started in the end of 2011 (Musika, 2014). Musika is placed in Table 2 under rural public goods and services.

Musika will mitigate the initial risk that exists when private business enterprises start working with smallholders or the poor. The goal is to reduce the threshold for smallholders to connect to business enterprises, and increase the probability of business relationships between business enterprises and smallholders. As Musika is quite new, there has, as far as we know, not been any evaluations of the NGO nor the development impacts of its work. Therefore, it is difficult to assess the profitability and long term economic viability of these business relationships on both smallholders and business enterprises. It is also difficult to assess possible impact on food security in a climate perspective. Judging from the fact that owners of Musika represent parts of the business services organizations in Zambia, they should be well informed on what is needed for these linkages to be sustainable and long lasting. If the NGO reaches its strategic objectives, the development impact can be positive.

## **5.10 Africado Ltd in Tanzania**

Africado Ltd is a business enterprise producing and exporting avocado from Tanzania that started in 2007. Africado has invested in a 137 ha orchard, a packing facility, a plant to produce avocado oil and an out-grower scheme. The business enterprise started in 2007. The location of the plantation on Kilimanjaro makes it possible to export a particular type of avocados to the EU market and take advantage of the off-peak market opportunities in that market. Africado Ltd. is a partly vertically integrated business enterprise which covers the full value chain from inputs (nursery), production (orchard), packing (packing facility) and sells the product in the market via a South African firm. Africado Ltd links to smallholders in most/or all of these parts of the business enterprise. Africado Ltd is an example of foreign direct investment in the agricultural sector from Table 2.

Africado Ltd has attracted financing from several development funds such as Norfund, AECF, and TRAC<sup>4</sup>. Norfund invested 21 million NOK as equity and loans in the business enterprise in 2009 (Norfund, 2014a), and provided supplementary grants to the out-grower scheme run by Africado Ltd. In 2012, AECF supported the building of the packaging facility with 977,000 USD for the period 2012-2017 whereof 200,000 is a grant and the remaining 777,000 are repayable grants<sup>5</sup>. AECF evaluates that Africado Ltd met their development criteria by: i) contributing to an avocado cluster; ii) is a joint venture with smallholders; iii) income diversification for smallholders in the area – avocado three; and iv) including avocado oil which can utilize the not very high quality fraction of avocado production from the smallholders (AEFC, 2014). Most of the grant elements are to support the out-grower scheme of Africado Ltd.

Africado Ltd will break even this year. The orchard reached its full size of 137 ha in 2011 and the first harvest took place in 2010 (Norfund, 2014a). Africado Ltd is currently employing 10 managers and 142 workers permanently with another 180 seasonal workers. As far as possible, Africado Ltd recruits the workers from the surrounding villages. The out-grower scheme is important for Africado Ltd, and currently 2400 smallholders are participating. The smallholders are recruited from the surrounding area and at the longest 4 hours away from the orchard. This is to secure that the fruits are not damaged in the transport to the packaging plant and to be able to provide technical assistance. The smallholders need to have access to water for irrigation in order to be recruited into the scheme. More than 90% of the out-growers have planted less than one ha with avocado. The nursery sells subsidized avocado plants to the 2,400 smallholders currently participating in the out-grower scheme. USAID is currently paying for the subsidy, but Africado Ltd aims to support the overhead for the out-grower scheme and even make a small profit from the scheme in 2017. Currently, the smallholders' contribution to the exports is limited, only about 74 tons of about 1,238 tons that will be exported this year. However, the objective is that the smallholders' part of the export should rise to more than 40% by 2020. This will require careful training of the smallholders to be able to meet the requirement of the GlobalGap standard. Africado Ltd aims at training all the 2,400 smallholders by 2018, and the training program is starting to be rolled out from this year. It has not been possible to start training and certification before as the avocado trees need to be 3 to 4 years old before the process can start. The packing facility was opened in 2013, and is currently running at more than 50% capacity. For produce that is up to export quality standard, the growers receive a premium of more than 100% three months after delivery (AEFC, 2014). No comprehensive impact study of the development impact of Africado Ltd for the participants in the out-grower scheme or the surrounding villages has been undertaken. However, anecdotal evidence of premium prices indicate that participation in the out-grower scheme will have a positive income impact that might result in improved food security and resilience towards a changing climate.

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<sup>4</sup> TRAC - Trademark East Africa Challenge Fund is an investment fund supported by among others the government of Belgium, Denmark, the Netherlands, Sweden and the UK, <http://www.trac-fund.com/>

<sup>5</sup> A repayable grant is a loan with zero interest over the project's life span  
<http://www.aecfafrica.org/windows/agribusiness-window/rounds/faqs> accessed 16th of September 2014.

The self-reported development impacts of Africado include opening up export of fruits thorough climate friendly sea freight while most former exports of vegetables has been by air freight, increasing employment in the area, and direct linkages to the 2,400 participating smallholders in the out-grower scheme. The value chain for avocados represents a diversification of cash crops for the smallholders in the area (AEFC, 2014). The authors do not know if there are or were conflicts related to land and water rights in the establishment of the plantation. As Africado Ltd is starting to make a profit, the impacts of this private sector development seems to be sustainable in the long run.

### **5.11 AECF Africa Enterprise Challenge Fund – a regional fund**

The Africa Enterprise Challenge Fund (AECF) is a development fund aiming at stimulating business enterprises in Africa to make investments and innovation related to markets for rural poor. AECF provides social venture capital mainly in the form of grants and repayable grants to business enterprises through competition. It focuses on new business ideas in “agriculture, agribusiness, renewable energy, adaptation to climate change and access to information and financial services”. The objective is to increase the income of the rural poor and of smallholders. The Fund has received its money from donors such as Danida, DFID, Sida, Australian Aid, IFAD and the Bill and Melinda Gates Foundation. AECF has an independent board and KPMG-Ideas manage the fund, and it is related to AGRA (AECF, 2014a).

The central idea is that the private sector should compete for its funding, and it has held 16 competitions for funds with more than 8,000 applications received, funded 179 projects in 23 countries with 128.5 million USD. Thus, the competition for financing by the AECF has been strong. The overall criteria to be rewarded support, is that the business will be sustainable and generate development impacts (Wiggins & Keats, 2014). The specific evaluation criteria varies between the different rounds of competitions. AECF demands at least a 50% matching grant, which means that the business enterprise must have at least 50% of their capital from other sources. This can be investments from other funds. The higher degree of matching funds, the higher the chance of getting a grant.

AECF depends upon its stakeholders for its capital, and we do not know if the Fund itself is sustainable over time. The Fund has invested in a wide range of business enterprises, and as the AECF is quite new it is still too early to tell to what degree the businesses they have invested in are economic viable. In the General Window about 17% of the accepted investment projects have closed and 13% are performing poorly, indicating that about 70% are performing well or good (AECF, 2014b). This might be a good indication of the overall performance among the business enterprises.

AECF has started to use the Donor Committee for Enterprise Development (DCED) standard for evaluating the impact of their investments. This system of evaluating development impacts already starts at the application stage, is followed-up with a base-line study at grant approval, and requires half-yearly reporting on indicators. Furthermore, AECF has developed six categories of systemic change. The rapid increase in investments

and projects has made the report and measurement department hanging behind (Heinrich, 2013a). Despite these monitoring and evaluation efforts, it is difficult to assess the development impact of the AECF as such, and there is a need to study the development impact of the individual investments they have supported. Africado Ltd is one such example.

## **6 RESPONSIBLE INVESTMENT IN AGRICULTURE AND FOOD SYSTEMS**

Private sector investments in food and agriculture carry both opportunities and risks for smallholder farmers, rural communities, investors (small, medium and large), governments, and the environment. Lessons learned from experience in the past with investments in large-scale commercial farming such as for example, tea estates or coffee plantations have largely been negative in relation to rights and livelihoods of the workers. Newer agro-investments e.g., in relation to large-scale land acquisitions, involve similar risks. However, there is a plea by many international and national development actors as well as governments in the global South to increase the involvement of the private sector in agricultural development not least to create more jobs. Given this policy of increasing the involvement of the private sector as investors as well as promoting public-private partnership, the challenge is how to safeguard that the investment is happening in a responsible way.

Several principles and guidelines have been developed to promote responsible investments. As regards food and agriculture, guidelines such as: a) *The Voluntary Guidelines on Food Security*, 2005 (FAO, 2005); b) *Responsible Agricultural Investments* by the World Bank, UNCTAD, IFAD and FAO (UNCTAD, Bank, IFAD, & FAO, 2010); c) *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* (VGGT, 2012)(CFS & FAO, 2012); and d) *Principles for Responsible Investment in Agriculture and Food Systems* CFS-RAI, 2014) (CFS, 2014), are such examples. In October 2014, the *Committee on World Food Security* (CFS) is expected to approve a set of responsible agriculture investment guidelines that have been negotiated by a working group where all UN countries have been invited to participate (CFS-RAI, 2014). Norway has played an active role in this process and it is expected that Norway will adhere to and actively promote implementation of the CFS-RAI guidelines. CFS-RAI is also expected to be among the most referred to guidelines regarding agro-investment in the future. Since so many countries in the world are behind the CFS-RAI principles, there should be scope for follow-up. However, what governments commit themselves to adhere to in international meetings, is not necessarily what happens in practice at the country level. In this chapter, we will look more closely at what the CFS-RAI principles contain.

The CFS-RAI principles define responsible investment in food and agriculture as follows: *Responsible investment in agriculture and food systems is essential for enhancing food security and nutrition and supporting the progressive realization of the right to adequate food in the context of national food security. Responsible investment is a significant*

*contribution to enhancing sustainable livelihoods, in particular for smallholders, and members of marginalized and vulnerable groups, creating decent work for all agricultural and food workers eradicating poverty, fostering social and gender equality, eliminating the worst forms of child labor, promoting social participation and inclusiveness, increasing economic growth, and therefore achieving sustainable development. Agriculture and food systems encompass the entire range of activities involved in the production, processing, marketing, retail, consumption, and disposal of goods that originate from agriculture, including food and non-food products, livestock, pastoralism, fisheries including aquaculture, and forestry; and the inputs needed and the outputs generated at each of these steps. Food systems also involve a wide range of stakeholders, people and institutions, as well as the socio-political, economic, technological and natural environment in which these activities take place.*

It is interesting to note that the CFS-RAI principles define men and women smallholders as investors. Usually, people tend to think about private business enterprises when investment is mentioned. However, responsible investments include priority investments *in, by, and with smallholders* recognizing that smallholders are the main investors in their own agriculture. The principles emphasize that it is particularly important that smallholders' capacity to invest in agriculture be strengthened and secured. According to the CFS-RAI principles, farmers can be both smallholders and business enterprises.

CFS-RAI includes the following ten principles with operational sub-points of importance in relation to food and agriculture:

- Contribute to food security and nutrition
- Contribute to sustainable and inclusive economic development and the eradication of poverty
- Foster gender equality and women's empowerment
- Engage and empower youth
- Respect tenure of land, fisheries, forests and access to water
- Conserve and sustainably manage natural resources, increase resilience, and reduce disaster risks
- Respect cultural heritage and traditional knowledge, and support diversity and innovation
- Promote safe and healthy agriculture and food systems\*
- Incorporate inclusive and transparent governance structures, processes, and grievance mechanisms
- Assess and address impacts and promote accountability

The CFS-RAI principles also include a section on roles and responsibilities of stakeholders. States get the longest list of responsibilities as they have the primary responsibility for achieving food security and nutrition, as well as ensuring that human rights are respected in their country. States are encouraged *not to apply the CFS-RAI principles in a manner that may create or disguise barriers to trade, or promote protectionist interests, or in a way, which imposes their own policies on other nations*. Further, States should *play a unique role in*

*fostering an enabling environment for responsible investment in agriculture and food systems, and take measures to address all agriculture and food system workers' labor rights, in line with applicable international labor standards. It is also specified that the States have a key role in enabling, supporting and complementing investments by smallholders by promoting access to inputs and technologies, by facilitating smallholders' access to public services and the benefits from public policies and programs, by encouraging market access and participation. States should also play a role in establishing monitoring systems to measure the impacts of investment in agriculture and food systems and address possible negative impacts of such investment.*

*Agro-investors such as business enterprises should apply the CFS-RAI principles with a focus on mitigating and managing risks to maximize positive and avoid negative impacts on food security and nutrition. Business enterprises have a responsibility to comply with national laws and regulations and any applicable international law and act with due diligence to avoid infringing on human rights. Donors are encouraged to apply the principles when formulating their policies for loans and grants, articulation of country investment portfolios and co-financing with other partners. Donors are also encouraged to act appropriately so that their support to investors does not lead to violations of human and legitimate tenure rights. The CFS-RAI principles underline the power of the purse held by donors, which allow donors a unique position where they can communicate with a broad range of stakeholders about the implementation of the CFS-RAI principles.*

## **7 DISCUSSION**

We have presented 11 different cases on private sector development, ranging from support to smallholders and their organization and large estates to promoting an enabling environment for private sector development. The cases illustrate that there are many different ways of supporting private sector development relevant for food security in a climate perspective. The CFS-RAI principles (2014) define men and women smallholders as investors as reflected in the case studies.

### **7.1 Economic viability of the private sector and linkages to smallholders**

In the analysis of the case studies, we have discussed long-term economic viability of the different business enterprises. For private sector to contribute to long-term economic growth, it needs to be economic viable. However, we would like to underline that there are other factors than the economic viability of the private sector to be taken into consideration when discussing the linkages between economic growth, food security and climate resilience in relation to for example support by the state or by donors. For a State or a donor, it might be more efficient to support or subsidize private sector such as warehouses, commodity exchanges, farmer organizations, agro-dealers and inputs in order to improve food security than for example to provide food relief in situation of hunger and food insecurity. It is the responsibility of a State to ensure that food security exists in their country and a State might choose (with or without donor assistance) to support/subsidize



the private sector to contribute towards achieving national food security. If the alternative should be costly food relief with the human sufferings that accompany hunger, States/donors might find that support/subsidies are an economic viable solution. In the current situation of food security being threatened by climate change, States and donors are searching for ways of preventing hunger and build resilience at smallholder and community levels.

Table 5 presents an overview of the cases as regards economic viability, linkages to the smallholders and potential income impact.

*Table 5 Overview of case studies*

<b>Case</b>	<b>Business enterprise economic viability</b>	<b>Linkages to the smallholders</b>	<b>Income impact smallholders</b>
1 SAGCOT	NA	Indirect	NA
2 Yara	?	Indirect	?
3 Warehouse	?	Direct	+
4 Commodity exchange			
AHCX	yes	?	?
ACE	Yes?	Direct	+
NASCOMEX	Yes?	Direct	+
MACE	?	?	?
5 Soybean	Yes	Direct	+
6 NASFAM	Yes?	Direct	+
7 CFU	NA	Direct	+
8 Bwato	Yes	Direct	?
9 MUSIKA	?	Direct	?
10 Africado Ltd.	Yes	Direct	+
11 AECF	NA	Indirect	NA

*Notes: NA Not applicable*

*? Do not know*

Table 5 indicates that four of the business enterprises are economic viable, that the information is unknown in six cases and that it is not applicable in three cases. We would like to add that it is outside the scope of this study to do a thorough analysis of economic viability in each case and our findings are mere indications from brief reviews of available information. For NASCOMEX, ACE and NASFAM, it appears that these business enterprises or organizations are close to break even. It is not possible to draw any conclusions regarding Yara-Tanzania and Musika, as the investments are new. Furthermore, there is uncertainty about the economic viability of the warehouses in Tanzania. Finally, the economic viability of SAGCOT, the Conservation Farming Unit and AECF are not applicable as these are not traditional business enterprises but instruments to strengthen investments by smallholders and business enterprises.

An advantage of smallholder driven private sector development is that these interventions always have direct linkages with the smallholders, and therefore probably provide incentives for smallholders to invest in their farms. Conservation agriculture directly encourages smallholders to invest in their farms. Furthermore, smallholder driven private sector development probably reaches more smallholders than business enterprise driven private sector development. For example, Africado Ltd includes 2,400 smallholders in their avocado value chain while NASFAM reaches more than 100,000 smallholder families. Most of the interventions under promoting public goods and services and direct investment support to smallholders will reach a larger group of smallholders than investment support to business enterprise. Private sector development driven by smallholders can reduce conflicts related to access to land and water compared to large sale business enterprises driven by private sector development.

An advantage of business enterprise led private sector development is that it can establish access to international markets (Africado Ltd) and contribute to developing new large infrastructure (Africado Ltd, and Yara). The development of these types of infrastructure reduces the transaction costs for smallholders as well, and can encourage them to invest in their own farm. The lead business enterprises can also introduce new technology and transfer competency to smallholders, as Africado Ltd does in avocado production. The cooperation between FK Norway and IKURU is a good example of how expertise can be transferred between business enterprise partners.

## **7.2 Linkages between the three approaches for supporting private sector development**

In this study, we have addressed three different approaches for supporting private sector development: i) promote an enable environment for private sector development; ii) provision of public goods and services; and iii) direct investment support. Several of the case studies show that there are strong linkages between the three different approaches. For example, a Bwato agro-dealer gets a profit from his business enterprise largely due to the fertilizer subsidy program (agricultural policy) and the direct investment support that some agro-dealers receive. Because of these interventions, he sells agro inputs, and thereby provides important business services to smallholders.

The warehouse receipt system and commodity exchange cases show how sensitive different market information systems are to agricultural and food security policies. In commodity exchange case, the local procurement of food by the World Food Programme strengthens the commodity exchange in Malawi making it more economic viable, while maize export bans introduced for food security reasons in Tanzania reduce or even render the warehouse receipt system unprofitable for the smallholders. These examples show how important it is carefully to consider the impact on all actors of changes in agricultural policies before the policy changes are introduced.

The cashew warehouse receipt system in Tanzania introduced a monopsony for cashews. This makes the smallholders very dependent upon the prices of the warehouses with the

monopsony power. If another buyer of cashew emerges, the smallholders cannot sell to these buyers and therefore cannot take advantage of this market opportunity. Part of the success of the soybean production in Mozambique is actually that the smallholders were not bound to sell their soybean to FK Norway, but could sell it on the local market when domestic prices were higher. This made the smallholders less dependent upon FK Norway, gave them higher prices for their produce and made soybean production more profitable.

Finally, the majority of the grants Africado Ltd has received is related to their out-grower schemes. This indicates that for business enterprise led private sector development to be inclusive for smallholders (pro-poor), there is a need to supplement direct investment support for business enterprises with similar direct investment support for smallholders. By securing this linkage, direct investment support to business enterprises can encourage and lead to direct investment support to smallholders. We believe that this is not necessarily an automatic process, and the current changes in financing for development underlines the importance of strengthening the public and civil sectors' ability to monitor the development impact of private sector development, and apply the guidelines for responsible investments in agriculture and food systems.

### **7.3 The private sector and Food Security in a Climate Perspective**

One of the objectives of this study is to assess what role the private sector can play regarding implementing the *Food Security in a Climate Perspective strategy* 2013-15 in Ethiopia, Malawi, Mozambique, Tanzania and Zambia. As table 1 illustrates, most people in these five countries are employed in the agricultural sector and food insecurity is a serious problem. In order to analyze the impact of private sector activities on food security, all four dimensions of food security should have been taken into account: *availability, access, stability and utilization* (WFS, 1996). Unfortunately, in this study we have not been able to undertake a comprehensive analysis of all four of these dimensions. Food insecurity is a complex problem that apparently cannot be solved by a single stakeholder or sector (FAO, 2014). The call for increasingly involving the private sector in fighting hunger, food security and malnutrition is a response to the complexity of the problem and a realization that business as usual has not worked as we still have more than 800 million insecure people in the world (FAO, 2014). To what degree the private sector will make a difference for the better or the worse is still to be seen. However, without being able to generalize, the 11 cases that we have reviewed indicate that the private sector can play an important role regarding contributing towards improved food security and resilience in relation to negative impacts of a changing climate. Private sector investments in food and agriculture carry both opportunities and high risks particularly for smallholders, local communities and the environment. In order to minimize risks, we would like to underline the importance of the following three factors:

- *Careful selection of the kind of private sector and agro-investment:* The private sector comprises many different business enterprises and investors, from the more "quick money" type with limited respect for human rights, law and regulations to those that take social responsibilities more serious. The private sector and investors are

also more than private companies. In this report, we have made a point of including in the private sector both business enterprises such as private companies as well as farmers including women and men smallholders recognizing that smallholders are the main investors in their own agriculture. We have also included farmer organizations in the private sector as well as several public private partnerships such as warehouse receipt systems and commodity exchanges. In this way, we think it is not a question of the private sector as such, but what kinds of the private sector can solve which problem with regard to agricultural development and food insecurity in a climate perspective. We have small, domestic, private agro-dealers employing a couple of people and we have large international companies such as Yara employing thousands of people in 50 countries. Both are categorized as private sector. Hence, our point is that private sector are such a diverse group of actors, which make it difficult to talk about the private sector as a homogeneous phenomenon.

- *Responsible Agriculture Investment:* The private sector should concur with the principles of responsible agriculture investment with regard to contributing to food security and nutrition; contributing to sustainable and inclusive economic development and the eradication of poverty; fostering gender equality and women's empowerment; engaging and empowering youth; respecting tenure of land, fisheries, forests and access to water; conserving and sustainably managing natural resources; increasing resilience and reducing disaster risks; respecting cultural heritage and traditional knowledge; supporting diversity and innovation; promoting safe and healthy agriculture and food systems; incorporating inclusive and transparent governance structures, processes, and grievance mechanisms; assessing and addressing impacts and promote accountability (CFS-RAI, 2014).
- *A strong State to reinforce responsible behavior and make sure human rights, laws and regulations are not violated:* Unfortunately, the situation in many developing countries is that the State is weak and is not able to fulfill its role in relation to reinforcing regulations and principles such as CFS-RAI. This situation of weak States and institutional failures make agro-investment risky for smallholders and local communities in many Sub-Saharan African states. The civil society will have an important watchdog role to fill, in contributing towards reducing the possible negative risks embedded in private sector activities in Sub-Sahara Africa.

#### **7.4 Monitoring and evaluation of private sector development**

The case studies illustrate that there is a general lack of information regarding development impacts of private sector activities as regards e.g., food security. In the majority of the 11 cases, it is also difficult to establish if the business enterprise is economic viable from an investor's point of view. One possible reason might be that this is business sensitive information. Most of the information presented is on positive impacts such as outreach, the number of smallholders reached, and less on the possible negative impact such as potential conflicts resulting from the investments. Thus, there is information on the development outcomes of the investments, but less on the actual impact of the investment or the project on food and livelihood security. There is, in general, a lack of knowledge on

the totality of the development impact of private sector activities as regards the topics for this study being food security in a climate perspective. Establishment of better monitoring and evaluation systems are important to be able to learn from on-going private sector activities. As recommended by CFS-RAI (2014), States should play a role in establishing monitoring systems to measure the impacts of investment in agriculture and food systems and address possible negative impacts of such investments.

Furthermore, little is known about whether the impact is a direct result of the support or whether other factors have played a bigger role. Regarding the warehouse receipt system, for example, we find information indicating that the impact on the cashew farm gate price might not only be due to the warehouse receipt system, but also on the increase in world market prices for cashews. Thus, what would have been the situation without the investment or project? There is in general more information on evaluation, monitoring and impact assessments of development projects and programs such as those included in Sections 1 and 2 of Table 2, and direct investment support to smallholders in Section 3 of Table 2, than regarding traditional private sector support. Moreover, little is known about the development impacts of the newer partnership for development, i.e. the direct investment support to business enterprises presented in Table 2. The reasons for this might be the difference in culture between donors and private business enterprises, unclear roles of the partners regarding monitoring, evaluating and impact assessment, relying on self-reported data by the businesses, the worry that business secrets might be disclosed and timing advantage lost in the business opportunity, and lack of funds for evaluating and monitoring (Heinrich, 2013b).

## **8 CONCLUSIONS**

This study assesses the role of the private sector in implementing the *Food Security in a Climate Perspective strategy* 2013 in Ethiopia, Malawi, Mozambique, Tanzania and Zambia and discusses lessons learned from different private sector and PPP initiatives of relevance for agriculture, climate change and food security in the same five countries. Eleven diverse examples are reviewed and categorized according to three different approaches for supporting private sector development: i) promote an enabling environment for private sector development; ii) provision of public goods and services; and iii) direct investment support. Private sector includes both small domestic businesses with hardly any people employed to large international companies with thousands of employees. Private sector is also more than private companies. In this report, we have made a point of including in the private sector both business enterprises such as private companies as well as farmers including women and men smallholders recognizing that smallholders are the main investors in their own agriculture. Private sector investment in food and agriculture carry both opportunities and risks for smallholder women and men farmers, rural communities, investors (small and large), governments and the environment. Lessons learned from the eleven cases that have been reviewed indicate that the private sector can play an important role regarding contributing towards agricultural development, improved food security and enhanced resilience in relation to negative impacts of a changing climate.

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## Appendix A People consulted

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In addition, Ruth Haug used some data from previous fieldwork in Tanzania (e.g. interview with *Bwato Agrodealer*).

## **Appendix B Terms of Reference**

Terms of reference: Food Security in a climate perspective: What role could private sector play regarding investment in smallholder agriculture in Ethiopia, Malawi, Mozambique, Tanzania and Zambia?

1) Discuss how Norwegian Embassies might implement Food security in a Climate perspective strategy in relation to support to private sector development and public-private partnership (PPP) as regards agriculture, climate change and food security in Ethiopia, Malawi, Mozambique, Tanzania and Zambia

a. To what degree do the states develop enabling policy, regulatory frameworks and institutional capacity to establish responsible and well-functioning private sector development and public-private partnership?

b. To what degree could the Principles for responsible agricultural investments (CFS-RAI, forthcoming 2014) provide useful guidance when supporting private sector development and PPP?

2) Assess lessons learned from different private sector and PPP initiatives of relevance for agriculture, climate change and food security in the same five countries.

a. What kind of private sector and/or PPP initiatives have been successful regarding improving the livelihood of small scale farmers in the countries in question? Are there also lessons to be learned from unsuccessful private sector/PPP initiatives in food and agriculture?

b. To what degree are there lessons to be learned from other countries, e.t. Kenya and Uganda in relation to private sector development/PPP as regards agriculture, climate change and food security.

## Appendix C Detailed description of Doing Business

Table B.1 Detailed description of the Doing Business ranking and criteria

Economy		Ethiopia		Malawi		Mozambique		Tanzania		Zambia	
Year		2010	2014	2010	2014	2010	2014	2010	2014	2010	2014
Ease of Doing Business Rank		..	125	..	171	..	139	..	145	..	83
Starting a Business	Rank	..	166	..	149	..	95	..	119	..	45
	Procedures (number)	9	9	10	10	10	9	10	9	6	5
	Time (days)	15	15	39	40	26	13	26	26	18	6.5
	Cost (% of income per capita)	267.5	100.1	108	120.1	19.3	18.7	41.3	27.7	28.4	26.8
	Paid-in Min. Capital (% of income per capita)	492.4	184.2	0	0	0	0	0	0	1.3	0
Dealing with Construction Permits	Rank	..	55	..	173	..	77	..	177	..	57
	Procedures (number)	9	9	16	16	12	12	19	19	11	11
	Time (days)	128	128	183	183	249	130	206	206	144	124
	Cost (% of income per capita)	544.9	203.9	1,311.3	1,755.	302.1	257.6	637.9	490.9	335.7	198.
				0	0						5
Getting Electricity	Rank	..	91	..	183	..	171	..	102	..	152
	Procedures (number)	4	4	6	6	5	7	4	4	6	6
	Time (days)	75	95	222	222	77	107	382	109	117	117
	Cost (% of income per capita)	4,898.	1,879.	11,655.	7,468.	3,276.	2,857.	2,849.	1,690.	1,198.	955.
		9	5	6	5	7	7	6	6	4	8
Registering Property	Rank	..	113	..	85	..	152	..	146	..	102
	Procedures (number)	10	10	6	6	8	8	9	8	6	5
	Time (days)	41	41	88	69	42	39	73	68	42	45
	Cost (% of property value)	2.2	2.1	3.2	2	11.3	7.7	4.4	4.5	6.6	8.6
Getting Credit	Rank	..	109	..	130	..	130	..	130	..	13
	Strength of legal rights index (0-10)	4	4	7	7	3	3	7	7	9	9

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Economy Year		Ethiopia		Malawi		Mozambique		Tanzania		Zambia	
		2010	2014	2010	2014	2010	2014	2010	2014	2010	2014
	Depth of credit information index (0-6)	2	4	0	0	4	4	0	0	3	5
	Public registry coverage (% of adults)	0.1	0.1	0	0	2.3	4.3	0	0	0	0
	Private bureau coverage (% of adults)	0	0	0	0	0	0	0	0	0.4	12
Protecting Investors	<i>Rank</i>	..	157	..	80	..	52	..	98	..	80
	Extent of disclosure index (0-10)	3	3	4	4	5	5	3	3	3	3
	Extent of director liability index (0-10)	4	4	7	7	4	4	4	4	6	6
	Ease of shareholder suits index (0-10)	3	3	5	5	9	9	8	8	7	7
	Strength of investor protection index (0-10)	3.3	3.3	5.3	5.3	6	6	5	5	5.3	5.3
Paying Taxes	<i>Rank</i>	..	109	..	81	..	129	..	141	..	68
	Payments (number per year)	30	30	23	35	37	37	48	48	38	38
	Time (hours per year)	198	306	157	175	230	230	172	176	183	183
	Profit tax (%)	..	26	..	20.7	..	30.9	..	20.4	..	1.2
	Labor tax and contributions (%)	..	4.2	..	9.6	..	4.5	..	18	..	10.4
	Other taxes (%)	..	3.2	..	4.6	..	2.1	..	6.4	..	3.6
	Total tax rate (% profit)	30.3	33.4	26.3	34.9	37.5	37.5	44.4	44.9	15	15.1
Trading Across Borders	<i>Rank</i>	..	166	..	176	..	131	..	139	..	163
	Documents to export (number)	7	7	10	10	7	7	7	7	7	7
	Time to export (days)	50	44	41	34	24	21	24	18	53	44

*Food security in a climate perspective: What role could the private sector play regarding investments in smallholder agriculture in Ethiopia, Malawi, Mozambique, Tanzania and Zambia?*

Economy Year		Ethiopia		Malawi		Mozambique		Tanzania		Zambia	
		2010	2014	2010	2014	2010	2014	2010	2014	2010	2014
	Cost to export (US\$ per container)	2,230	2,180	1,713	2,175	1,100	1,100	1,262	1,090	2,664	2,765
	Documents to import (number)	10	10	11	11	9	9	11	11	9	8
	Time to import (days)	44	44	51	43	28	25	31	31	59	49
	Cost to import (US\$ per container)	2,660	2,760	2,570	2,870	1,475	1,600	1,475	1,615	3,335	3,560
Enforcing Contracts	<i>Rank</i>	..	44	..	145	..	145	..	42	..	120
	Time (days)	530	530	432	432	950	950	515	515	611	611
	Cost (% of claim)	15.2	15.2	142.4	94.1	119	119	14.3	14.3	38.7	38.7
	Procedures (number)	38	38	42	42	30	30	38	38	35	35
Resolving Insolvency	<i>Rank</i>	..	75	..	150	..	148	..	134	..	73
	Time (years)	1.8	1.8	2.6	2.6	5	5	3	3	2.7	2.4
	Cost (% of estate)	15	15	25	25	9	9	22	22	9	9
	Outcome (0 as piecemeal sale and 1 as going concern)	0	0	0	0	0	0	0	0	0	0
	Recovery rate (cents on the dollar)	40.9	36.9	17.5	15.6	15.2	16.6	21.3	21.4	30.2	37.1

Source: Doing Business 2014