

WORKING PAPER



United Nations Development Programme

Regional Bureau for Africa

WP 2012-004: January 2012

The Political Economy of Large-Scale Agricultural Land Acquisitions: Implications for Food Security and Livelihoods/Employment Creation in Rural Mozambique

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This paper is part of a series of recent research commissioned for the African Human Development Report. The authors include leading academics and practitioners from Africa and around the world, as well as UNDP researchers. The findings, interpretations and conclusions are strictly those of the authors and do not necessarily represent the views of UNDP or United Nations Member States. Moreover, the data may not be consistent with that presented in the African Human Development Report.

Abstract: This paper will provide a brief assessment of the impacts of investments on food security and rural livelihoods/ employment creation in Mozambique. Based on the lessons learned from the Mozambican experience the paper will discuss the potential role of large-scale land acquisitions in promoting food security and reducing poverty. The paper will also discuss some of the opportunity costs associated with large-scale farming and look at the alternative rural development strategies available to Mozambique, as well as other land-abundant African countries. The paper concludes that, despite some recorded positive impacts, the relatively high number of negative impacts from recent large-scale land acquisitions in Mozambique give cause for concern. The country's demographic and sociopolitical characteristics suggest that a labor-intensive rural development strategy may be more suitable than the attraction of large-scale investments in farmland.

Keywords: Food Security, reducing poverty, land acquisitions, Mozambique

JEL Classification: Q18, I32, O2, K00

1. Introduction

Although the acquisition of large tracts of farmland in developing countries is not a new phenomenon, the scale, speed and drivers behind the recent increase in demand do merit attention². Compared to an average annual expansion of global agricultural land of 1.9 million hectares (ha) between 1990 and 2007,³ large-scale investments totaling approximately 56 million ha were announced by the end of 2009, for that year alone (Deininger & Byerlee, 2010).⁴ The expansion of cultivated area is predicted to continue, and as much as two-thirds of this expansion is estimated to take place in sub-Saharan Africa and Latin America (Deininger & Byerlee, 2010).⁵ The recent increased interest in farmland coincided with a spike in world food prices, which in 2008 led to protests in many countries and the introduction of export restrictions on food by some governments.⁶ Food importing countries felt the impact of these events on their food security situation, which motivated some to search for farmland abroad. Simultaneously, the world confronted the most severe financial recession since the Great Depression, which led investors to shift focus from financial products to other sectors, including agriculture (UNCTAD, 2009). The growing world population and the global development achievements over the past decades have led to unprecedented demands for food, water and energy (UN DESA, 2011). With increasing global oil prices, many countries have opted to invest in alternative energy sources,

² This paper will use the term large-scale land acquisitions about investments in large tracts (typically above 1,000 ha) of land, either through sale or long-term leases (often 50-100 years). For the purpose of this paper the distinction between sale and lease is not considered relevant, since in most countries the local inhabitants' separation from their land through either form of acquisition is permanent, as the land tends to return to the state, rather than the local communities who used to hold the customary rights, upon the cessation or revocation of a long-term lease period (German et al, 2011).

³ Total global area of farmed land in 2007 was 1,554 million ha (Deininger & Byerlee, 2010: 100). In addition to farmland, land for pasture has expanded by 2.5 million ha per year between 1990-2007, to a total global pasture area of 3,400 million ha in 2007. The area for plantation forestry has expanded with 2.5 million ha per year between 1990 and 2005, to a total of 140 million hectares globally. 54% of the expansion in area for plantation forestry, 75 million ha, took place in developing and transition economies (Deininger & Byerlee, 2010: 11).

⁴ Data on the exact scale of large-scale land acquisitions are scarce and incomplete, due to the lack of transparency that often accompanies these investments. Significantly higher than the World Bank estimate, a recent report from Oakland Institute (The Oakland Institute, 2011a) estimates that during 2009 alone, foreign investors acquired nearly 60 million ha of land in Africa. Research from the ILC/CIRAD in the Commercial Pressures on Land Research Project has documented just over 2000 projects covering as much as 227 million ha of land since 2001. The bulk took place over the last two years (Oxfam, 2011). On the more cautionary side, FAO estimates that globally around 10 million ha was sold in 2008 and 20 million ha of farmland was sold or negotiated for sale or lease during the first six months of 2009 (Vidal, 2009).

⁵ A conservative estimate of the growth through 2030 is a global average of six million ha per year, with total area increases over the period estimated at 120 million ha (up to 240 million ha). The growth is presumed to be much higher in developing countries, to compensate for the reduction in total cultivated area in the industrialized world (Deininger & Byerlee, 2010: 16).

⁶ Prices in 2008 reached their highest levels since 1845, in inflation-adjusted terms, according to the Economist magazine's index (WTO, 2011). In 2011, the price records of 2008 were broken.

including biofuels.⁷ The shift to biofuels is estimated to have contributed to at least 20-30 % of the food price increases (Helbling et al, 2008).⁸ During the food price spike in 2008, some 125 million tonnes of cereals were diverted into biofuel production. Further aggravating the situation are the current and future consequences of climate change, which present severe challenges to agricultural production, especially in developing countries.⁹

In 1996, 2002 and 2009 at the World Food Summits, the world's leaders committed to reduce hunger.¹⁰ The World Food Summit Goal is to reduce by half the global *number* of undernourished people in the world between 1990-92 and 2015. The Millennium Development Goal (MDG) number 1 is to halve the *proportion* of people suffering from hunger between 1990 and 2015. Yet the number of undernourished people in 2010 was higher than it was 40 years ago, and the MDG 1 seems unattainable in many countries (FAO, 2010a).

⁷ The world has seen rapid increases in the demand for biofuel since 2003. There are significant concerns that biofuel mandates may significantly impact land use for areas far beyond the countries in which they operate (Deininger & Byerlee, 2010: 15). In 2008, the total area under biofuel crops was about 36 million ha (est.), which was double the 2004 levels (UNEP, 2009). In the decade between 2008 and 2018, biofuels may account for 52% of increase in demand for maize and wheat and 32% for oilseeds (OECD/FAO, 2010).

⁸ In 2008 several studies came out that identified biofuels as a part the food price hike crisis. The IMF attributed 20-30%, IFPRI 30%, FAO 56-59%, OECD almost 60% and the Donald Mitchell study for the World Bank at 75%. The World Bank later said that the role of biofuels was likely less than originally thought (ActionAid, 2011).

⁹ The effects of climate change in the form of changing rainfall patterns, increased frequency of extreme weather events and rising average global temperatures can be devastating for Africa's agriculture. A common estimation by agro-ecologists is that grain yields are reduced by 10% per degree Celsius above the optimum during the growing season (Brown, 2011a). One study show that climate change will reduce irrigated wheat yields in developing countries by as much as 34% by 2050 (Nelson et al., 2009 in Deininger & Byerlee, 2010: 15). Another study suggest that maize yields in Africa are set to decline drastically, by up to 65% for every degree Celsius rise in temperature (Lobell, Bänziger, Magorokosho, & Vivek, 2011). Climate Change will also have significant impacts on the water availability for food production and productivity in the decades to come (FAO, 2011).

¹⁰ The 2009 Rome World Food summit reinstated food security on the global agenda with new urgency. The Committee on Food Security was recreated and a new Comprehensive Framework for Action was adopted. The Framework follows a twin-track approach where response to immediate needs (social protection, safety nets) and long-term food security/environmental sustainability through investments in agriculture are both prioritized. The new approach focuses on a "global partnership" between governments, civil society, private sector, the UN, development banks and research groups (Nabarro, 2011).

Box 1.1 Food security and the right to food

Food Security: The World Food Summit defined food security as “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. The four pillars of food security are availability, stability of supply, access and utilization (FAO, 2006).

Human Right to Food: “The right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement.” *Committee on Economic, Social and Cultural Rights, General Comment No. 12**

*General Comment No. 12 is an authoritative interpretation of the right to adequate food as contained in Article 11 of the International Covenant on Economic, Social and Cultural Rights to which currently 147 States are parties (FAO, 2006).

According to the United Nations Food and Agriculture Organization (FAO), 1.02 billion people, or 15% of the world population, are currently undernourished, and food prices are set to rise with as much as 40% over the coming decade (OECD/FAO, 2010; UN DESA, 2011). For poor families who spend most of their income on food, even small price increases can have significant detrimental effects. The World Bank (WB) has estimated that 44 million people were pushed into poverty between the summer of 2010 and February 2011 as a direct impact of rising commodity prices (World Bank, 2011a). However, on the global level there is no shortage of food in the world^{11, 12}. On the contrary many of the millions who are food insecure are the food producers.¹³

¹¹ It should be noted that there are contrasting views regarding the future need for food production. According to Bruinsma (2009) in Deininger & Byerlee (2010: 14), global production would need to rise by 70% by 2050 to cope with a 40% increase in the world population. Bruinsma estimates that agricultural production in developing countries will have to nearly double to meet rising demands for calories per capita. Others argue that, despite expectations of slow advances in technology and greater future resource constraints, current food production levels are sufficient. We will be able to meet future needs if we manage to reduce the high levels of waste in all levels of the food chain, improve the distribution and ensure the affordability of food. A recent report from SIK/FAO (2011) estimates that approximately 1.3 billion tonnes of food is lost or wasted annually. According to the report, consumers in industrialized countries waste almost 222 million tons a year, an amount which roughly equals the total net food production of sub-Saharan Africa. While recognizing the potential need to increase food production in the future, especially since the rate of resource use in the world has increased twice as fast as the increase in global population in the 20th century (UNEP, 2011), this paper argues that the reason for today’s widespread under-nutrition cannot be attributed merely to the lack of food. While measures should be taken to control future resource consumption and population growth, the key to reduce the prevalence of hunger is to ensure universal access to food, through policy measures which tackle the challenges of distribution and affordability of sufficient quantities of nutritious food among deprived groups (Nabarro, 2011).

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The UN Special Rapporteur on the right to food 2000-08 stated that “[h]unger and famine are not inevitable. According to the FAO, the world already produces enough food to feed every child, woman and man and could feed 12 billion people, or double the current world population” (Human Rights Council, 2008). Yet “500 million people depending on small-scale agriculture are hungry” (De Schutter, 2010). People are no longer hungry because of the lack of food in the world, but rather due to challenges with regards to affordability and distribution of the global food surplus (Gustavsson et al, 2011). The continued high levels of widespread chronic hunger and malnutrition in certain countries is deeply concerning and suggest that efforts much be redoubled to ensure that every human being’s right to food is respected. The coexistence of sufficient food supplies and hunger is not new and was examined by classical economists such as David Ricardo two centuries ago (Sen, 1990). Indeed, one of the founding fathers of the Human Development Reports, Amartya Sen wrote extensively about this topic. According to Sen, “Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat.” (Sen, 1982: 1). Perhaps even more famously, Sen observed that “[n]o substantial famine has ever occurred in an independent and democratic country with a relatively free press” (Sen, 1999). This underlines the importance of policy choices to ensure the accessibility and affordability of food for all groups of society. The world food market has become increasingly globalized in recent years, shifting the dynamics of food availability and price levels from the national to the global arena. When the global food prices rose to unprecedented levels despite record harvests in 2008, the effects were not felt equally in all parts of the world. In developing countries, which have increasingly become net-importers of food over the past decades and where the majority of the population spends most of its income on food, the governments had limited capacities to cushion the impact of the abrupt price increases. The effects of the rising prices were felt immediately by the most vulnerable strata of society, which in many cases were forced to make tough choices on how to reduce expenditure in other areas, including children’s education and nutrition, to compensate for the price increases. In sharp contrast to this, the impact of the price changes was negligible for consumers in developed countries, who spend only a marginal share of their income on food.¹⁴

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¹³ About 70% of the one billion hungry people in the world are farmers, herders and other food producers “who could feed themselves in they had access to land, markets and a little bit of credit” (Kuyek from GRAIN interviewed in IPS, 2011).

¹⁴ Food represents between 60–80 per cent of consumer spending in poor countries in comparison to 10–20 per cent in rich countries (UNCTAD, 2008). The poorest countries paid as much as 20 percent more for food in 2010 than in

In this context the rush for farmland in the developing world raises a number of important concerns. Investments in the agricultural sector and in rural areas of developing countries are certainly needed to help increase agricultural production, close yield gaps and create employment, all of which are key factors to reduce poverty. However, large-scale land acquisitions also entail risks of negative socioeconomic and environmental impacts in developing countries where the majority of the population lives in rural areas and depends on the land for its livelihood (HRC, 2009). Careful thinking must be invested into ensuring that developing nations and poor, rural communities do not lose out as a result of the recent increased interest in their farmland.

Due to the short history of the most recent increase in interest for farmland, further research is needed with regards to the impacts of these investments. This paper will use the case of Mozambique to explore the extent and effects of large-scale land acquisitions in one land abundant least developed country in sub-Saharan Africa. The paper will provide a brief assessment of the impacts of these investments on food security and rural livelihoods/employment creation in Mozambique. Based on the lessons learned from the Mozambican experience the paper will discuss the potential role of large-scale land acquisitions in promoting food security and reducing poverty. The paper will also discuss some of the opportunity costs associated with large-scale farming and look at the alternative rural development strategies available to Mozambique, as well as other land-abundant African countries.

Structure of this paper: Section 2 provides an overview of the scale, scope and nature of the recent growth of interest in large-scale land acquisitions in sub-Saharan Africa as well as the debate which the phenomenon has inspired. Section 3 will focus on Mozambique, one of the countries which have been singled out as land abundant and attractive for foreign investors. Data on the scale, scope and nature of Large-Scale Land Acquisitions in Mozambique will be combined and contextualized with information on the employment and food security situation in the country, as well as the structure of the country's agricultural sector. The chapter will also attempt to summarize the observed short-term effects and assess the likely long-term effects of these investments on the employment and food security situation in Mozambique. Section 4 outlines some of the alternative strategies for rural and agricultural development and discusses how the government's goals of improving food security, increasing agricultural production and productivity and creating sustainable employment opportunities best can be achieved in a rural developing country such as Mozambique. The conclusion summarizes the main findings and highlights the lessons learnt from the Mozambican experience, while the relevance of the Mozambican findings for the region is discussed. The paper concludes that, despite some recorded positive impacts, the relatively high number of negative impacts from recent large-scale

2009, in the U.S., the world largest food exporter, retail food prices rose just 1.5 percent last year and will gain as little as 2 percent in 2011, according to estimates from U.S. Department of Agriculture (Pooley & Revzin, 2011).

land acquisitions in Mozambique give cause for concern. The country's demographic and sociopolitical characteristics suggest that a labor-intensive rural development strategy may be more suitable than the attraction of large-scale investments in farmland.

2. Scale, Scope and Nature of Large-Scale Land Acquisitions in Africa

2.1 Large-scale land acquisitions in Africa

Scale and scope

Africa has been the target of more than 70 % of the global demand for land in recent years and is expected to continue to be so in the future (Deininger & Byerlee, 2010). It is challenging to get an overview of the phenomenon because of the lack of transparency surrounding many investment deals; limited institutional capacities to adequately record these investments in national land directories; low implementation rates of many of the announced deals; as well as the unprecedented speed and scale of the expansion seen in recent years. The lack of overview is also evident from the fact that the World Bank refers to media reports for estimates of the size of these investments (Deininger & Byerlee, 2010).¹⁵ While the cultivated area in sub-Saharan Africa increased with 1.79 million ha per year on average between 1961 and 2007, the demand for land expansion in the region in 2009 alone was 39.7 million ha (Deininger, 2011).¹⁶ Although the high level of demand does not automatically translate into land transfers, the total amount of transferred land in the region was also high. Total transfers of land between 2004 and 2009 were at least 4 million ha in Sudan, 2.7 million ha in Mozambique, 1.6 million ha in Liberia and 1.2 million in Ethiopia (Deininger & Byerlee, 2010). In Madagascar in 2008, 1.3 million ha, or half the country's agricultural land, was leased to a South Korean company in one single investment deal. This concession was subsequently cancelled in 2009 due to widespread protests (Sodikoff, 2009). Numerous other African countries have also been targeted by investors (Braun & Meinzen-Dick, 2009; Cotula et al, 2009; The Oakland Institute, 2011). Land in Africa is considered attractive to

¹⁵ Due to the low levels of transparency surrounding many investment deals, the data of the extent of these deals are scattered and incomplete. In its report "Rising global interests in farmland (...)", one of the most comprehensive treatments of the global scale of this phenomenon, the WB bases its information on three sets of sources: For 14 of the countries which recently have experienced increased investor interest, officially available data from land directories was analyzed (Deininger & Byerlee, 2010). This was complemented by case studies and panels with wide representation to assess policy, legal and institutional frameworks in these countries. Lastly, the authors analyzed all media reports on the theme which was collected and made available on the GRAIN website (www.grain.org) between 2008 and 2009. Although the triangulation of sources is likely to have increased the robustness of the WB estimates, it is important to be aware of the high level of inaccuracy which is bound to accompany any (gu)estimates of this sort.

¹⁶ The area cultivated in Sub-Saharan Africa rose from 134.6 million ha in 1961 to 218.5 million ha in 2007, with an average area expansion of 1.79 ha per year (Deininger, 2011). As with the global estimates, the estimates of total areas acquired by investors in Africa vary significantly between different sources. According to Global Land Project 51-63 million ha have changed hands in 27 African countries in recent years (Palmer, 2011). Oakland institute (2011a) estimates that nearly 60 million ha of African farmland was bought in 2009 alone. The World Bank estimates that at least 35 million ha was bought or leased in recent years. Friends of the Earth say the number is higher. Deininger (2011) estimates an investor interest for 39.7 million ha in 2009.

investors because of relatively low land prices, availability of cheap labor and less stringent legal requirements on investors than in most other regions. With continued population growth and increased demand due to welfare improvements in transition economies, the demand for land and water resources to satisfy both food and fuel demands is likely to remain high. The pressures on land are likely to be exacerbated by the ongoing and future consequences of climate change. Since most land in industrialized countries is already in use, the larger share of future area expansion for agriculture production is estimated to take place in Latin America and Africa. Over 50% of the land which is estimated to be "*potentially available for expansion of cultivated area*" is concentrated in ten countries, six of which (Sudan, the Democratic Republic of Congo, Mozambique, Madagascar, Chad and Zambia) are in Africa.¹⁷ However, agriculture in sub-Saharan Africa is still characterized by very low levels of productivity and "*relatively more land in Africa is located far from infrastructure*" (Deininger & Byerlee, 2010: xxxv).

New drivers and stakeholders

The traditional stakeholders with interests in African agricultural land have been the continent's smallholders, local elites, colonial powers and to a certain extent commercial agricultural enterprises (Palmer, 2011). Post-independence national elites emerged as major investors in African land. Using their privileged positions, local know-how and extensive contact networks, such elites secured access to some of the most attractive and fertile land on the continent (Fairbairn, 2011; Wily, 2011; de Wit, 2002). This trend seems to continue. Indeed, in most African countries a majority of the investments in farmland between 2004 and 2009 were by domestic investors (Deininger & Byerlee, 2010). Little research has been done on the acquisition and use of land by domestic elites, but a growing number of reports suggest that a significant share of this land is not used for productive purposes. Strong political and or economic ties between domestic land investors and the government may explain why few of these land allocations are revoked despite suboptimal use (Fairbairn, 2011; German, Schoneveld, & Mwangi, 2011; Nhantumbo & Salomão, 2010; Wily, 2011).

The recent surge for African farmland has brought additional stakeholders into the competition for the continent's arable land. In addition to the private sector (including agribusinesses, investment banks, hedge funds and commodity traders), food and water insecure states and sovereign wealth funds have become significant players over the past few years (Kelleher, 2011; Mittal, 2009; UN DESA, 2010). The new investors differ from the traditional investors in at least two main ways. Firstly, the new investors seem to be largely motivated by geopolitical and financial motives, rather than in the production of food for global and local markets (Collier &

¹⁷ The definition of "available" land is not uncontroversial.

Dercon, 2009; Mittal, 2009; Mullin, 2010).¹⁸ While food insecure states are likely to prioritize their own food security over host country needs, financially motivated investors are prone to turn their backs on planned projects if and when the world price dynamics change and make profit margins higher elsewhere (Oxfam, 2011). Furthermore, poorly developed investment projects may in part explain the low execution rates of proposed investments in recent years (Locke, 2009a). This shift in the drivers for land investment may not be in the interest of land-abundant development countries, which may wish to attract responsible investors with a long-term perspective, experience with farming and operations in developing countries and an understanding of the importance of sharing benefits with local populations.

The variety of stakeholders interested in African farmland suggests that there are significant opportunity costs linked to the decision of whose interests are prioritized. Linking national targets and legal frameworks which regulate FDI to rural development and poverty reduction strategies is necessary to ensure that investments are compatible with national needs and may contribute positively to the development of the countries in which they take place.

2.2 The link between agriculture and food security

More than 70 % of the African workforce is at least partially engaged in agriculture and depends to a great extent on the access to land and other natural resources for its livelihood (Ashley & Maxwell, 2001 in Fan et al, 2008). Most rural Africans are smallholders, with 69 % of farms being smaller than 2 ha, and a mean farm size of 2.4 ha (Eastwood et al, 2010). Food and nutrition security for many of these smallholders is strongly linked to their agricultural production. They are highly vulnerable to adverse weather conditions and natural disasters and risk seasonal food insecurity in the period between harvests (World Bank, 2007). Not only is food production a crucial source of their food supplies - the agricultural harvest is also the main source of income and livelihoods for most households (FAO, 2003).¹⁹ In cases where large-scale land investments result in the loss of land for local communities, this can have devastating effects for the targeted

¹⁸ Food insecure states in the Middle East, Asia and Europe have all sought deals with African states to secure access to arable land or binding commercial agreements with guarantees of long-term food supplies. Rising food prices combined with the reduced trust in financial products resulting from the global financial crisis has increased financial speculators' interest in the agriculture sector. Africa is frequently described as a continent in which high profits await risk-willing investors, and a rapid financialization of the agricultural sector has been reported in recent years (Brown, 2011b; Gillam, 2011; Knaup & von Mittelstaedt, 2009; The Oakland Institute, 2011a; UNCTAD, 2009).

¹⁹ Hunger is the direst manifestation of poverty and the link between agriculture and poverty is at least twofold. Growth of the agricultural sector, and especially increased food production may disproportionately benefit poor people because staple foods comprises a very large share of their total consumption (easy and cheap access will reduce their expenses), and because it will increase the income of the majority of poor rural people, who depend on agricultural production as their main source of revenue (FAO, 2003).

population, both by potentially reducing the actual food supply available to them and through the loss of their livelihoods (FIAN, 2010; Sen, 1990).

The recent surge in demand for African farmland occurred simultaneously with a growing realization of the general neglect of the agricultural sector in most African countries over the past decades (Mittal, 2009; WSFS, 2009). Investments in agriculture both by African governments and by donors have been relatively low compared to the level of investments in this sector on other continents. Many African countries spend far less on agriculture relative to the total budgets than the target set by the 2003 Maputo Declaration of Heads of State and Government of the African Union, which established that 10 % of the state budget should go to agriculture and rural development by 2008 (Mittal, 2009). While African governments have on average spent 4-5 % of their total budget on agriculture, Asian governments have spent the double (Fan et al. 2008 et al. in Fan, Johnson, et al., 2008). Furthermore, the share of foreign aid targeted towards agriculture has decreased from above 20 % in 1980 to current levels of about 5 % (Islam, 2011). The production increases realized in Africa in recent years have largely been due to expansion of the area used for farming, mainly as a consequence of population growth, rather than as a result of productivity increases (Deininger 2011; Smith et al. 2010 in German et al, 2011)²⁰. Average cereal yields remained fairly stagnant between 1961 and 2001 and were in 2001 only 1 tonne per hectare - three times lower than average cereal yields in the Asia-Pacific region (Jones, 2006). Regional trade in food and agriculture is also low compared to other regions, and has increased only slowly during the past twenty years, although the levels of informal cross-border trade are difficult to document (Dijk, 2011; Mucavele, 2011). Food imports to the region have increased over the past four decades, since domestic production could not keep up with population growth (De Graaff, Kessler, & Nibbering, 2011). Overall African cereal imports increased from 5 to 25 % of total consumption from the 1960s to the early 2000s (from 5 to 47 tonnes between 1961 and 2003), by which time food aid accounted for as much as 5 % of sub-Saharan Africa's cereal consumption (Betru et al., 2006). With this backdrop, it may not be surprising that about one third of Africa's rapidly growing population is food insecure (De Graaff et al., 2011).

2.3 An introduction to the debate – threat or opportunity

Africa has become the center of attention for a new wave of interest in global farmland, a phenomenon that paradoxically coincided with the recognition of a long-term neglect of the continent's agricultural sector. The close links between agriculture and food security in Africa, and large-scale land acquisitions' potential diversion of resources and land away from food production makes it a highly politicized issue. The debate so far has been quite polarized between

²⁰ 70% of the global increase in crop production between 1960 and 2005 was due to yield increases, 23% due to expansion of arable area, 8% intensification of cropping (Bruinsma (2009) in Deininger & Byerlee, 2010: 10). While global food production has increased by 145 percent in fifty years, Africa's food production as decreased by ten percent in the same period (Juma, 2011).

the proponents and the opponents of large-scale land acquisitions. See for instance Borras and Franco (2010a, 2010b), Braun and Meinzen-Dick (2009) or UN DESA (2010) for more in depth treatment of this topic.

Large-scale land acquisitions have the potential to bring sorely needed foreign investment (FDI) to African nations. The estimates of exactly how much money is at stake vary widely, but according to a conservative estimate by IFPRI, investments for 20-30 billion USD have been made on farmland in Africa in recent years (Braun & Meinzen-Dick, 2009). In comparison, net bilateral ODA to sub-Saharan Africa was 24 billion USD in 2009, the continent receive food aid for about 3 billion USD per year, and estimated annual diaspora remittances to Africa are 40 billion USD (IFAD, 2009; OECD, 2010; UPI, 2011). FDI can benefit the recipient countries both by increasing their foreign exchange reserves and by stimulating necessary development through providing local economic spillovers, trade benefits and access to new markets. By making productive use of under-cultivated areas, FDI can contribute to increased liquidity in rural areas and investments in crucial public infrastructure, such as roads, schools and health posts (Collier & Dercon, 2009). Furthermore, investments in the agricultural sector have the potential to create employment, facilitate technical transfers and modernize the agriculture sector to improve its productivity and increase its production (Schut, Slingerland, & Locke, 2010). *"Congo has been waiting for an investment initiative like this, the creation of thousands of jobs. More than anything else, the country is expecting abundant food since the South African farmers will produce crops and raise livestock"* (Pierre Mabila, Minister of Land Affairs and Public Domain, interviewed about a recent allocation of over 800,000 ha of land to 40 South African farmers, IRIN, 2011). Investors can facilitate access to markets for surrounding smallholders and reduce traditional agriculture's vulnerability to shifting weather conditions through increased input use (improved seeds) and investments in irrigation. In addition, through land- and or surplus taxes, FDI can contribute to increase the tax base in the host countries (Schut et al., 2010).

However, while the agricultural sector in most African countries is in sore need of investments to address infrastructural deficits and low productivity levels, the potential benefits of such investments are far from automatic and there are high risks associated with large-scale land acquisitions in developing countries (De Schutter, 2011). Recognizing that investors are likely to prioritize their own commercial or food security enhancing motives, concerns have been raised with regards to whether a win-win situation can be created or whether the poor, vulnerable communities will lose out as a consequence of such large-scale investments (Borras & Franco, 2010a). Governments in developing countries may value foreign investments and potential export earnings higher than customary land rights, and power-imbalances between large multinationals and poor, often illiterate peasant farmers are considerable (Braun & Meinzen-Dick, 2009; German et al., 2011; Nhantumbo & Salomão, 2010; The Oakland Institute, 2011a). Careful thinking must

be invested in how such imbalances can be rectified if ideals such as “voluntary and informed consent” to land sales by the local population are to have any meaning.²¹

One main concern is that large-scale investments may negatively affect local populations by displacing them from their land without adequate consultation or compensation (The Oakland Institute, 2011a). In countries where the majority of people are employed in the agricultural sector, separating people from their land without simultaneously creating opportunities in non-farm sectors is likely to aggravate poverty, unemployment and food insecurity (Oxfam, 2011). It may also exacerbate pressures on urban migration (UN DESA, 2010). Another key concern is that such investments may entail a reallocation of resources for infrastructure to benefit large-scale investments, rather than local communities (Locke, 2009a).

The opportunity costs associated with selling or leasing vast plots of fertile land to large-scale investors would need to be considered. Large-scale land acquisitions are likely to “*result in a type of farming which will have much less powerful poverty reducing impacts than if access to land and water were improved for the local farming communities*” (Collier & Dercon, 2009; De Schutter, 2011). Large-scale investors tend to favor highly mechanized capital-intensive agriculture, mainly intended for export, with poor linkages to local economic development (UNCTAD, 2009). Research has shown that a labor intensive growth model that aims to increase local food security and create employment, combined with a gradual structural transformation of the economy through the creation of non-farm employment in sectors such as agro-processing is often more appropriate for land abundant developing countries (De Schutter, 2011; Deininger & Byerlee, 2010). Experience in Malawi and Senegal has shown that, with limited public resources available, rather than attracting large-scale industrial investors whose main target is production for export, efforts could be concentrated on investments which benefit smallholder farming, which generates income on which a majority of the rural poor depend for their livelihoods (Haggblade & Hazell, 2010; Mittal, 2009; Resnick, 2004).

Large-scale land acquisitions may also have negative environmental impacts. Due to the limited legal frameworks and/or enforcement capacity of governments in the host countries, rigorous environmental impact assessments are in many cases not conducted and even more rarely made publicly available (Locke, 2009a; Nhantumbo & Salomão, 2010). This raises concerns of the possibility that such investments can threaten the ecological sustainability of land and water resources and may lead to long-term sustainability problems such as salinity, water logging and

²¹ As required by Mozambican law, and included in UNCTAD/FAO/IFAD/WB’s. The “Principles for Responsible Agricultural Investment that Respect Rights, Livelihoods and Resources” (“RAI Principles”) suggest the need for negotiations with land holders/users, based on “informed and free choice” (FAO/IFAD/UNCTAD Secretariat/World Bank, 2010). The Mozambican Land Law (República de Moçambique, 1997) also requires community consultation and consent to take place prior to the issuance of any land concession.

soil erosion. The introduction of intensive agricultural practices and the diversion of indigenous forests or rangeland to mono-cropping can threaten biodiversity, carbon stocks, above-ground and subsurface carbon stocks as well as land and water resources (Havnevik, 2011; UN DESA, 2010). Research has illustrated cases where large-scale land acquisitions have resulted in pollution of soil and waters as well as depletion of water resources to the detriment of neighboring communities (Braun & Meinzen-Dick, 2009).

2.4 Observed impacts of large-scale land acquisitions in sub-Saharan Africa

The most recent wave of investments is still ongoing. While it is too early to draw any final conclusions, a large and growing number of articles, civil society case-studies and academic literature provide sufficient insight to make some general observations. Some positive developments such as employment generation, increased government revenues and the construction of much needed social and other infrastructure to the benefit of local communities have been recorded as the consequence of some of the projects, though in general the provision of such benefits has fallen far short of expectations (Waterhouse, Lauriciano, & Norfolk, 2010). Notwithstanding these positive impacts, a high number of conflicts and controversies have also been reported (German et al., 2011; Hanlon, 2011; Nhantumbo & Salomão, 2010; The Oakland Institute, 2011a). In particular the negative impacts need to be analyzed, both in order to understand their causes and to suggest possible ways to minimize such impacts in the future. The focus is by no means an attempt to ignore that some positive outcomes of large-scale land investments have been recorded, nor to deny the possible development potential of such investments. It is however, a result of the observation of a significant number of negative consequences resulting from the recent wave of large-scale land acquisitions, which often stand in stark contrast to the reported intensions and high expectations of positive developments that frequently accompany such deals. In a comprehensive study on the effects of the recent land rush, the World Bank found that "*[p]rojects struggle to get off the ground, fail to generate employment and investment at the envisaged scale, and often end up neglecting both local rights and established social and environmental norms*" (Deininger & Byerlee, 2010:56). In a recent report, the High Level Panel of Experts on Food Security and Nutrition (HLPE/FSN) asked whether international investment in land could be "*a means to improve agricultural productivity and rural livelihoods*" and concluded that "*Evidence from this land rush to date shows very few such cases. Rather, large-scale investment is damaging the food security, incomes, livelihoods, and environment for local people*" (HLPE, 2011).

While a third of the population on the African continent is food insecure, the recent investments have not yet translated into improved food security or increased food production in the host countries. Of the several African countries which attracted large-scale investments in the agricultural sector, Ethiopia was the only which registered an actual increase in its food production, though this increase was negligible (L. Brown, EPI, quoted in The Guardian, 2011).

One reason why these investments have not translated into increased food production is the low level of implementation of these projects. Only an estimated 21% of the recently approved projects have begun actual farming, often on a scale much smaller than intended (Deininger & Byerlee, 2010). Furthermore, it seems that most of the new investments were not in food crops. Rather, some 63% of the recent investments were in non-food agricultural products such as biofuels (21%), industrial cash crops (21%) and conservation, game reserves, livestock and plantation forests (21%) (Deininger & Byerlee, 2010: 51). Based on the observed current characteristics of large-scale land investments, it is uncertain whether these investments will contribute to considerably alleviate the future food insecurity situation, even in the medium or long term.²²

The investments that are reported to have had negative environmental, social and political consequences have several characteristics in common. Most negative impacts are the result of conflicts of interest combined with glaring power imbalances between investors, national governments, local elites and local communities. *"The bargaining power is on the side of the foreign firm, especially when its aspirations are supported by the state or local elites. Smallholders who are being displaced from their land cannot effectively negotiate terms favorable to them when dealing with such powerful actors, nor can they enforce agreements if the foreign investor fails to provide promised jobs or local facilities"* (Braun & Meinzen-Dick, 2009). In Mozambique, farmers report that they were forced by the local authorities to cede 1,000 ha of farmland to the UK-based joint venture EmVest Asset Management, despite their claimed need for this land *"to feed their children and graze their cattle"* (The Oakland Institute, 2011b: 3). Farmers in Sierra Leone have similar accounts of how they in 2007 were *"forced to sign the binding agreement under duress"* of an area of about 10,000 ha with the Iranian company Sepahan Afrique (The Oakland Institute, 2011c: 36).

²² *"One key finding from the case studies is that, especially for investments started recently, progress with implementation is surprisingly limited, in part because many were approved in the 2008 boom (...) In fact, almost 30 percent are still in an exploratory stage; 18 percent have been approved but have not started yet; more than 30 percent are at initial development stages; and only 21 percent have initiated begun actual farming, often on a scale much smaller than intended"* (Deininger & Byerlee, 2010: 52). It may be reasonable to expect a time lag before the results of investments in agriculture materialize. This is especially true for investments are made in remote areas, where high levels of initial investments in public and private infrastructure are needed even before cultivation can take place. However, the observed lag in implementation was normally attributed to unanticipated technical difficulties, reduced profitability, changed market conditions, or tensions with local communities. *"Investors may thus have underestimated the complexity of agricultural operations, particularly the challenges associated with clearing land, establishing internal infrastructure, and linking to markets. It could also mean that the approval criteria applied may not have been sufficiently rigorous in situations where government is involved in screening projects and transferring land"* (Deininger & Byerlee, 2010: 67). Furthermore, it seems that most of the new investments were *not* in food crops. Indeed, 63% of the recent investments were in non-food agricultural products such as biofuels (21%), industrial cash crops (21%) and conservation, game reserves, livestock and plantation forests (21%) (Deininger & Byerlee, 2010: 51).

Lack of transparency is another key characteristic of many of the most controversial investments. The lack of adequate information about the extent of the ongoing deals, the value of land etc. prevents engagement from local communities, civil society organizations and other actors, and provides ample opportunities for graft, corruption and other misconduct. *"Land deal negotiations are unfolding fast and behind closed doors. But secrecy and haste are no friends of good deals. Rather than rushing into land contracts, governments should promote transparent, vigorous public debate about the future of agriculture in their country—and producer organizations must be central to that debate"* (Lorenzo Cotula, IIED, 2011).

Linked to the limited transparency are controversies resulting from limited local community participation and empowerment. When the inhabitants of the land in question are not consulted, inadequately informed, or incapable of fully understanding the practical and legal consequences of the offers they receive, the result may be unfair deals, which may ultimately result in long-term open conflicts to the detriment of all parties involved (Haselip, 2011). In 2008 the Libyan company Malibya was granted 100,000 ha of Malian farmland, free of charge and with extended water rights and a range of investment incentives, to grow rice and raise cattle to ensure food security for Libya. *"To date there has been no consultations with the farmers, and the Malibya project has not informed locals about how many people may be employed and what employment they will receive"* (La Republique du Mali, 2008; The Oakland Institute, 2011d). In Sierra Leone, when the Portuguese investor Quifel Agribusiness (SL) changed from the announced production of biofuels to trials of cassava, pineapple and rice, tensions grew within the local community, where people felt that they had given up their land on false premises (The Oakland Institute, 2011c). In Mozambique local communities have destroyed plantation forests and crops on areas under dispute (Hanlon, 2011).

Vague promises of "benefits" and employment coupled with inadequate or, in some cases, inexistent compensation to the local inhabitants for the loss of their land and livelihoods has been a source of many of the recent conflicts. In Sierra Leone, landowners who in 2008 gave up their 5-6 ha land plots to the Quifel project with the expectation of receiving land leases have yet to receive any money. In the same case, though employment was highlighted as a benefit for the 72,000 inhabitants within the lease areas, no documents with specifications of the quantified obligations of the investors exist. However, the land rent that the company has agreed to pay per ha is by far insufficient to compensate for the loss of income that the previous landowners made on these plots (The Oakland Institute, 2011c).

The lack of monitoring, enforcement and conflict resolution mechanisms is also a common source of controversy (Cotula, 2007). In Mozambique, despite the findings of a 2009 Land Audit that more than 50 % of the awarded projects were not operating as agreed, it is still rare that land user rights are cancelled (Deininger & Byerlee, 2010). Many investors are reported not to have honored their commitments to provide employment and other benefits to the local population. In the case

of Sepahan Afrique in Sierra Leone the landowners were promised annual rental fees of 20,000; 40,000 and 50,000 USD in the first three years respectively, as well as health centers, schools and water wells. To date, no rental fees have been paid and the development promises have yet to materialize (The Oakland Institute, 2011c). Low state capacity and underdeveloped legal systems in the host countries may limit the authorities' capacity to sanction such noncompliance (Nhantumbo & Salomão, 2010; República de Moçambique, 2011a). Oxfam (2011) reports of a conflict in Uganda between two local communities and the UK-based New Forest Company, where more than 20,000 people were forcefully evicted without any form for compensation. Despite taking the case to the Ugandan High Court, which granted an order restraining further evictions pending the results of the court hearings, Oxfam reports that evictions continued to take place.

Lenient legal practices combined with low prices of land could also be a factor contributing to the low level of implementation from the latest wave of investments (Deininger & Byerlee, 2010). Africa is by some investors perceived as "the last frontier" and land can be acquired at a low cost. This led to a rush to secure the rights to as much land as possible while costs were still low. Texas-based Nile Trading and Development Inc. leased 600,000 ha (with a possible extension of another 400,000 ha) for 75,000 Sudanese Pounds, which translates into 0.41 USD per ha. For this price, the company was granted full rights to exploit all natural resources on the leased land. The lease agreement was signed by one community chief, in the presence of one lawyer and one judge (Oxfam, 2011; The Oakland Institute, 2011e). Ethiopia, a major recipient of food aid, has recently offered several billion ha of high quality farmland at low prices to Indian companies (Vidal, 2010). In Madagascar, South Korea's Daewo Logistics Corp. received a 99-year lease to cultivate 1.3 million ha land "at minimal up-front costs, in exchange for job and infrastructure creation" (Gower, 2009). Speculative investments may be based on highly volatile global prices for agricultural produce and oil. Consequently investment plans may be altered with changing world prices, leaving the acquired land unused. There appears to be a preference among some investors for countries with weak recognition of land rights (Oxfam, 2011: 55).²³ However, weak policy, legal and institutional frameworks are likely to foster conflicts, and reduce a country's attractiveness for serious investors of the kind that the continent may want (Deininger & Byerlee, 2010: 97). Thus it seems that by strengthening its legal framework, its institutions and its land- and agriculture-related policies, a country's attractiveness to serious investors increases, while it may become less attractive for speculators.

²³ The World Bank (2010) notes that low recognition of land rights increase a country's attractiveness for land acquisition, yet the attractiveness of low recognition of land rights is halved for projects where investments were actually implemented. "This could either mean that, in these environments, more challenges need to be overcome to successfully implement projects or imply that these countries attract investors who are less able or willing (for example because they are interested in more speculative land acquisition) to put together projects that can actually be implemented on the ground" (Deininger & Byerlee, 2010: 55).

If properly addressed, the challenges that contributed to recent land conflicts can be tackled. Power asymmetries, limited community participation, weaknesses in monitoring and enforcement mechanisms can all be addressed through holistic, long term planning, improvements in the legal framework and capacity building of both national and local governments, civil society organizations and local communities. In the long-term, investors can become more responsible and adherence to an international code of conduct can separate serious from irresponsible investors. However, such solutions require time; solid institutions with monitoring, enforcement and sanctioning capacities; capacitated local communities, civil society and media; resources and, most importantly; political will. A number of the deals take place in failed states, or states with limited traditions for political accountability. There are also concerns of conflicts of interests between political elites and the populations they are meant to serve, and a number of cases have been reported where the government and ruling elites tend to side with the foreign investors against the local population (Deininger & Byerlee, 2010; German et al., 2011; Nhantumbo & Salomão, 2010; Wily, 2011).

Investments in the agricultural sector have the potential of bringing a number of significant benefits to local communities. However, an active effort by the government is required to ensure that the necessary conditions for the realization of such benefits are in place. The opportunities have so far proved difficult to materialize, whereas the risks are immediate and often irreversible. Regardless of the right conditions created; there remains a need to assess the opportunity costs of large-scale land acquisitions compared to alternative uses of the same land and resources. While these investments may bring benefits, they are not necessarily the preferred development model for all countries. Investments in farmland expansion are costly and entail high economic, sociopolitical and environmental risks. Even serious investors need certain minimal conditions to operate (access to market, basic infrastructure), and cannot magically create large numbers of jobs and be competitive on remote infrastructure-stripped land areas without support (Alberts, 2001). The diversion of limited public resources away from small-scale producers to support larger enterprises may have a less-than-desired poverty reducing impact. Efforts to ensure productivity increases may be preferable to land expansion at this point in time.

There is an urgent need for the countries which are targeted by the increased investor demand to develop mechanisms which ensure that potential transfers of farm land take place in a transparent and fair manner, in accordance with national and international legislation and with the best interests of the affected local communities, national development and food security priorities in mind. To achieve this, it is essential to empower local communities and promote their

participation in all phases of the land allocation process. Until such mechanisms are in place, new investments should be approached cautiously.²⁴

3. Large-Scale Land Acquisitions: The Case of Mozambique

3.1 *The Mozambican context*

Mozambique is a predominantly rural country with a vast majority of its population depending (partly or fully) on subsistence agriculture for their livelihoods (INE, 2010; República de Moçambique, 2011). Despite significant achievements in both poverty reduction and non-monetary development indicators during the two decades since the end of the war, huge development challenges persist. Mozambique remains among the world's least developed countries according to the Human Development Index, ranking number 184 of 187 countries in 2011. More than half the population lives below the national poverty line and malnutrition remains widespread (UNDP, 2011).

Agricultural productivity in Mozambique is low even by regional standards and the agricultural sector faces a number of challenges (INE, 2011). Among them are high transportation costs; the lack of access to credit and risk insurance; poorly developed infrastructure; lack of access to productivity enhancing inputs, technology and extension services. Addressing these challenges in an effective manner has the potential for improving agricultural production and creating positive externalities including reduced rural poverty and increased food security.

In order to reduce poverty and vulnerability in Mozambique the government has pledged to increase agricultural production and productivity and to focus on employment creation (República de Moçambique, 2011b). In 2011 a new agricultural sector strategy was approved and the government pledged to spend 10% of the GDP on agriculture (República de Moçambique, 2011a). Simultaneously, the interest for the country's farmland is on the increase. Mozambique has been singled out as one of the countries "*where most land is available and where investors have shown more interest*" (Deininger & Byerlee, 2010)²⁵.

Estimates indicate that at most 6 million ha of a total of 36 million ha of Mozambique's potentially arable land was cropped in 2005 (FAO in Deininger & Byerlee, 2010; INE, 2011; Uaiene, 2011).²⁶ This may seem to suggest that significant amounts of suitable land are available for

²⁴ In March 2011 Norwegian People's Aid suggested that the government of South Sudan should consider a temporary ban on large-scale land acquisitions until institutions are established (The Oakland Institute, 2011e).

²⁵ "(T)he seven countries with the largest amount of land available (Sudan, Brazil, the Russian Federation, Argentina, Mozambique and Democratic Republic of Congo) account for 224 million ha, or more than half of global availability (Deininger & Byerlee, 2010: 79). The definition of "available" land is not uncontroversial. For more on this, please see box 3.1.

²⁶ According to the preliminary results of the recently conducted Agriculture and Livestock Survey, the cultivated area grew by 45 % from 3.9 million ha in 1999 to 5.6 million ha in 2009 (INE, 2011).

cultivation. For a low-income country with severe malnutrition and food insecurity problems, there is clearly a large unrealized potential for increasing agricultural production. With a sustainable and pro-poor development strategy, the existence of an abundance of hitherto “unused” fertile land could help address many of its current development problems. However, as box 3.2 indicates, when factors such as alternative land use, protected areas such as natural reserves, existence of basic infrastructure and distance to roads and markets are accounted for, the estimates of “available and suitable” land shrink quite considerably. Evidence arising from reports on the recent investments shows numerous cases of conflict between local communities and large-scale investors, which suggest that large-scale investments are not always occurring on virgin or marginal land, but in many cases take place in inhabited areas with good transport conditions, infrastructure levels and soil conditions (Hanlon, 2011; Oxfam, 2011).²⁷ Cases of displacement without compensation and appropriation of vital natural resources such as water by the new investors at the expense of subsistence farmers are among the reported impacts of the investments conducted between 2004 and mid-2009 (Hanlon, 2011). This suggests that despite the apparent abundance of available land in Mozambique, which may seem to enable the coexistence of a dual agriculture with large-scale investors operating on one hand and small-scale farmers on the others, in many cases the same stake holders are fighting over the same resources in the same areas, creating conflicts of interest and situations where crucial resources needed by subsistence agriculture are diverted away from the local farmers to the benefit of the large-scale investors. Although the investments undoubtedly have environmental, social and political consequences as well, the main focus of this analysis is on the observed short-term consequences for food security and employment, two of the most pressing concerns for the Mozambican Government (República de Moçambique, 2011b).

²⁷ DNTF listed 78 cases of conflict in 2008, with 76% of these occurring in the provinces of Tete, Cabo Delgado and Zambezia (Nhantumbo & Salomão, 2010). CFJJ (Centro de Formação Jurídica e Judiciária) has listed over 300 cases of conflicts in the past 5 years (Hanlon, 2011).

Box 3.1 “Unused’ Land”

Estimations of “marginal”, “potentially arable”, “uninhabited”, “idle”, “available” or “unused” land should be treated with great care. There is no global consensus on a definition or calculation of available quantities of unused land. Different stakeholders use different definitions to justify their positions on this highly politicized topic. Classifying land as “potentially available” may conceal crucial information on the quality and geographic location (not all land is equally valuable) and may give the misleading impression that much larger areas are available for farming than what is actually the case.

The World Bank defines “*potentially available*” land as the: “*currently noncultivated area suited for cropping that is nonforested, nonprotected, and populated with less than 25 persons/km²*” (Deininger & Byerlee, 2010) and estimates that the global total of such land is 446 million ha. This estimate masks both supply and demand issues which constrain the use of this land.

On the supply side it is important to note that non-cultivated land is not necessarily neither “vacant” nor “available”. Traditional agricultural practices are often extensive and communities shift their agricultural production between cultivated and fallow land over a cycle of years (Tanner, 2011). In addition, the uses of non-cultivated land by the local population can be multiple, including pastoralism, collection of firewood and access to water sources. Despite their value as crucial livelihood sources for the poor, these uses tend to be undervalued in official assessments because they are not marketed (Braun & Meinzen-Dick, 2009). Non-cultivated areas can also be unsuitable for expansion due to their valuable agro-ecological endowments and unique biodiversity. One should also factor in the need to set land aside for future development for present and future community generations (Nhantumbo & Salomão, 2010).

On the demand side a key finding is that much noncultivated arable land with low population density is located far away from markets and lacks essential infrastructure (Deininger & Byerlee, 2010). Significant initial investments in infrastructure are necessary before economically viable projects are possible on such land, making it far less attractive to investors. The distance to existing infrastructure and the socioeconomic and environmental costs of developing these areas may by far exceed the potential benefits.

If such constraints are not addressed in overall estimates of “potentially available” land, it may seem that the potential for conflict over land is far less that what is the case (Oxfam, 2011). While large tracts of theoretically farmable land do exist, much of it is in fact currently unsuitable because of its remote location or rich biodiversity which warrants protection. It is the land which remains when all these considerations are accounted for which is attractive to investors, and this area is far smaller that what current estimates imply. The best land is always disputed, and opportunity costs for different land uses must always be factored for. Mapping and agro-ecological zoning exercises are important and will confirm this if they are properly done and combined with information on settlement patterns, land use etc.

3.2 The agricultural sector in Mozambique

69 % of the Mozambicans live in rural areas (INE, 2010). Agriculture account for 24% of the GDP (Uaiene, 2011) and 79% of the labor force (INE, 2006). The agriculture sector grew by more than 7% per year between 2003 and 2009 (Uaiene, 2011). The World Bank classified Mozambique as a country with much “*suitable land available*” but with a “*high yield gap*” (Deininger & Byerlee, 2010: 89). Most of the agriculture is low productivity subsistence production, but 841 large (above 50

ha) commercial farms are also in operation (INE, 2011).²⁸ Major food crops are maize (51%), cassava (37%) and sorghum (2%) (Uaiene, 2011). Rice and ground nuts are also common food crops. Food crops occupy 57% of the cultivated land area; while cash crops occupy 5.7% and horticulture 6.7% (INE, 2011). The vast majority of the 3.8 million Mozambican farms are small. 99.6% of the farms cover less than 10 ha, and about 72% are smaller than 2 ha (INE, 2011), but in recent years there is a clear trend of increased investor interest for larger areas: 60 % of the land allocated in 2009 was for projects of more than 10,000 ha, which clearly illustrate a new trend of “mega investments” (Tanner, 2011). Agricultural yields in Mozambique are among the lowest in the world, with current production performing less than 25% of what is considered the full potential output (Deininger & Byerlee, 2010). The maize yields are on average 0.92 tonnes per ha, which is less than a tenth of potential yields (Mucavele, 2011).²⁹ The low cereal yields are in part explained by very low levels of input. In 2007 less than 4 % of the farms used fertilizer; only 13 % had irrigation; 3-10 % used improved seeds, and a mere 7% used pesticide. Levels of animal traction (12%) and machinery use (only 1.6% of farms reported the use of tractors and 1.8% the use of ploughs) were also low (INE, 2011; Uaiene, 2011).³⁰ The agricultural labor force has a low skill-base. The national mean years of schooling is only 1.2 years and 40.3% of rural households are illiterate (INE, 2011; UNDP, 2010). Mozambican agriculture is also highly vulnerable to climate change, which is likely to increase the pressures on land, water and other natural resources in the future.³¹

Agricultural food production is mainly concentrated in the Central and Northern regions. The provinces of Nampula and Zambézia alone account for 43% of the farms and nearly 40% of the

²⁸ The smallholders are responsible for 95% of total agricultural production in Mozambique. The remaining 5% is produced by approximately a few hundred commercial farmers, who mainly concentrate on cash crop for export (sugar cane, tobacco, tea, citrus and livestock). According to TIA 2008, 24.1% of the smallholder households are headed by a woman (República de Moçambique, 2011a).

²⁹ Most crop yields are far below their potential. Maize yields are 0.9 t/ha, versus a maximum potential of 5.0-6.5 t/ha. Cassava yields are 5.5 t/ha, versus a maximum potential of 5.0-10.0 t/ha, Sorghum yields are 0.6 t/ha, versus a maximum potential of 0.8-2.0 t/ha. Pulses yields are 0.45 t/ha, versus a maximum potential of 0.3-2.5 t/ha and groundnut yields are 0.9 t/ha, versus a maximum potential of 2.5-6.0. About 3.3 million ha can be irrigated, compared to the current irrigated area of 114,000 ha (0.13%) (Mucavele, 2011).

³⁰ Comparisons between the TIAs for the 2001/02 and 2008/09 cropping seasons show a decline in use of agricultural input. Fertilizer use went from 3.7 % to 3.5%, Pesticide from 6.7 % to 5.1 % and animal traction from 11.2% to 8.6 %. According to preliminary results of the Agricultural and Livestock Survey (CAP) by INE (2011), the levels of input are even lower: Only 5.3 % of farms use irrigation, 3.7% use fertilizer and 2.5% use pesticides. The national numbers mask huge geographical disparities with regards to the use of inputs. While 24% and 9.8% of the households in the provinces Tete and Maputo City respectively reported fertilizer use, the corresponding use was only 2.7% in Nampula and 1.3% in Zambézia (INE, 2011; Uaiene, 2011).

³¹ *“Food security and nutrition in Mozambique are strongly linked to environmental conditions. Both flooding and drought cause extensive agricultural losses to households dependent on subsistence farming. Over 70 per cent of the population rely on rain-fed agriculture, making the country particularly vulnerable to the water stresses that occur regularly, though not always in the same places or at the same time. For example, in 2001-2002, droughts in southern Mozambique caused the loss of about one third of the expected harvest, leading the Government to request additional international aid to feed some 650,000 people”* (UNICEF, 2011b, 2011c).

total cultivated area. Incidentally, these provinces are also the most populous provinces in Mozambique, accounting for 38 % of the national population (INE, 2010). Two areas that are particularly attractive for agriculture are the fertile Zambezi river valley and the “Beira Corridor”, the latter due to its relatively well developed road and railway infrastructure, and the proximity to the port of Beira. The agricultural potential is lower in the South due to less abundant natural water resources, but potentially more attractive for investors due to its comparatively high levels of infrastructure. The production of biofuel (assumed to need less water) has been promoted in these areas (Hanlon, 2011).

In addition to the low levels of irrigation and input use, the agricultural sector faces huge challenges due to the lack of access to credit and insurance³² and high transport costs (Arndt et al., 2010; República de Moçambique, 2011a; Uaiene & Arndt, 2009). Mozambique is large and scarcely populated, with an underdeveloped transport network. While the capital city of Maputo is situated in the far South, close to the border with South Africa and Swaziland, the most fertile areas are in the Centre/North. Excellent road conditions, short distances and modern farming methods in neighboring South Africa makes it challenging for Mozambican smallholders to compete with South-African large-scale producers for market shares in the capital. Much existing cultivated land and even more of the land “available” for area expansion is located far from markets. Mozambique’s road density of 0.04³³ is among the lowest in the world and the few railways lines that exist were constructed during colonial times and are not able to connect most farms to the markets (ANE, 2011; CFM, 2011; INE, 2010; República de Moçambique, 2011a).

³² Only 12% of the Mozambican population has a bank account (FinScope, 2009), and although the banking sector is rapidly expanding throughout the country, this has yet to translate into a significantly increased offer of credit for small-scale farmers. Credit for rural enterprises is still very limited, and in all practical terms inaccessible for subsistence farmers. 86.5% percent of rural Mozambicans were found to be excluded from financial services (banking, savings, credit and insurance), according to a 2009 survey (FinScope, 2009). Mozambique is one of the countries most exposed to natural disasters and the effects of climate change, which makes addressing the issue of insurance crucial to increase investment. 95.4 percent of the population is without insurance (FinScope, 2009).

³³ Road density is a measure for kilometers of road per square meters of land area. The authors used publicly available data on the road network and land area to calculate the road density for Mozambique (ANE, 2011; INE, 2011).

Box 3.2 Available and suitable land for large-scale investments in Mozambique

Mozambique has a total area of 80 million ha of which an estimated 45% is potentially arable and less than 6 ha is currently productively used (Tanner, 2010b). The Ministry of Agriculture estimates that there is about 15 million ha of *available* arable land in Mozambique (Deininger & Byerlee, 2010). The World Bank classifies Mozambique among the countries in which areas of noncultivated land area larger than the total area of currently cultivated land and estimates that there is 16.3 million ha of “available” land, using the definition from box 3.1 (Deininger, 2011). However, the results of a recent zoning exercise show that only just below 7 million ha is available and suitable for large-scale land-based economic activities, of which 3.8 million ha for agriculture, including biofuels (INE, 2011; Nhantumbo & Salomão, 2010). The estimate of 7 million ha may be an underestimation because it excludes all areas with established DUATS (formalized land use rights), many of which are un- or underutilized and can be cancelled and redistributed by the government. By excluding areas with defined DUATs one also risk overlooking the possibilities for partnerships between local land holders and potential investors (Tanner, 2011). On the other hand, the 7 million ha may also be an overestimation, since it fails to account for the very low number of communities that have had their land formally delimited.* Since both the Mozambican Constitution and the 1997 Land Law recognize local populations’ customary land rights, much of the land which is not under DUATS may still belong to communities (Tanner, 2002). Although partnerships between local communities and investors are encouraged, the failure to account for customary rights in zoning and mapping exercises may lead to conflicts, as investors move to acquire land which is already in use. Lastly, though theoretically “available” much of the available land may be located in remote areas with poor transport links and low levels of infrastructure, making it much less “usable” and attractive to investors and local producers alike (Deininger, 2011; Kaarhus, 2011).

The result of the 2007-08 zoning exercise suggests that the amount of suitable and available land in Mozambique is far lower than previously thought, which underlines the need for a determination of the real opportunity costs of different land uses and increases the urgency of strengthening the mechanisms for sound land management by the government**. The 2.7 million ha of land which were transferred for large-scale agricultural projects between 2005 and 2009 is a considerable amount in the light that only a remaining 3.8 million ha is estimated to be available for further expansion.

**Only twelve percent of the 70 million ha which is estimated to be controlled by local communities in Mozambique has been demarcated. However, the total area over which land use titles that were given to investors overlapped areas previously delimited in the name of communities amounted to at least 1.4 million ha in 418 cases (about 20% of the total), raising concerns about potential conflicts (Deininger & Byerlee, 2010: 63; Hanlon, 2011). Between 2007 and 2010 no community delimitation certificates were issued (Fairbairn, 2011; Hanlon, 2011).*

*** A second and more detailed land zoning exercise is currently under preparation (Nhantumbo & Salomão, 2010).*

Mozambique is highly dependent on food and fuel imports. The import bill for fossil fuels rose from 400 million USD in 2006 to 700 million USD in 2007 (Locke, 2009b). The national cereal production for the 2009/2010 agricultural season was 2.49 million tonnes, compared with a national consumption of 2.6 million tonnes in 2007. In 2007 national food production covered around 70% of food needs in rural areas, compared to less than 20 % in urban areas. The remaining food needs were covered through market purchases and food aid (European

Commission, 2007; FAO, 2010b). While the national production of maize and cassava is high, the country is largely dependent on imports for wheat and rice. Mozambique received 160,000 tonnes food aid from WFP in 2009 (WFP, 2011). The estimated cereal import needs for 2010/11 (April-May) were projected at 919,000 tonnes, a slight increase from the year before (FAO/WFP, 2010). Due to the high import needs, state finances are highly sensitive to volatile global food prices and to currency fluctuations, especially between the national Metical and the currencies of its main trading partners, the South African Rand and the USD. The State Budget for 2011 was revised in May 2011, due to the need for additional resources to finance the increasing costs of wheat and fuel subsidies, caused by record world prices (Afrique Avenir, 2011; Macahub, 2011; República de Moçambique, 2011c).

As described above, a number of constraints prevent the full realization of Mozambique's agricultural productivity potential. This suggests that increased investments in farmland expansion through large-scale land acquisitions without addressing these constraints will not in itself contribute to solve the underlying reasons for the country's low agricultural productivity. Prior to further area expansion, identifying, understanding and addressing such productivity constraints should be prioritized.

3.3 Scale and scope of large-scale land acquisitions in Mozambique

As discussed above, investor interest in Mozambique has increased significantly in recent years due to increased global demand for land combined with estimates of large tracts of land "available", low labor and land prices and donor-backed government efforts to attract foreign investors (Deininger & Byerlee, 2010; Hanlon, 2002).³⁴ Attracting FDI through offering large land tracts to foreign investors for mining, production of biofuels, tourism and other purposes was seen as a potential driver for development for the impoverished country (Hanlon, 2011).³⁵ By 2009 the government had received investment proposals for a number of biofuel projects totaling nearly 3 billion USD. *"Such a level of investment is very attractive for the government, particularly the expectations of job opportunities, increased revenue collection and contribution to the balance of payments through increased export earnings"* (Nhantumbo & Salomão, 2010)³⁶.

³⁴ Mozambican farmland is considered cheap by investors. Tax levels have been symbolic, and less than 30% of taxes were collected (Deininger & Byerlee, 2010; Hanlon, 2011). While taxes were as low as USD 0.08 (for livestock and game ranches), USD 0.60 (for agricultural production) and USD 8.0 (for tourism) per ha per year, "land expectation value" for such land in Mozambique could be as high as USD 9,750. 34 (Deininger & Byerlee, 2010; Hanlon, 2011). Less than 30% of the taxes were collected (Deininger & Byerlee, 2010: 108).

³⁵ For information on the investments in the Mozambican mining sector, see for instance Castel-Branco (2010).

³⁶ A study made as a preparation to the National Policy and Strategy of Biofuels (República de Moçambique, 2009) indicated that biofuels could increase revenue and generate jobs but also entailed socio-economic risks especially with regards to food security and local land rights. The study also highlighted the risk of biofuel competing with food production and recommended that marginal land was allocated to the former (Nhantumbo & Salomão, 2010).

During the period between 2004 and mid-2009 the government granted at least 405 concessions for 2,670,000 ha to investors in Mozambique (Deininger & Byerlee, 2010: xxxiii).³⁷ Interest in Mozambican farmland by the large-scale investors has been particularly strong for biofuel production. By 2009, requests for land to produce biofuels feedstock (sugarcane for ethanol and jatropha for biodiesel) exceeded 20 million ha (Arndt, Benfica, & Thurlow, 2010), whereas “comparatively little” land was allocated for the production food crops (Deininger & Byerlee, 2010; Tanner, 2011). According to Kachika (2010), less than ten percent of the land approved for agricultural investments between 2007 and 2009 were for food crops. Most of the large land concessions were in the North and Central regions (Hanlon, 2011). Foreign investors accounted for 47.5% of the investments while domestic investors acquired the remaining 52.5 %.³⁸ The medium size of the granted investments was 2,225 ha. Additional proposals for at least another 1.27 million ha are still being evaluated (Deininger & Byerlee, 2010).

Despite its goal of attracting investments, the government was not prepared for the significant rise in the number of requests (Nhantumbo & Salomão, 2010). Strong external pressures for quick land transfers combined with limited administrative capacity both at central, provincial and local levels may in part explain the rushed approval of many large-scale investments, despite the strong customary land rights protected by the Land Law and an increasingly active and vocal national and international civil society (Hanlon, 2011).³⁹ As was observed in the rest of the region, low degrees of transparency, large power imbalances and vague and non-enforceable promises of benefits from the investors to the local communities characterized many of the deals (Deininger & Byerlee, 2010; Nhantumbo & Salomão, 2010; Waterhouse et al., 2010).

³⁷ This number is based on publicly reported transfers and is likely to be an underestimation. As with the global estimates of the scale of the recent land acquisitions, there is significant uncertainty attached to the accuracy for Mozambique. The Mozambique land directory only records projects involving more than 1,000 ha. It does not provide any data on smaller projects, where permissions are granted at the provincial level. There have been recordings of cases where investors have submitted several smaller proposals simultaneously, in an attempt to avoid scrutiny. The WB noted a forestry project which involved simultaneous submission of six land applications for a total of 28,000 ha to avoid the need for authorization by the Council of Ministers (Deininger & Byerlee, 2010: 126). According to the national investment agency, during 2009 informal requests for 13 million ha was received in less than one year, an estimate which is confirmed by FAO (Deininger & Byerlee, 2010: 148; Tanner, 2011). According to the Global Land Project, a minimum of 10 million ha has been acquired in Mozambique in recent years, while Friends of the Earth estimate that between 5 and 12 million ha, or about 1/7 of the country’s arable land was acquired for biofuels in recent years (Palmer, 2011(Friends of the Earth Europe, 2010).

³⁸ However, if counted by the number of investors, rather than size of land, 67.7% of the requests were by domestic investors. The average requested size by the domestic investors was smaller than the foreign investors (Deininger & Byerlee, 2010: 63). However, it should be noted that local businesses may act as fronts for foreigners, so the share of land acquired by foreign investors may be higher than what this estimate indicates.

³⁹ One of the general findings from the analysis of the publicly available land directories in 14 countries, including Mozambique, was that the “[l]imited data sharing and inconsistencies in record keeping implied an astonishing lack of awareness of what is happening on the ground even by the public sector institutions mandated to control this phenomena” (Deininger & Byerlee, 2010: 3).

Based on a sample of projects, a 2009 land audit concluded that more than 50 % of the granted projects had not started at all, or were considerably behind their scheduled development plans (Locke, 2009a). The World Bank, which conducted three case studies on large-scale land acquisitions in Mozambique, had difficulties identifying project which were operating according to schedule: "*Progress with implementation is surprisingly limited (...) In Mozambique, Tanzania and Zambia it was difficult to identify any projects operating on the ground. (...) None of the biofuel projects [in Mozambique] were operating at the envisaged scale, and all of them reported 3-5 year delays*" (Locke, 2009: 67). This is despite the fact that the 1997 Land Law requires that activity must commence within 120 days of project approval.⁴⁰

As a reaction to the dramatic increase in applications for land, Mozambique reversed its policy of attracting investors, from investment facilitation towards investment selection (Locke, 2009b). The issuance of new land titles was temporarily halted and a moratorium was issued on allocation of land for biofuels from October 2007 to May 2008, while a land zoning exercise was conducted (Locke, 2009b; Nhantumbo & Salomão, 2010).⁴¹ The links between the approval of investment proposals and applications for land titles, which previously had been separate, were strengthened, and applicants for DUATS were required to submit more detailed proposals (MINAG, 2010; Waterhouse et al., 2010). The result of the first agro-ecological zoning exercise to map available and suitable land, with the scale 1:1,000,000, showed the need for a more fine-tuned exercise, so the government is currently conducting a second zoning exercise at the scale of 1:250,000 (Deininger & Byerlee, 2010; Hanlon, 2011). "*The 2008 zoning indicated that the country has only about 7 million ha available for allocation to land-based economic activities, including biofuels. This is a smaller area than was expected*" (Nhantumbo & Salomão, 2010: 24).⁴² The results of the second zoning are expected in 2012 (AIM, 2011). The governments' shift in policy may be a sign of the high political costs of food insecurity and land conflicts (Hanlon, 2011). In February 2011 President Guebuza met with representatives of the Civil Society to discuss land grievances (Wily, 2011).

⁴⁰ An extension for an additional 120 days can be granted if a minimum of 5% of the investment value is deposited (Deininger & Byerlee, 2010: 118).

⁴¹ The Agricultural Promotion Centre, CEPAGRI, was created in 2006, with a mandate to issue opinion notes on investment proposals. More information was required from potential investors (Ministério da Agricultura, 2010).

⁴² The result of the first zoning exercise found that there was just below 7 million ha land available for large-scale agricultural activities in Mozambique. Of this, 3.8 million ha (54%) was suitable for agriculture (biofuels, etc.) and 3.2 million ha (46%) was suitable for "other purposes". In this zoning exercise, land under formalized DUATS (land use and benefit rights) was considered as not potentially available (Ministério da Agricultura, 2010). This is problematic for two reasons: First because local communities which hold DUATS can be potential partners for investors, and may benefit from properly implemented investment deals, which is in line with the intentions of the 1997 Land Law. Secondly because large land areas held under DUATS are un- or underutilized. The legislation enables the government to cancel user rights for unused land, but this has only been done in certain cases. Capacity reasons at the government level, as well as the often powerful economic and political status of the landholders are often listed as the main reason for this (Nhantumbo & Salomão, 2010).

3.4 Food security and under nutrition in Mozambique

While the Mozambican poverty rate is 54.7%, the rural poverty level is even higher and increased from 55.3% in 2002-03 to 56.9% in 2008-09.⁴³ IFAD's Rural Poverty Report 2011 describes Mozambique as a country with a "high level of hunger and slow progress in resolving it" (IFAD, 2011: 51). The levels of malnutrition have improved in recent years, but remain alarmingly high. An estimated 8.1 million, or 38% of the population (average 2005-07, FAO, 2011) are undernourished and as many as 44% suffer from chronic malnutrition – which places Mozambique among the countries with the highest levels of malnutrition in Africa (WFP, 2011b). The country scores 23.7 points and is classified as "alarming" on the Global Hunger Index (International Food Policy Research Institute (IFPRI), 2010).⁴⁴ The Mozambican MDG 1.3, to reduce by half the proportion of people who suffer from hunger by 2015 (compared with 1990) can "potentially" be met (República de Moçambique, 2010). These national figures mask large geographical disparities.

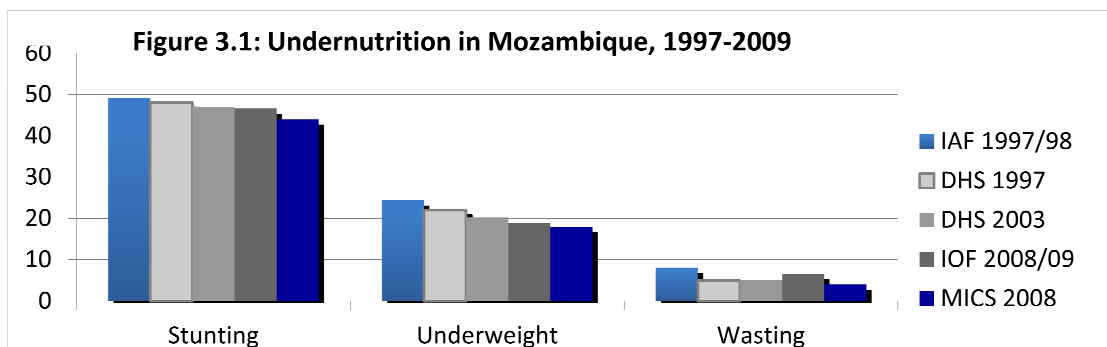
⁴³ According to some estimates, rural poverty levels are even higher; at 65% in 2008/09 (van den Boom, 2011). These poverty estimates are according to the national poverty line, of 18 Mzn per day. If measured by the USD 1.25 a day poverty line, 68.2 % of Mozambicans were poor, and 86.6% of Mozambicans lived on less than USD 2 a day in 2005 (World Bank, 2011b).

⁴⁴ The GHI is a combined measure that combines three indicators: level of child malnutrition, rates of child mortality and the proportion of people who are calorie deficient (IFPRI, 2010).

Box 3.3. Undernutrition and food security in Mozambique.

Undernutrition is the result of prolonged low levels of food intake and/or low absorption of food consumed. It is generally applied to energy (or protein and energy) deficiency, but may also relate to vitamin and mineral deficiencies. The major manifestations of undernutrition are:

- *Underweight* (low weight for age). Generally the result of a combination of acute and chronic undernutrition. The Mozambican level of underweight is “moderate” according to WHO.
- *Wasting* (low weight for height). Often a symptom of recent acute periods of hunger and or disease. The Mozambican level of wasting is “moderate/low” according to WHO.
- *Stunting*, or chronic malnutrition (low height for age). Chronic malnutrition is an extremely important indicator of both the current state of a country’s human development and its future economic productivity. Chronic malnutrition has irreversible, long-term impacts on an individual’s life, as well as the economy and the future skill-base of the country in which it occurs (FAO, 2003). The Mozambican level of stunting is classified as “very high”.
- *Micronutrient deficiencies*.



Although undernutrition the result of a variety of factors, one of the main underlying causes is food insecurity*. In Mozambique studies have shown a strong relation between the subjective measures of food insecurity and child undernutrition indicators based on short-term food deprivation such as wasting/underweight (UNICEF, 2011a). Research has also confirmed strong links between poverty and malnutrition/food insecurity in Mozambique. Although undernutrition affects all wealth quintiles, the prevalence of stunting among children under five was 49% among the poorest quintile, compared to 20% among the richest quintile (INE & MISAU, 2005).

Widespread and high levels of chronic malnutrition and recurrent seasonal food insecurity are sources of great concern at the country level. Mozambique’s Multisectoral Action Plan for the Reduction of Stunting aims to reduce the level of stunting among children from 44% in 2008 to 20% in 2020. The action plan complements other relevant plans and strategies such as the Food and Nutrition Security Strategy and the Plan for the achievement of the MDG 4 and 5. The recently approved agricultural sector plan aims to eradicate food security in five years (República de Moçambique, 2011a).

**Other underlying causes include inadequate diet, disease, maternal health and inadequate child caring practices.*

Sources for this box: (FAO, 2011b; UNICEF, 2011a, 2011b, 2011c; WHO, 2011).

Undernutrition is worse in rural than urban areas. The Northern region has the largest average rates of undernutrition, while the Southern region has the lowest (UNICEF, 2011a). Stunting rates, which are a sign of chronic malnutrition are particularly high in Zambezia, Nampula, Cabo Delgado and Tete (UNICEF, 2011a). The levels of self-reported food insecurity coincide to a large degree with recorded levels of undernutrition in Mozambique. According to the latest national agriculture and livestock survey, 42% of farm households (cultivating less than 2 ha) reported to have experienced seasonal food insecurity. The provinces in which the reports of food insecurity were higher than the national average were Gaza (65.9%), Nampula (50.8%), Inhambane (52.0%) and Sofala (49.6%). In Zambézia the figure was 41.7%, while in Maputo city 4.6% of the farm households reported incidents of food insecurity. More than half (51.3%) of the agricultural households said their food insecurity situation was linked to insufficient rainfall, while 6.7% reported it was due to drought. Other reasons were too small land plots (9.1%), no inputs (6.2%), lack of workers (5.6%), post-harvest losses (5.4%), pests (5.3%), cyclones, strong winds and floods (2.2%) and other reasons (8.2%) (INE, 2011).

In contrast to the self-reported measurements of food insecurity, in August 2010 an assessment by FAO/WFP indicated that the overall national food security situation was satisfactory, but that an estimated quarter million people from low-income households in semi-arid and arid areas of Tete, Gaza, Inhambane and Sofala provinces would require emergency food assistance to meet their basic needs from August 2010 to the harvest in March 2011 (FAO/WFP, 2010). While the early warning systems of FAO and USAID (FEWS and GIEWS) indicate challenges with localized and seasonal food security in Mozambique, WFP and IFPRI describe a situation of very high and alarming levels of hunger in the country (FAO, 2010b). Surveys show that most incidences of hunger and food insecurity occur in the period just before the year's first harvest, while the situation improves considerably during the harvest period, from May to June (Fewsnet, 2011; República de Moçambique, 2011a).

Due to the high dependence on agriculture and natural resources, the right to food is strongly linked to the right to land for Mozambique's rural population. However, though the Constitution and the Land Law acknowledge customary land rights, nearly 90% of such rights have yet to be formalized through DUATS. Although the government acknowledges the human right to adequate food (República de Moçambique, 2011a), Mozambique has yet to ratify the International Covenant on Economic, Social and Cultural Rights, which is considered the most important Human Rights instrument to ensure the right of food for all.

In addition to the availability of food and the access to land, the price of food affects the accessibility of healthy, nutritious and culturally appropriate food for all groups of society. Rising food prices may undermine the ability of poor households to meet essential food needs (UNCTAD, 2008). Food prices in Mozambique increased by an annual average of 11.3% between 2002 and 2010. In the same period, food production increased by only 2.2% per year (less than the

population growth of above 2.5%), and the productivity fell (Wuyts, 2011). The price rises for cereals continued in 2011, as did the oil prices, which increased by 21% between Jan-April 2011 (UPI, 2011). In Mozambique, most rural households (poor and non-poor) are net food buyers, and spend on average 68.9% of their income on food.⁴⁵ Although rural areas are less dependent than urban areas on food imports, international price increases considerably reduce the purchasing power of the most vulnerable. Almost 70% of rural families are net buyers of maize, and in the North half the population is a net buyer of cassava (UNCT Mozambique, 2008). Increased food import costs also affect rural households indirectly in the long run, through shifting the government's focus from long-term increases in agricultural output to short-term affordable urban food supplies⁴⁶. The political costs of hungry urban constituencies were seen in March 2008 and September 2010, when people took to the streets in protest of rising food and fuel prices (Kring, 2010). In both cases the government responded by introducing food and fuel subsidies. Such consumption subsidies have proven to be costly, and though they may alleviate the urban food insecurity in the short run, they fail to address its underlying structural causes. Especially the fuel subsidy has been considered to be poorly targeted, directing resources away from other uses, such as investments in employment creation and long-term productivity increases in agriculture (Kring, 2010).

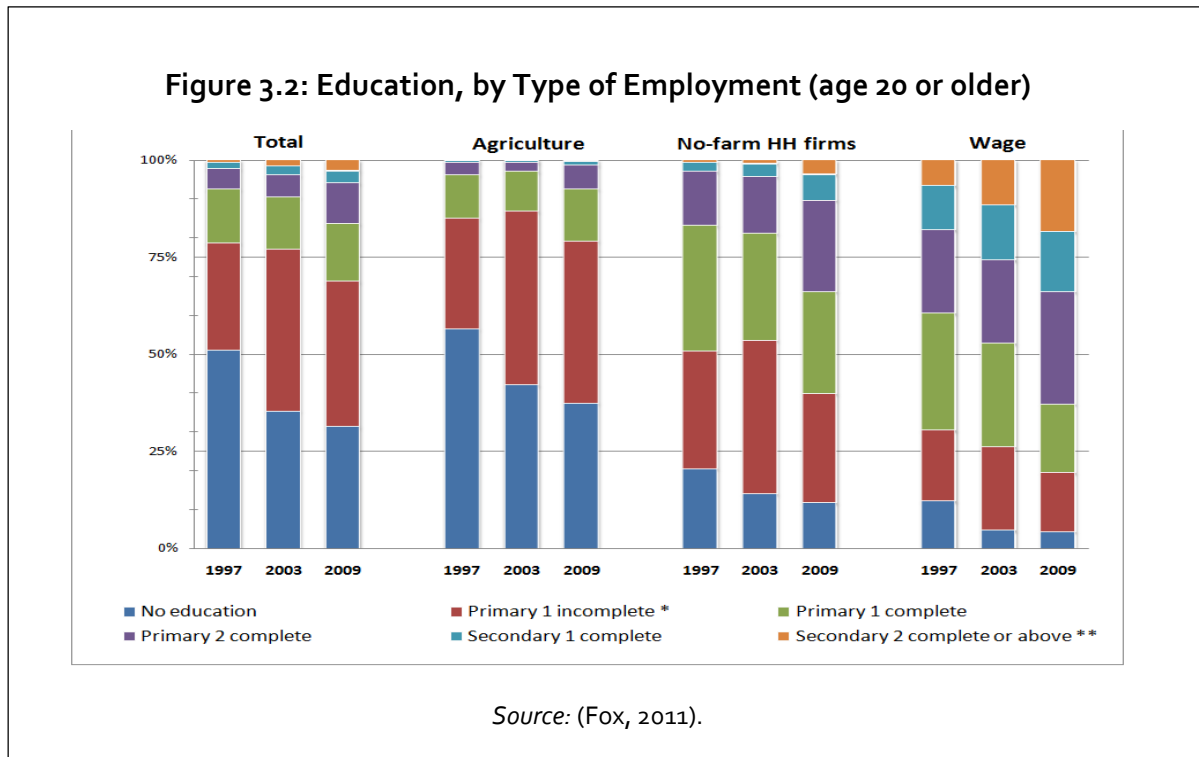
3.5 Employment in Mozambique – context

The vast majority of Mozambicans are engaged in agriculture (figure 3.2). While 79% of the labor force has agriculture as its main source of income, the corresponding figures are 18% for services and 3% for industries (INE, 2006). In rural areas, nearly a hundred percent of the population is engaged in agriculture, though livelihoods often depend on multiple activities and sources of income. About a quarter of the rural households are involved in a non-farm household enterprise, while about a tenth of the households have at least one wage earner (Fox, 2011). The agricultural sector is characterized by a high degree of seasonability, with workloads and opportunities for income earning varying considerably between high and low seasons.

⁴⁵ On a national scale, the average Mozambican spends 55% of his income on food, and households among the bottom quintile spend of 71.8% on food. The top quintile spends 43.7% percent on food, and the urban population (poor and non-poor) spends 44.9% (Arndt, Garcia, et al., 2010).

⁴⁶ Rural and urban inhabitants in Mozambique face very different challenges in relation to food security. While the urban population depends on imported food (and their prices) for their food security, a majority of rural households depend on their land for food. While the rural households are vulnerable to drought, climate change and natural disasters, urban households are vulnerable to global food price volatility and exchange rate fluctuations. The food security situation of rural and urban households are interlinked. The rural population is indirectly affected by the vulnerabilities of the urban population due to the limited state budget, and the political importance of the urban inhabitants. The government tends to prioritize the short-term needs of the urban populations (food and fuel subsidies, *cesta basica*) over the rural and long-term national needs (investments in agriculture).

While the economic contributions of large scale investments have been substantial, their effects on employment creation have been much more modest (Castel-Branco, 2010; Kring, 2009). Of the combined foreign and domestic investment approvals of 38.6 million USD to agriculture and industry in the first quarter of 2009, only 1,273 jobs were expected to be created. *"The investments in the agricultural sector have a relatively high cost per job created, suggesting that Mozambique is not fully utilizing the potential for attracting more labor intensive investments to this sector"* (Kring, 2009:1).



Due to the technical sophistication of capital-intensive technologies often employed by large-scale investments, such projects often require employees with a certain skills-level. The education level of the Mozambican labor force is still very low. Less than 10% of the labor force has more education than primary school (figure 2), and the illiteracy rate is 55 % (UNESCO, 2011). The level of skilled workers is higher in the formal economy, while the skills-level in agriculture is lower than the national average (Fox, 2011). Due to their low skill-base and lack of experience with other kinds of work, the employability of the rural work force in other sectors may be limited. An estimated 300,000 young Mozambicans join the labor force each year (which adds up to 1.8 million people since the last labor force survey was conducted) and due to the limited absorption capacity of the formal economy, most of the new entrants join the informal sector (República de Moçambique, 2011b). Due to the high level of population growth (2.7% in 2011), the high number of new entrants to the labor market is expected to continue (INE, 2010). Since there is so little

formal employment, a vast majority of the population depends on land as a crucial part of their survival strategies.

3.6 Impacts of large-scale land acquisitions on food security and employment in rural Mozambique

Although certainly not the only factor to influence rural development in Mozambique, large-scale investments in farmland should be assessed not only based on their investment levels and contributions to GDP growth, exports and foreign exchange earnings, but also with regards to their effects on employment creation and food security in the areas in which they take place. This is both since, by taking place in rural areas characterized by high levels of poverty, seasonal food insecurity and with a population which largely depends on natural resources and agricultural activity for its survival, these investments make use of land tracts which could be used for alternative purposes; and since such investments may have very direct effects on local communities. The effects can both be positive, when the projects create employment opportunities, construct infrastructure and contribute to local economic development; and negative, when the projects lead to loss of land and livelihoods, and limit local inhabitants' access to water, fire wood and other natural resources that are important for income generation and food security. In a context of increasing pressures on land, water and other natural resources it is important to assess the socioeconomic and environmental impacts, as well as weigh the opportunity costs, of any activity which entails land area expansion and or significant investments.

An additional reason why large-scale land acquisitions' impact on food security and employment should be assessed is because the stated aims of many of these projects, both expressed by the government and the companies themselves, are contributions to local poverty reduction and development. The 1997 Land Law is designed to both protect local communities' land rights and to promote investments which are meant to bring mutual benefits to the companies and to the local population (Norfolk & Tanner, 2007; Tanner, 2010a; Tanner & Baleira, 2006). The government's first poverty reduction strategy, PARPA (2001-05), was based upon attracting direct commercial investment into rural areas (Waterhouse et al., 2010). Promoting large-scale private investment was also highlighted (together with support to smallholders) as a means for growth and poverty reduction in the second poverty reduction strategy, PARPAII (2006-09). The promotion of biofuels export was highlighted as a strategic objective in the 2007 National Rural Development Strategy (Nhantumbo & Salomão, 2010). When the government in 2007 granted 30,000 ha to UK-based CAMEC for biofuel production in Gaza province, the Minister of Agriculture stated that he hoped that the project would bring benefits for local communities, while helping to cut Mozambique's high fuel costs. The provincial authorities in Gaza welcomed the project for its new employment opportunities for the local population and for its contributions "*in the fight against poverty in Mozambique*" (Biopact, 2007). Several investors have also

highlighted the positive local benefits expected to result from their projects. Mozambique Principle Energy, which in 2008 was granted a concession of 18,000 ha to produce ethanol from sugarcane in Manica province, selected its area for production partly due to its potential for positive social impacts. The investor stated an aim to help to reduce poverty in the area through the creation of 2,650 local jobs; the provision of technical assistance and social infrastructure; and professional training (Waterhouse et al., 2010). Sun Biofuels, which has produced jatropha and sugar cane for biofuel in Manica province since 2006, states on its website that its investment brings *“employment to what would typically be very disadvantaged communities, potentially providing wages for several thousand agricultural workers as well as more highly skilled clerical positions”* (Sun Biofuels, 2011). EmVest, a South Africa-based, Mauritius registered joint venture, which will irrigate and farm virgin land in Gaza province, claims a strong relationship with the local population *“built through the provision of medical facilities, schools and bore wells”* (The Oakland Institute, 2011b).

It is challenging to directly measure the effects of large-scale land acquisitions on food security and employment in Mozambique due to the difficulties in controlling for the large number of external factors which may also have been influential. Nevertheless, it is possible to discuss some of the observed effects of such large-scale investments on these two aspects of rural development in the country.

Employment is one of the key ways in which large-scale land acquisitions can be translated into local benefits and broad-based, sustained and pro-poor growth. Local people often identify jobs as the most important and immediate benefits of investments. The creation of decent employment increases local purchasing power, which is likely to create spillovers (Deininger & Byerlee, 2010) effects when the salaries are used for consumption at the local market. The effect of large-scale investments on employment can be assessed by comparing the expected and promised levels of employment with the number of jobs that were actually created. One can also analyze the provision of employment by large-scale farm enterprises in the light of the need for employment creation in the host society and by comparing it to the employment potential of alternative uses of the same land and resources.

The prospect of employment creation is one of the most commonly stated benefits of large-scale investments in farmland, both by the government, investors and the local communities.⁴⁷

⁴⁷ In a biofuels assessment prepared for the Ministries of Agriculture and Energy, Econergy (Econenergy, 2008: 365) assesses the potential employment benefits in the following way: *“The potential significance of such job creation in the biofuels sector underscores its potential impact on the economy of Mozambique. It is important to understand that this would also correspond to an extremely wide distribution of earnings generated by the sector among a large portion of the population. Consequently, development of the biofuels industry presents a good opportunity to significantly reduce the endemic poverty the country faces, especially in those regions where it is felt most intensely. Unlike the other economic sectors in which Mozambique offers a high potential, such as mineral extraction or*

However, promises of job creation are seldom quantified and detailed in community consultations and legally enforceable investment contracts (Hanlon, 2011; Wily, 2011). In fact, "[t]he level and recording of information on planned (temporary and permanent) employment and physical investment is surprisingly limited" (Deininger & Byerlee, 2010: 63). In addition to questioning how many jobs that are created in comparison to the number of livelihoods lost and to the employment potential of alternative land uses, there is reason to examine what kind of jobs that are created, both in terms of working hours (full-time/part time), job security (temporary/permanent), decent working conditions and salary levels. The costs for the local populations of going from being land owners to farm laborers, and the permanent loss of access to land and resources must also be accounted for. An increasing number of studies indicates that the number of jobs created by the large-scale projects fall far short of expectations in Mozambique (Deininger & Byerlee, 2010; Hanlon, 2011). In Manica province, a biofuels company estimated that its project would create 2,650 local jobs. However, in 2010, two years after its approval, only 35-40 fulltime jobs were created (Waterhouse et al., 2010). In some cases, the jobs created were reported to go to people with good contacts among the political and economic elites. In the cases where some jobs were created, some of the beneficiaries reported that the wages were insufficient to compensate for the loss of production that they had on their farms, and many continued subsistence farming as a means of survival (Deininger & Byerlee, 2010; Nhantumbo & Salomão, 2010). In other cases large numbers of workers may be needed in the initial phases of land clearing and construction, whereas labor intensive agricultural production are replaced by capital intensive and mechanized modern techniques, reducing the need for employment in the long run (Waterhouse et al., 2010). Experience from Quifel's investments in Sierra Leone (Quifel has also invested in Mozambique) was that 30-40 young men per site (5 ha plots) were employed for one month to clear the land (The Oakland Institute, 2011c).

While the expectations of employment creation have yet to fully materialize, several projects have displaced local inhabitants from their land, with negative implications for their livelihoods (Deininger & Byerlee, 2010; Hanlon, 2011). A large-scale biofuels contract "*was terminated following changes in the world economic climate and lack of compliance with the investor's contractual commitments. Yet, by that time, the land had already been allocated and cleared, with direct impacts on local livelihoods and conservation activities*" (Nhantumbo & Salomão, 2010).

The large-scale investment projects' impacts on employment creation can also be analyzed in the context of high national and rural levels of un- and underemployment, combined with a growing and still mainly unskilled labor force and a majority of the economically active population involved in the agricultural sector, as described in 3.5. In a situation where formal employment is

hydroelectric power generation, which are typically capital intensive, the biofuels sector offers a disproportionate potential to create jobs, distribute wealth and reduce poverty" (Econenergy, 2008: 335).

utopian for most and wage labor remains extremely scarce, it can be argued that any job creation may be considered as better than none. On the other hand, the employment creation expected by large-scale farming should be compared to alternative uses of the same land.

Table 3.1: Job Creation per ha and per USD by agricultural investment projects approved by the government 2007-2009

Year	Value of approved investments (Million USD)	Land area, ha	Number of jobs created (estimated)	Cost per job (USD)	Jobs per ha
2007*	510.0	30,000	7,000	72,854	0.233
2008	860.5	105,692	10,761	79,965	0.102
2009	4,565.4	338,093	21,835	209,087	0.065
Total	5,935.9	473,785	39,596	149,912	0.084

Source: (The Oakland Institute, 2011f) and author's calculations

The numbers in this table are based on information and estimations provided by the investors in the investment proposals as submitted to and approved by the government.

* The numbers from 2007 are based on one single investment (ProCana), which was cancelled in 2009 due to low implementation rates and failure to comply with contractual obligations.

Different crops differ widely in their labor requirements, but large-scale farming generally entails capital-intensive rather than labor-intensive methods (De Schutter, 2011). Based on observations from India, land area per family farmer or farm worker (full-time) for various crops would be "up to 2.5 ha per person", which translate into 0.4 jobs per ha (Econenergy, 2008: 354). Oil palm and (manual) sugar cane may create 10-30 times more jobs than large-scale mechanical farming (Deininger & Byerlee, 2010: 39). In D.R. Congo, the expected job creation from an out-grower based sugar project was 0.351 jobs per ha, compared to less than 0.01 jobs per ha at a large-scale maize plantation (Deininger & Byerlee, 2010: 64).

In Mozambique, no mechanisms are in place to monitor the implementation of the aims stated in the investment proposals, and thus the estimates of observed job creation by the large-scale investments vary. The Mozambican Biofuels Assessment prepared for the Ministries of Agriculture and Energy in 2008 estimated that biodiesel production (by smallholders) had the potential of creating 0.45-0.5 agricultural and industrial jobs per ha, while the production of bioethanol (based on large-scale sugar plantations) had the potential of creating 0.2 jobs per ha (Econenergy, 2008). Arndt et al. (2010) estimate that jatropha production could employ 0.487 (small-scale) farm workers and 0.118 processing workers, totaling 0.605 workers per ha, if both production and processing takes place in Mozambique.

Table 1 shows the expected investment levels, size of awarded land area and estimated potential employment creation by 15 large-scale agricultural investment projects which were approved by the government between 2007 and 2009. The seven projects which were approved in 2008 pledged to invest a total of 860.5 million USD, occupy a total land area of 105,692 ha and create a total of 10,761 jobs, which implies an average cost per job of 79,965 USD and an average of 0.102 jobs per acquired ha. The approved projects in 2009 and 2010 estimated an employment potential of 0.065 and 0.084 jobs per ha respectively. The estimated employment generation potential by these approved large-scale investments is thus far lower than the employment generation by labor-intensive methods. It is important to note that the data in table 1 is based on information provided by the investors in their investment *proposals*, as submitted to and approved by the government. It is unlikely that the investors have underestimated the employment generating potential of their investments. And as a 2009 land audit revealed, as much as fifty percent of the approved projects had yet to begin, or were far behind schedule, which indicates that both employment and investment commitments may have yet to be realized. Several large investors withdrew from Mozambique when the global economic climate changed, but there is no monitoring mechanism in place which provides information on the size of the land area actually taken in use or the number of jobs created by these large-scale investments. According to Hanlon (2011), the job creation in biofuels was "*less than the government had hoped for*", at only 0.05-0.143 jobs per ha. Experiences from South Africa and India show "*that large-scale, foreign-owned, highly mechanized agro-industries bring limited micro or macro-economic benefits to the local communities they are associated with*" (Econenergy, 2008: 256). The relatively low employment creation (both when measured per hectare and per invested dollar) by the large-scale investments may suggest that large-scale farming is not the most suitable model for Mozambique.

As previously discussed, **food security** depends on availability, accessibility, stability and use of food. The achievement of a satisfactory food security situation in Mozambique depends on a cross-sectoral approach which includes a series of measures, including productivity increases, price/wage balances, distribution, as well as social protection for vulnerable groups. The main obstacles for food security which can be affected by large-scale land acquisitions are linked to the first three pillars of food security. Large-scale land acquisitions can impact food security in the following ways:

Large-scale enterprises represent one of many possible uses of the existing land. Choices of production of food versus cash crops, production for the local market or for exports, as well as efforts to close yield gaps may have significant positive or negative impacts for the local food security situation through the consequences for the availability of food at the local market. There need not be a conflict between food and cash; or import and export crops, but with limited resources available and high and prevalent levels of food and nutritional insecurity, the best uses

of available resources should be ensured to improve the situation. The National Biofuels Strategy (República de Moçambique, 2009) prohibits the use of food crops for biofuels production and states that jatropha should only be produced on marginal lands. The policy also states that the production of biofuels must minimize the plantations of large areas of monoculture due to their negative consequences on biodiversity (Nhantumbo & Salomão, 2010). However, research has shown that it may be overly optimistic to expect that feedstock for biofuels can be commercially grown on marginal land. In Mozambique a company switched from jatropha to a forestry project due to poor soils (Nhantumbo & Salomão, 2010). As a result, land allocations to large biofuels projects are very likely to affect areas with high suitability for crops or with forestland. A study from 2009 found that “*the subsistence farming sector doesn’t plant Jatropha in marginal soils, but in good arable soils, directly replacing food crops*” (Ribeiro & Matavel, 2009: 26). Biofuels investors have shown interest for areas where there are new projects for labor-intensive food crops, creating a “*serious potential for land competition and conflict*” (Hanlon, 2011: 18). Concessions for more than 12 million ha of land were requested to 28-30 biofuel projects in the few years before the global financial crises, amidst a persistent situation of widespread undernutrition and recurring seasonal food insecurity in Mozambique. Most of these investments were abandoned or considerably delayed as a consequence of the global financial crises and shifting commodity prices (Tanner, 2011)⁴⁸.

In the short term, if at least part of the production is guaranteed for production of nutritious and healthy food for sale at the local market, food security may improve through increased availability of supply as well as lower food prices. “*As well as jatropha, the company also cultivates maize and sunflowers – crops that help to increase the food security of the local community*” (Sun Biofuels, 2011). If current land users (subsistence farmers or other food producers) are displaced from their land to the benefit of cash crops or other uses, the food security may deteriorate. Case studies have revealed cases where companies have encroached on community land outside their concession, and the clearing of a forested area by one project led to the loss of revenue for charcoal producers in the area, as well as the loss of access to game meat and fish by the neighboring communities (Waterhouse et al., 2010).

In the long run, intensive land use and modern farming practices may be positive if they contribute to substantial yield increases. However, they may also be unsustainable and poorly suited to local soil conditions, which can lead to long-term degradation of the land and potential future food security concerns (Deininger & Byerlee, 2010; Nhantumbo & Salomão, 2010). Other unfavorable effects may be noted if water or other limited natural resources are diverted away from local uses or used in an unsustainable manner (Locke, 2009a). The need to conduct

⁴⁸ Meanwhile, in early 2011, reports by smallfarmers that had been convinced to switch to the production of jatropha, complained of difficulties in finding buyers for its harvest. In May 2011, president Guebuza guaranteed that the Mozambican state would buy all surplus jatropha from the small farmers (Issa, 2011).

Environmental Impact Assessments (EIAs) is required by law, but often ignored – which may have severe long-term environmental consequences, and may reduce the economic land value, and its production potential over time (Nhantumbo & Salomão, 2010). In the cases where EIAs are conducted, they are not always made publically available, which makes it impossible for Civil Society or other stake holders to monitor whether their recommendations are followed. Several of the large-scale investments benefit from subsidized water supplies (Locke, 2009). The resources used to subsidize big investments' water supplies could alternatively be used to expand the water coverage for the Mozambican people.

Large-scale land investments may also affect the food security situation through their effect on rural incomes. On the one hand, if such investments create employment and raised rural incomes, the food security situation may improve. In addition to the direct employment effect previously discussed, investments may also create non-farm employment through spillover effects to the local economy. This seems to have been the case in Niassa, where a forestry project reportedly increased local commercial activity and trade in affected and nearby villages (Waterhouse et al., 2010). This can also be the case when large-scale investors enter into partnerships with smallholders and provide guaranteed markets for these producers. On the other hand, if these investments entail displacements of local communities, their food security situation may deteriorate due to the resulting loss of livelihood and income opportunities (Waterhouse et al., 2010). Also in Niassa, local people lost access to forest products such as firewood and medical plants as a consequence of the operations of Chikweti Forests of Niassa (Hanlon, 2011). The relationship between the investor and the community may also be one of dependence and vulnerability, as was illustrated in the Niassa province, when small farmers claimed that Mozambique Leaf Tobacco (MLT) did not honor its promise to buy their tobacco crops, despite the fact that it was grown with inputs provided via MLT (AIM, 2011b). Large-scale investments may further create local spillover effects to the economy through the purchase of inputs on local markets. One company stated that it contributed to development through its purchases of food for its employees on the local market. The effects of such purchases have probably been limited so far, since all but 35-40 of the 2,650 estimated jobs have yet to materialize (Waterhouse et al., 2010). An agreement signed in late 2011 between several multinational mining in the Tete province companies and the provincial government to buy food locally, is hoped to have a far more significant effect (AIM, 2011c). However, in many cases such opportunities for spillovers are currently missed, due to high degrees of import of inputs. Sun Biofuels imports its improved seeds from Tanzania, while MoçamGalp imports from Brazil (Ribeiro & Matavel, 2009).

In the long term, productivity increases and agricultural modernization may release labor from the agricultural sector (Mittal, 2009). The effects of this on the food security situation will depend on the Mozambican economy's ability to absorb the excess labor from the agricultural sector, and

the skills level of the labor force. Efforts to further increase rural skills-levels as well as to provide non-farm labor opportunities will be crucial to avoid negative impacts of such developments.

Large-scale investments may also affect the food security through the contributions to development of infrastructure such as bridges and roads, irrigation, electrification, storage and processing facilities. Food security may be improved if the large-scale investments contribute to reducing the agricultural sector's vulnerability to erratic weather patterns, as well as improving rural communities transport linkages. Case studies show that several projects have contributed with social infrastructure, such as waterholes and health clinics (Deininger & Byerlee, 2010; The Oakland Institute, 2011b; Waterhouse et al., 2010). However, as with employment, the promises of the provision of such benefits are rarely quantified and specified in legally enforceable documents such as contracts. In cases where infrastructure is provided, such interventions are often not coordinated with the respective authorities and running costs for salaries and maintenance of the infrastructures are rarely covered (Locke, 2009a). There are also reports of projects with negative impacts on local infrastructure. One project destroyed both the local access road and the village water supply with heavy machinery which overwhelmed the capacity of the existing infrastructure. Far from compensating the community or repairing the damages, the project simply moved from one water pump to the next and built a private access road, which the local community was barred from using (Locke, 2009a). Experiences from the extractive industries in Mozambique are that many opportunities for spillovers are missed when large sums are invested in transport infrastructure for megaprojects, without simultaneously adapting it so that it could benefit the local population through the transport of goods and people (Castel-Branco, 2010). Experiences from the mega-projects also indicate that the investors to a large degree cover their needs for inputs through imports, including for food and other inputs which are or could be made available at the local market. Castel-Branco further states that the sums these companies spend on CSR projects are very low compared to their total investment and revenue levels.

Lastly, large-scale land acquisitions may affect food security through their impact on food prices. National food prices are largely affected by global food and fuel prices, and it is difficult to establish the effects large-scale land acquisitions have had on national price development. However, the large focus on biofuel and other cash crops by the new investors suggests that they have not significantly contributed to increasing food production in Mozambique. As discussed in 3.3 and 3.4, national food prices have increased significantly, and food production per capita has not increased in the period.

3.7 Participation and empowerment of local communities

As discussed, investments with reported negative environmental, social and political consequences tend to have several characteristics in common. These include: large power

imbalances between buyers, sellers and regulators; limited transparency; limited local community participation and empowerment; inadequate or inexistent compensation for the loss of land; lack of monitoring, enforcement and conflict resolution mechanisms; disregard or lack of knowledge about the Land Law and other laws and regulations; low land prices; impunity for in compliance with regulations; room for speculation; conflicts of interest between political elite and the population. In order for future land deals to be more beneficial to both buyers and sellers, there is an urgent need for the empowerment and increased participation of the local communities in all parts of the process. Increased community participation can help ensure sustainable benefits for all groups and considerably reduce the potential for conflict. In Mozambique, there is a large potential to reduce conflict levels by nurturing and supporting a constructive dialogue between the community, state and investor company. Through such a dialogue, if well conducted, areas which the community is willing to cede or share can be identified, terms for compensation can be established and the investments can become a source of revenue and prosperity both for the investors and for the local population. Sun Biofuels, which produces jatropha in Manica province, decided in June 2011 to cede 130 ha of the land under its concession, as a response to demands from the population of the neighborhood Herois Moçambicanos that they needed more space to allow for population growth and the construction of social and public services (Macua, 2011). However, in spite of the large potential, civil society organizations working on these issues report that the cases of successful dialogue remain rare. Poor consultations and lacking or limited community participation still seems to be the rule in Mozambique (Hanlon, 2011). A study on biofuels in Mozambique found that none of its case studies "*involved genuine and enforceable partnerships agreements between investors and communities*" and underlined that partnerships are insufficiently covered in the legislation, both in the Land Law and in the National Biofuel Strategy (Nhantumbo & Salomão, 2010:43).

3.8 Summary of findings

As discussed, government efforts to attract direct investments were based on perceptions of FDI as a source of development and beneficial impacts for Mozambique (Nhantumbo & Salomão, 2010). While the government succeeded in attracting FDI to the country - especially to the mining sector, but also to agriculture, the observed benefits of these investments have not met expectations. FDI inflows have tripled in the last decade and average annual GDP growth has been above 7%. Agricultural GDP growth was 7% from 2003 to 2009 (Uaiene & Arndt, 2009). Over the same period, national poverty reduction stagnated, and rural poverty increased from 2003 to 2007. The number of poor Mozambicans was the same in 2007 as it was 10 years earlier. Per capita food production decreased, and no significant productivity increases were achieved (Castel-Branco, 2011)⁴⁹. High vulnerability to erratic weather patterns, natural disasters and climate change in agriculture; alarming levels of chronic undernutrition and recurring pockets of regional

⁴⁹ Yield increases did not keep up with population growth in the period.

food insecurity remains severe challenges, and Mozambique is still highly dependent on food and fuel imports. Research suggests that large-scale land acquisitions may have failed to create the expected number of jobs, as well as linkages to support a broader based economic growth in the country (Castel-Branco, 2010; Kring, 2010). Despite the large number of awarded concessions, implementation has been slow. A 2009 land audit found that more than half the awarded concessions had yet to fully utilize their land, and the World Bank had trouble finding any operating biofuel projects for its case studies. Furthermore, less land and natural resources are available than initially assumed and the most attractive land is already in use.

Meanwhile, whereas gains are delayed, the adverse impact on local communities and the environment are already registered. Experience shows that certain conditions must be in place for FDI to yield potential positive impacts. When such conditions are not in place, investments can actually have negative impacts. A significant number of controversial cases where local communities and the environment have suffered losses as a consequence of large-scale land acquisitions have been reported (Hanlon, 2011; Matavel, Dolores, & Cabanelas, 2011).

There is a need to assess why the expected positive benefits of these investments have not materialized. The reversal of the government policy and the slowdown in issuance of new concessions in the wake of the results of the second zoning exercise provide an opportunity to reflect on how the government's objective of agricultural development and employment creation best can be achieved. Alternative agricultural development strategies should be explored, and there is a need, at the very least, to critically review the reasons behind the overall negative impact of large-scale land acquisitions in the Mozambican context, in order to implement effective and well-planned measures to ensure that the potential new large-scale investments bring benefits, and not harm, to the affected local communities as well as to Mozambique as a whole.

4. Alternatives to Large-Scale Land Acquisitions: The Case of Mozambique

The present situation in Mozambique suggests that the potential benefits of large-scale land investments may not outweigh the opportunity costs. Though contributing positively to the GDP, such investments have not brought the expected levels of rural development benefits through local spillover effects, rural employment opportunities or improved local food and nutrition security. Though there are examples of benefits from some projects, an increasing body of research indicates possible long-term and potentially irreversible negative consequences of recent investments, both in the form of environmental damage and displacements of local communities from their land. The promotion of large-scale land acquisitions is but one of many options for Mozambique and its true opportunity costs should be determined, in order to find the best suitable model to increase agricultural production and reduce poverty and food insecurity particularly in the rural areas (Deininger & Byerlee, 2010).

Increased food production is needed to address growing and unmet demands for food and energy for domestic consumption and to reduce the country's dependence on food and fuel imports. Yet, there are limits to the amounts of farmland available and suitable for expansion in Mozambique. The low agricultural productivity levels indicate that there are persistent obstacles that prevent farmers from making the most effective use of the land. *"In areas with large amounts of suitable land currently not cultivated, area expansion will have little developmental impact if it fails to address the factors that underlie such widespread failure to make full use of the productive potential of currently cultivated land"* (Deininger & Byerlee, 2010: xxxv). Rather than expanding cultivated area, identifying and addressing the obstacles to more productive farming may be a politically, environmentally and economically preferable alternative for Mozambique at this point in time. By reducing the yield gap it would be possible for Mozambique to achieve large increases in output and improved welfare for the poorest groups (Deininger & Byerlee, 2010).⁵⁰ As the economic structure in Mozambique changes, agricultural productivity improves and other sectors' labor absorption increases, a gradual move towards higher levels of input use and mechanization can be expected. Such developments should be accompanied by efforts to increase the skills-base of the agricultural labor force.

Large-scale land acquisitions often create few linkages to the local economy, since they mainly produce for export and rely largely on imported inputs for production. As the agricultural sector moves from labor-intensive to capital-intensive mechanical farming, the need for unskilled labor decreases. Large-scale land investors tend to benefit from a range of incentives offered by the host states, including fiscal benefits, which reduces the tax revenues that result from such investments (Deininger & Byerlee, 2010; Hanlon, 2011; Locke, 2009a). Due to the low-skilled and predominantly rural character of the Mozambican labor force, a strategy which prioritizes labor-intensive farming whilst simultaneously focuses on creating non-farm rural employment in the micro, small and medium enterprise sector, agro-business and other related industries is potentially more suitable to the national context (De Schutter, 2011). Efforts to increase smallholder productivity and improve their market access are expected to improve agricultural production and rural incomes considerably. Strengthening of farm associations and the organization of farmers in cooperatives may enable them to benefit from economies of scale in areas such as marketing and transport of the surplus to markets, as well as strengthening the farmers' bargaining power when negotiating the prices of inputs and outputs. Boosting smallholder farmers' income has the potential of creating more local linkages than large-scale modern farming. Increased purchasing power of farm households tends to result in increased trade at the local market and may lead to positive spillover effects for the local economy (Oxfam

⁵⁰ Sub-Saharan African yield gaps show that on average only 20% of potential productivity is realized, far lower than the ideal 80% (which is economically viable). By attaining 80% of its productivity potential, maize output in sub-Saharan Africa would quadruple from current levels. This is equivalent to the increases in production that could be achieved by potential area expansion of 90 million ha – more than what is globally available for the expansion of maize production (Deininger & Byerlee, 2010: 81, table 2.3).

International, 2008). There are various views with regards to the efficiencies of small- and large-scale farming. According to a study of maize cultivation in Mozambique, smallholders are more efficient than larger farms (Zavale, Mabaya, & Christy, 2005). Others have “*questioned the evidence base for an exclusive focus on smallholders*” (Collier & Dercon, 2009). Efficiencies aside, there is a wide consensus that in contexts of widespread rural poverty, smallholder agriculture may be preferable for equity reasons and due to its much larger potential for poverty reduction (Locke, 2009a; Nhantumbo & Salomão, 2010).⁵¹

It may be advantageous for both smallholders and large-scale investors to enter into partnerships rather than agreements involving the transfer of land. Joint ventures; arrangements where farmers own part of the company and benefit from increases in production and profits; and various forms of contract farming/outgrowing schemes may have significant potential as alternatives to land acquisitions. These schemes commonly involve that the (foreign) investors provide the technology and capital, while the local farmers own or lease the land and supply a product of a pre-agreed quantity and quality at fixed prices. Such schemes are not without challenges. Side-buying and side-selling are common and large power-imbalances may reduce the bargaining power of the farmers versus the investors. Risk-sharing may also be an issue. However they do have the distinct advantage that they allow the local population to maintain control and ownership over land and water resources, while they give investors indirect access to the land and the possibility of organizing a reliable supply of the desired quantity of quality products.

The level of investments in the agricultural sector must increase considerably to make up for the under-investments in recent decades. Increased investments are needed to enable the development of a viable farm sector where the productivity and income of subsistence farmers improve, and which can produce food in sufficient quantities to reduce Mozambique’s import dependence (Mittal, 2009). A strategy that focuses on achieving productivity increases by supporting small-scale farmers is not in any way incompatible with large (foreign and domestic) investments in agriculture. In fact, though Mozambique may be less in need of FDI from agriculture than many other LDCs due to its high export revenues from the mining sector and large ODA inflows, both Government spending, FDI and ODA have important roles to play in increasing the investments to the sector. There are urgent needs for rural roads and other transport infrastructure, expansion of the electricity grid and access to irrigation and the construction of storage and processing facilities, to mention but a few. Smallholders’ access to credit must be improved and risk-sharing mechanisms developed. There is also an urgent need for increased investments in agricultural research and efforts to improve the rural skills-base through formal education, vocational training and other targeted interventions. The key is to avoid that large investment projects become “*enclaves of high-tech, high-productivity agriculture*”

⁵¹ Collier and Dercon (2009) would dispute the efficiency claim, but agree with the poverty reduction/equity

in a sea of low-tech subsistence agriculture”, and instead ensure that foreign investments in agriculture can make a positive contribution to rural development and food security (UN DESA, 2010: 7). The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) concluded that there is a need for a systematic redirection of investment, funding, research and policy focus towards the needs of small farmers (IAASTD, 2009). A strategy which focuses on smallholders must be complemented by support to micro, small and medium enterprises and rural non-farm sectors (agro-processing and selected industries), which can absorb surplus farm labor over time as agricultural productivity increases and releases labor from the sector.

To the extent that the government finds it beneficial to attract large-scale farm investments in the future, either as substitute or complement to the support to smallholders, the identification of ways in which such investments can benefit local populations should be prioritized. Any investments in farming should seek to guarantee the fulfillment of the multiple purposes of agriculture as a (i) vital source of employment/livelihoods for Mozambique’s 3.8 million small farmers; (ii) a source of nutrition, which should ensure the production of sufficient supplies of a mix of nutritious food at the local market; and (iii) as a key to the environmental sustainability of the country (Nabarro, 2011). Mozambique should aim to move from demand driven land allocations, in which the investors choose the area in which to invest and then start the land acquisition process, to a supply-led approach where Mozambique identifies the areas which are available and appropriate for investment and awards concessions to the investors with the most advantageous offer for the country. In order to increase the transparency of the land deals, the government could opt to make contracts, as well as environmental, social and economic impact assessments publically available. In Liberia, investment contracts are ratified by the Parliament and made available online (Cotula, 2011). Such a system should be complemented with the strengthening of the implementation of the 1997 Land Law’s requirement of close consultations with local landholders. It should be made sure that land is allocated in ways that are in accordance with national and rural development and poverty reduction strategies, including their aims for ensuring food security and creating employment. The ratification of the International Convention on Economic, Social and Cultural Rights would be an important step to confirm the government’s commitment to the human right to food. Performance requirements, as well as quantifiable and measurable commitments by the investors to provide benefits such as employment and infrastructure to local communities should be detailed in the investment contracts – so that they are enforceable by domestic law (Cotula, 2011). The creation of mechanisms for the monitoring of implementation as well as mechanisms to sanction non-compliance is necessary. It may also be advisable to experiment with shorter-term and performance-based land transfers, as well as land rents rather than one time compensations (Deininger & Byerlee, 2010; German et al., 2011). Issues of transparency, accountability and power-imbalances must be addressed, for instance through including the agricultural sector into the EITI certification initiative (Deininger & Byerlee,

2010). In order to reduce the potential for conflict and increase the chances of positive outcomes for all parties, it is crucial to support and empower local communities, enabling their active and informed participation in all stages of the negotiation process.

Experience from all countries which have developed their agricultural sectors has shown the important role of the state through a mix of interventionist and protectionist policies (Mittal, 2009). The state has the responsibility to ensure the right to food of its citizens, and its intervention in agriculture is important to ensure food security, farmer livelihoods and rural development (IAASTD, 2009). The government is also responsible for preserving agro-ecological practices and ensuring the sustainable use of natural resources to ensure their preservation for current and future generations (IIASTD, 2009). Public sector involvement through support to *"agricultural marketing, agricultural input and food subsidies, special credit facilities for agriculture, and agricultural promotion agencies including national grain reserves and marketing boards"* can be vital (IFPRI, 2005). In the case of Ghana, import tariffs and state subsidies to farmers increased the production significantly (Mittal, 2009). The state can also help ensure price stability and mitigate risks through establishing floor prices, grain parastatals which guarantee prices of certain key commodities (FAO, 2011b). The establishment of national or regional grain or food reserves can help reduce the vulnerability to changing weather conditions and mitigate the effects of fluctuating world prices. Furthermore, the state can be instrumental both in providing incentives to stimulate the production of staple foods, create links between production and local agro-processing and in the development of niche products and mechanisms to add value to agricultural products through certifications (Mucavele, 2011). In the long run, there is a need to shift away from exports of primary goods and imports of processed goods, due to the decreasing rates of return in agriculture over time. It is necessary to find ways to capture higher value added in Mozambique, to support the economic restructuring to an industrial economy over time (Mucavele, 2011).

5. Conclusion; Summary of Findings and Recommendations

The recent growth of interest in farmland in Africa and the increased focus on the importance of agriculture for development in poor countries present both risks and opportunities. The increased investor interest and general focus on agriculture has been welcomed. Support to the African agricultural sector has dwindled during the past decades, so there is a clear need for a new impetus. If this new drive can contribute to increased government spending on agriculture, as well as more donor funding and private investments in the sector, this may have important positive impacts with regards to increased food security and reduced rural poverty. The debate on large-scale land acquisitions has been quite polarized between the proponents and opponents of such deals. In order to achieve the goal of improved food security and reduced poverty in rural Africa, it is important that a balanced debate is promoted where the potential positive sides of large-scale investments in the sector are recognized, at the same time as caution is sounded –

there are many potentially damaging aspects of such investments. This paper has aimed to contribute with empirical evidence from Mozambique, one of the African countries that have been singled out as particularly land-abundant to farmland investors.

There is often a discrepancy between the stated aims and the observed impacts of large-scale land acquisitions in Mozambique. Large-scale investment projects in the agricultural sector have in many cases failed to deliver the expected benefits. Such investments were anticipated to contribute significantly to rural poverty reduction and development through employment generation, investments in infrastructure and increased production. Although the production of certain crops, such as sugar, has increased, some infrastructure has been built, and some employment has been generated, the most striking observed consequences so far are, besides the low degree of implementation of the projects compared to what was stated in the investment plans, a significant number of land conflicts and a series of negative social, economic and environmental impacts of many of these projects.

At the national level, despite attracting a significant number of investors and distributing an unprecedented number of land use concessions in recent years, a 2009 government land audit revealed that more than half of many of the investments did not use the land as agreed (Deininger & Byerlee, 2010). Over the same period, Mozambique's economy grew very rapidly, while its poverty head count stagnated. Rural poverty is still staggeringly high at 56.9%, and has been growing in recent years. Few of the companies that were granted concessions have been reported to contribute significantly and sustainably to rural employment creation, food production or other benefits. This underlines the need to review the strategy of encouraging large-scale investments in the agricultural sector in Mozambique.

At the local level, despite the existence of a strong land law, and a number of civil society organizations which have actively lobbied on behalf of local communities, there have been a significant number of serious land conflicts in Mozambique, in which the local populations have suffered from forced evictions, lack of compensation for lost land, broken promises of jobs and alternative livelihoods, and the discontinued access to the use of vital natural resources such as water and forests. This suggests the need for a revision of the current legislation, as well as efforts to improve its implementation, through addressing the many challenges mentioned in this paper. Efforts to empower local communities to effectively be part of the decision making process with regards to the use of their land and natural resources is recommended to reduce the chances of grievance-based conflicts, as well as to ensure outcomes that are mutually beneficial both to investors and the local population.

Mozambique is still a predominantly rural least developing country, with a rapidly increasing population, high levels of un- and underemployment, and a small formal economy. Access to land and natural resources remain crucial for poor people's survival, both as their main source of

income, and as a guarantee of their food and nutritional security. The country's demographic and sociopolitical characteristics suggest that a labor-intensive rural development strategy may be more suitable than the attraction of large-scale investments in farmland in effectively combating poverty.

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