STUDY

Foreign Direct Investment in Agri-Food Networks in India and Sub-Saharan Africa

by Martin Franz and Philip Müller

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Foreword

Teaching 'EcoFair' has evolved from the worldwide 'Slow Trade – Sound Farming' debate which started in 2005 with a discussion of fundamental reform of the international agricultural trade regime. Today, it is widely acknowledged that sustainable development is not possible unless trade policy is treated in conjunction with social issues concerning the livelihoods and rights of human beings and the protection of the environment. We therefore wish to raise the awareness of lecturers, researchers and students about the link between agricultural trade and investment policy on the one hand and the right to food on the other. Since over 70 % of the world's poor and undernourished people still live in rural areas and earn their livelihoods from agriculture, it is of key importance to focus on the coherence of agricultural trade and investment policies, and inclusive development, right-to-food and poverty-eradication strategies.

The aim of this baseline study is to provide detailed background information on current developments in Foreign Direct Investment (FDI) by EU countries in the agricultural sectors of Sub-Saharan Africa (SSA) and India. Teaching of and research on agricultural trade and investment policy often lack the local perspective of vulnerable groups in the South as it is largely based on theoretical considerations. For this reason, the research presented here includes detailed case studies from SSA and India.

We are convinced that it is important to address tertiary-level teaching and research; after all, institutions at this level are educating the decision-makers of tomorrow. In so doing, we hope to spark the debate as to whether FDI supports or undermines the right to food.

Analysing crucial data and relevant trends, this study therefore provides a deeper understanding of FDI in the context of agriculture in SSA and India. Students and researchers conducting development studies are encouraged to read it and use the results and findings in their own analysis of ways in which FDIs can or cannot be effectively and efficiently employed to foster sustainable agricultural growth. We also encourage them to consider the possible effects of FDIs on the livelihoods and the overall socio-economic development of the majority of the rural poor engaged in agricultural activities in these two regions.

So the results of this study should be a substantial contribution to the ongoing debate on sustainable investment. At the international level the Principles for Responsible Investment in Agriculture and Food Systems are currently at the focus of widespread discussion. It is therefore important for us to examine whether or not investments in the agricultural sector of developing countries constitute a promising means of eradicating hunger and supporting the situation of smallholder farmers.

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Introduction

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The way in which food is being produced (e.g. the industrialisation of agriculture), distributed (e.g. the globalisation of the food markets), marketed (e.g. the spread of transnational retailers) and consumed (e.g. the increasing amount of processed foods or the globalisation of food cultures) has changed dramatically over the past thirty years. These processes have been accompanied by changing investment patterns in the agri-food sector. First, since the 1980s many countries – mainly under pressure from the International Monetary Fund (IMF) and the World Bank[1] – have stopped subsidising the food sector through supported prices, input subsidies or government credits for farmers (Kherallah et al. 2002; Stein 1992; Swinnen & Maertens 2007). Second, a worldwide increase of food and land speculation observed in the past ten years. (Clapp & Helleiner 2012, Ouma 2012). Third, FDI in the agricultural sectors of developing countries have increased dramatically in recent years (see Fig. 1). These three major developments ignited discussions about whether this "may – or may not – lead to the persistence of food insecurity and poverty in rural communities" (WHO 2013: n.pag, see Opinion Box 1), and whether investments in the Global South's agricultural sector, might be an opportunity for development (e.g. Cotula et al. 2009).

The aim of our baseline study is to contribute to a solid base for these debates and consequently gain a thorough understanding of FDI in the agricultural sectors of Sub-Saharan Africa (SSA) and India. This includes collecting information about the developments as well as the nature and extend of the FDIs. Much attention will be on the investments of EU countries, where available data allows such detailed analysis. Empirical analyses of investments in agriculture are difficult to conduct due to the limited data availabilty on the Global South. Data of the agriculture capital stock, government expenditure, research and development and especially data on agricultural FDI is weak, as it is very limited, inconsistant and incomprehensive (Lowder & Carisma 2011). It was therefore not possible to get consistent data for SSA. Thus we focused on two case studies in Ghana and Tanzania, where a good amount of information was found. The data situation in India is better, however, as will be shown later, it still has its limits.

When talking about the impacts of FDI on food security, one has to be clear what is meant by the term 'food security'. Pinstrup-Andersen (2009: 5) clarifies that "originally, the term 'food security' was used to describe whether a country had access to enough food to meet dietary energy requirements. National food security was used by some to mean self-sufficiency, i.e. the country produces the food it needs or that which its population demands. [...] National food sovereignty[2] was and still is used to measure the extent to which a country has the means to make available to its people the food needed or demanded, irrespective of whether the food is domestically produced or imported. A country that does not produce the food it needs or its population is prepared to buy and does not have the hard currency to import what is missing, would not be food sovereign".

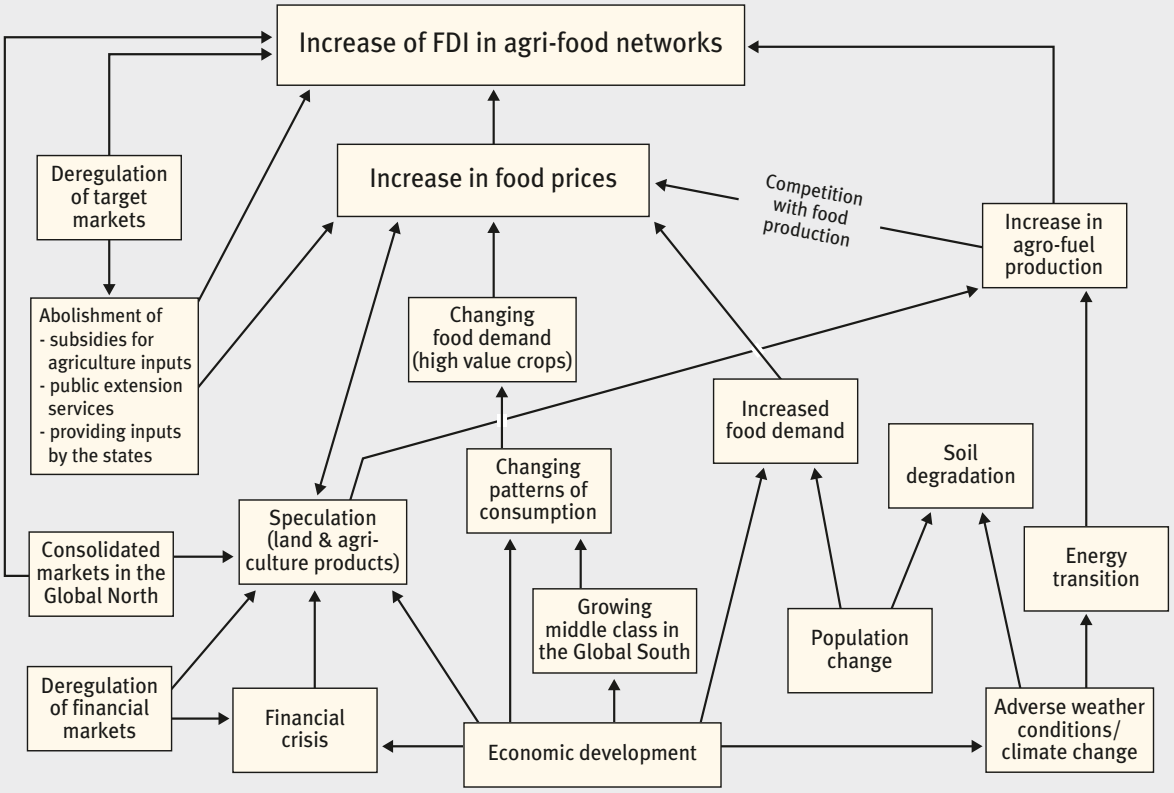
Photo: Laes-Fettback/MISEREOR

This distinction between food sovereignty and security is important when talking about the impacts of FDI in the agri-food networks of the Global South. Companies often invest in high value crops (see Fig. 2); however, its products are mainly produced for export and thus those investments clearly limit a nation's food security. Even if

[1] Since the 1980s many developing countries took loans from the World Bank, IMF or other institutions (e.g. in the case of India the Asian Development Bank, Ahmed 2011). Those loans were connected to obligations including the "removal of government subsidies and price controls, significant devaluations, cuts in public expenditures with deep public sector retrenchments, privatization, relaxation of foreign ex-change controls, an increase of interest rates to real levels, the withdrawal of protectionist measures, the introduction of user fees, tight control of credit, and an increase in agricultural producer prices" (Stein 1992: 83).

[2] The term food sovereignty was originally introduced by Via Campesina (1996: 1): "Food sovereignty is the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity". The way it is used by Via Campesina, it is not an analytical term but a political concept. In this study we use the term as defined by Pinstrup-Andersen (2009) above.

Figure 1: **Reasons for the increase of FDI in agri-food networks.**



these crops are kept in the country, they will – due to their limited quantity and calorie value – most likely not fulfil the dietary energy needs of the domestic population. On the contrary, it is often argued that exports of high value crops can strengthen the national food sovereignty, as it may provide the financial means for countries to import the food needed or to purchase it domestically. The problem here howeve is that gains from food exports often do not reach the very people relying on imported foods due to low staple food production levels.

Apart from discussions about domestic or export production, it is widely accepted that investments in the agricultural sector of the Global South are needed. Investments in the primary sector are particularly crucial, as these can bring growth in productivity and, considering the estimated world population of 9.6 billion by 2050 (UN 2013: 1), they also help to meet the constantly growing food demand. "Given that industrialised countries have little ability to increase either the quantity of land devoted to agricultural production or their own agricultural productivity, growth will need to come from developing countries and emerging economies" (GIZ 2012: 7). However, it is highly controversial who should make those investments and in which area of agriculture the investments should be made. While some argue that the private sector is needed to increase production, value chain inclusion and food sovereignty (e.g. World Bank 2012), others believe that only public spending can guarantee the sustainable development of the agricultural sector; one that actually reduces poverty, hunger and malnourishment (e.g. Ramakumar 2012). The question of which area of agriculture should be fostered by investments is no less controversial – the extremes being technological optimized large-scale industrial agriculture on one side (e.g. Borlaug 1997) and the small-scale peasant agriculture with agroecological or organic principles on the one side (e.g. Varghese & Hansen-Kuhn 2013). "Choices about production methods, farming systems, types of aggregators and value chains, etc., will lead to very different kinds of outcomes for communities engaged in food production, harvesting and processing" (Varghese & Hansen-Kuhn 2013: 1).

However, it is a common obligation of all responsible institutions to guarantee the availability of food as the right to food is a human right. "[This] entails governments' obligations to guarantee the food security of their populations. In a world richer than ever before, it is unacceptable that people can be left to die of starvation. Nor should anyone be condemned to the misery of stunted mental and physical development that results from chronic hunger and malnutrition. All human beings have a right to live in dignity, free from hunger" (UN 2006: 8).

This study is organized in seven chapters. The introduction is followed by five chapters focusing on various segments of agri-food networks follow. Chapter two will give an overview on the extent of FDI in agri-food networks in India and SSA. In chapter three the amount of FDI in input industries and agricultural services will be discussed. Chapter four analyses FDI in land, including the drivers, the investors and the impacts. Chapter five covers FDI in the food processing sector. The focus of chapter six is on FDI in the wholesale and retail sector. 'Case Study Boxes,' explaining the topics through examples supplement the sections. Additional 'Opinion Boxes' present the view of various experts. The study closes with a conclusion.

Photo: Peter Dannenberg

Figure 2: Modern horticulture for high value crops near lake Victoria in Tanzania

Opinion Box 1: **Bill Pritchard** *(Associate Professor in Human Geography, University of Sydney)* on FDI and Food Security

The relationship between FDI and food security is not easy to summarise. On the one hand, FDI can provide capital and investment that provides jobs and agricultural innovations which enhance the volume of food produced and/or the ability of local people to earn income to secure their food needs. However, FDI can also play a potentially disruptive role in terms of pre-existing rights to land, water and other natural resources, and as a result, undermine food security for some members of a population. The most positive forms of FDI with respect to food security are investments that source agriculture from local smallholders, and therefore give these producers a new form of market access. However, evidence throughout the world indicates that large companies tend to prefer to source their agricultural products from large farmers, not smallholders, so this development route is not always open. For example, when supermarkets and modern food processing companies invest in developing countries, they tend to rapidly reorganise pre-existing supply chain arrangements and the landholders with the smallest areas of land, who are frequently also the most vulnerable, can miss out. To secure the interests and participation of smallholders in these situations, regulations or NGO assistance is frequently required. In other cases, FDI can be associated with exploitative local relations, such as that which typically known as 'land grabs'. In these situations, FDI represents a means to remove local smallholders from land and replace subsistence and semi-subsistence production systems with commercial, large-scale agriculture. This disrupts existing forms of food security, and although it may be the case that the new (foreign) landholders may provide wage employment, it is not always the displaced locals who get jobs, and also, these jobs may be casual and low-paying. Additionally, if 'land grab' foreign investment is associated with agricultural exporting, the volume of food in a country can be reduced to service higher-paying foreign markets. Clearly, the relationship between FDI and food security depends on the nature of the FDI and the local contexts in which it is located. This emphasises the important role of geographical research in understanding the contexts and places in which these events occur.

3 The development of FDI in agri-food networks

FDI flows are a part of the processes of globalisation. The UNCTADstat database (2013) shows that the world total inward FDI flows have increased from 629 billion USD in 2002 to 1.3 trillion USD in 2012. The share of FDI inflows into developing economies and transition economies increased from 18.8 % and 0.4 % in 2000 to 54.8 % and 6.3 % in 2012, respectively. Developing economies absorbed more FDI inflows than developed countries for the very first time in 2012 (see Table 1).

Fig. 3 shows the long-term trend of FDI inflows to Asia, Africa, USA and the European Union (EU). Asia has seen an increase over the last two decades of 10.9 % in 1990 to 30.1 % in 2012. Africa's inward FDI flows started to grow in the late 1990s; for example from 1996 to 2012 the inward FDI flows increased from 6.3 to 50 billion for example. In contrast, the EU's inward FDI flows declined after a long period of growth. Their peaks in 2000 (701.8 billion USD) and 2007 (859.1 billion) plummeted to 258.5

Table 1: **Total inward FDI flows (billion USD) 2002–2012,** Source: UNCTADstat data 2013

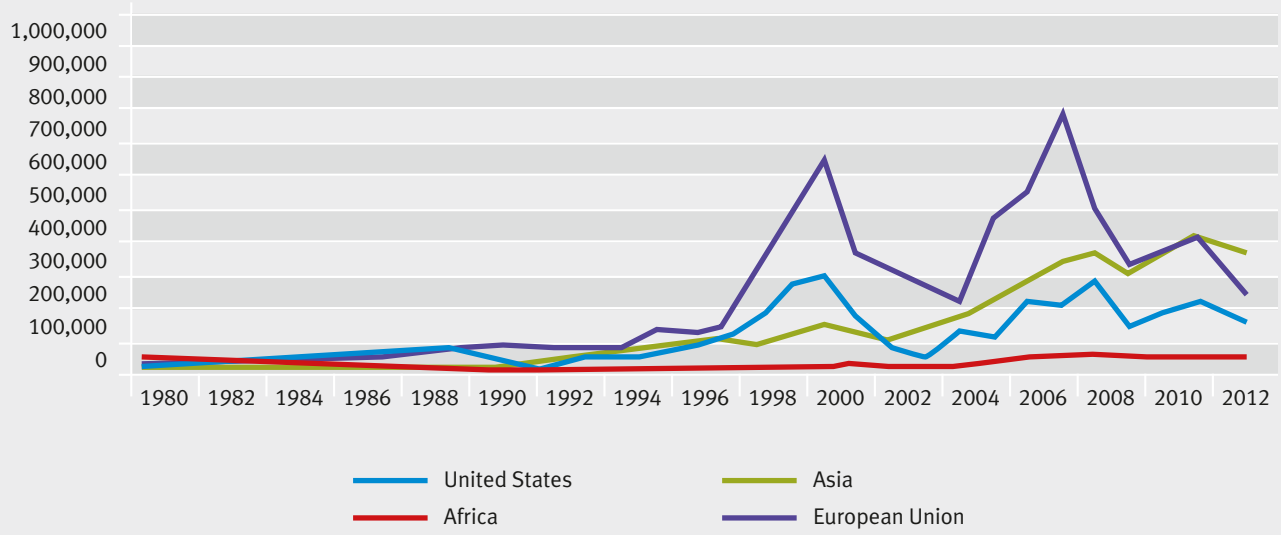
	2002	2004	2006	2008	2010	2012
World	629	738	1,482	1,819	1,422	1,330
Developing economies	172	285	433	669	648	729
Transition economies	10	29	60	118	71	84
Developed economies	446	424	988	1,032	703	517

Table 2: **FDI in Food and Tobacco by host (destination) country region/ income group[3], billion USD, 2003–2010,** Source: Lowder & Carisma 2011: 36 using Financial Times 2011.

Region / Income Group **Region (developing countries only)**	2003	2004	2005	2006	2007	2008	2009	2010
East Asia & the Pacific	1.5	2.6	1.0	2.5	1.3	2.9	6.8	3.5
Europe & Central Asia	1.7	1.6	1.3	2.0	2.0	4.3	5.8	1.3
Latin America & the Caribbean	1.0	1.5	0.5	0.3	1.3	2.5	1.1	1.3
Middle East & North Africa	0.2	0.3	0.2	0.1	0.5	0.1	0.4	0.5
South Asia	0.6	0.2	0.2	0.7	0.3	0.6	0.4	0.5
Sub-Saharan Africa	1.4	0.1	0.4	0.4	0.6	0.7	1.9	0.9
Income Group								
High income	3.5	3.7	3.5	3.7	5.0	5.2	5.2	4.5
Total	**9.9**	**9.9**	**7.0**	**9.7**	**10.9**	**16.3**	**21.7**	**12.4**

[3] Classification based on World Bank classification of Country and Lending Groups (http://data.worldbank.org/about/country-and-lending-groups#IDA).

Figure 3: **Trends in FDI inflows to Africa, Asia, EU and USA (million USD), 1980 – 2012,** Source: UNCTADstat data 2013



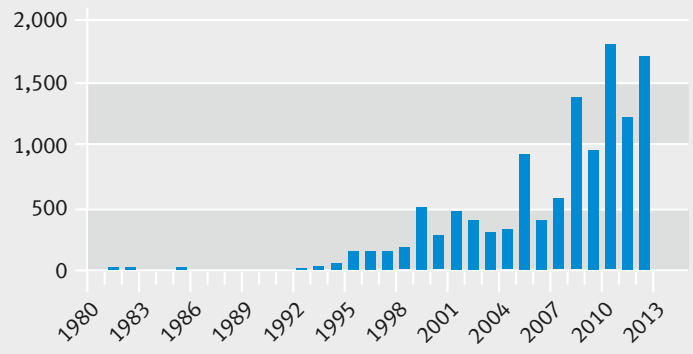
billion USD in 2012. Like the EU, the inward flows of the United States of America also declined in the period between 2000 to 2012 from 314 billion to 167.6 billion USD (UNCTADstat data 2013).

In all sectors FDI levels increased dramatically from 2003 to 2008; they doubled from 711 billion USD to 1,410 billion USD. However, after the peak in 2008 FDI declined to 754 billion USD. The FDI inflows to selected sectors, which are relevant to the agricultural sector (such as alternative / renewable energy, food and tobacco, beverages), were marked by a substantial growth from 2005 to 2009 (Lowder & Carisma 2011: 35). Yet, it is important to note that FDI inflows in beverages have declined after the peak in 2009. The share of FDI in the relevant sectors remains, with one exception, less than 10 % of the total FDI from 2003 to 2010. Only in 2009 did all the relevant sectors reach 13.2 % of the total FDI. Within these three sectors the majority share has been invested in alternative/renewable energy, while inflows in beverages as well as food and tobacco have remained under 2 % (Lowder & Carisma 2011: 35 using Financial Times 2011).

The total FDI flows in food and tobacco increased from 2003 (9.9 billion USD) to 2009 (21.7 billion USD). Following this, the peak investments declined to 12.4 billion USD in 2010. The highest new FDI in food and tobacco have been undertaken by high-income countries, followed by the developing East Asian and Pacific countries as well as the European and Central Asian countries. Table 2 shows where FDI in the food and tobacco sectors have been made geographically and by income from 2003 to 2010. In SSA, there have been two peaks in 2003 and 2009 at 1.4 billion USD and 1.9 billion USD, respectively; in those years the FDI inflow remained at a constant (low) level of under 1 % (Lowder & Carisma 2011: 36 using Financial Times, 2011).

To conclude, it was found that even though investments in the agri-food networks have increased dramatically from 2005 to 2009, FDI in agri-food networks have taken only a minimal portion of the total FDI flows. It was also observed that the increase in investments is unevenly distributed within the various world regions. While FDI in high-income countries remain high, Africa

Figure 4: **Trends in FDI inflows to Tanzania (million USD), 1980 – 2012** Source: UNCTADstat data 2013.



has seen a substantial increase (based on a very low starting point) in agricultural FDI from 2004 to 2009, decreasing thereafter (no later data available).

3.1 FDI in the agricultural sectors of Sub-Saharan Africa

Since the late 1990s, Africa's inward FDI inflows have grown. From 1996 to 2012 there was an increase from 6.3 billion to 50 billion USD (UNCTADstat data 2013). The share of these investments in agri-food networks remain relatively small, even though literature of consulting firms and the World Bank is celebrating Africa's enormous potential for agricultural investments: "Africa's agriculture holds enormous potential for companies across the value chain. With 60 % of the world's uncultivated arable land and low crop yields, Africa is ripe for a 'green revolution' like the ones that have transformed agriculture in Asia and Brazil" (Roxburgh et al. 2010: 7).

Barriers for this 'green revolution' are seen by consultants in a "lack of advanced seeds and other inputs suited to the continent's ecological conditions; inadequate infrastructure to bring crops to market; perverse trade barriers and tax incentives, unclear land rights; and lack of technical assistance and finance for farmers" (Roxburgh et al. 2010: 7–8). Apparently, this represents a neoliberal perspective in which trade barriers and tax incentives are viewed as an obstacle to the universal remedy called market integration. Other perspectives critically view especially the opening of markets and the elimination of state subsidies as well as the integration of African farmers. Skarstein (2005) for example, (2005) showed that the liberalisation of the agricultural sector in Tanzania in the mid-1980s (including the decontrol of agricultural producer and input prices, abolishment of pan-territorial prices, removal of subsidies and privatisation of trade in agricultural products and inputs) has resulted in a stagnation or a decline of labour productivity, yields and food grain production per capita until the late 1990s.

Photo: Martin Franz

Figure 5: Sisal production is one of the sectors which attracted FDI since it was privatised in 1998. Sisal is mainly produced for export in large plantations. The picture was made on a farm owned by Swiss investors near Tanga.

Lastly, no agreement is to be found in literature on which development path is best for Sub-Saharan Africa's agricultural sector. As Rakotoarisoa (2011: 17) states: "The impacts of foreign agricultural investment on the SSA economy deserve greater attention because of the food-insecurity and food-trade challenges the region is facing." The developments and the importance of FDI in the agricultural sector of the exemplary states of Ghana and Tanzania will be presented in the following.

3.1.1 Tanzania

The United Republic of Tanzania has a population of 47.78 million people (World Bank 2013a). Its official capital is Dodoma. The largest city (4.36 million people) is Dar es Salaam (NBS 2013: 26). In Tanzania FDI has increased over time, although FDI activity is still in an initial stage. The FDI inflows to Tanzania started to increase in the mid-1990s as a consequence of changes in the investment climate (FAO 2013: 60). Tanzania initiated and implemented economic liberalisation policies to attract FDI. Reforms were made in financial institutions, the public sector and other areas. Furthermore, a legal framework for investments was implemented, in particular the National Investment Promotion Policy of 1996 and the associated Tanzania Investment Act of 1997 (Ngowi 2012: 4). However, in 2013 Tanzania planned to review the main laws of the legal framework for investments (OECD 2013: 20).

In 1999 the increase of FDI inflows to Tanzania reached a peak at 496.6 million USD. In the early 2000s, FDI inflows decreased slightly, followed by another peak at 935.5 million USD that was superseded by yet another drop.In 2008 the 1 billion USD mark was reached. In recent years, the FDI inflows have fluctuated on a high level. The so far largest FDI inflow was witnessed in 2010 with 1.813 billion USD (UNCTADstat data 2013, see Fig. 4).

South Africa, Canada, UK, Mauritius and Kenya were the top five source countries of FDI inflows into Tanzania from 2008 to 2011 (TIC 2013: 22). In this period, these countries invested a total of 4.6 billion USD in Tanzania, which amounts to 86.1 % of total FDI inflows. Investments from South Africa accounted to 31.1 % and thus presented

the highest share of total inflows. Looking at the sources of FDI inflows by regional groupings during the observed period the Organization for Economic Cooperation and Development (OECD) countries are the dominant source of investments in Tanzania, which have a share of 56.1 % of total FDI inflows. Canada and the UK accounted for 74.1 % of the total inflows from the OECD. The countries from the Southern African Development Community (SADC) are the second largest investors in Tanzania. Nevertheless, South Africa accounted for 76.1 % of the total inflows from SADC. Investments from the East African Community (EAC) contributed with a share of 5.1 % (TIC 2013: 24).

FDI in Tanzania's Agriculture Sector

In general, the agricultural sector, which contributed about 28 % of the gross domestic product (GDP) in recent years (World Bank 2013b), attracts little FDI. Despite the increase in investments, the agricultural sector received only 104.5 million USD between 2008 and 2011. This is only 1.9 % of all of Tanzania's FDI inflows. Additionally, the FDI stocks in the agricultural sector totalling 1.171 million USD have had only a small share (3.6 %) of all FDI stocks between 2008 and 2011 (TIC 2013: 21).

The major problem for Tanzania's agricultural development is the low productivity of its dominant small-scale farmers. From the perspective of the Food and Agriculture Organization (FAO) of the United Nations (FAO 2013:62) they have "low levels of productivity, but also limited education, skills and experience, and insufficient access to credit and input." It is correct that small-scale farmers lack access to credit and input, however it is questionable whether the latter have limited skills and experience. These farmers are often very experienced and have a vast traditional knowledge of their profession, highly adapted to the local circumstances. However, foreign investors wanting to sell inputs to the farmers or source products from them, expect a different kind of knowledge and often discredit traditional agricultural knowledge.

Only a small fraction of Tanzania's agricultural enterprises attract a large percentage of FDI. In most cases, these enterprises are larger and/or dispose a higher level of organisation to maintain the FDI (FAO 2013: 63). Further reasons for the low level of FDI in the agricultural sector are, according to the Tanzania Investment Center (TIC 2009: 40), an "underdeveloped infrastructure in the rural areas, restrictive land policy, inadequate land bank facility, and less attractive incentive package" (see Fig. 6). Another problem are ill-represented statistics. For example, projects that involve agri-processing, like beverages, are not listed under agriculture (FAO 2013: 63).

According to the FAO (2013: 65), export commodities of the agricultural sector have expanded in the last years and with that investments in non-traditional commodities, such as fruits, sugar, maize, mushrooms, seaweed, poultry, vegetables, cut flowers, beef, moringa trees, sesame and honey. Furthermore, increasing investments in the beverage sector have been noted, the investors often being from the UK. (OECD 2013: 20).

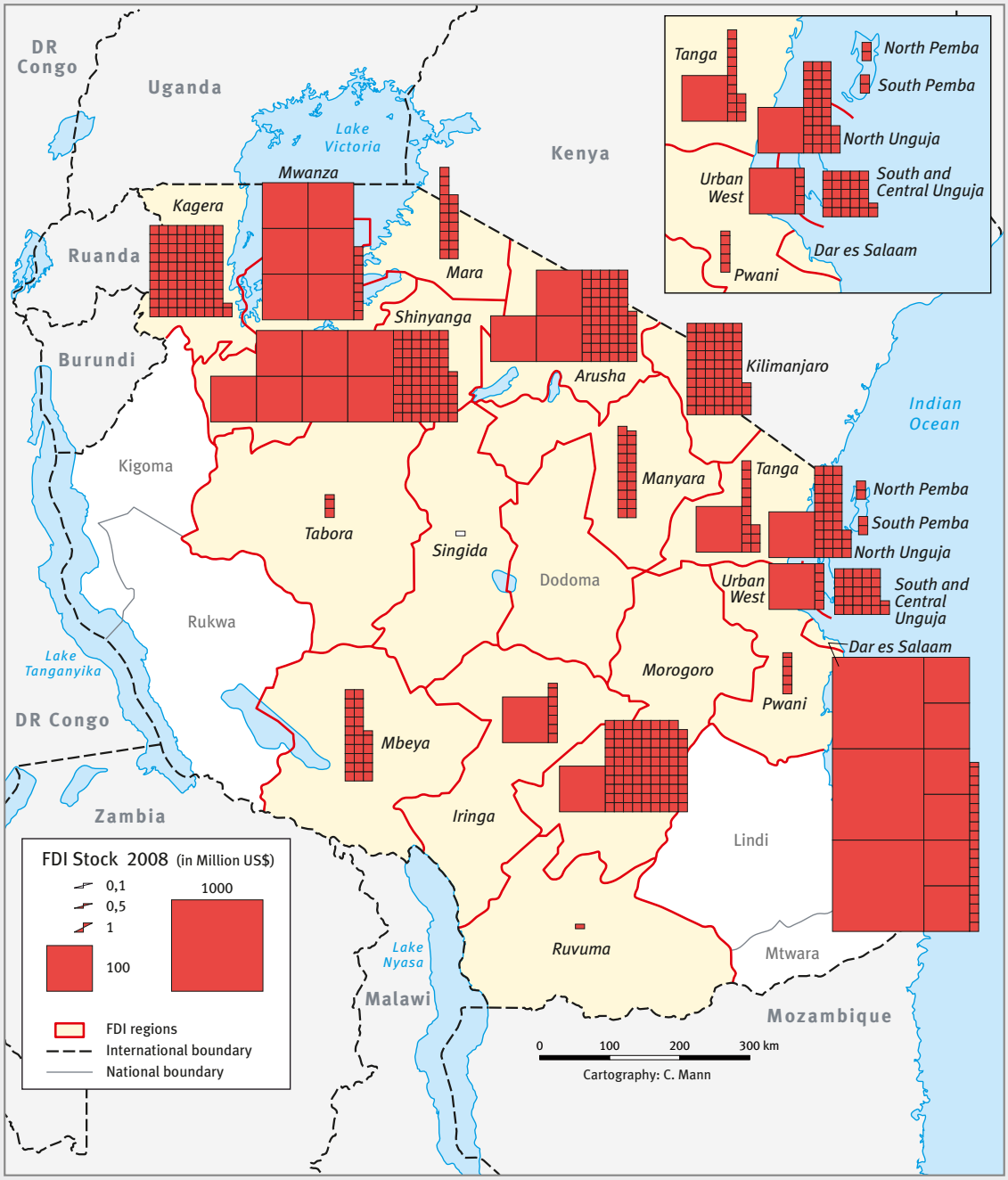
Photo: Martin Franz

Figure 6: The bad road infrastructure in Tanzania often hinders farmers to market their products

Geographical distribution of FDI in Tanzania

FDI in Tanzania are geographically distributed in about 21 regions. The largest FDI stock with 3,618 million USD in 2008 is located in Dar es Salaam, followed by Shinyanga and Mwanza with 765 and 608 million USD, respectively. These three regions represent about 80 % of the total FDI stock in Tanzania between 2005 and 2008 (see Fig. 7). The same pattern is observed for the geographical distribution of FDI flows (see Fig. 8). During 2005 to 2008, in average 449 million USD of FDI have been made in Dar es Salaam per year. Compared to Mwanza, where the second largest FDI flows have been transacted, the investments in Dar es Salaam are ten times higher (TIC 2009: 25 – 26). In general, it can be said that FDI beneficiaries in Tanzania are regions that exhibit abundant natural resources or a strong tertiary sector (e.g. headquarters, commerce), modern infrastructure and/or good market accessibility (e.g. port proximity). The latter is the case for Dar es Salaam, which has become a leading city in the country. In the regions of Shinyanga and Mwanza, where fishing and mining is prevalent, large FDI have occurred.

Figure 7: **Regional Distribution of FDI Stock (in million USD) in Tanzania from 2005 to 2008,** Source: TIC 2009: 25

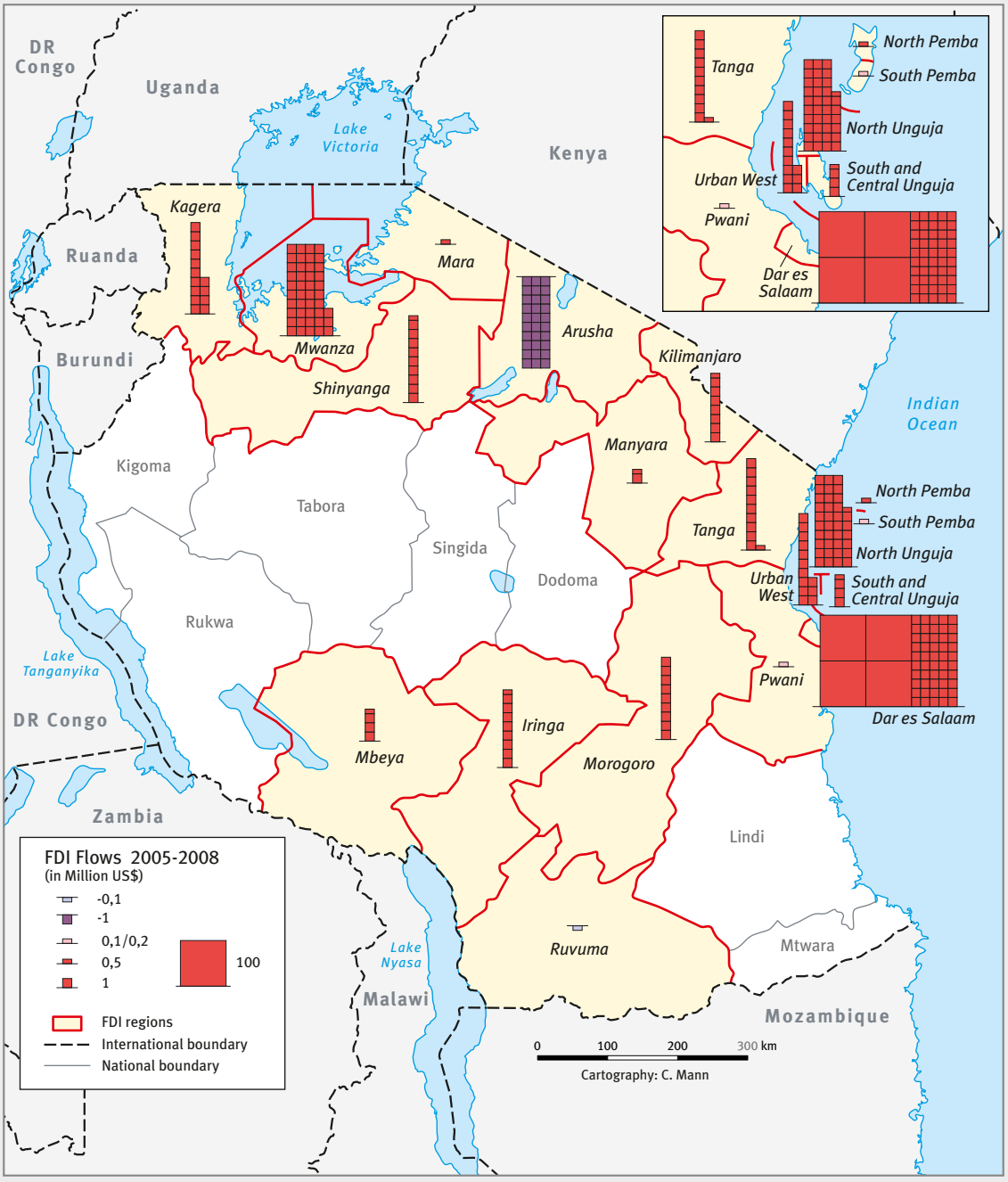


3.1.2 Ghana

The Republic of Ghana has a population of 25.37 million people (World Bank 2013c). Ghana consists of ten territorial administrative regions and its capital is Accra. Economically, Ghana has had a strong growth throughout the last decade, which is, besides the strong prices of cocoa and gold, largely due to an enhanced performance and a higher productivity of the agricultural sector (UNCTAD 2011: 23).

In Ghana, agriculture – accounting for 30.2 % of the GDP in 2010 – is the dominant field next to the service and industry sector. About 13,628,179 ha of land, covering approximately 57 % of the country's total land area

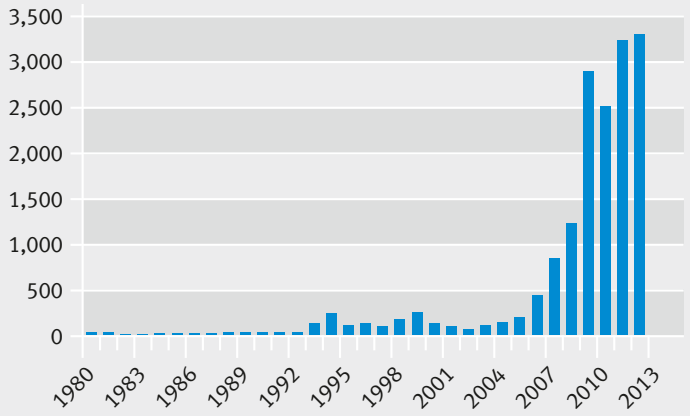
Figure 8: **Regional Distribution of FDI Flows (in million USD) in Tanzania from 2005–2008,** Source: TIC 2009: 26



of 23,853,900 ha, is classified as "agricultural land area". About 51 % of the labour force (approximately 51.8 % female and 48.2 % male) is engaged in agriculture. Despite annual growth rates of around 4 to 7 %, the growth of the predominantly traditional, smallholder and rain-dependent agricultural sector is constrained by poor infrastructure, such as inadequate roads and storage facilities. Moreover, there is only limited irrigation – only about 2 % of the agricultural land area is irrigated (UNCTAD 2011: 23).

Under the aegis of the World Bank and the IMF, Ghana's government purposefully began to acquire FDI through the Economic Recovery Programme of 1983. At the beginning of the 1990s, a large privatisation programme –

Figure 9: **Trends in FDI Inflows to Ghana (in million USD), 1980 – 2012,** Source: UNCTADstat data 2013.



that sold over 200 state-owned facilities – arranged further incentives to steer more FDI into the economy (Abdulai 2005: n. pag). Fig. 9 shows an increase of FDI inflows in the 1990s and the dramatic acceleration in the mid-2000s. FDI spiked from 192.94 million USD in 2005 to 3.3 billion USD in 2012. FDI activity jumped noticeably from 2008 (1.2 billion USD) to 2009 (2.9 billion USD). FDI further increased after reaching the 2+ billion USD mark (UNCTADstat data 2013). Between September 1994 and December 2009, the GIPC registered a total of 3,214 FDI projects in Ghana. Consequently, the FDI inflows and the FDI projects have increased since 2009. Between 2008 and 2012, 1,851 FDI projects were registered, which accounts for about 60 % of all registered projects between 1994 and 2009. Of these, 672 projects were joint ventures and 1,179 were 100 % foreign projects (see Table 3, GIPC 2008 – 2012).

In the period between 1994 and 2009, the UK (4.8 billion USD), the USA (2.45 billion USD) and the United Arab Emirates (2.1 billion USD) were the main foreign investors (see Table 17 in appendix). From Europe, only Italy (115,19 million USD) and the UK were under the top ten investors in Ghana. In addition, origins of other investors from Europe were: Switzerland, France, Ireland, the Netherlands and Denmark. In this period, most of the FDI projects were initiated by investors from China (415) and India (388) (GIPC 2009: 9). In the years from 2009 to 2012, India and China implemented by far the most projects when comparing them to other nations.[4] Altogether FDI of 15.2 billion USD was invested in Ghana's economy in this period. The largest investments were made by Korea (4.8 billion USD) and Lebanon (1.6 billion USD). The only European country that was ranked among the top ten investors in Ghana were the Netherlands (GIPC 2008 – 2012).

In comparison to the total GDP, agricultural FDI volume in Ghana is rather small. In the years between 1994 and 2009 for example, only 3 % of the FDI inflow has been invested (383.07 million USD) in Ghana's agricultural sector. The most substantial FDI inflow has been made in the manufacturing (7.5 billion USD) and the building & constructions (2.4 billion USD) area. Together, these sectors cover about two thirds of the total FDI inflow. The investors of Ghana's agrarian sector come from various countries. Main investors are South Africa (92 million USD), France (50.42 million USD), the USA (48.65 million USD) and Switzerland (46.19 million USD). Further European investments have been initiated from the Netherlands, Denmark, the UK and Italy. In the period of 2009 to 2012, FDI in agriculture increased to 975.18 million USD (approx. 6 % of the total volume) (GIPC 2008 – 2012).

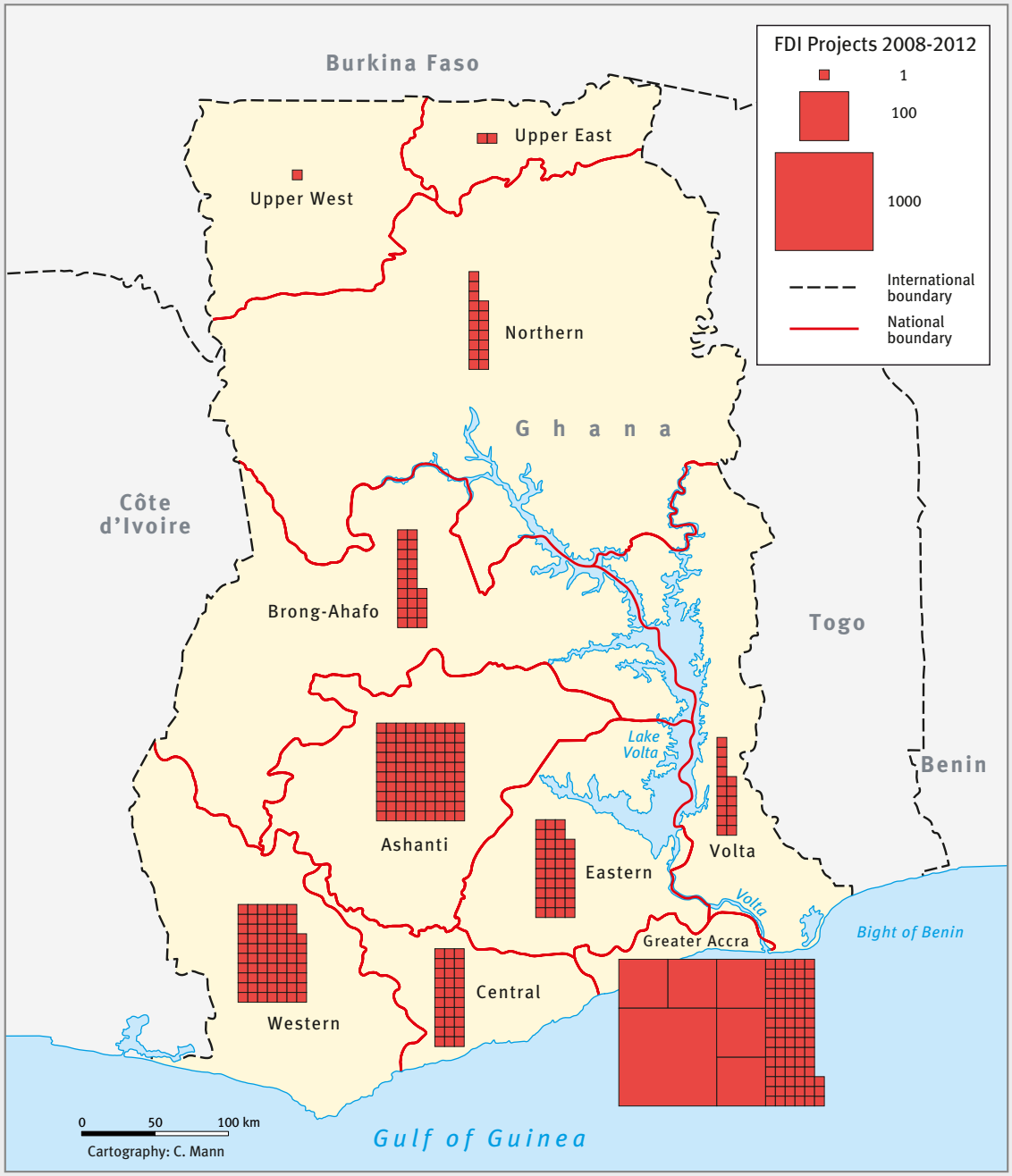
Table 3: **FDI Projects in Ghana, 2008 – 2012,** Source: GIPC 2008 – 2012.

	2008	2009	2010	2011	2012	Total
Total No. of projects	296	257	385	514	399	**1,851**
No. of joint ventures	99	90	136	187	160	**672**
No. of 100 % foreign projects	197	167	249	327	239	**1,179**

Ghana's economy heavily depends on agricultural exports. The main agricultural export products are cocoa, timber, horticultural products, fish/seafood, game & wildlife (SRID 2011: 1). Pineapple and bananas account for the largest volume in the export of horticulture products (SRID 2011: 38). The past ten years, the country has made

[4] Unfortunately there is no continuous data for the years 2009 – 2012 on sectoral distribution of FDI in the countries.

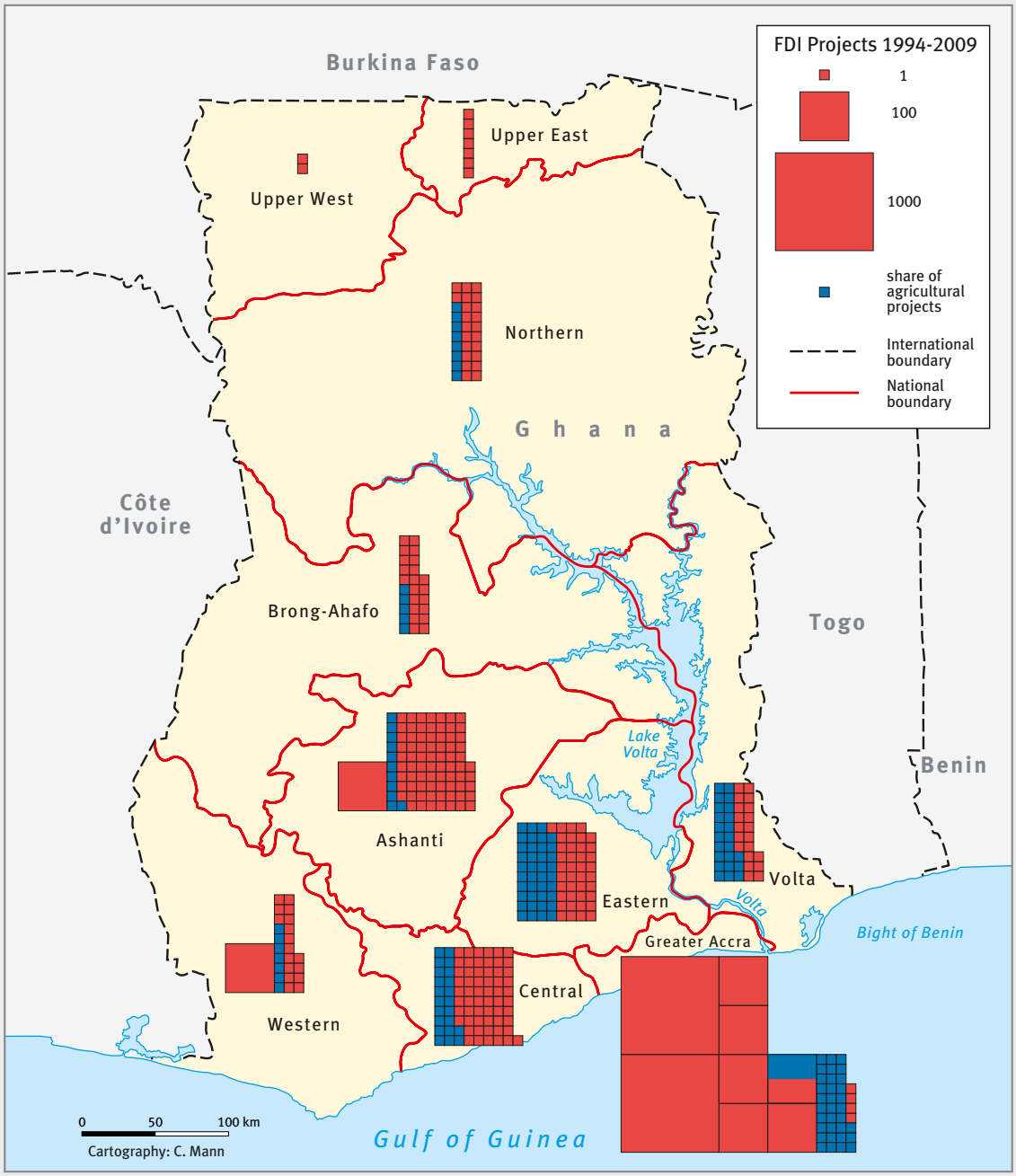
Figure 10: **FDI Projects in Ghana 2008–2012,**
Source: GIPC 2008 – 2012



considerable efforts to attract FDI in order to support the production and export of non-traditional agriculture products, such as vegetables, fruits and seafood (see case study box 3). The World Bank (2006) emphasises in particular the attractiveness of the horticulture and food and beverage processing sector for FDI in Ghana's agricultural subsectors.

Since 2003 the Compagnie Fruitière of France invested in the Ghanaian Golden Exotics Company, one of the largest bananas and pineapple producers. Other foreign investors in Ghana's horticulture sector are the juice manufacturer Pinora and the Swiss fruit distributor HPW (Jaeger 2008: 4). Horticultural goods are primarily exported to the EU and the Commonwealth countries. Although

Figure 11: **FDI Projects in Ghana 1994–2009 with share of agricultural projects,** Source: GIPC 2009: 3



Ghana focusses more on exporting, it also cultivates horticulture for the local market (World Bank 2006: 18).

The FDI inflows in the agricultural sector have had an important impact on the Ghanaian economy, especially for the creation of employment. It was expected that 196,313 jobs would be available in the time frame of 2001 to 2009, of which 195,814 were supposed to be allocated to local people and 499 to foreigners (GIPC 2009: 5). According to the FAO (2013: 204), the employment creation of FDI inflows in the Ghanaian agriculture is "underscoring again the crucial role FDI can play in reducing poverty in rural areas given the relatively high labour-intensive nature of agricultural related activities therein". However, it is questionable whether the expected employment numbers

will actually be reached. History has shown that governments tend to announce more employment opportunities and what can be reached. A strategy that greatly helps to sell projects.

Geographical distribution of FDI in Ghana

FDI projects in Ghana between 1994 and 2009 are unevenly distributed over various regions (see Fig. 11). For example, 2,637 (82.05 %) of the 3,214 FDI projects were undertaken in the Greater Accra region. The region around the capital is the main attraction for FDI in Ghana. Together, all of the other regions only received 20 % of the FDI projects. The Ashanti region obtained the most projects following Accra (185; 5.8 %) (GIPC 2009: 5). In regard to agricultural FDI projects, the dominance of the capital region is not clearly recognisable though. Admittedly, with 83 out of 198 projects (41.9 %), the Greater Accra region is the main attraction for FDI projects. In addition, a number of other FDI projects have been realised in the Eastern, Central and Volta Region. 84 agricultural FDI projects (42.4 %) took place in these three regions; this supersedes the capital region (see Fig. 11). For the years between 2008 and 2012 only accumulated data on the regional distribution in the agricultural sector exists. Fig. 10 shows Greater Accra as the main attraction for FDI in Ghana; the region received 1,578 (82.2 %) of the 1,920 undertaken projects. The Ashanti region (90 projects; 4.7 %) and the Western region (3.5 %) follow (GIPC 2008 – 2012).

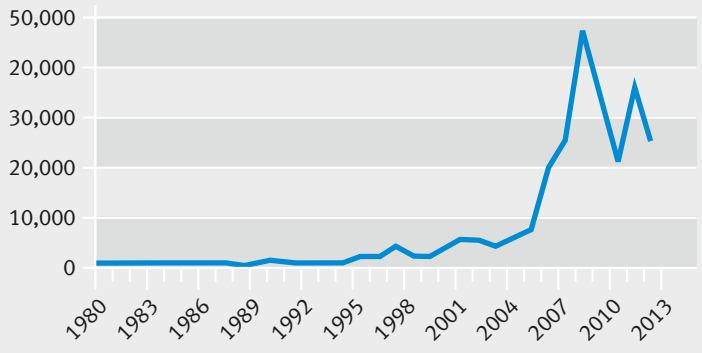
3.2 FDI in the agricultural sectors of India

The liberalisation phase in India began in 1991. Aghion et al. (2003: 5) called this liberalisation "one of the most dramatic trade liberalizations ever attempted in a developing country." This statement is worth discussing, as India's economy is still regulated in many ways (for a deeper insight into the liberalisation of the Indian economy see Ahluwalia 2002; Roychowdhury 2003 and Mukherji 2007). Especially the Indian agro-food system has long been bypassed by the reforms. Existing regulations include restrictions on imports and FDI and domestic trade.

Fig. 12 presents the trends in FDI inward flows for India from 1980 to 2012. An upward trend of FDI inflows was observed in the mid-1990s. Starting in 1994 at 0.97 billion USD, India reached a peak in 2008 at 47 billion USD. Following this peak, investments became unstable. In 2012 FDI inward flows reached only 25.5 billion USD (UNCTADstat data 2013).

In 2012 a total of 92 countries invested in India. The majority of these countries were non-EU states; together 21 countries from the EU invested 6.38 billion USD in India.

Figure 12: Trends in FDI inflows to India (million USD), 1980 – 2012,
Source: UNCTADstat data 2013.



This is a share of 23 % of the total amount (22.78 billion USD). The highest FDI flows to India have been initiated by the Netherlands (1.67 billion USD), Cyprus (0.96 billion USD), the UK (0.83 billion USD) as well as Germany (0.73 billion USD) (Indiastat 2013).

During the last few years, India's national government and many state governments have started to liberalise

Photo: Martin Franz

Figure 13: Agriculture in India is still dominated by small-scale farmers

regulations to support private investments and FDI in the food trade. The norms for FDI were eased, import duties lowered and the agro-food network was partly deregulated from licenses. Furthermore, the Food Safety and Standards Act replaced the vast number of individual food safety regulations in 2006 (Punjabi 2007).

Photo: Schwarzbach/MISEREOR

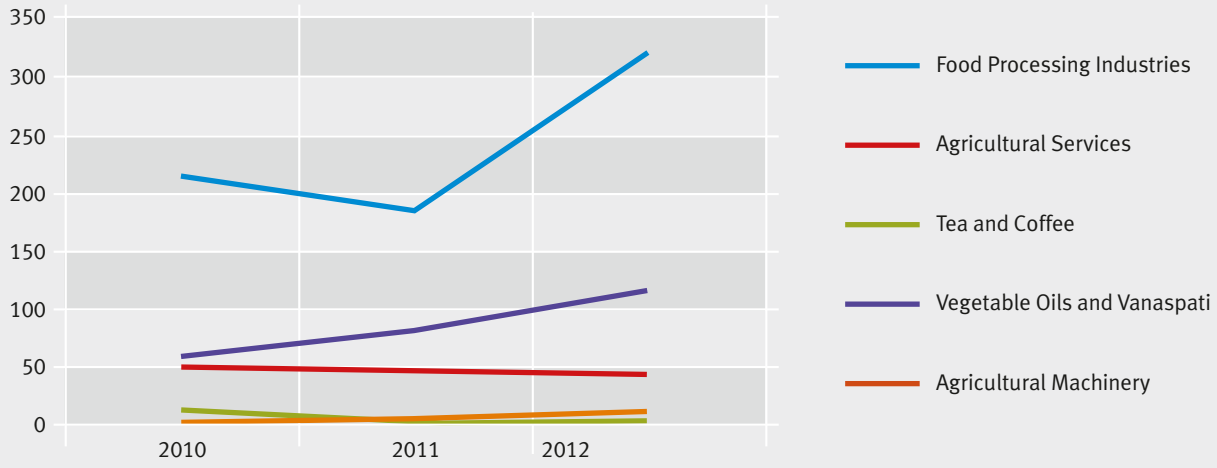
Changing demand and growing domestic market

Investments in the agri-food networks did not only become attractive due to the possibilities of export production; the domestic market has also become more attractive for investments. The economic growth has resulted in the development of a growing urbanised middle class with a significantly higher purchasing power. The economic changes have also promoted social change. This includes changes in family structures (growing proportion of nuclear families) and in lifestyles (increasing employment of women, emulation of Western patterns of consumption, growing access to refrigerators and cars). These different factors resulted in changing buying and dietary habits (Keskar 2006; Radhika 2006), including a growing demand in high value crops, meat and products that fulfil higher quality standards.

While FDI in India's agricultural sector is growing steadily, its general share in the country's total FDI inflows is still small. From 2000 to 2013, India's agricultural sector received 4.3 USD (FDI inflows). This is a share of only 2.2 % of the total inflows (195 billion USD) in all Indian sectors. The highest amount of FDI inflows in agriculture has been invested in the food processing industries (1.9 billion USD) and in agricultural services (1.6 billion USD) (Indiastat 2013).

In Fig. 14 it becomes clear that the food processing industry received the most FDI inflows from 2010 to 2012, despite a low in 2011. The next highest investments were made in vegetable oils and Vanaspati. During this time, the FDI inflows into this sub-sector increased from 58.6 to 112.1 million USD. In contrast, investments in tea, coffee, sugar and agricultural machinery remained below 11 million USD.

Figure 14: **FDI inflows in the Indian Agricultural Sector (million USD), 2010 – 2012,** Source: own calculations using data from Indiastat 2013.



FDI in input industries and agricultural services

4

Since the 1960s, the production of cereal has increased greatly due to the intensified use of fertilisers and irrigation systems as well as the development of new seeds. This has contributed vastly to the food security in many states. At the same time, these increases in production are very unevenly distributed and have ecological impacts that make them unsustainable in the long term. While the introduction of fertilisers, new seeds and irrigation systems have occurred in all areas of the industrialised world, this has been only partially true for the developing countries. For example, the Green Revolution[5] caused major productivity improvements in India – but only in selected regions. Even in those regions where productivity has increased, many farmers have not gained access to new inputs (such as seeds and fertilisers) and production methods. Especially smallholders cannot afford to purchase these expensive inputs. In addition, the detrimental effects on the environment as a result of the excessive use of agrochemical products and intense irrigation have been questioned. Evenson and Gollin (2003) have shown that the consumers have benefited from lower food prices due to the introduction of more productive plants, however farmers have not always benefited, as sometimes price reductions exceeded cost reductions. In Sub-Saharan Africa the Green Revolution has long failed to take root. Estimates show that in 2000 only 24 % of the cereal-producing area in SSA had improved cereal varieties (World Bank 2007: 52).

More investments in input industries and agricultural services are seen as a big potential. A study by the consultancy group McKinsey suggests that a green revolution in Africa could hold huge potential for input industries. "Our analysis suggests that upstream input markets would increase from around 8 billion USD today to 35 billion USD by 2030. The largest of these opportunities is fertilizer. Africa's use of fertilizer, at 24 kilograms per hectare is a quarter of the world average. Increased fertilizer use would be an essential component of an African green revolution, presenting suppliers with 14 billion USD in potential revenue, or 3 billion USD in profits" (Roxburgh et al. 2010: 43). Such calculations do not include the potential costs of environmental impacts.

The lack of modern inputs, such as fertilisers, pesticides, high-yielding seeds and agricultural services is often identified as one of the major reasons for the low agricultural production levels in the Global South (e.g FAO 2013). Farmers of the Global South do no only lack the access to inputs, they also do not know how to use agrochemicals appropriately, which results in health damages, ecological problems and low-quality products (see Fig. 15 and 16). Thus, they need training. In many states of the Global South, governmental agencies have taken over the distribution of inputs. In the mid-1970s, governmental agencies were also in charge of the training and consulting of the farmers of the Global South. Yet, since the 1990s, many governments have notably retreated from these areas. They believed that private actors could operate more effectively (or were made to believe so by the IMF and the World Bank). Indeed, governments were often overwhelmed. They lacked resources, qualified personnel or the required technology. Corporations and NGOs filled the emerging void caused by the retreat of the governments (Swanson & Samy 2002). "Private sector firms and nongovernmental organizations [...] have become important alternatives to public extension in providing technical inputs, information and training, and organizational support services to farmers and rural households. Private sector firms, including multinational seed and chemical companies, have become important contributors to agricultural technology transfer, especially to the commercial farm sector" (Swanson & Samy 2002: 5). Certainly, these private actors and the associated investments hold enormous potential for creating

Photo: Martin Franz

Figure 15: Pest infestation in an egg plant in India

[5] The Green Revolution started in the 1960s and is characterised by the development of high yield crops in combination with the use of irrigation systems and agrochemical products and their successful distribution in developing countries.

a more effective agricultural sector in the Global South and for enabling farmers' access to inputs and services, although it is debatable what kind of inputs and services are desirable. In the end, this could strengthen the food security. Nevertheless, such developments do not only entail positive outcomes, which will be discussed below.

Private actors increasingly view farmers at the Bottom of the Pyramid (BoP) as a target group with which profits can be made. The BoP approach emphasises the potential of the poorest (Prahalad 2012) as a growing market and suggests that companies should invest in the bottom in order to assure sustainable economic growth (UNDP 2008). "This, in turn, means companies can profitably build new markets for seeds, feed, fertiliser, plant protection products, irrigation systems, machinery and other production factors. […] To ensure that smallholders have the income to pay for these investments, and help boost their demand for high-quality inputs, companies often work with partners to help establish links between the various stages of the value chain. Rather than being simply product providers, companies are thus becoming system and solution providers" (GIZ 2012: 20). Case study box 1 shows an example of such an approach. The investments are often seen as a win-win scenario (Prahalad 2006): the companies have the potential to earn money and the farmers may benefit by gaining better access to knowledge, innovation technology and services. This should help to overcome the so-called "BoP penalty" (Hammond et al. 2007: 25), defined as the higher prices for goods and services that poor consumers sometimes have to pay, "either in cash or in the effort they must expend to obtain them," by comparison to wealthier consumers (Hammond et al. 2007: 25).

Photo: Martin Franz

Figure 16: Farmers often do not know how to use agrochemicals appropriately. The photo shows the hands of a farmer in India after he prepared a pesticide mixture and distributed it on his field

However, there are also critics of the BoP approach, who highlight the selectivity of corporate investments. Such critics argue that corporations invest only in areas where they can reach certain amounts of profits. This means, in many cases, that especially those farmers who need to be supported the most, are left behind. The reasons for this are manifold: their land may be too remote, their holding size too small, their production not suited to market demands and/or their education level too low. Additionally, the selectivity of the knowlegde transfer selectivity that is based on the intentions of the private trainer is questionable. The training of local farmers turns into marketing actions for certain products and traditional agricultural knowledge is undermined. (Trebbin & Franz 2010, see case study box 1). Furthermore, an intensified use of pesticides and fertilisers also brings significant ecological risks. These include the degradation and contamination of soils which can be seen as a threat to food security. Instead of training provided by agribusinesses, the implementation of "[f] armer-to-farmer knowledge exchanges based on locally determined priorities" (Varghese & Hansen-Kuhn 2013: 4) could improve the situation in many regions. However, traditional knowledge and practices can be unsustainable too – especially when agriculture gets more intense due to a growing population (see Fig. 18). In such cases the transfer of knowledge from other regions with similar problems can have a high impact, e.g. the introduction of terraces in pilot projects by the Sokoine University of Agriculture in Tanzania showed good results.

On closer consideration of the role of input and agricultural service providers in the Global South, their relevance for forming power relations in agri-food networks should not be forgotten. The potential role of input suppliers in shaping the structure of agri-food networks is often underestimated. While the providers of fertilisers, pesticides, seeds or technology/machinery are often named in value chain studies and shown in figures of the respective chains or networks, they are widely presented as subordinates who depend on the orders of producers or on the influence of lead firms (Franz et al. 2014). Especially studies on the implementation of quality standards (e.g. Lee et al. 2012) or contract farming (e.g. Dannenberg & Nduru 2013) emphasise that lead firms have the ability to impose requirements for specific inputs. However, there are many hints in the literature that input providers are taking an active role in shaping value chains (see case study box 1 and 2). For example, Ouma (2010) states that more input suppliers have joined the membership base of the GlobalGAP organization that was originally formed by large retail companies in order to define and enforce food quality standards. Furthermore, reports criticise that especially smallholders are driven into deep dependencies with middlemen or certain products (e.g. Monsanto

Case study Box 1: The Food Chain Partnership Programme of Bayer Crop Science in India

The German corporate group Bayer AG is a global player in the chemical and pharmaceutical industry. One of its subsidiaries, Bayer Crop Science (BCS) holds a 19 % share of the world market for agro-chemicals (World Bank 2007: 136). The engagement of Bayer in India is well known. It already entered India's market in 1896. Even though the ownership of Bayer in India has changed since then, the Bayer brand has been used continuously. In 2006 BCS India started to build-up a network with various retailers, processors and exporters of high-value crops, such as fruits and vegetables, in the so-called Food Chain Partnership (FCP) programme. FCP has been implemented in more than thirty countries. Cooperation partners include retail companies, such as German Metro Group, as well as food processing companies, such as US-based Pepsico corporation. FCP's aims is to improve farming, offer farmers agricultural services and integrate farmers into the supply chains of the above-mentioned companies. The programme was implemented in regions, which are of great importance to the cooperation partners in the sourcing of fruits and vegetables. The areas are located in different Indian states. BCS targeted only those crops that are highly demanded by retailers and processors. These crops include chilli peppers, eggplant, onion, okra, potato and tomato. The core idea of FCP is to train project farmers in modern agricultural practices. This is done by the 'project officers.' They advise the farmers on crop varieties, fertilisers and pesticides to be used in order to ensure the kind of crop quality that is demanded by the big corporations. In return for their advice, BCS expects the farmers to buy exclusively Bayer products as inputs for production. Consequently, Bayer benefits from the FCP through an increased market share in agrochemicals by BCS and in seeds by Nunhems, another Bayer subsidiary. Farmers that fulfil the BCS guidelines are included into a database. This BCS database is shared with its cooperation partners from the retail and food industry. These companies can use the database to choose the farmers from whom they want to buy produce. By doing so, BCS has developed into a service provider for food retailing and processing companies. The benefits for the participating farmers are the inclusion into the supply chains of big corporate buyers, the potential to save costs for agrochemicals due to better-adjusted dosages and potentially better harvests. However, the costs (e.g. for transportation) and risks (e.g. crop failure) still have to be borne by the farmers. They do not automatically gain more stable or higher prices than those found at the traditional markets. Since BCS selects the farmers, who are included in the BCS database, the company holds a lot of power over determining whether a farmer will gain access to the supply chains of corporate buyers or not. In addition, some of the selection criteria are hard to fulfil for many Indian smallholders. They include a minimum land holding size of 0.4 hectare, irrigation facilities, literacy and access to a mobile phone. Furthermore, FCP can be regarded as highly selective due to four further reasons: (1) FCP is implemented only in certain regions; (2) only crops that are of the highest interest to the corporations are integrated; (3) only information about Bayer products is distributed in the FCP and (4) only certain agricultural practices are applied, while traditional and local farming knowledge is devalued or may be lost forever (Trebbin & Franz 2010; Franz et al. 2014).

seeds). The large input investments of farmers can only be financed in years of good production numbers. In the case of crop failure, farmers find themselves in a debt trap that has been linked to a large number of farmer suicides (for a review see Gruère et al. 2008).

Despite the above-mentioned challenges, even governmental development agencies in some European states believe in the cooperation with big input providers. One example is the "German Initiative for Agribusiness and Food Security in Emerging and Developing Economies" (GIAF), which was launched in 2012 by the German Federal Ministry for Economic Cooperation and Development (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung – BMZ) and its development agency GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), together with agribusinesses such as Bayer Crop Science, BASF, Syngenta and GlobalGAP.

No data on the extent of investments in input industries and agricultural services is available. Nevertheless, the evaluation of annual reports and similar sources of the big agro-chemical corporations clearly show that Africa and Asia constitue a major market for their products. One example is the German company Bayer Crop Science (BCS) (see case study box 1 and Fig. 17). In 2012 BCS sales

increased in the Asia-Pacific region by 8.6 % (Fx adj.) to 1,164 million Euro (by comparison, sales in Europe were 2,706 million Euro and in North America 2,154 million Euro). This development was mainly driven by their seed treatment products and herbicides, but also by the considerable growth in sales of fungicides and insecticides. India is seen as one of the most important markets for BCS (see Fig. 17). BCS sales in Latin America, Africa and the Middle East increased by 13.8 % (Fx adj.) to 1,899 million Euro in 2012. At that time, sales in Africa were growing by double-digit figures (BCS 2013: 13 – 14). Another big actor in this segment is BASF from Germany. Their crop protection division in Asia also grew in 2012 as well. Their sales improved by 38 million Euro to 525 million Euro. In 2012 one of the main drivers was the successful herbicide business in India. In that year, the company made 11 % (4,679 million Euro) of its total sales in crop protection in Asia Pacific and 26 % in South America, Africa and the Middle East (BASF 2013: 82 – 83). India is also an important market for Syngenta. Syngenta invested in an Indian subsidiary in 2000. In Goa the company produces many active ingredients and formulations for the Indian and the global market (Syngenta 2013). These company statistics show that the Global South is an important investment

Case study Box 2: **SAP's Virtual Cooperative in Ghana**

In 2009 the African Cashew Initiative (ACI) was founded by the German development agency GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), the African Cashew Alliance (ACA), a regional business association, and the NGOs FairMatch Support (Netherlands) and Technoserve (USA). The initiative aims to strengthen the global competitiveness of cashew farmers in Benin, Burkina Faso, Côte d'Ivoire, Ghana and Mozambique. The goals of ACI are to help farmers to improve their yields and product quality through better farming techniques, entrepreneurial practices, value chain inclusion and regional processing. The case of ACI is an example of the importance of NGOs in the process of smallholder value chain inclusion. This particular value chain includes 13 institutions and companies from different sectors, such as financing (e.g. Bank of Africa), agricultural extension services and technology (e.g. SAP) as well as food processing (e.g. Kraft Foods). They are engaged in the project via public-private-partnerships. In this paragraph, we will concentrate on the role of the German company SAP in the network. SAP is the world leader in business software. In the project, SAP develops applications for smartphones that should strengthen farmers' and processors' market linkages. SAP provides buying station agents (BSAs) with smartphones, who use their phones as well as the SAP-software to register each individual transaction with farmers and buyers. The names, addresses and additional information about every farmer delivering cashews to the buying station are saved on the smartphone. The farmer's membership booklet and each cashew sack is equipped with a barcode. Thus, every farmer can be linked in the database to his or her sacks of cashews. Financial services, such as current balances of the delivered produce, pre-payment, pre-financing, input management and micro-credits, can be included in the application. Furthermore, an SMS-service can provide farmers with up-to-date information about weather and market prices. The barcode system also helps trace the product all the way back to the farmer – even if he or she is part of the informal sector. The implementation of this scheme makes it possible to enforce quality standards because it minimises the chances of bypassing certification obligations and thereby increases the pressure to fulfill the required standards. By improving the transparency of the many informal businesses at the bottom of the value chain, the system helps companies to overcome the barriers of smallholder value chain inclusion, such as the lack of reliability and standard compliance. This can make it more attractive for companies to source from smallholders. A certain degree of organisation (e.g. cooperative or farmer association) is needed to participate in the SAP-project. These organisations are selected by SAP. The partnering organisations then select the farmers. The longterm goal of using this approach is to enable non-organized farmers to organise themselves in so-called "virtual cooperatives". This programme offers a promising business opportunity to SAP to develop software applications on a co-financed basis and potentially enables it to create a new market for the company's products. While SAP is already offering business solutions to the formal sector, it could cover the informal sector and the BoP markets with this new product. Such a project brings new actors into agri-food-networks. These actors bring new ideas, technology, capital and interests and they have the ability to change the power relationships in those networks fundamentally (Franz et al. 2014).

Photo: Martin Franz

Figure 17: Products from European agrochemical companies are widely distributed across India

target for agrochemical corporations. But it also shows that India plays a much larger role in this sector than Sub-Saharan Africa.

While Africa is still largely dependent on the import of agrochemical products, India is the 4th largest producer of agrochemicals in the world (after USA, Japan and China). More than 60 technical grade pesticides are being manufactured in India and 125 large and medium-sized companies produce pesticides for the country. The Indian government allows 100 % FDI in the chemical industry and about ten foreign companies have already invested in various production sites (Bhide 2013:).

The alternative to conventional agriculture with all its ecological risks and its dependence on agribusinesses is the implementation of principles and practices of agroecology[6] or organic agriculture. There is a strong academic dispute about the potential of organic agriculture or agroecology to feed the world (e.g. Cassman 2007; Connor 2008; Ingram 2011). The benefits of organic farming compared to conventional agriculture seem clear: an environment friendly cultivation, often combined with criteria for social sustainability (such as fair trade), promises a positive contribution to feeding the world (see Opinion Box 2). However, there is lack of evidence that a purely organic global agriculture could feed the world's population (Bernzen 2013). Estimates project that the food production in the Global North would significantly decrease (up to 50 %), while a number of case studies show that significant yield increases (20 to 250 %) would be possible in the Global South (Bernzen 2013: 55). Thus organic agriculture can potentially contribute to more food security in the Global South.

Opinion Box 2: **Amelie Bernzen** *(Researcher in Economic Geography, University of Cologne)* on FDI in organic agriculture and food security

› The contribution of alternative, more sustainable farming systems to local and global food security has received increasing attention since the early 2000s. Organic agriculture (OA) is a prominent example. It refers to a certified production process following organic standards which originated in the 1920s in Europe – which should not be confused with de facto OA that has been applied all over the globe for centuries. The advantages of OA over conventional farming seem convincing at first glance, given that it promotes environmentally friendly methods that are often complemented by social sustainability criteria. Furthermore, it relies on local inputs, provides employment opportunities due to its relatively high labour intensity, and provides attractive margins to farmers who export their products. However, OA also poses some challenges. While some studies have shown OA to be more resistant to drought, yields are generally still seen to be lower than in conventional agriculture; and more research is needed to identify the conditions for equal volumes of food production. A major shortcoming in developing countries is know-how, particularly among small-scale farmers who often lack access to training. This is where FDI can provide support. Due to the traditional small-scale nature of operations in OA, some of these FDI do in fact help farmers excluded from conventional arrangements. Dedicated medium sized and large importing firms in western consumer markets, for instance, invest in partnership projects in producer countries, providing training and/or covering certification costs; thereby leaving intact the land used for additional self-subsistence farming. However, FDI also stimulates OA in large scale cash crop schemes e.g. for coffee, tea, cocoa or bananas exported to western markets. This has caused lively debates among OA practitioners and industry members about whether conventionalisation is taking place; i.e. organic standards and values being eroded due to more industrialised (mass) production for globalised markets. Consequently, the contribution of FDI to food security in OA is also highly contextual. ‹

Photo: Martin Franz

Figure 18: Traditional practices of agriculture are not always sustainable. The picture shows slash and burn agriculture in Northern Laos. While this practice was well adapted to the environment when the population density was very low, it has resulted in a total eradication of the forest in many regions, which is by now a result of the higher population density.

A wide introduction of organic principles needs huge investments – especially in the transfer of knowledge and, in the case of certified organic agriculture, in certification. There is evidence that there are already many cases of investments in organic agriculture (however, statistics usually do not itemised them seperately from investments and conventional agriculture). In some cases, corporations invest in organic agriculture as one product line in their portfolio (see case study box 5); in other cases, NGOs or specialised organic companies invest in the certification of farmers (e.g. Franz & Hassler 2010).

Generally agricultural research and development (R&D) in the Global South have to be strengthened. "There is a knowledge gap in [...] extension, traditional knowledge, farming systems, social sciences, ecosystems services, mitigation and adaptation of climate change, and health in agriculture" (IAASTD 2009: 496). As corporate R&D mainly targets mainstream agriculture, there is a need for more government and donors funding for alternative techniques in agriculture (IAASTD 2009). Big donors such as the Bill and Melinda Gates Foundation or the Rockefeller Foundation already fund research in agriculture, however these donations are focussed on the sustainable intensification (SI)[7] of agriculture (Varghese & Hansen-Kuhn 2013) and SI is often regarded as less sustainable than the name suggests.[8]

[6] "The science of applying ecological concepts and principles to the design and management of sustainable agroecosystems. It includes the study of the ecological processes in farming systems and processes such as: nutrient cycling, carbon cycling/sequestration, water cycling, food chains within and between trophic groups (microbes to top predators), lifecycles, herbivore/predator/prey/host interactions, pollination, etc. Agroecological functions are generally maximized when there is high species diversity/perennial forest-like habitats" (IAASTD 2009: 560).

[7] „SI focuses primarily on increasing productivity by tapping the unrealized potential of small-scale producers" (Varghese & Hansen-Kuhn 2013: 2).

[8] "Sustainable intensification claims to include agro-ecological farming practices but in practice seems to focus primarily on technology-based approaches. It aims to help small farmers but is driven by the agendas of corporations, the science establishment and international donors. It talks about participation but generates its strategies far away from small farmers" (Collins & Chandrasekaran 2012: 22).

FDI in land

5

In light of the changing dietary habits, the increasing importance of biofuels and the growing world population, the demand for land is steadily rising. At the same time, the food supply is shrinking due to land overuse and degradation as well as the consequences of climate change. These discrepancies prompt corporations to invest directly in land (backward integration) in order to secure the base of their own value chain. Simultaneously, land is discovered as a means for private investment. Even governments purchase land in other states in order to secure resources for their own people. Such controversial land deals are referred to as "land grabbing". Land grabbing is a simplified term for "large-scale, cross-border land deals or transactions that are carried out by transnational corporations or initiated by foreign governments" (Zoomers 2010: 429).[9]

Land grabbing can have strategic (e.g. food and resource security) and economic (e.g. rate of return) reasons; it may include private as well as governmental actors. Land grabbing for agricultural production can be interpreted as a market failure for agricultural products or as the shrinking of trust of the various actors in those markets (De Schutter 2009a). Land grabbing allows actors to avoid taking part in the global agricultural market because the owners of agricultural land change for a limited or unlimited time. In this way, land grabbing leads to a transformation from local to long-distance production and to a commercialisation of land and water resources. Through these processes, land becomes an "increasingly globalised commodity" (Taylor & Bending 2009: 3). The largest portion of the purchased areas is usable land for agriculture, which is one of the reasons why agricultural land grabbing has been at the centre of the public's attention. Land grabbing also entails so-called "Green-Grabs", which are undertaken in the name of climate protection (e.g. carbon offsetting) (Ouma 2012).

Many authors are critical of these processes (e.g. Klopp 2000; Amanor 2012). However, in the consulting literature for politicians and investors, land grabbing is seen as an opportunity that can bring certain advantages, depending on the given situation in the sourcing region: "In some instances, plantations may be the best option for the investor, host country and the local community. For example, in areas with very low population densities and little local capacity to engage in agricultural production, it may be difficult to establish business models that include local ownership and operation" (Vermeulen & Coutula 2010: 14). Positive effects on food security and the right to food may also exist. The German development agency, GIZ, wrote in this regard: "[e]ffects could be positive, if FDI in land not only support the production of food for export to the investors' countries, but also – directly or indirectly – support the production for use and consumption at national level, and thus improving the national balances of food and other agricultural products. Such effects, e.g., could be expected if new technologies are introduced and/or capacities, which are built in the context of FDI inland, are available for use beyond the geographical area and timeframe of the specific investment. FDI in land deals may also include specific provisions for production and use of food and other items for both export to the investors countries and local markets" (GTZ 2010: 17). Investors can introduce new farming techniques, improved seeds and technology, which could transform the agricultural sector towards greater efficiency and increased food production. States which purchase land for food in other countries secure their own food sovereignty by gaining market independency (De Schutter 2009b). The proponents of land grabbing argue that it ultimately provides the land to those actors who can produce food most efficiently and thus, help feed the world most effectively. "[...] Well-functioning land markets are needed to transfer land to the most productive users and to facilitate participation in the rural nonfarm sector and migration out of agriculture" (World Bank 2007: 9). Besides the effects on the agricultural production, positive impacts on regional economic development are expected: „[T]hrough backward and forward linkages and multiplier effects of increased employment opportunities and incomes of people in the investment region" (GTZ 2010: 17). However, it can be questioned if the beneficiaries of land transfers are really the most productive users or if they are only the most effective rent seekers.

Much thought must be given to food security issues and the right to food. Especially, food production for purposes of export leads to food insecurity in the invested country because the availability of local food decreases. "Even if investments increase aggregate food supplies, this does not automatically imply that domestic food availability will increase, especially when produced food is exported to the investing country. Local food availability could even further decrease if land and water resources are directed to and used by the investors at the expense of domestic

[9] Many definitions emphasise that land grabbing involves investments from industrial countries in developing nations (Daniel & Mittal 2009, De Schutter 2009a). As a definition criterion, this seems to be unnecessary as indications suggest that such investments take place in emerging, transition and industrial countries (Ouma 2012). Many investors are even from developing countries (Land Matrix 2013). Due to the globalisation of the finance sector, the allocation of an investor to a specific country has become increasingly difficult.

Photo: Peter Dannenberg

Figure 19: Construction of green houses for horticulture in Tanzania

smallholders' production" (GTZ 2010: 17). These negative aspects affect various groups differently (GTZ 2010). "[...] people in rural areas – subsistence and small-scale farmers, landless people, agricultural labourers, day or contract workers – are the most directly affected by FDI in land because of their direct link to and dependence on land (and other resources) for their livelihoods. In addition, experience has shown that special attention is needed to ensure that the interests and access of women and indigenous population groups to productive resources are maintained and/or facilitated [...]" (GTZ 2010: 17). The impact on small-scale farmers is particularly tough; they are often expelled from their land without compensation due to a lack of formal land concessions. This kind of displacement equals a complete loss of livelihoods and is consequently a violation against the right to food (De Schutter 2009b; GTZ 2010). It is often argued that the former landowners may find employment on the new farms or plantations. In reality, this is only the case for a very small portion of those affected (see Case Study Box 4).

Table 4: Land deals in Sub-Saharan Africa, Source: Land Matrix 2013

African region	Number of total land deals	Number of land deals with European investors	Total land in ha (as known)	Total area in land deals with European investors in ha (as known)
Central Africa	30	16	4,010,601	3,029,741
Eastern Africa	198	83	5,107,144	2,953,703
Western Africa	113	58	192,500	540,365
Southern Africa	5	0	62,190	0
Total	**348**	**157**	**9,372,435**	**6,523,809**

Hence, transnational investments in land must be viewed extremely critical in terms of the right to food. De Schutter (2009b: 2) summarise this as following: "States would be acting in violation of the human right to food if, by leasing or selling land to investors (whether domestic or foreign), they were depriving the local populations from access to productive resources indispensable to their livelihoods. They would also be violating the right to food if they negotiated such agreements without ensuring that this will not result in food insecurity, for instance because this would create a dependency on foreign aid or on increasingly volatile and unpredictable international markets, as large proportions of the food produced thanks to the foreign investment would be shipped to the country of origin of the investor or sold on the international markets." Whether investments in land are a chance or a threat depends on the legal frameworks and their reliability for the affected population. "The extent to which national policy legal frameworks provide adequate safeguards for local land and resource rights, and effective mechanisms for local participation in decision-making, will frame whether increased agricultural investments will translate into new opportunities or further marginalisation" (Vermeulen & Cotula 2010: 899).

5.1 Land deals in India

In India large land investments for energy and high-value crops have led to many conflicts with the local population (Daniel & Mittal 2009, Haralambous et al. 2009, Taylor & Bending 2009). More conflicts occurred during expropriations of areas for industrial projects (Nielson 2010). The Land Portal (2012) designated an area of 4,616,760 ha in India that it believes to be affected by land grabbing. Indian investors purchased or leased 95.3 %. Foreign investors only purchased 4.7 %, although it is questionable how often foreigners may be the source of domestic investments. The data of the Land Portal is based on the web portal Land Matrix, which presented only nine land deals for India after its re-launch in 2013 (Land Matrix 2013). This includes only two deals with one European investor, namely the company Vedanta Resources which is based in the UK and listed on the London Stock Exchange. It actively trades a diverse set of global natural resources with a major interest in zinc, lead, silver, copper, iron ore, aluminium, power, oil and gas.

The changing land use – from food production to the production of energy crops, to the exploitation of natural resources and to the establishment of industrial

Opinion Box 3: **Prof. Dr. Dirk Loehr** *(Professor in Economics, Trier University of Applied Sciences)* on land deals and food security

Opinion Box 3: With regards to food security, I have a critical view on FDI in land. The background being an increasing monopolisation of value chains. At the top of such chains are powerful supermarkets and international food producers gaining further power through FDI in land. In the long run, this might be at the expense of the farmers, one day maybe even at the expense of the consumers. This depends on the monopolisation of the market access. Moreover, the current FDI activity enters a new stage: In the past, only the beginning (seed and herbicide industry) and the end (supermarkets) of the value chains were subject to monopolisation. With growing direct investments, the production (farming) becomes more and more affected by monopolisation. This means that competitive elements in the value chains of the renewable resources and food sector are continuously removed and options for smallholders as well as consumers are diminished further, as they are becoming increasingly dependent. The positive effects of contract farming are limited due to the exclusion of many smallholders, while the many negative effects often outweigh the few positive outcomes. This has been discussed above and below. International and highly export-orientated investors own large estates. As a result, a substantial portion of the agricultural surplus is exported. Thus, the surplus cannot be used to develop the local agricultural sector or other sectors in the targeted economies. A rural middle class cannot emerge under such conditions and access to land for subsistence farming might become increasingly difficult. However, such a rural middle class is the potential backbone of the agricultural and economic development of underdeveloped countries. Overall, we have to expect rent-seeking behaviour and corruption, which once again will hamper sustainable development. FDI target countries commonly follow the Latin American development patterns instead of the East Asian patterns. However, the East Asian model (with its emphasis on equal land distribution and access to land) was much more successful (Korea, Japan, China, Taiwan etc.).

plants or urban development (living) areas – is extremely alarming when considering food security issues. Agricultural areas for food production are lost in countries that actually need to expand their food supply due to their growing population numbers.

Case study Box 3: The Southern Agricultural Growth Corridor of Tanzania

FDI in agri-food networks are subject to strong regional disparities. Certain investments in some regions are purposefully encouraged. In the last years, Agricultural Growth Corridors have been established in Mozambique and Tanzania (the Beira, the Nacala and the Zambezi Agricultural Growth Corridors in Mozambique and the Southern Agricultural Growth Corridor in Tanzania). These "growth corridors" are "[…] designed to facilitate the conversion of millions of hectares of land to industrial agriculture, to be served by building infrastructure (roads, railways, irrigation, storage, processing and ports) and led by private companies" (Paul & Steinbrecher 2013: 1). The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) was initiated at the World Economic Forum Africa summit in 2010. SAGCOT`s area covers about one third of Tanzania, including the fertile regions of the Southern 'grain basket' (Sulle & Hall 2013: n.pag.). The area runs along existing infrastructure and spans from Dar es Salaam to the Northern regions of Zambia and Malawi (SAGCOT 2014:). The large-scale SAGCOT project is a multi-stakeholder partnership including more than 20 multinational companies (e.g. Bayer Crop Science, Syngenta and Unilever), international financial institutions (e.g. Stanbic Bank and the International Finance Corporation of the World Bank Group), donors (e.g. USAID and the embassies of Ireland and Norway) and the Tanzanian government (Sulle & Hall 2013:). The self-imposed aim of SAGCOT "[…] is to foster inclusive, commercially successful agribusinesses that will benefit the region's small-scale farmers, and in so doing, improve food security, reduce rural poverty and ensure environmental sustainability" (SAGCOT 2014). This is to be accomplished by combining private and public investments in extension services, irrigation, agro-processing units, logistics and infrastructure (e.g. storage, power generation, roads, rail, ports, airports). Special attention is directed at smallholders that are to be integrated in global value chains through the formation of farmer organisations, contract farming and through outgrower schemes (GoT 2013: 8). These activities are supposed to transform 350,000 ha land for production purposes, create 420,000 jobs and free two million people from poverty (Jenkins 2012: 34). However, others fear that the proposed positive impacts may actually bring more negative effects to local communities (Paul & Steinbrecher 2013: 5). Besides the socio-environmental impacts of the TNC's large-scale farming techniques (e.g. changing pattern of water use), land grabbing has become the focus of attention in the media and in scientific literature (Massay 2012; Paul & Steinbrecher 2013). In the Rufiji river basin, which is one of the three main water sources in the SAGCOT region, land grabbing occurred long before the creation of SAGCOT (SAGCOT 2012: n.pag.). In their case study on investments of the Turkish company SAP Agriculture Ltd. and the African Green Oil Company, Massay (2012: 2) verified that "[l]and grabs are carried out today in the Rufiji River Basin through the application of both force and consent. In the case of the former, those to be dispossessed resist and when that happens they have to be coerced to comply. In the latter, the consent is used to dispossess after bombarding the dispossessed with illusions about a myriad of benefits from the investor". Using the example of investments by Sun Biofuels in Kisarawe, Paul und Steinbrecher (2013: 12) also demonstrated that conflicts between investors and local communities have occurred before SAGCOT's existence. In prospect of compensation, eleven Kisarawean villages have been relocated in order to make room for the Jatropha plantation of Sun Biofuels. However, the project failed and the promises of adequate compensation were not fulfilled. In general, the development of SAGCOT illustrates the high hopes that national and international politics put into large-scale investments in SSA's agricultural sector. Positive outcomes for local communities in land deals and related investments can only be reached under fair investment strategies. Thus, SAGCOT may "risk the displacement of land users without sustainable benefits to local communities; accelerate habitat degradation and fragmentation; and affect river flows […]" (GoT 2013: ii – iii).

Opinion Box 4: **Martina Locher** *(Researcher at the Department of Geography, University of Zurich)* on investments in land

› At first sight, land deals and related investments, which have recently been labelled 'global land rush' or 'land grabbing', could be seen as promising development because the investors usually announce labour opportunities, improved infrastructure and new technologies. In my analysis of two European forestry companies in Tanzania, however, I have shown that the consequences for local people are mixed at best. I have deliberately chosen an investment sector and a country that presumably show more positive outcomes for the local population. Tanzania, in comparison to other target countries of land investments, holds a fair amount of abundant land and a progressive land law in terms of respecting local land rights. Forestry plantations have potentially more positive outcomes for local people than investments in other sectors because they are vulnerable to be set on fire accidentally or deliberately; thus, the investors undertake specific efforts to gain the local people's goodwill. In fact, the analysed deals did result in infrastructural improvements and new labour opportunities. The labour opportunities will not reduce poverty significantly though because the offered salaries are rather low and the labour conditions bad. Yet, poor households welcome these insecure jobs as a small and temporary additional income. However, the analysed deals also led to severe cases of violated land rights, inadequate compensation and decreased food security. It became obvious that, even under the comparatively positive preconditions, the consequences for local people are ambivalent. I assume that land deals under less favourable conditions lead to worse consequences for local communities. Other case studies confirm this assumption, reporting unfulfilled promises, ignored land rights and violent, forced evictions. I am convinced that land deals and related investments could only result in predominantly positive outcomes for local people under a bundle of conditions. These include: (i) sufficient land availability so that land deals do not interfere with existing land-based livelihood strategies; by no means should mechanised large-scale farms replace small-scale farming, as this is usually neither conducive in terms of agricultural productivity nor in terms of created jobs per area (former smallholders can usually not be absorbed easily by other economic sectors). However, abundant land is rarely found these days. Land is becoming more and more scarce and even if abundant land exists, it is often either of low quality or located in remote areas, which is not very interesting for investors. Further conditions for positive outcomes for local people are related to a fair land deal process. This requires (ii) a land law that respects and protects local land rights (also undocumented rights) and foresees local land users as decision-makers in land deals, (iii) a careful and impartial analysis of complex land right situations before investments take place, (iv) a well-informed local population that is knowledgeable about their land rights and informed about the potential risks of a deal. This also requires a transparent and critical discourse about land deals by the host governments, (v) civil servants and politicians that follow the law and support the local population in the negotiations. In short, a fair land deal process requires, among other things, good governance. In practice, this bundle of conditions is rarely met in the targeted countries. Hence, even though there might be some positive effects associated to a few particular land deals, the 'global land rush,' as it is occurring at the moment, is highly questionable and provides severe risks for the livelihoods of rural people. ‹

5.2 Investments in land in Sub-Saharan Africa

SSA belongs to the most critical target regions for land investments. Especially Eastern and Western Africa (see Table 5) attract many FDI with an unequal distribution in and between various states. European investors play a major role in Sub-Saharan Africa land deals (Land Matrix 2013). This is happening on a continent, where formal land tenure has hardly played a major role. Deiniger outlines that formal land tenure only exist for 2 to 10 % of land in Africa (2003: xxi). "To avoid leaving the occupants of these lands effectively outside the rule of law, many African countries have recently given legal recognition to customary tenure as well as to the institutions administering it; however, implementing these laws re-

Photo: Geographisches Institut der Universität Frankfurt

Figure 20: Biofuel production in Ghana

mains a major challenge" (Deininger 2003: xxi). Only 14 % of Africa's agricultural land (2,048,422 ha) is designated to the production of food crops. 13 % (1,815,689 ha) are used for the production of flex-crops. The remaining 30 % (4,381,921 ha) are designated to multiple uses with several crops in different categories (Land Matrix 2013). 43 % (6,223,848 ha) are allotted for the production of non-food crops, which is an amount high enough to imply a threat to national food security and the right to food. "Highly publicised large-scale land deals for biofuel production in Africa are raising prospects for macro-level benefits in recipient countries, but also carry the threat of appropriation of land and natural resources from the poor people who depend directly on these assets at the local level" (Vermeulen & Cotula 2010: 899).

5.2.1 Land deals in Tanzania

Tanzania is one of the Eastern African countries that attracted a lot of FDI in land over the past few years. Locher and Sulle (2013) compiled a comprehensive document containing all different sources on land deals in Tanzania. They summarised their results: "Foreign land deals, whether announced, ongoing or concluded land deal processes [...] amount to a total area of around 1,000,000 ha. However, of this amount, only around 200,000 ha can be considered as fairly confirmed (reported by at least two different sources) and being under process. Fairly confirmed, but just announced are deals with an area of 350,000 ha (of which 325,000 ha are from the announced AgriSol Energy deal). Information on the remaining 450,000 ha is either based on one source only, or there are conflicting sources. [...] domestic deals [...] [include] around 20,000 ha. Investments with unclear origin [...] amount to around 37,000 ha (of which most are based on rather vague data sources)" (Locher & Sulle 2013: 36 – 37). Moreover, the authors found that many planned land deals are not completed. This is particularly the case in the biofuels sector, which has been discussed critically in the Tanzanian public (Locher & Sulle 2013). In 2009 Sulle & Nelson gathered the positive aspects (e.g. independence from oil imports, possibilities for higher agricultural incomes, improvements of the infrastructure, potential production by smallholders) and the negative features (e.g. high water consumption, threat of smallholder displacement through investors) of biofuel production in Tanzania. At that time, a strong growth in this segment was expected. However, since then the number of new land deals has fallen considerably (Locher & Sulle 2013). "The decreased interest can be ascribed to the limited economic viability of some envisioned biofuel crops and also to a lack of policy, institutional, and legal frameworks in Tanzania. [...] Land acquisitions for the purpose of food production, particularly rice, sugar and oil, are now being planned and are beginning to materialise. It remains to be seen whether this boom is more effective and longerlasting than the previous biofuels boom" (Locher & Sulle 2013: 36). Forestry projects, focusing on wood production and carbon sequestration, also take place (Locher & Sulle 2013). Such projects are – just like the biofuel projects – to be evaluated seriously when facing the loss of potential agricultural land in times of ever-increasing population numbers.

The increase in investments in land is one of the aims of the Southern Agricultural Growth Corridor of Tanzania which is discussed in Case Study Box 3.

5.2.2 Land deals in Ghana

The data base Land Matrix includes a total of 25 land deals for Ghana. Altogether, the contracts cover 734,934 ha (Land Matrix 2014). Land ownership and land use is managed through a complex system in which traditional rights are combined with colonial colonial legal norms and other constitutional foundations. About 20 % of Ghana's land is state-owned. The largest portion of the country, about 78 %, is so-called 'customary land.' The local community owns this land and headed by the communal chief (FIAN 2010a: 2). Schoneveld et al. (2010) researched biofuel land deals in Ghana and found that in most cases the land is leased to investors by traditional authorities for 25 to 50 years (Schoneveld et al. 2010: 4). European investors (from Germany, France, Italy, Norway, Spain and the UK) were involved in 11 of these 25 deals (Land Matrix 2014), reaching an area of 104,165 ha. This includes investments by companies like DOS Palm Oil Production Limited (UK), Norpalm AS, PZ Cussons Ghana Ltd. (Norway) or Symboil (Germany), which produce or plan to produce palm oil in Ghana (Land Matrix 2014).

Schoneveld et al. (2010: 2) identified 17 commercial biofuel projects in Ghana. FDI is playing a major role in these developments, as foreign investors own 15 of these. Only one of these projects covers an area smaller than 1,000 ha. According to Schoneveld et al. (2010: 2), all FDI projects officially planned the integration of outgrower schemes, but in practice none of this has been realised (yet). In most of the investigated cases, the corporations did not consult the households affected by the land tenure. Only in one case compensation was promised to the affected households (Schoneveld's et al. 2010).

Thirteen of the commercial biofuel developments financised by FDI focus on the production of Jatropha nuts and one project focuses on cassava and oil palm (Schoneveld et al. 2010: 2). Jatropha nuts have a high oil concentration and the plant is draught-resistant. Thus, proponents point out that Jatropha does not compete with food production. The fact that the plant falls into hibernation during the dry period and becomes completely unproductive has been suppressed so far. Only fertile soil and enough water secure Jatropha's high yield that investors are seeking. Schoneveld et al. (2010: 2) estimate that foreign companies already owned over 1,075,000 ha in 2009. 730,000 ha of the area are located in the forest-savannah transition zone of central Ghana's Brong Ahafo and Northern Ashanti regions. "The high concentration of investors in this area can presumably be attributed to the high agro-ecological suitability of land in the area, relatively low population densities, the ease of obtaining large contiguous areas of land, and the physical accessibility to key markets" (Schoneveld et al. 2010: 2).

However, Schoneveld et al. (2010: 2) also point out that only a small portion of the area is already used for production. In 2009, not more than 10,000 ha were actually cultivated. Moreover, not all land deals in Ghana aim for biofuels. Other investments, like the one by Compagnie fruitière (France), target the production of export fruits (Land Matrix 2014). Compared to the Jatropha production, fruit plantations have higher labour/workforce requirements. Thus, fruit plantations may create more employment opportunities than Jatropha plantations, which only need 0.06 employees per hectare after the labour-intense infancy stages have been completed (Schoneveld et al. 2010: 5).

Case study Box 4: **Dominion Farms in Kenya**

The largest producing land grabbing project in Kenia is run by the American company Dominion Farms Ltd. They currently grow food on 6,000 ha and aim to increase their production area to 17,500 ha (Land Matrix 2014). The leased land is close to the Ugandan border. According to the company's website, long-grain rice, tilapia fish, rotation crops and a number of byproducts are produced and marketed locally and not intended for export (Dominion Farms Ltd 2009a). Dominion's internet presence is enthusiastic: "A major goal of Dominion Farms is to positively impact the community surrounding the farm and enrich the lives of rural Kenyans. Dominion is especially committed to supporting the youth and women of Kenya in their quest for economic advancement." However, a study from FIAN (2010b) lamented that hardly any jobs were created for locals. If the local population is hired at all, it is only for low-quality and ill-paid jobs such as chasing birds. "According to villagers, they have to stand in the mud from dusk to dawn for a miserable pay and even remain there when the plantation is sprayed with pesticides" (FIAN 2010b: 23). Complains also arise about: a) the displacement of farmers who have lived on the now company-owned land, b) that Dominion is alleged to have bribed politicians in order to push their interests, and c) the ecological effects of the project (FIAN 2010b).

6 FDI in food processing

In the last decades, there have been rapid transformation and modernisation processes in the global food processing sector. In many developing countries, the demand for processed and/or packaged food is growing. Consequently, the food processing and manufacturing sector is gaining importance (Wilkinson & Rocha 2006: 8). Especially the growing shares of non-traditional food exports, such as processed fish and horticulture products, from developing to developed countries have attracted increasing attention (e.g. Dolan et al. 2001).

Compared to other areas of the agri-food value chain, food processing became the main beneficiary of FDI in the 1980s (Hawkes & Murphy 2010: 23). As Table 6 indicates, the majority of in- and outward stocks of agro-processing FDI is still concentrated in developed countries. However, the table also shows a sudden increase in FDI in developing countries. From 1990 to 2004 the inward stock of FDI into food, drink and tobacco manufacturing in developing countries increased from 9,612 to 33,337 million USD (UNCTAD 2006; by Hawkes & Murphy 2010: 24, see Table 5). The main sources of food processing FDI are the USA and the EU. Here investments within Europe as well as between Europe and the United States are the most frequently transcated FDI, while food processing FDI flows between developing countries are gaining in importance (Wilkinson & Rocha 2006: 17, 20). American and European food processing companies such as Nestlé and Coca-Cola already invested in developing countries in the 1960s and 1970s (Hawkes & Murphy 2010: 23). In 1995, 20 % of the USA's total food processing FDI reached developing countries (Wilkinson & Rocha 2006: 2).

In the last decades, the food processing sector showed an increasing dominance of large transnational food companies in global food supply chains (Maertens et al.

Photo: Schwarzbach/MISEREOR

Table 5: **FDI into food and agriculture, developed and developing countries, 1990 and 2004 (in million USD).** Source: UNCTAD 2006; by Hawkes and Murphy 2010: 24.

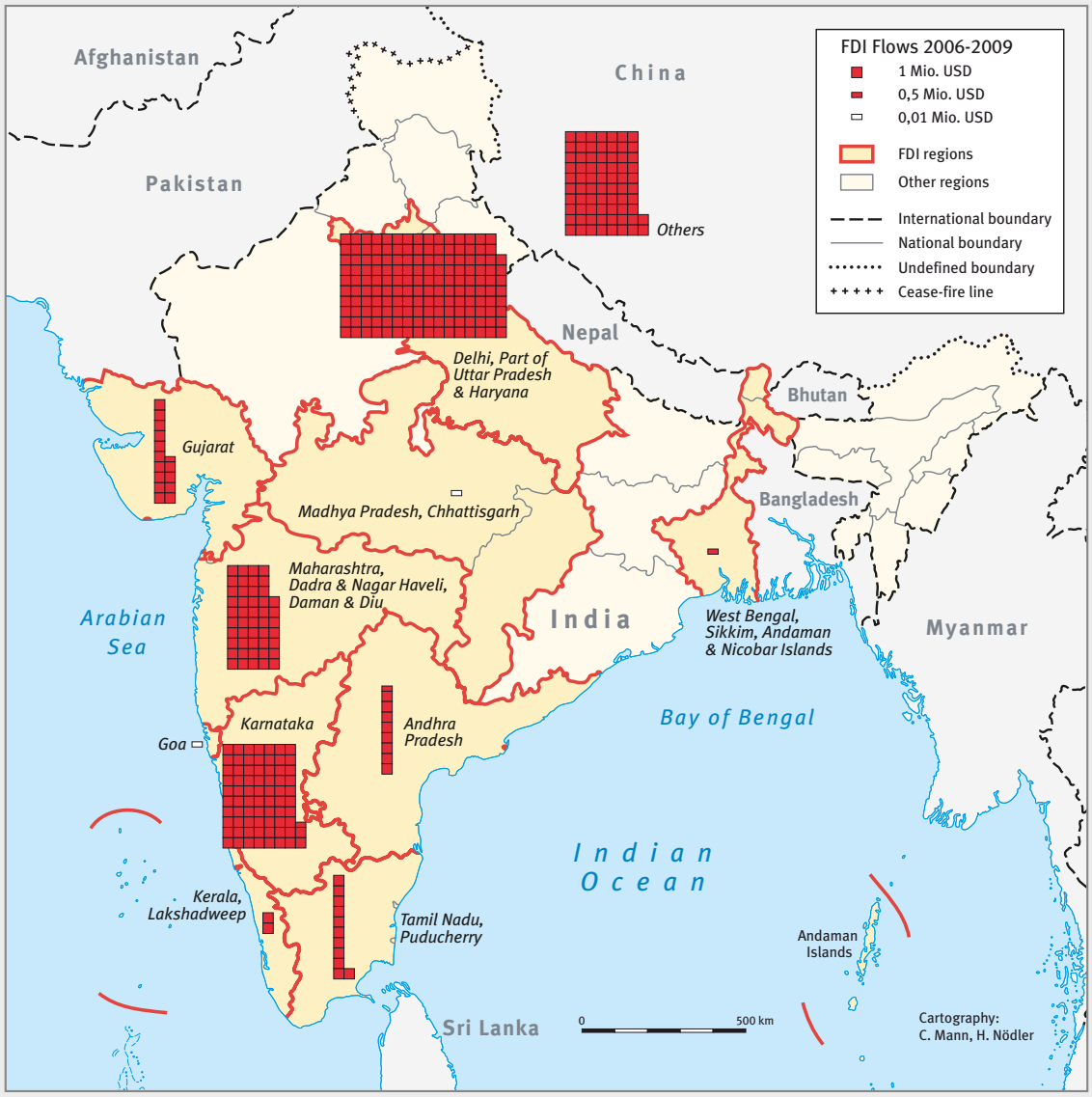
FDI flow		1990	2004
FDI into food, drink and tobacco manufacturing	Outward stock from developed countries	72,952	248,398
	Outward stock from developing countries	2,452	2,188
	Inward stock into developed countries	64,427	238,066
	Inward stock into developing countries	**9,612**	**33,337**
Agriculture, hunting, forestry and fisheries	Outward stock from developed countries	**5,061**	**5,287**
	Outward stock from developing countries	**408**	**1,106**
	Inward stock into developed countries	**3,193**	**7,739**
	Inward stock into developing countries	**4,063**	**14,339**

2012: 473; according to McCullough et al. 2008). This was driven by the trade and financial liberalisation in the 1980s and 1990s, bringing privatisations of state-owned agro-processing enterprises and regulatory flexibility of FDI in developing countries (Henson & Cranfield 20009: 20; Wilkinson 2004: 189). FDI in the food processing sector takes place in various forms: As an acquisition or a merger with an already existing company, as a joint venture or as a greenfield investment.

Most FDI in the food processing sector as well as in retailing comes in the form of mergers and acquisitions (M&A) (Hawkes & Murphy 2010: 24). Greenfield investments, on the other hand, have been trivial in this sector, as these are mostly limited to new market segments (Da Silva et al. 2009: 113; Rama & Wilkinson 2008: 61). One explanation for low greenfield investments might be the high contraints transnational companies have to overcome in most developing countries (e.g. bad infrastructure, limited market access, limited price information and currency instabilities, see case study box 5).

It must be highlighted that the extend of transformation processes in the food processing sector varies between developing nations and even between different regions within a state. For example, the analysis of FDI in the

Figure 21: **State/RBI Regional Office-wise FDI inflows (in million USD) in food processing industries in India (April 2006- September 2009),** Data Source: Indiastat 2013.



Case study Box 5: **Blue Skies Holding Limited in Ghana**

Founded in the late 1990s, Blue Skies Holding Limited is a privately owned, agro-processing company from the UK (headquartered in Nottinghamshire). It operates abroad in Ghana, Brazil, Egypt and South Africa. The company's primary business is the export of ready-to-eat freshly cut fruits – such as pineapple, mango, papaya, melon, grapes, etc. – to supermarkets in Europe. In the UK for example, Blue Skies supplies major retailers such as Marks & Spencer and Sainsbury`s. In the last years, Blue Skies has also expanded its business to local and regional markets, selling fresh juices (McMillan 2013: 1). For example, in Ghana the juice is sold to supermarkets, restaurants, bars and filling stations. In 1998 Blue Skies commenced its business in Ghana, where its plant is located 25 km north of Accra and started off with 35 employees.Today, Blue Skies employs nearly 1,500 people (Blue Skies 2013) and is responsible for ca. 5 % of Ghana's non-traditional exports (AIIC 2013: 17). It sources its fruits from over 150 farms (Blue Skies 2013) that signed a contract with Blue Skies (McMillan 2013: 3). The corporation works with individual farmers as well as farmers of the Blue Skies Organic Cooperative (BSOC). The BSOC is a producer association which includes four villages that started their economic relationship with Blue Skies in 1998. In 2008, BSOC members produced 45 tons of pineapples per week, of which 33.3 % (15 tons) were delivered to Blue Skies (AIIC 2013: 17). Blue Skies' framework is based on the Joint Effort Enterprise (JEE) model. As Osei (2011: 3) points out: "[t]his model dictates that the company must work collectively with both domestic and international stakeholders to confront challenges they might face." In the last years, Blue Skies has been acknowledged for their business model. In 2008 and 2011 Blue Skies won the Queen's Award for Enterprises in the sustainability category. In 2012 the company won the World Business Development Award for inclusive development and the Waitrose Way Award for treating people fairly. The central idea in Blue Skies' JJE model is the inclusion of value-adding processes in the producer countries, even when faced with major challenges, as was the case of Blue Skies' Greenfield investments in Ghana. The lack of credit and market access as well as the low skills level of the labour force are just a few of the major obstacles faced with when doing business in Ghana (McMillan 2013: 2). For Blue Skies' export business, the poor infrastructure was challenging. The roads in and around Accra, particularly close to farms, were seen as one of the main obstacles (Osei 2011: 5).To overcome this, Blue Skies improved road conditions near member farms. Further constraints were the high currency inflation and little information on prices (McMillan 2013: 2). Safeguarding the input supplies and the product quality were additional limitations that had to be overcome. To abide the high product standards in Europe, the corporation has to be able to assure the high quality of the suppliers' goods. To do so, Blue Skies employs a team of agronomists visiting the farmers on a weekly basis, evaluating the quality of the produce and the farmers' compliance with international safety standards. The proximity of the factory to the fruit production sites is, according to Wilson & Cacho, (2007: 36) "only a first step in reducing the risk of inconsistent flow and quality of tropical fruit". Furthermore, Blue Skies has invested in the GlobalGap certification for 18 farmers. Blue Skies' assistance was linked to an obligation: Farmers had to deliver to Blue Skies. The organisation also helped BSOC farmers to receive the Soil Association's organic and the Fairtrade certification (AIIC 2013: 17). This example of FDI in the food processing sector in Ghana shows infrastructural improvements and new labour opportunities that can arise through FDI-driven developments and value-adding agribusinesses, as opposed to whole fruit exporters (as seen in most cases). From a policy perspective, the case shows how crucial well-developed infrastructure, the access to market and price information as well as the stability of the currency is for attracting FDI in the food processing sector and for expanding agribusiness in African countries in general.

Indian food processing sector shows a distinct rise in the last years. Unequal regional distribution of the FDI can be observed, as the FDI is mainly concentrated in New Delhi, Bangalore and Mumbai, where it is mainly concentrated. Figure 21 presents the FDI inflows into India's food processing industries on a regional scale from 2006 to 2009. According to the data, the majority of the investments have been made in New Delhi (157.82 million USD), Bangalore (72.54 million USD) and Mumbai (46.96 million USD). More than 70 % of FDI inflows are concentrated in these three regional offices (385.78 million USD) (Indiastat, 2013).

In many countries of the Global South, high-value crops are the main food exports. But even the domestic urban-value markets are highly developed with great levels of supermarket penetration. The coexisting access to domestic and international high-value markets is characteristic of these countries (Henson & Cranfield 2009:28). In SSA, 35 % of non-traditional exports constitutes a large scale of the total export (Maertens et al. 2012: 477). Yet, Henson and Cranfield (2009: 28) state that in low-income Sub-Saharan states, where the traditional supply chains for agro-food products are still predominate, the transformation processes in the agro-processing sector are usually in an infancy stage. Exceptions are Zambia and Ghana, "[...] where high-value markets are more pronounced due to foreign investment in food processing and/or supermarkets, significant levels of remittances, burgeoning middle- and high-income groups, etc." (Henson & Cranfield 2009: 28).

However, Ghana still exports a large amount of unprocessed horticulture and seafood products. One reason for this is that the Ghanaian food- and beverage-processing sector is very small (World Bank 2006: 22). The sector is characterised by microenterprises and small- to medium-sized enterprises, which have a share of about 92 % of all companies in this sector. These enterprises are mostly family-owned and operate with traditional processing methods. Only few use modern processing techniques. Besides big local companies such as Ghana Cocoa Processing Company, some multinational companies such as Nestlé, Cadbury and Blue Skies (see Case Study Box 5), have established themselves in Ghana. Despite the progress in the last years, there are still huge constraints in the Ghanaian food- and beverage-processing sector. Enterprises have to gain access to medium or long-term credits and must overcome the poor infrastructure and the weak linkage to markets (UNCTAD 2011: 72 – 73).

The impacts of food processing FDI in developing countries can be observed in different areas. This includes its contribution to overall economic development, the innovation performance and changes in the prevalence of poverty and food security. Despite numerous research studies having been conducted on the impacts of FDI in the food processing sector in developing countries. Regarding the impacts of FDI on the food processing's innovation performance, no consensus can be reached on whether these impacts are of a positive or negative note. As Rama and Wilkinson (2008: 61) point out: "Some surveys suggest that the effects may be negative, inhibiting host country innovation and drawing only on engineering and technical assistance services. Other studies suggest that basic food research in large developing countries is increasing pointing to the need for capacity building in this area". The impacts of food processing FDI on the food security of developing nations are widely neglected. The positive impact of food processing FDI on the poor population in low-income developing countries is very minimal; food processing FDI might even have a negative impact. First, the poor population cannot afford the products. Second, the production of goods for the sole purpose of exporting them clearly limits the actual national food security level. On the contrary, in middle-income developing nations, where processed food is a standard repertoire on domestic markets, the consumption of these foods has increased over the last years (Wilkinson & Rocha 2009: 62).

Photo: Dorlöchter-Sulser/MISEREOR

From a resource-based point of view, this transformation process may have positive impacts on food security. Food that is not fresh anymore can now be processed. For example, the food-processing sector can transform overripe tomatoes into tomato paste, which can then be sold to the domestic population. On the other hand, the linked dietary transition is accompanied by obesity and food-related illnesses, which are caused above all by the high levels of fat, sugar and oil in the processed foods (Wilkinson & Rocha 2006: 61 – 62).

7 FDI in wholesale and retail

In the past twenty years, foodretailers like Carrefour, Metro and Wal-Mart, have extended their branch networks and supplier relations to emerging markets. By doing so, they have transformed into transnational corporations (TNCs) (Coe & Hess 2005). With the help of FDI, super markets, hyper-markets and shopping malls have become prevalent in many countries around the world. Such processes of globalisation have led to fundamental changes in the respective target markets: Local competitors are driven out of the market and a city's townscape as well as the consumption pattern of its citizen change. These dynamic processes have led to reactions from the various actors in the target markets (Coe & Wrigley 2007; Franz 2011).

Photo: Martin Franz

Figure 22: FDI in retail and wholesale can be an overwhelming competition for traditional retailers and wholesalers. The photo shows a market in Tanga, Tanzania

The transnationalisation of successful Western retailers since the 1990s was favoured by a series of pull and push factors. On the one hand, the liberalisation of the retail industry opened new markets in many countries previously inaccessible to FDI. Countries in Eastern Europe and numerous developing nations for example, opened their markets for investments in the retail industry. Significant push factors were the extensive consolidation and the increasing regulation of the home markets as well as the more difficult acquisition of cheap financial capital for further expansions (Wrigley 2000). By now TNCs have taken a dominant role in numerous countries in Southeast Asia, Europe and Latin America (Coe & Hess 2005).

Impacts on Supply Chains

Traditional supply networks in the Global South are the livelihood of many people. Nevertheless, those networks are frequently fragmented and inefficient. In India for example, vegetables could cross up to eight different stations without a cold chain before reaching the consumer. Moreover, 50 to 90 % of the end price is made up of commission for handling agents. (Kumar et al. 2008: 70). TNCs often use the existing supply chains when entering new markets, as the establishment of own structure is expensive and time consuming. Furthermore, entering new markets only makes sense economically once reaching a certain market share (Reardon 2005) and in some countries, like India the use of existing supplier structures is required. However, when TNCs are allowed to create their own supply chains and gain increased influence over suppliers, they do so to ensure reliable supplies, consistent quality and reduced prices. Such companies have the market power to choose their preferred suppliers, to enforce production standards and to dictate prices to a great extend (Reardon 2005). If TNC can bypass the middlemen, a lot of money can be saved.

Especially when dealing with fresh produce, the creation of modern supply chains in developing countries appears to be challenging. The base of these difficulties is a fragmented and not standardised market with very small and geographically scattered producers. These challenges are intensified by widespread corruption, a general lack of high-quality products, poor infrastructure (e.g. streets, warehouses, cold chains, electricity), insufficient post-harvest controls and missing market information (Reardon et al. 2004).

Once TNC manage to overcome these challenges, creating modern supply chains and increased market shares, they will be able to reach a powerful position in the entire supply chain. Subsequently, many states discuss the advantages and disadvantages of creating a modern retail sector with its corresponding supply networks and foreign direct investments. India is a striking example of this discussion (Franz 2010; Franz 2012). Arguments for modern retail supply chains include among others increased earnings of the supplier, a larger product variety, new job opportunities (tax payers) and the transfer of knowledge from the North to the South. In regards to the right to food, two arguments are relevant: Through the help of modern-day supply structures with cold chains, less produce will perish on the way from the farmer to the consumer. Moreover, advocates often argue – and some opponents disagree – that a modern retail sector with good cold chains brings lower food prices and a better

Opinion Box 5:
Michael Wiedmann *(Senior Vice President, Group Director Public Policy, METRO AG)* on investments in agri-food networks

› "FDI in the food sector lead to the modernisation of trade structures in developing and emerging nations. By establishing modern-day supply chains, trading companies contribute to the development of countries with poor infrastructure. In India, for example, modern trade structures are not widespread. This is associated to the fact that up to 2012 foreign retailers were not allowed to expand into the Indian market. Exempted from this regulation were wholesalers, like METRO Cash & Carry. Our experience shows that the rural and the urban population benefit from efficient trade structures. As suppliers, farmers are integrated into a transparent system, through which they safeguard their livelihoods. At the same time, consumers enjoy a larger product selection that also meets international food security standards. This contributes to India's local food security. The fact that foreign trading companies invest heavily in supply chains – they must do so in order to make their business profitable – is a big chance for the Indian economy and infrastructure. Of course, this causes changes in traditional structures, but it also creates more employment opportunities. Due to the rising standards in food quality, availability and demand, a well-qualified workforce is needed, which will give the populace a better access to education. Foreign direct investment in trade is not only important to boost prosperity in India. It is also an essential foundation in order to safeguard the nourishment of an enormously growing population (around 16 million per year). The traditional system and the large amounts of food waste, which is produced due to the lack of cold chains, cannot guarantee an adequate supply. Additionally, efficient trade structures help curb the food sector's high inflation, averaging about 10 % per year." ‹

Photo: Frank Sprütten

Figure 23: Inside a Shoprite Hypermarket in Arusha, Tanzania

food quality (Franz & Trebbin 2012). Additionally, new supermarket chains will most likely ignite an increased consumer demand for high-quality food products. While this changed consumption pattern may lead to higher wages, it could also cause a decreased staple food production for the nourishment of the poor population and may ultimately challenge food security for an entire nation, especially in times of disaster (e.g. natural catastrophes). Further arguments against the establishment of modern retail supply networks are:

- Losses of livelihoods for the long-established middlemen
- Supremacy of retail companies: Too much power in one hand
- Inequitable competition: Small retailers can no longer compete with large retail multinationals
- Heightened farmer dependence on retail companies
- Non-transparent and/or incontestable contracts between farmers and retail firms (e.g. all risks for production are still carried by the farmers)
- Exclusion of farmers and regions: Retail firms or the food industry are not interested in remote farms, farms with no irrigation systems, small land holdings or illiterate farmers
- Impairment of the production basis through industrial production practices (e.g. increased soil pollution due to pesticide use)
- Loss of diversity and traditional knowledge through standardisation (Franz & Trebbin 2012).

Vinod Shetty from the Indian NGO "India FDI Watch" put it this way: "In any market, which has been running for the last 50 years, people have worked out an economy of how to conduct their lives. […] How will a group of 100, 200 traders, who are organized in a small market, be able to compete with a giant corporation which comes in and opens a fancy store in their neighborhood and […] gives

Figure 24: **Indian states declining FDI in multi-brand retail in 2013.**

all kinds of discount pricing? It is not possible for them to compete. [...] Allowing corporations to have a free run in a market, which is already saturated, which is divided into people and [...] run by so many millions of people. One cannot say that it is the best market; one cannot say [that] it is most efficiently run, but the point is: Your alternative model has to take into account all these people. You cannot put forth an alternative which destroys the livelihood of so many people."

7.1 Foreign direct investments in Sub-Saharan Africa's food trade

Retail TNCs from Europe have not been active in SSA until recently. The most important transnational supermarket chains in Sub-Saharan Africa are South African companies. The company with the biggest transnational spread is Shoprite Checkers. It has more than 220 corporate and over 40 franchise stores in Angola, Botswana, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe and the Democratic Republic of the Congo (DRC) (Shoprite2013, see Fig. 23). A new big player in the retail and wholesale sector in Sub-Saharan Africa is Wal-Mart. In 2011 Wal-Mart acquired a majority stake in the South African company Massmart Holdings Limited. Massmart operates more than 350 stores in South Africa, Botswana, Ghana, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda and Zambia (Wal-Mart 2013).

7.2 Foreign direct investments in India's food trade

Over the last few years the national government of India and many regional governments have started to liberalise regulations to support private investments and FDI in the food trade. The norms for FDI were eased, import duties lowered and the agro-food network was partly deregulated from licenses. Furthermore, the Food Safety and Standards Act replaced the vast number of food safety regulations in 2006 (Punjabi 2007). In 2011/12 liberal bills have been introduced into and passed by the Indian parliament, despite a national strike in September of 2012. For the first time, 100 % FDI were permitted in the so-called single-brand retail as well as 51 % majority holdings of foreign investors in the multi-brand retail. Yet, this liberalisation has not been implemented in all regions. Fourteen Indian states opposing the liberalisation of the multi-brand retail sector, lead to major regional disparities in food retailing (see Fig. 24). In addition, several restrictions have been enforced on a national level. Foreign retailers are obliged to purchase 30 % of their products from small Indian producers (this applies to single- and multi-brand retail). Furthermore, the minimum investment in multi-brand-retail is 100 million USD from which at least 50 % have to be invested in the back-end-sector (e.g. infrastructure, cold chains, processing, logistics, etc.).

Modern supermarkets have been almost absent from India until the beginning of the 21st century. A significant change occurred in around 2005; it was the year when different Indian corporations, such as Reliance Industries and Future Group, started to invest heavily in the retail sector. Up to 2012 food retail was open exclusivley for domestic companies. Despite such regulations, in 1997 TNCs received the permission to invest in the so-called 'single-brand retail' (max. 51 %), wholesale and supply chain management (up to 100 %). In 2003 the German Metro Group was the first TNC to take advantage of this opportunity in the wholesale market (see Opinion Box 4). Today they are operating fifteen cash-and-carry markets[10]

[10] A cash-and-carry wholesale is a self-service wholesale market, in which the buyer is solely responsible for commissioning and transporting the purchased products.

Opinion Box 6: **Dharmendra Kumar** *(Director of the NGO "India FDI Watch", Delhi)* on FDI in agri-food networks in India

Food supply chains are being controlled increasingly by transnational corporations (TNCs) mainly based in Western European countries and the USA. The consolidation of procurement and distribution of agri-products by TNCs is often done by excluding independent traders and small producers. The requirements for 'entering' such a chain put small and marginal farmers at a clear disadvantage and they often loose out. In a country like India where agriculture and retail are the two largest sources of livelihoods, sustaining more than two-thirds of the country's enormous population, this development could have far reaching implications for millions, including small farmers and independent retailers. About 78 % of the operational holdings in India are marginal and small, having less than two hectares per holding. Agri-industrialisation has raised the input cost of farming whereas the outputs realised by farming families remain below sustainable levels. Unfortunately, this has led Indian farming families to an unprecedented situation, where more than 200,000 farmers have committed suicide in the past fifteen years. In distress, farming families of rural India are turning to petty retail as a desperate strategy. In urban India, street retailers are facing hardships and declining in numbers. The recent entry and the alarming expansion of European corporations in the retail trade of India are challenging the very existence of small independent retailers. With around 15 million retail outlets, India has the highest density of small shops in the world, employing more than 40 million people. Hawkers, or street vendors, are one of the most visible segments of the informal Indian economy. India has already liberalised almost every sector to facilitate corporations in the food supply chain, including single brand and multi-brand retail, wholesale cash-n-carry, export trade, warehousing, construction, real estate, agriculture, food processing, horticulture, cold chains and food parks. Bharti, a leading Indian retailer has already launched 'Field Fresh' Foods in collaboration with the UK-based company Rothschild. Rothschild has more than 4,000 acres of land under cultivation in Punjab. The company is planning to bring a total of 20,000 acres under cultivation. Another UK-based TNC is Tesco, which has a joint venture with Tata and is expanding into bio-diesel, fresh fruits and the production and distribution of vegetables with massive investment plans. It has already set-up Jatropha cultivation in various regions of India for the production of bio-diesel. The Mega Food Parks Scheme (MFPS) of the Indian government aims to achieve the Vision 2015 of the Ministry of Food Processing Industries. Its goal is to raise the processing of perishables from the existing 6 % to 20 % and the share in global food trade from 1.5 % to 3 %. Dozens of mega food parks have already been set-up in the last couple of years. The Global Green Company has purchased around 12,000 acres of land in the south of India aiming to mainly produce export-oriented crops. It is to be noted that The Global Green started in 1992 as a joint venture between Indian and European firms. In 2006 Global Green acquired the Belgium-based Intergarden Group of Companies. This has been happening without India making any binding commitment on agriculture or retail at any multilateral levels. A new Free Trade Agreement (FTA) is currently being negotiated between the European Union (EU) and India, which would grant further liberalisation commitments and unabated power to investors. The EU-India FTA with a likely removal of equity caps and investor protection clauses would result in a massive investment in the food supply chain. Dozens of food companies from across the EU have visited India after the launch of the FTA negotiations, as agricultural tariffs will be eliminated with only minor exceptions. The FTA will most likely eliminate tariffs on processed foods completely and withdraw various export restrictions, including export taxes on agricultural raw materials. Subsistence farmers hardly benefit from export-based policies. In fact, after finalising the FTA, farmers may have to fend off the onslaught of transnational investors, whose commanding position throughout the food supply chain (from production to final consumption) could threaten food sovereignty, bio-diversity and retail democracy.

in India (2013). Companies like Tesco & Wal-Mart used such investment opportunities for their market entry in the supply chain management. There is "little doubt that, if the country's economic march continues, supermarkets will be a growing part of the commercial and consumer landscape of this 'new India'" (Pritchard et al. 2010: 435).

In 2008 Tesco signed a franchise agreement with Trent Ltd., which is part of the Tata group. As a result, Tesco

Photo: Martin Franz

Figure 25: Resistance against FDI in the retail sector is nothing new in India. The articles on the picture were published in 2007

transferred knowledge to the supermarket chain of Trent Ltd., named Star Bazaar. Furthermore, Tesco built-up a supply system in India that provides up to 80 % of the food and non-food stock needed by Star Bazaar. These products are sourced through Tesco's distribution centre in Mumbai, which also works with the cash-and-carry concept as a wholesaler for Indian retailers, restaurants and other businesses. Tesco has two sourcing offices, one in Bangalore and one in Delhi. They sourced over 490 million USD – equalling the total annual product volume of Indian suppliers – that amounted to 7 % of Tesco's international sourcing (Tesco 2013). Another European retail company that invested in India is Carrefour. The French company entered India in 2010. It operates four cash-and-carry stores under the name of "Carrefour Wholesale Cash & Carry" without any cooperation with indigenous retail companies. More stores are planned for the future (Tandon 2013).

Photo: Dorlöchter-Sulser/MISEREOR

In 2007 Wal-Mart and Bharti Enterprises established a joint venture with the name Bharti Wal-Mart Private Limited. Just like Tesco's cooperation with Tata, the joint venture focused on cash-and-carry wholesale and back-end supply chain management operations. In 2009 their first "Best-Price Modern Wholesale" was opened. Today the company runs twenty cash-and-carry stores in India. In 2013 the partnership between Bharti Enterprises and Wal-Mart was dissolved. Bharti is looking to establish its own retail chain called "Easyday." Wal-Mart continues to operate the twenty cash-and-carry markets (Loeb 2013).

Conclusion

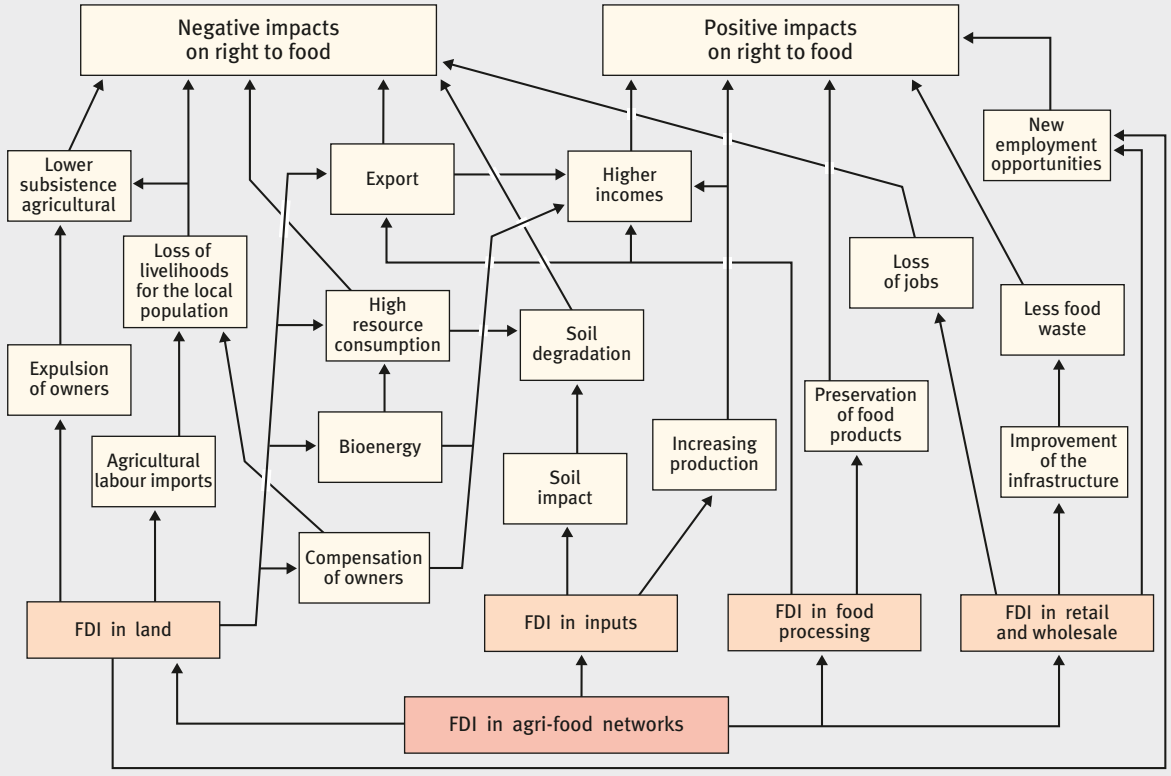
8

The right to food is a human right. Thus, it is therefore an obligation of all responsible institutions within a state to guarantee food security to its citizens. Furthermore, it is an obligation of the international community to assure that the world trade, the global financial markets as well as worldwide investment patterns do not threaten or impede single states in their task to guarantee food security. It is being debated whether FDI in agri-food networks are a chance or a threat to food security in target countries. Given the complex problems and the versatile interdependencies (see Fig. 25), this question cannot be clarified at this point. The value of this report lies in the discussion of the various perspectives and the illustration of the scale of developments. In the following, the results will be summarised and put into context.

The evaluation of the SSA countries in our case study has shown that agriculture has a big share in the GDP (with the majority of the population working in the primary sector), however agricultural FDI remain extremely low. It only accounts for 2 – 3 % of the total FDI volume. Nevertheless, where investments were made, big changes have occurred (e.g. changes in the usage of inputs and manpower, technology, agricultural and power structures, product kind and quantity, market shares, etc.). In India the share of the agricultural sector in the total FDI volume is also low, but India's absolute FDI values are higher and allow for bigger transformation processes in retail and wholesale, food processing and input industries compared to SSA countries. India's investors, compared to those in SSA seem to be more interested in the domestic market compared to SSA.

Investments in inputs have a substantial influence in the quantity of produced foods and thus in food security. Specifically in Africa, the consulting industry sees an enormous potential in investing in the input industry. This development includes the discovery of small-scale farmers as an interesting market segment to which, in the case of global value chain inclusion, inputs could be sold. Many view this as a win-win-situation, because on the one hand, corporations earn money and on the other hand, farmers increase productivity. Previous developments have shown that the availability of fertilisers and pesticides as well as

Figure 25: **Impacts of FDI in agri-food networks on the right to food**



improved seeds can increase production levels significantly. These production growths are distributed unevenly and the gap between farmers who can afford these inputs and those who cannot increases further. In the wake of the Green Revolution food has become significantly cheaper in these countries, which contributed positively to the population's food supply. However, those farmers who were not able to keep pace with these developments were no longer competitive and lost their livelihoods. In addition, the farmers' dependencies on input producers and distributors have been critisised. Important aspects

Photo: Schaaf/MISEREOR

for a country's long-term food security are the ecological ramifications due to an intensified agriculture. Toxic particles can accumulate in the soil and the more intense water consumption may degrade entire tracts of land. The alternatives to such negative impacts of conventional agriculture are the implementation of agroecological methods or organic agriculture. These approaches offer an environment friendly cultivation, often combined with criteria for social sustainability. While estimates suggest that introduction of such principles would result in a decrease of food production in the Global North, a number of case studies show that a significant increase of yields would be possible in the Global South. Therefore, alternative agricultural practises have the potential to contribute to food security in the Global South.

Crucial to the application of inputs is knowledge on how to use these correctly. In this regard, a shift – from state-owned/run to privately and NGO owned/run – in the distribution of inputs and know-how can be observed. The private actors' selective distribution of knowledge is a concern; knowledge is only communicated if it represents own interests and if profits can be made. Yet, development agencies in many countries count on the cooperation with agri-business firms.

Investments in natural resources, such as land and water, are a particularly sensitive subject. Authors point out the positive effects, when produced food is not only exported, but when the local population also benefits. In addition, technological spillover and indirect effects on economic development are often seen as a great potential. Such positive outcomes are clouded by many negative effects, severely limiting the right to food:

1. The existing land users lose their livelihoods.
2. Export production deprives the country of food.
3. Scarce water resources are diminished by investors and are no longer available to local farmers.
4. Many investments in land aim for biofuel production, which brings new land use conflicts.

Whether the positive or the negative impacts prevail is determined by legal parameters depending on what is produced and whom it is produced for. In general, India has received few investments in land from foreign countries due to India's legal parameters. In contrast, SSA is a significant target region with a regionally diverse spread of land take-overs.

A range of investments in the food processing sector are not only directed at the domestic, but also at the export market. Generally, crossed investments, both within Europe and the United States, are the most common FDI in food processing. At the same time, FDI flows to developing nations are increasing. So far, food processing FDI in low-income countries are minimal and only allow for minor transformation processes. Middle-income countries attract more FDI. Here, the focus is on producing for exports and for the growing middle class, buying and demanding more processed food products in the transforming and increasingly modern retail stores.

Transnational corporations have a leading role in food processing investments. In relation to food security, various effects of food processing are to be distinguished:

1. The creation of a food processing industry influences the demand because, above all, high-value crops are desired, which can suppress the staple food production.

2. The food processing industry also purchases products that are hardly marketable (overripe fruits or fruits that deviate from the standard appearance).
3. Processing perishable food extends their shelf life.
4. Processed food used for the export market can lead to a lower food quantity and variety in the production country.
5. Food processing brings new jobs and capital flows, which may enable the country to import food.
6. Processed food is not affordable to all citizens.

The retail sector has a strong impact on food security. It plays a major role due to its effects on supplier relations. Through modern supplier structures with cold chains, less food perishes on the way from the farmer to the consumer. In addition, modern retailis viewed as a catalyst for sinking food prices and an improved food quality. In particular, the lower food prices are debatable, as traditional trade systems are very cost effective (e.g. no costs for cold chains and low wages in developing countries despite labour-intensive work). Supermarket chains ignite new consumer desires (e.g. high-quality food, meat), which affect food security. This may lead to higher income for farmers, but also to a lower production in staple food that will – especially in times of shortages – be lacking for the provisioning of the poor population.

India has become an important country for investments in the retail sector. In SSA, this development is still in its infancy stage. This report shows that a) a considerable increase in FDI in agri-food networks has occurred in India and SSA; b) a significant amount is invested by actors from Europe; c) the FDI increases show an uneven spatial distribution, having effects on selected parts of the agri-food networks; the large variety of effects may counteract one another.

It has been found that investment in agriculture is needed. To evaluate in which areas such investments bring positive or negative changes or whose interests should be considered, a more differentiated analysis is required. The underlying challenges and the manifold causal relations are too complex to cover all these aspects in such a small-scale study. Further research, and particularly primary data is needed.

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