Deutsche Bank
DB Research

Current Issues
Natural resources

Foreign investment in farmland

No low-hanging fruit

November 13, 2012

Author
Claire Schaffnit-Chatterjee
+49 69 910-31821
claire.schaffnit-chatterjee@db.com

Editor
Maria Laura Lanzeni

Deutsche Bank AG
DB Research
Frankfurt am Main
Germany
E-mail: marketing.dbr@db.com
Fax: +49 69 910-31877

www.dbresearch.com

DB Research Management
Ralf Hoffmann | Bernhard Speyer

There is a global rush for land. Since 2000, recorded agricultural transactions involving foreign investors amount to 83 million hectares of land in developing countries – 1.7% of the world's agricultural area – although only half of these data are considered reliable. Most of the targeted countries are poor with weak land governance, have high yield gaps and good accessibility. Two-thirds of the targeted farmland is located in Africa, especially in Sub-Saharan Africa.

Investors originate increasingly from emerging countries, especially China, India, Brazil and Malaysia. Globally, the investors are both private actors – especially from America and Europe – and public or state-owned companies – especially from the Gulf States.

Investment in farmland is driven by long-term trends such as growing consumption of food and biofuels in a context of limited availability of arable land, water and energy: investors are interested in securing access to food or other agricultural products, access to water and financial returns in an alternative asset class. Both food and non-food crops (e.g. biofuel crops, rubber) are of interest. The agricultural production on acquired land is largely for export.

Significant risks are associated with investing in farmland. The main challenges are to respect the economic and social rights of local populations, to preserve environmental sustainability and to avoid one-sided agricultural development. Investors often compete for land with local farming communities.

Investments in farmland can also be a “win-win-win” strategy if the risks are mitigated, particularly through project transparency and long-term engagement with the local population. Besides the gains for investors and home countries, investments in farmland can yield benefits for local communities, the host country at large and lead to increased global agricultural production. Financial investors have an important role to play in maximizing these benefits.

The way forward includes improved governance, especially security of land tenure. Guidelines ensuring responsible investments in land conducive to broad-based development have been produced but an effective mechanism to enforce them is still missing. Documenting foreign investment is also key, both for transparency and better understanding of the phenomenon.

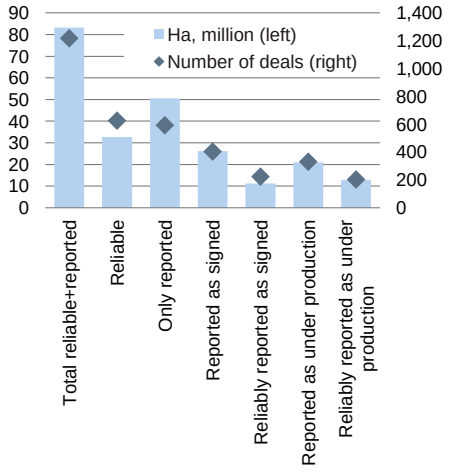
There is a strong case for private investment in agriculture. Investments required in developing countries to support the agricultural output needed in 2050 amount to an average of USD 83 billion per year, which represents an increase of about 50% over current levels. There is increasing evidence that collaborative business models between small farmers and investors (for instance contract farming) can be mutually beneficial, boosting agricultural productivity while reducing poverty and hunger, without necessitating transfer of land.

A key driver of foreign investment in land, food security is a challenge mankind has been confronted with in various times and places. Wherever human societies have developed, growing needs have led to increasing arable land, and when land has been limited by nature or wars, food shortages ensued. The key solution has always been migration when possible, otherwise innovation-led yield increase. Over millennia, mankind has been gradually spreading over the various continents. This process is now unfolding at the scale of the planet. The extraordinary demographic growth taking place between 1950 and 2050, rising protein consumption in developing countries and energy mandates for biofuels drive an increased demand for feed, fiber, fuel and food. This is leading to the further exploitation of previously unused land.

A. There is a global rush for land

It is very difficult to get accurate data on global investments in land. Information is often derived from a combination of international reviews – mostly based on media reports – and in-country research using official government records. Media sometimes overestimate scale, national inventory figures tend to be lower. All usual parameters can vary greatly according to sources, deal size, time-frame, land use and status of deals[1].

Large-scale land acquisitions from agriculture 1



Sources: Land Matrix, DB Research

Although the picture is imperfect, all evidence indicates that land acquisitions are happening quickly and on a large scale[2]. Foreign investment accounts for most of the deals and has been the focus of attention. However, land acquisitions by domestic investors are also significant and account for the majority of allocated land in some countries like Ethiopia. Anseeuw *et al*.[3] also point out that the world's foremost "investors" in land and agriculture are the 500 million smallholder households who invest time and money in producing food as well as maintaining and improving agricultural systems.

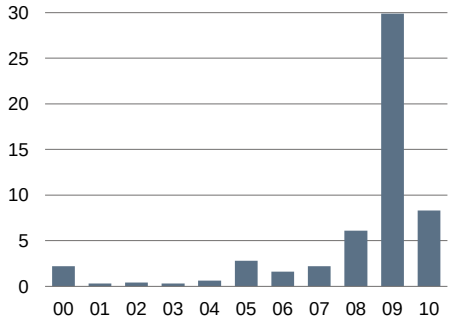
As many as 1,217 agricultural transactions or deals involving foreign investors have been recorded since 2000 in the "Global South" and Eastern Europe according to Land Matrix[4], amounting to 83.2 million hectares (see chart 1[5]). For comparison purposes, global cultivated land is 1.5 billion hectares – increasing by about 1.9 million hectares each year in 1990-2007[6] - and it is estimated that 445 million hectares of land are uncultivated and available for farming[7] (charts 14 and 16 in section D show the regional spread).

Data for around half of these agricultural deals are considered "reliable" which means that a land transaction, at least a transfer of land rights, has actually taken place. For the "reported-only" deals, a significant proportion has very likely taken place. This figure may even have been underestimated given the lack of transparency surrounding many deals. The reliable deals cover an area of 32.7 million ha – or Germany, Belgium and the Netherlands put together– amounting

1 IEED briefing (2012).
2 Several institutions have been reporting data including the World Bank, the NGO GRAIN, the International Land Coalition (ILC), the International Food Policy Research Institute (IFPRI) and recently Land Matrix: a public database of large-scale land deals facilitated by ILC, CIRAD (Centre de Coopération Internationale en Recherche Agronomique pour le Développement), CDE (Centre for Development and Environment), GIGA (German Institute for Global and Area Studies) and GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit).
3 Anseeuw *et al*. (2012a).
4 These refer to agriculture-oriented projects (no mining, tourism, etc.) acquired by foreign investors (excluding domestic transactions) targetting low and middle income countries of the Global South and Eastern European countries, affecting an area of 200 ha (2 km^2)or more. See Anseeuw, W. *et al.* (2012a).
5 All charts based on Land Matrix data refer to deals recorded since 2000.
1 ha is an area of 100 metre by 100 metre, so that 100 ha equals1 km^2.
6 Declines in industrial and transition countries (-2.1 and -1.3 million hectares, respectively) were more than outweighed by increases in 5.5 million ha per year in developing countries.
7 Deininger *et al.* (2011).

Pace of global land acquisitions 2

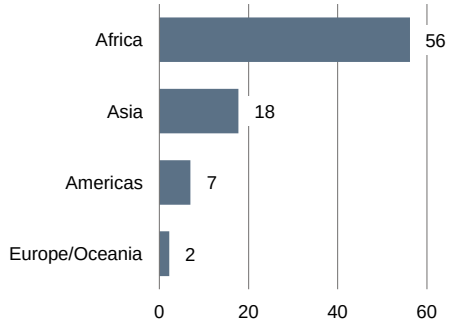
Million hectares reported



Sources: Land Matrix, DB Research

Land acquisitions by region 3

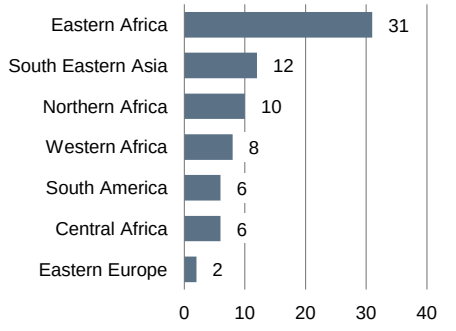
Cumulative size of deals, million hectares



Sources: Land Matrix, Asmussen et al., DB Research

Land acquisitions by sub-region 4

Cumulative size of deals, million hectares



Sources: Land Matrix, Anseeuw et al., DB Research

to 0.7% of the world's agricultural land. The World Bank reports in a separate survey[8] 56 million ha between October 2008 and August 2009.

Out of the total recorded by Land Matrix, 403 deals covering 26.2 million hectares are reported as actually signed and 330 covering 21 million ha are reported to have started production. So a large number of signed contracts (81.9%) have been followed through by the implementation and start of operation of projects. The reasons why a deal does not lead to a production start include the following[9]:

— Underestimation of the managerial and technical difficulties related to the implementation of large deals, given that the environments are often challenging at the ecological, political, bureaucratic and socio-economic levels (especially likely for operators with no established track-record in agriculture)

— Failure to find the sought-after conditions leading investors to pull-out (e.g. insufficient transport and infrastructure support for a Chinese parastatal to grow oil palms on forested lands[10])

— Strategic and speculative positioning of investors expecting that land prices will increase (rather than specific investment plans in the short-term)

The Land Matrix data suggest that the rate of land acquisitions spiked in 2009, particularly as a result of the 2007-2008 food crisis (see chart 2). The likely drivers are discussed in section D. The slowdown in 2010 may be a consequence of the easing of commodity prices, the financial crisis as well as a result of investors' increased awareness of risks involved: technical, socio-political and reputational – especially in a context of increased adverse press coverage. Overall, a long-term trend of growing commercial interest in land is expected, for the reasons discussed below.

B. A large number of target countries

High concentration with strong interest in Africa

Over 80 countries are targeted by foreign investors but 11 of them concentrate 70% of the targeted surface as reported by Land Matrix. Two-thirds of the farmland area of interest to foreign investors is located in Africa, mostly in Sub-Saharan Africa – e.g. Sudan, South Sudan, Mozambique, Tanzania, Ethiopia, Madagascar, Liberia, The Democratic Republic of Congo and Zambia[11]. Argentina, Brazil, Indonesia and Laos represent heavy targets in other regions according to Land Matrix and GRAIN (see Charts 3 and 4). Other countries, particularly in Latin America, are of interest for other reasons (mining and conservation), often to domestic investors. Table 8 shows project details for three countries among the most targeted ones: Sudan, Ethiopia and Brazil.

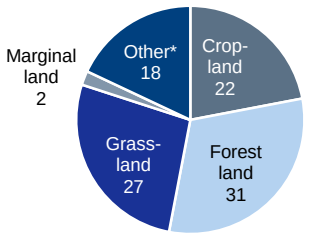
In Africa, reported large-scale acquisitions of farmland amount to 4.8% of Africa's total agricultural area – equivalent to the area of Kenya. In contrast, these acquisitions account in Latin America and Asia for 1.2% and 1.1%, respectively, of agricultural land – still representing a considerable area in absolute terms.

[8] Deininger *et al* (2011).
[9] Anseeuw *et. al* (2012a).
[10] Brautigam and Xiaoyang (2012).
[11] Deininger *et al.* (2010).

Foreign investment in farmland

Forests, grassland and cropland 5

Share of area acquired by land cover class, %

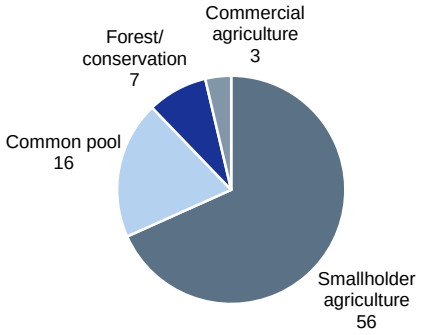


* Other refers mostly to bare land

Sources: Land Matrix, Globcover, ESA, DB Research

Former land use of acquired land 6

Number of cases

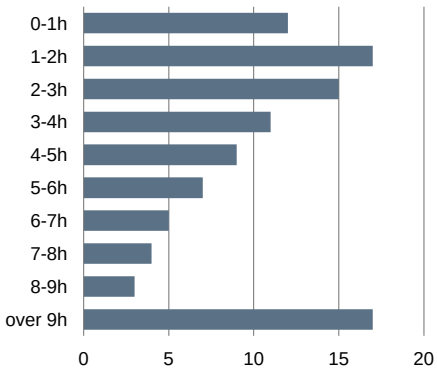


Note: Based on 82 observations

Sources: Land Matrix, Anseeuw et al., DB Research

Accessibility of land deal locations 7

% area in target countries, by travel time to next city



Sources: Land Matrix, Anseeuw et al., DB Research

Mostly poor countries with weak land governance

The countries where large numbers of deals have been reported tend to be poor. Destination countries have lower GDP per capita than origin countries, much lower if compared to 'exclusive' origin countries which are not targeted at all for investment. Destination countries show net exports of USD 30 per capita – USD 99 per capita if they have at least one operating project – while origin countries are net food importers, with net imports of USD 12 per capita – USD 211 for exclusive origin countries.[12]

Countries with large numbers of reported deals also tend to have weak governance – in terms of regulatory frameworks, government effectiveness, the rule of law, corruption control, investor protection and land governance. For signed deals, however, the countries with the highest number of signed contracts or projects in production do not exhibit significantly lower general governance indicators but weaker land governance institutions. This may suggest that investors are interested in countries which offer a relatively strong general institutional framework – for investment protection and smooth business operation – but low land tenure security – allowing easy and possibly cheap access to land.[13] There is, however, no clear evidence of a causality since it could be that the countries with weak governance are attractive for other reasons, for instance yield gaps.

Mostly countries with high yield gaps and good accessibility

Spatial analysis of land deals[14] indicates that investors tend to target forest land, grassland and cropland to similar degrees (see chart 5). They also tend to target cropland where the yield gap is relatively large, and where additional inputs (water, fertilizers, seeds, infrastructure and know-how) may create greater yields.[15] It is often land covered by mosaics of cropland with vegetation and forests, likely related to smallholder agriculture. This may indicate that investors compete for land with local communities – as confirmed by data from a smaller database (82 observations for which former land use information is available) (see chart 6).

Accessibility is another criterion for choice of target area: the median accessibility of the targeted areas is about 3 hours away from the next city – reflecting relatively easy access to markets and inputs (seeds, fertilizers, pesticides and machinery). However, there is also a significant share of areas located 9 hours or more away from the next city (see chart 7) which may drive improvement in communication infrastructure. More than 60% of all land deals target areas with population densities of more than 25 persons per km^2.

[12] Arezki *et al.* (2011).
[13] Anseeuw *et. al* (2012a), Arezki *et al.* (2011), Deininger *et al.* (2010).
[14] Anseeuw *et al.* (2012a).
[15] Arezki *et al*. (2011). Also find that the determinants of large agricultural investments are agro-ecological suitability, yield gap and weak land governance.

Foreign investment in farmland

Project details for 3 selected countries, 2006-2012 8

Land of interest	Investor	Origin	Sector	Area, ha	Use of farmland	Projected investment
Sudan	Pinosso Group	Brazil	Agribusiness	100,000	Cotton, soybeans	
	ZTE	China	Telecommunications	10,000	Oil seeds	
	Djibouti	Djibouti	Government	4,200		
	Citadel Capital	Egypt	Finance	131,890	Cotton, corn, rice, sorghum, sugarcane, sunflowers, wheat	
	Egypt	Egypt	Government	17,000	Cattle	
	Egypt	Egypt	Government	400,000	Corn, sugar, wheat	
	"a joint Arab-foreign company"	Philippines	Agribusiness	25,000	Cereals and other crops	
	Hassad Food	Qatar	Agribusiness	100,000		USD 160 million
	Almarai Co.	Saudi Arabia	Agribusiness	9,239	Corn, wheat	USD 45.3 million
	Foras International Investment Co.	Saudi Arabia	Finance	126,000	Cereals	USD 200 million
	NADEC	Saudi Arabia	Agribusiness	42,000		
	South Korea	South Korea	Government	690,000	Wheat	
	Abu Dhabi Fund for Development	UAE	Government	29,400	Alfalfa	
	Al Dahra	UAE	Agribusiness	38,400	Barley, cotton, hay, corn, sugarcane, sunflower, wheat	
	Jeenan	UAE	Agribusiness	40,500		
	Pharos Financial Group	UAE	Finance	156,000	Corn, peanuts, sorghum, sunflower	
	Sayegh Group	UAE	Industrial	1,500,000		
	UAE investor	UAE		38,400		USD 15 million
Ethiopia	Hunan Dafengyuan	China	Agribusiness	25,000	Sugarcane	
	Djibouti	Djibouti	Government	5,000	Wheat	
	AfricaJUICE	Netherlands	Agribusiness	1,200	Fruit	
	Egyptian National Bank	Egypt	Government	20,000	Cereals	USD 40 million
	Acazis AG	Germany	Agribusiness	56,000	Castor beans, peanuts, vegetable oil	USD 77 million
	Almidha	India		28,000	Sugarcane	
	ARS Agrofoods	India	Agribusiness	3,000	Cotton, groundnut, sesame, soybean	USD 5 million
	BHO Agr	India	Agribusiness	27,000	Cereal, oilseeds, pulses	USD 8/ha/year (lease)
	Chadha Agro Plc	India	Industrial	100,000	Sugarcane	
	Confederation of Potato Seed Farmers	India	Agribusiness	50,000	Corn, oilseeds, pulses, sugarcane	USD 4/ha/year (lease)
	Karuturi	India	Agribusiness	311,000	Corn, palm oil, rice, sugar	USD 1.2/ha/year in Gambela (after 7 years), USD 8/ha/year in Bako (after 6 years)
	Neha International	India	Agribusiness	4,000	Oil seeds, pulses, rice, wheat	
	Rashtriya Kissan Sangathan	India	Agribusiness	5,000	Cotton, oil seeds, rice	
	Romton Agri PLC	India	Agribusiness	10,000	Tomato farming	
	Ruchi Group	India	Agribusiness	50,000	Soybeans	USD 4 million (lease cost for 25,000 ha)
	Sannati Agro Farm Enterprise	India	Agribusiness	10,000	Cereals, pulses, rice	USD 10 million
	Shapoorji Pallonji and Co.	India	Construction	50,000	Food crops, pongamia pinnata	
	Jalandhar Potato Growers' Association	India	Agribusiness	100,000		USD 4/ha/year (lease)
	FRI-EL Green	Italy	Energy	30,000		USD 18 million
	Al Amoudi	Saudi Arabia	Finance	140,000		USD 2 500 million
	BDFC Ethiopia	US	Agribusiness	17,400		

Source: GRAIN

Continued

Foreign investment in farmland

Project details for 3 selected countries, 2006-2012 (continued) 9

Land of interest	Investor	Origin	Sector	Area, ha	Use of farmland	Projected investment
Brazil	Cresud	Argentina	Agribusiness	175,000	Cattle, crops, sugarcane	
	El Tejar	Argentina	Agribusiness	220,000	Cereals, oilseeds	
	Los Grobo	Argentina	Agribusiness	60,000	Soybean	
	Brookfield Asset Management	Canada	Finance	97,124	Crops	
	Chongqing Grain Group	China	Agribusiness	200,000	Soybean	USD 879 million
	Pengxin Group	China	Real estate	200,000	Cotton, soybean	
	Calyx Agro	France	Finance	61,352	Crops (mainly soybean)	
	Louis Dreyfus	France	Agribusiness	250,000	Sugarcane	
	Aquila	Germany	Finance	250,000	Cattle, sugar	
	Shree Renuka Sugars	India	Agribusiness	133,000	Sugarcane	USD 569 million
	Mitsui	Japan	Industrial	100,000	Cotton, maize, soybean	
	Fonterra	New Zealand	Agribusiness	850		
	Prio Foods	Portugal	Agribusiness	29,528	Soybean	
	Hyundai	South Korea	Industrial	10,000	Soybean	
	Clean Energy Brazil	UK	Agribusiness	30,000	Sugarcane	
	Adecoagro	US	Agribusiness	165,000	Cattle, coffee, grains, soybean, sugarcane	
	Archer Daniels Midland	US	Agribusiness	12,000	Oil palm	
	Black River Asset Management	US	Finance	50,000	Crops	
	Bunge	US	Agribusiness	10,000	Sugarcane	USD 80 million
	Galtere	US	Finance	25,000	Rice, soybean	
	Sollus Capital	US	Agribusiness	35,000	Crops	
	TIAA-CREF Retirement Equity Fund	US	Finance	424,000	Soybean, sugarcane	USD 1.240 million
	Tiba Agro	US	Agribusiness	320,000		

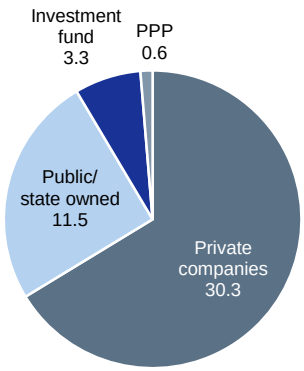
Source: GRAIN

C. A great variety of actors

Mostly private but also public actors

Types of investors 10

Million ha



Sources: Land Matrix, DB Research

There are three broad groups of economic players in agricultural land: 1) governments seeking to acquire agricultural land in other countries in order to secure food and energy supplies, 2) agricultural companies either looking to expand or to integrate the supply and 3) financial investors. These groups do not work in isolation: the interest of one set of actors, by putting pressure on land, drives the interests of the other groups higher. Regarding the latter, the principal sources of funds for agricultural land have historically been wealthy individuals, family offices and endowments – from academic, cultural or religious institutions. There has been a noticeable shift recently, with pension funds and hedge funds entering this asset class.

The Land Matrix data identify four types of investors (see chart 10): private companies, state-owned or public companies, investment funds and public-private partnerships. Most of the investors are private companies (accounting for 442 projects), followed by state-owned or public companies (172 projects), investment funds (32 projects) and PPPs (12 projects).

The distribution of investor types varies according to the regions of origin. Investors from North and South America and Europe are almost exclusively private companies. Public or state-owned companies are the main actors in the

Foreign investment in farmland

Gulf States (except for Saudi Arabia) and to a lesser degree in China and South Korea.

Foreign investors have sometimes built a partnership with a domestic company, for instance, this has been the case for investors from China, the UK or USA: investing in Ethiopia, the Philippines and Tanzania. Such a partnership may be required by legislation in some countries and it can be a way of reducing the costs of complex local administration. Foreign investors also often act in partnership with each other. Investors from the USA, the UK and South Africa have formed such partnerships in about a third of the deals in which they are involved.[16]

Investment originates increasingly in emerging countries

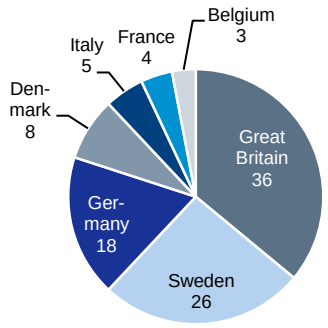
According to Land Matrix, investment originates from three groups of countries: emerging countries (Brazil, South Africa, China, India, Malaysia, Korea); Gulf States and countries in the "Global North" (USA, Europe). Chart 12 displays the top 20 investing countries in terms of total area covered by land deals – reported and reliable. The gap between the two types of deals is large for some countries, for instance Brazil – mostly due to the lack of information on its attempts to acquire land in Mozambique (as opposed to Angola where they are well documented). Chart 11 shows the origin of land investments from the EU and chart 13 on the next page displays the target countries.

The recent wave of large-scale land deals has involved investors from Brazil, South Africa as well as China, India and most emerging Asian countries. These countries, typically rich in capital but poor in arable land, may be both origin and target of investment flows. Target countries are on average net food exporters, but after excluding the target countries which are also origin countries, the remaining "target only" countries are on average net food importers.

The large involvement of investors from emerging countries is symptomatic of a new trend towards South-South relationships. It is likely driven by cultural affinity and reduced transport and transaction costs. For investments in Asia, 57% of deals involve investment of Asian origin. Agri-business companies from Brazil and Argentina invest preferably in their regional neighbourhood and South African investors target Africa at large, especially Eastern, Central and Southern Africa. In Africa, however, European, North American and Gulf States investors are more active than African ones.[17]

European investors in land by country 11

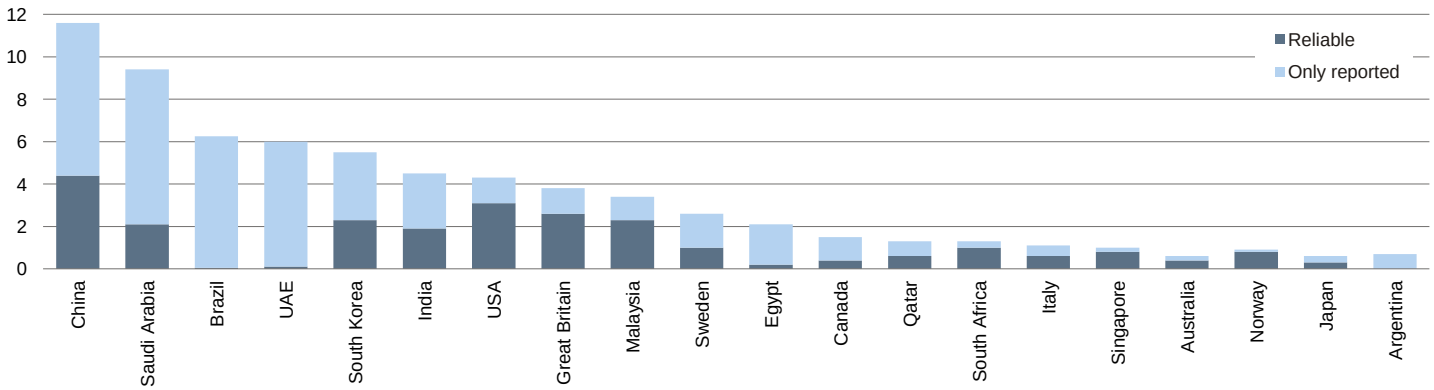
%, 2007-2010 out of a total of 2.2 m ha



Sources: GRAIN, DB Research

The origin of land investment - top 20 countries 12

Million ha

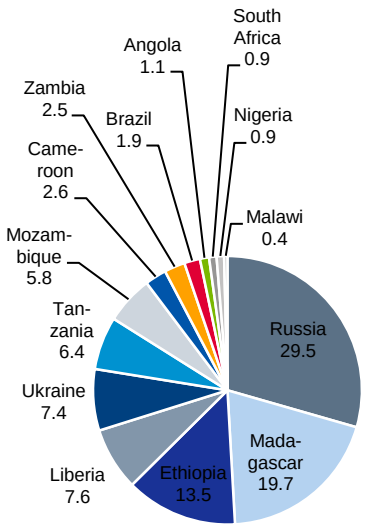


Sources: Land Matrix, Anseeuw et al., DB Research

[16] Anseeuw *et al.* (2012a).
[17] Anseeuw *et al.* (2012a).

Target countries from the EU 13

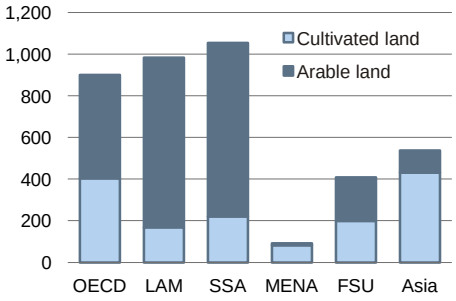
%, 2007-2010 out of a total of 2.2 m ha



Sources: GRAIN, DB Research

Arable and cultivated land across regions 14

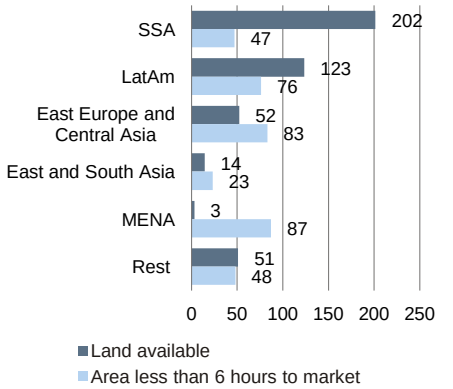
Million ha



Sources: B. Dorin, FAO, DB Research

Potential supply of land available 16

Million ha



Sources: World Bank, DB Research

The Gulf States have been active investors in land, especially Saudi Arabia and the United Arab Emirates (15.3 million ha in total) although only 14% of these deals have led to implementation. According to the Land Matrix data, investors from the Gulf States have acquired land mainly in Africa and South East Asia, targetting locations with cultural and religious affinities.

In the "Global North", private companies from the US and the UK are the most active investors. North American and European investors have negotiated land deals mainly in Africa, South America, as well as Indonesia and the Philippines.

D. Drivers of investment in farmland

The drivers of investment in farmland appear to be security of food and agricultural products, interest in water and financial returns from land as an asset class.

Securing food and agricultural products

A number of macrotrends drive a tight supply and demand balance for agricultural products. Three major factors push upwards the demand for agricultural products for food, feed, fuel and fibers: growing world population (6 billion now, around 9 billion in 2050, rising income in developing countries – driving increased consumption of resource-intensive foods like meat (see table 15) – and increasing use of crops for biofuels. This will require a 70% increase in global food production by 2050 according to the FAO. At the same time, supply is constrained by limited availability of water and energy and this is exacerbated by climate change. Bottlenecks in storage and distribution also limit supply in some regions.[18]

The ecological footprint of food 15

Food	Land use	Water footprint	Emissions	Calories
1 kg	Kg CO_2 eq.	litres	m²	Kcal
Beef	16.0	15,500	7.9	2,470
Milk	10.6	1,000	9.8	610
Eggs	5.5	3,333	6.7	1,430
Chicken	4.6	3,900	6.4	1,650
Wheat	0.8	1,300	1.5	3,400
Rice	-	3,400	-	1,300

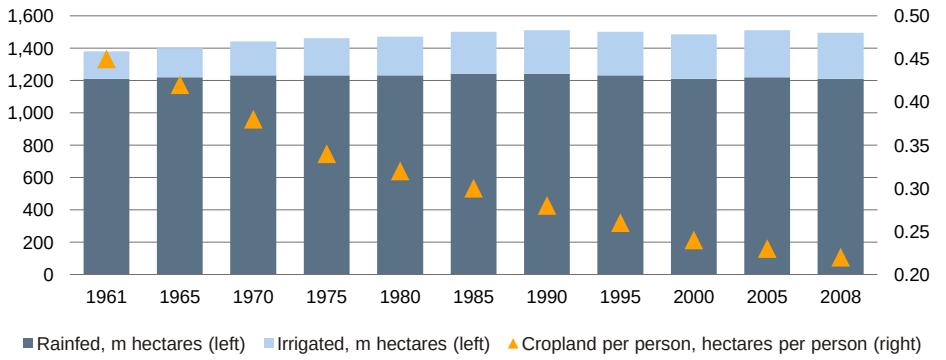
Sources: www.waterfootprint.org, UK DEFRA (2006), National Geographic, USDA National Nutrient Database, Oxfam

Competition for land is fierce, due to land degradation, urbanisation, further use of agricultural products for biofuels and potential carbon sequestration. Over the last fifty years, land and water management has met rapidly rising demand for agricultural products. Input-intensive, mechanized agriculture and irrigation have contributed to rapid increases in productivity. The world's agricultural production has grown between 2.5 and 3 times since 1960 while the cultivated area has grown by 12% (to close to 1.5 billion hectares).[19] So increasing the amount of land under cultivation is the way agriculture has grown through most of history (See chart 17).

[18] More on these factors in Schaffnit-Chatterjee (2009).
[19] World Bank (2007).

Now in theory, there is still land potentially convertible to agricultural use (see charts 14 and 16). The cost of bringing new land into production can however be high, either financially or from an environmental point of view. It typically requires large investments in infrastructure in Sub-Saharan Africa and cutting down subtropical and tropical forests in some regions, like Latin America. In fact, as rural populations have grown, cultivated areas per capita have shrunk, which outlines constraints. In Eastern and Southern Africa, cultivated land per capita has decreased by half over the last generation. In some countries of the region, the average cultivated area is now less than 0.3 hectares per capita.[20]

Evolution of land under irrigated and rainfed cropping 17



Sources: FAO, DB Research

Interest in water

Water scarcity is an increasing constraint in agricultural production, driving rising competition for water resources. It has been argued that large-scale land acquisitions also take place to secure water use. Outsourcing agricultural commodities is a way of relieving pressures over domestic water resources (and transferring these pressures somewhere else).

In particular, declining fossil water reserves in the Gulf States have prompted moves to acquire agricultural land overseas. The Land Matrix data show that land acquisitions have been focused in irrigable river basin areas, particularly along the Niger and the Nile.[21]

A profitable investment

Investments in land are attractive to financial investors for four main reasons[22]:

1. Good prospects for income generation – through returns from agricultural productivity on acquired land – also in the long term, given the structurally tight supply/demand balance for agricultural products driving high prices. Returns vary widely depending on location and land type, typically between high single-digits (for initial investments in Africa for instance) to over 20% or even 30% in Brazil.
2. Rising prices of agricultural land. The value of agricultural land may rise as a result of its scarcity, as well as increasing demand for agricultural commodities. Potential returns from carbon sequestration or other environmental services (biodiversity, water availability and quality, etc.) could further increase the value of agricultural land.

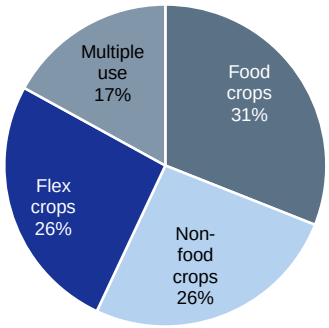
[20] De Schutter (2011b).
[21] Anseeuw et al. (2012b).
[22] For more on this, see Auer *et al.* (2012).

3. Diversification of investment portfolio. A low correlation of the returns with traditional asset classes like equities and bond markets is often cited as an attractive feature of investing in agricultural land. However, we should keep in mind that this refers rather to what is grown on the land since the land is a very illiquid asset compared to bonds or equities.
4. Hedge against inflation. The literature is divided on this issue but the returns from agricultural land are mostly uncorrelated with – and higher than – the inflation rate in developed economies.

Both food and non-food crops

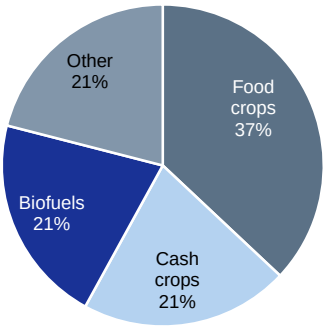
Future use of land acquired 18

Share of total area



Sources: Land Matrix, DB Research

Significant driver: Energy crops 19



Other: forest, livestock area or hunting ground

Sources: World Bank, DB Research

According to data from Land Matrix, agriculture is by far the main objective of land acquisition, accounting for around 75% of the whole area targetted by foreign investors – followed by tourism and forestry (both around 5%).

Chart 18 displays the relative importance of four types of production in acquired land: food crops, non-food crops, multiple use and flex crops – such as soybean, sugarcane and oil palm, which can be used for either food or biofuel production, depending on demand, prices, market opportunities, etc. These results have to be interpreted with caution since it is difficult to gather such data[23]. Chart 19 displays results from the World Bank[24] based on 405 investment projects and confirms that energy crops represent a significant driver of large-scale investments in farmland.

According to the Land Matrix data, large-scale land acquisitions for food crop production are located mostly in East Africa, West Africa and South-East Asia, with the majority of implemented projects in East and West Africa. The main crops involved are rice, corn and wheat. Investors interested in food production come predominantly from the Middle East and East Asia (mostly China and South Korea). These data seem to indicate that governments or sovereign funds from the Middle East as well as public and state-owned companies from East Asia pursue a food security strategy. Some countries like China may also be interested in the infrastructure component of the farmland investment deals.

The production of non-food crops such as rubber, fiber crops and jatropha is also an important use of large-scale land acquisitions. Rubber production projects often take place in South-East Asia (the Philippines, Indonesia and Cambodia) and are managed mostly by Chinese and Vietnamese actors, according to the Land Matrix data. Biofuel crops, especially jatropha, also play an important role in land acquisitions with the majority of projects located in Africa, especially in East African countries such as Ethiopia, Mozambique and Tanzania, managed by private companies from the UK while companies from the Netherlands and South Korea are also showing an interest.

Flex crops such as soybean, sugarcane and oil palm have played a central role in the recent wave of large-scale land acquisitions. Their flexibility to be sold either in the food market or the biofuel market reduces price volatility risk. Eastern African countries are again the main targets here, followed by four regions: South America, Western Africa, South-Eastern Asia and Central Africa. South African and South American private companies are among the main actors of these geographically spread projects. The “multiple use” projects do not seem to refer to particular actors or regions.

Export appears to be by far the main objective of the future use of acquired land: exclusively in 67% of the cases, in combination with domestic use in another 24% of the cases, so domestic use is exclusively foreseen in only 9% of

[23] Anseeuw *et al.* (2012a).
[24] Deininger *et al*. (2011).

the cases.[25] Among the deals aimed for export, 43% have the country of origin of investors as destination. And 42% of these projects are about food production, which confirms that food security is one of the drivers of the land rush.

E. Risks associated with large-scale land acquisitions

"It is no longer just the crops that are commodities. Rather it is the land and water for agriculture themselves that are increasingly becoming commodified, with a global market for each being created" Olivier de Schutter, UN Special Rapporteur on the Right to Food.[26]

Given the importance of food and the features of acquisitions of farmland described above, these investments are associated with a number of risks and opportunities for all stakeholders: the local population, the host country, the investors themselves and potentially mankind at large. In addition to the ethical aspects of these risks, it also makes long-term business sense for investors to invest responsibly and mitigate all risks associated with acquiring or leasing land.

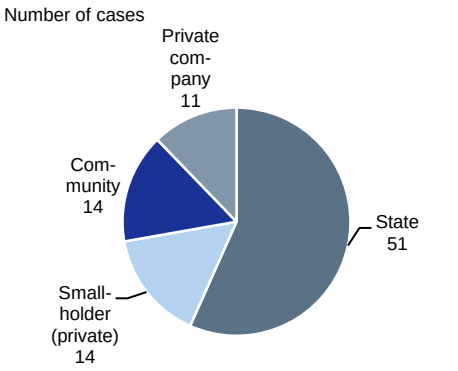
Some of the risks to investors or operators are directly associated with agricultural production (e.g. in terms of agronomy or bad weather), others with volatile commodity prices. The level of political stability in the host country is also a factor. But most importantly, given that investors may compete for land with local farming communities, a key risk is related to the challenge of respecting the economic and social rights of indigenous peoples, especially in countries with weak governance and inadequate or inexistent land tenure systems.

Land acquisitions and land grabs

Land acquisitions become land grabs when they violate human rights, fail to consult affected people, don't get proper consent and happen in secret. Land grabbers overlook the possible social and environmental impacts of the land deal.

Source: Oxfam web site, Land grabs Q&A

Former legal land owner 20



Note: Based on 90 observations

Sources: Land Matrix, Anseeuw et al., DB Research

Tenure

Tenure systems define and regulate how people, communities and others gain access to natural resources,whether through formal law or informal arrangements. The rules of tenure determine who can use which resources, for how long, and under what conditions. They may be based on written policies and laws, as well as on unwritten customs and practices.

Source: FAO (2012)

Economic and social rights of local populations

Food security

According to the Land Matrix data, 66% of the land area acquired in reported deals is located in countries with above-average prevalence of hunger and above average share of GDP coming from agriculture, mostly in Sub-Saharan Africa. A number of these countries are acutely food-insecure and depend on aid from the World Food Program (WFP) in order to sustain their populations.

Since a significant proportion of this land is likely to be used for food export or non-food production (see previous section), local food availability may be negatively impacted, with potential consequences on hunger and malnutrition. Land allocations that look small in relation to the overall national territory can still be very significant where they concentrate on the likely more limited areas of higher-value land (more fertile land, land with greater irrigation potential or easier access to markets).

Conflicting land claims in a context of weak land governance

A significant share of land acquired appears to have been formerly used by smallholders as mentioned in section B (see chart 6) as displayed in chart 20. The former legal land owner is often a smallholder, a community or the state. This suggests that investors often compete for land with local communities and this is of particular concern in a context of weak land governance. A number of

[25] Regarding the destination of production, data are available for only 393 projects out of the 1,217 projects recorded by Land Matrix.
[26] De Schutter (2011a).

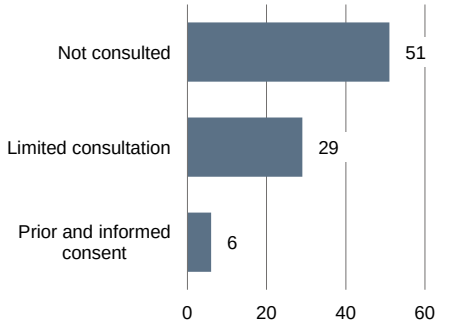
land users such as herders, fishers and forest-dwellers depend on communal land for their livelihoods and land ownership is often complex and controversial in host countries.

Indeed, although the importance of land rights and land governance for the economic performance of agriculture has long been recognised, land tenure systems in many countries, particularly in Sub-Saharan Africa, are unclear. They are often found in the form of a dual system where customary land rights coexist with formal property rights. When smallholders use land on the basis of customary, sometimes communal, use rights which are not formally recognised, these rights may be overlooked and lead to local populations losing access to land without adequate compensation.

Beyond a productive natural resource and an economic asset, land also has a cultural significance in that it is associated with social status, identity and is an essential part of livelihood.[27]

Involvement of the community 21

Number of cases



86 projects, including non-agricultural deals

Sources: Land Matrix, DB Research

Compensation and evictions

Even if contracts are not signed or projects are not implemented, announcements and negotiations may still exacerbate pressures on land and lead to displacements or a weakening of land rights for the local population.

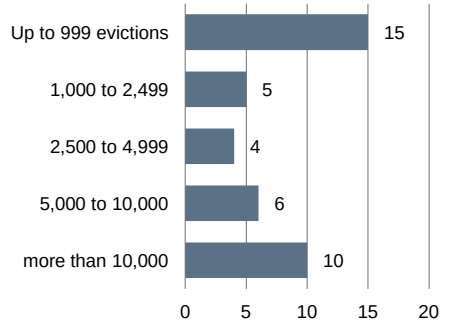
It is widely believed that investors rarely discuss their interest in farmland with affected local communities, although the evidence is limited. Land Matrix data based on a sample of 86 projects do indicate that there are only six reports of informed consent before the start of the project (chart 21). For most projects, the investment comes as a surprise to local communitiy members.

Information on the number of people displaced by investments in farmland is scarce. The Land Matrix database includes 40 projects for which displacement is reported (chart 22): 25 of them have led to evictions of at least 1,000 people, 10 of them more than 10,000. (There is evidence that smallholder farmers have been evicted from their land, sometimes by force, typically with minimal compensation to make way for foreign investors.)

If people lose access to land, they are likely to lose a major source of employment and income. Given a relatively high dependence on agriculture, people may have few alternatives for income generation.[28] Like all economic risks, this can potentially lead to social conflicts. The situation may be exacerbated by immigration from agricultural workers with a different language, culture and religion.

Reported evictions 22

Number of cases



Based on 40 projects

Sources: Land Matrix, DB Research

Environmental sustainability

As land use change intensifies, the ecological conditions on which mankind depends may be undermined by the loss of natural capital, such as fertile soil (through erosion or intensive agriculture), water, forests and biodiversity.

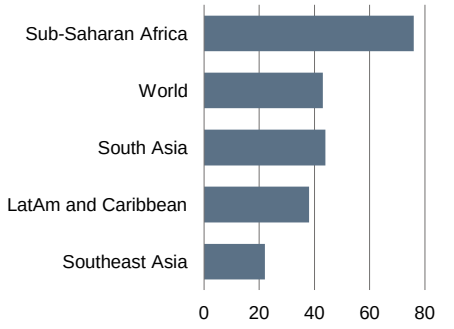
Land degradation[29], particularly soil erosion, is one of the main concerns in meeting the growing demand for commodities. Some 5 to 10 million hectares of potentially productive lands are lost annually through soil erosion and degradation, a larger number have reduced yields and 290 million hectares are considered at very high risk of desertification, much of it in developing

[27] De Schutter (2011b).
[28] Anseeuw et al. (2012a).
[29] Land degradation includes soil erosion, loss of soil fertility, soil salinisation, creeping desertification, etc.

Foreign investment in farmland

Annual loss of arable land, 1961-2009 23

Square meters per year per capita



Sources: IFPRI, FAO, DB Research

Mali's water limits

- Current cultivated area with rice and sugarcane: 100,000 ha
- Water capacity to irrigate: 250,000 ha
- Two large investments in Mali are said to require more than half of the critical reserve of water available in the region for the dry season

How water rights should be dealt with in land contracts is a major point of contention.

Source: Litovsky 2012 based on GIZ, IFPRI

countries.[30] Land degradation is particularly severe in eastern Africa, where it affects 14% of the area.

Overexploitation of land – through the heavy reliance and over-use of chemical fertilisers and pesticides – is regarded as one of the main causes of the rapid degradation of the Earth's ecosystem, while droughts and climate change exacerbate the situation. Preserving soils through traditional means – with indigenous seeds and agriculture derived from local biodiversity – is considered as a resilience strategy to feed a growing population while adapting to and mitigating climate change.[31] There is a risk that these options may be undermined if land deals disproportionately increase large-scale agriculture projects – sometimes associated with the use of intensive farming techniques that have been criticised as ecologically detrimental and harmful in the long term.[32]

When an agricultural commodity is produced and exported, it is virtually taking water from one country to the next – the so-called "virtual water". Countries facing water stress, such as China, Saudi Arabia, Kuwait, Qatar, Bahrain and countries in South Asia are among the major investors in farmland.[33] The farmland areas acquired have water embedded in them and this may exacerbate water stress in target countries, thus aggravating land degradation and affecting local people's livelihoods. Two-thirds of the countries targeted will experience an increase in water consumption as a result of large-scale land acquisitions. Overall, the increase in water consumption in these countries is estimated at 12.7%.[34]

A (small) share of the land acquired is initially covered by forests. Their conversion into farmland is a well-known concern since forests provide many key environmental services such as water management, conservation of biodiversity and mitigating global warming as a carbon sink. Additionally, forests contribute to the food security of one billion of the poorest people by providing food or cash income through fruits, nuts, mushrooms, leaves, honey, edible insects and medicinal products.

[30] Gionannucci *et al.* (2012).
[31] Litovsky *et al.* (2012), Schaffnit-Chatterjee (2011).
[32] See for instance IAASTD (2008).
[33] Litovsky *et al.* (2012).
[34] Anseeuw *et al.* (2012a) and World Bank (2007).

Foreign investment in farmland

Risks of land acquisitions to countries of interest to investors from the EU 24

	Socio-economic risk					Ecological risk		Political risk	
	Share of food in exports, % 2010	Agriculture % of GDP 2009	Rural population, % 2009	Share of undernourished, % 2005-07	Rural access to drinkable water, % 2008	Fresh water for agriculture, % 2007	Yearly rate of deforestation, % 2005-10	Political Instability Index 2010, EIU	Share of non-cultivated arable land, %
Angola	n.a.	10	42	41	38	33	0.21	7.6	24
Brazil	22.9	6	14	6	84	55	0,,53	5.4	20
Cameroon	23.9	19	42	21	51	76	0.99	6.9	38
Ethiopia	58.2	48	82	41	26	94	1.11	5.1	5
Liberia	n.a.	61	39	33	51	34	0.68	7.4	n.a
Madagascar	23.0	29	70	25	29	97	0.55	7.1	60
Malawi	19.7	31	80	28	77	84	0.99	5.7	n.a
Mozambique	7.4	32	62	38	29	74	0.53	5.7	47
Nigeria	2.3	33	50	6	42	53	3.25	7	n.a
Russia	1.7	4	27	n.a.	89	20	-0.01	6.5	12
South Africa	6.7	3	38	n.a.	78	63	0.05	7	5
Tanzania	17.0	28	74	34	45	89	1.16	5.9	19
Ukraine	11.0	8	32	n.a.	97	51	-0.27	7.6	10
Zambia	3.9	9	64	43	72	76	0.33	7.8	50
Average	16.5	23	51	28.7	57.7	64.1	0.80	6.6	26

Sources: Rudloff, World Bank, UN, FAO, EIU, DB Research

One-sided agricultural development

Large-scale land investments by foreign investors in developing countries have the potential to impact in a major way agricultural development – thus both local and global food security – and the future of smallholders beyond immediate risks to the local population. The issues of scale and concentration are of particular concern.

Balance between small-scale and large-scale farming

Although large farms are usually regarded as more efficient, the importance of unlocking the potential of smallholder farming in order to sustainably increase food production and reduce poverty is now widely recognised. The World Bank[35] outlines two differentiating factors:

Firstly, even if larger farms are usually considered more efficient in terms of land or crop productivity, small farms can be very efficient in terms of total factor productivity – including labour and capital. Lower yields do not necessarily translate into lower efficiency since their costs tend to be lower than those of large farms. In addition, scale economies may be achieved by mechanisation in crops such as sugarcane, cereals and soybeans but perennial crops such as rubber, fruit and vegetables tend to do better under intensive production with a significant proportion of manual input. The reality of geography/topology (e.g. mountainous areas) and climate may also hinder economies of scale, for instance in some parts of Sub-Saharan Africa.

Secondly, smallholder cultivation has advantages on equity grounds: smallholders' income is often higher than what they could obtain from wage employment only. (However, opportunities for productive partnerships between smallholders and investors exist through traditional contracting and outgrower

[35] Deininger *et al.* (2011).

Land acquired over the last decade

10% of investors account for 68% of the acquired land

42% of the land acquired is in Africa

2/3 of the land acquired by rich nation investors over the last decade is in Africa

Source: Land Matrix, Oxfam (2012)

Three scenarios

1st The transition scenario sees the development of large-scale plantations by the arrival of foreign investors as an opportunity to accelerate the industrialisation of farming and the exit from agriculture of small farmers, who are unable to move beyond subsistence agriculture into commercial farming

2nd The coexistence scenario sees large-scale agro-industrial farming and small-scale farming as complementary

3rd The reform scenario prioritises small-scale farming and proposes that foreign investment be channeled towards making that type of farming more viable and increasing its levels of productivity.

Source: De Schutter (2011a)

schemes, for instance in gaining access to technology, as further discussed below). Around two-thirds of the 3 billion rural people in the world live off the income generated by farming less than two hectares.[36] These 500 million small farms have a crucial role to play in equity and poverty reduction. Agricultural growth that includes smallholders boosts food availability and incomes, and thus generates demand for locally produced goods and services, resulting in broad-based socio-economic development in rural communities.

Risks associated with high concentration

The acquisition of vast areas of farmland is likely to lead to increased monocultures which decreases resilience to diseases and weather events. Due to their size, small farms may be more flexible and their farmers able to react to changes more readily. This is of particular importance given that extreme weather events are on the rise, both in terms of frequency of occurence and of impact. In many parts of the world small-scale farming has proved economically competitive and able to respond to changing challenges.

A further decrease in the diversity of crops also increases the risks associated with biodiversity loss and thus reduces the ability to adapt to local conditions and to climate change. Directing agriculture towards crops for export markets also increases the vulnerabiity of the host country to price shocks.

There is an often polarised debate about which type of agricultural development is more beneficial – in terms of farm size, intensity level of production, etc. Olivier de Schutter, United Nations Special Rapporteur on the Right to Food, describes the risk of a more capitalised form of agriculture and land concentration and contrasts it to a broad-based rural development through democratized access to land and reforms benefiting small-scale farmers. The question boils down to what kind of agricultural investment is needed to overcome hunger and support small-scale farmers. In the continuum from industrialised farming to small-scale farming, three scenarios can be considered on the choices faced by the governments of target countries (see box).[37]

F. Opportunities from investing in farmland

Beyond expected returns to the investors, investments in farmland potentially offer significant opportunities – particularly those associated with using land which was so far uncultivated to produce crops with high and increasing global demand or simply improving yields which are often quite low.

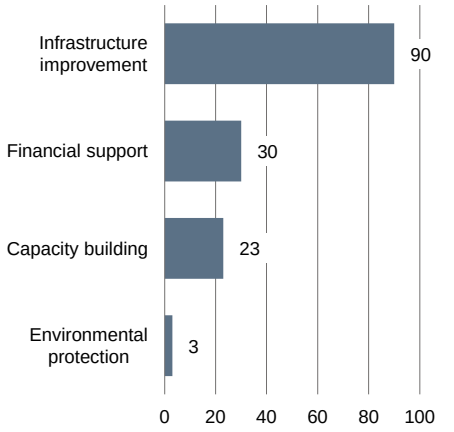
Local economic benefits

Potential benefits of long-term investments in farmland and agriculture to local farmers and the host country at large include the improvement of infrastructure – such as roads, irrigation infrastucture, storage facilities – access to markets, the creation of on-farm and off-farm employment (the latter for crops processing, packaging and transportation, for instance) as well as the transfer of technology and know-how (machinery, irrigation, improved seeds).

Chart 25 displays the benefits reported in the Land Matrix, based on 117 projects for which information is available. For the majority of these projects (77%) infrastructure improvement is reported – including health or education facilities, better access to markets and project infrastructure usable by the local population. Around a quarter are reportedly associated with financial support, 20% with capacity building. For around 56% of the 117 projects for which

Reported benefits of investing in farmland 25

Number of projects



Based on 117 projects

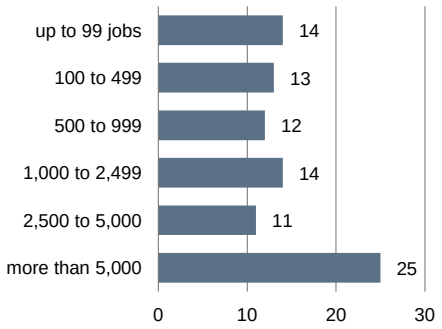
Sources: Land Matrix, DB Research

[36] World Bank (2007).
[37] De Schutter (2011b).

information on benefits is available, the investors are of Asian origin, who tend to be mainly interested in investments within Asia. A greater commitment to contribute to local development may stem out of closer ties between investors and target country.[38]

Projects with domestic job creation 26

Number of projects



Based on 89 projects

Sources: Land Matrix, DB Research

Chart 26 illustrates the evidence of job creation available for 89 cases of the Land Matrix. Around a quarter of these projects are reported to have created over 5,000 jobs and 58% of these projects over 1,000 jobs. It is, however, difficult to differentiate between additional employment creation and job replacement – for instance when smallholders losing access to land get into farm employment contracts. There is also no information on the type of employment created (seasonal or not, level of skills required). There is additional information on job creation for foreign workers, taking place in only 12% of the projects in the sample. There is thus no evidence in the Land Matrix data supporting the fear of a massive influx of workers from investor countries.[39]

Country-level benefits

Potential benefits for the host country of investments in farmland include economic growth (particularly through employment creation or improved infrastructure), income generation, foreign exchange proceeds as well as the increase in exports revenues from agricultural produce and possibly processed food – which could in turn lead to higher levels of workers' skills and income as well as food security.

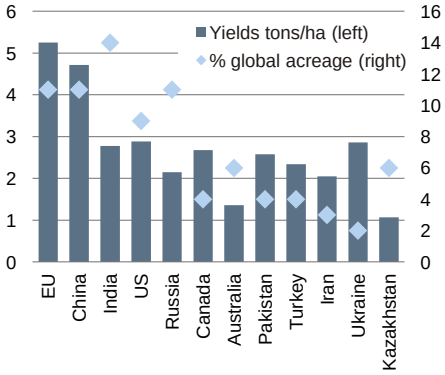
In Africa, benefits to the host country are mostly seen in terms of employment creation and infrastructure development. Leases are often provided at very low levels of rent – around USD 1/ha – and with extensive tax exemptions with transactional opacity. Indeed, opportunity costs are typically seen as very low. Moreover, there is a lack of well-established formal land markets so the land value is often unclear. Weak negotiating position of the host government may also push land fees down.

Global food security

If large-scale investments in farmland lead to productivity gains and the spread of commercial agriculture, global food supply will increase. According to the FAO[40], increasing productivity will be key to containing food prices in a context of rising resource constraints and declining global food insecurity. Productivity gains in the medium term may come primarily from reducing the productivity gap in developing countries. Charts 27 to 29 display some opportunities for yield improvements among the top 12 producers of wheat, corn and soybeans.

Wheat yields- top 12 producers 27

2005-2010 average



Sources: USDA, DB Research

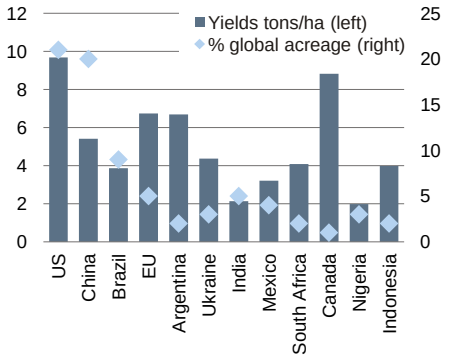
G. Ways forward

In order to feed a growing population, major new investments in agriculture are required which secure the productivity of small and large farms – while protecting the environment and existing users' rights. How countries and investors mobilise to invest in the limited amount of land on Earth will determine much of the geopolitics, environmental, economic and social agendas of the next decades.

[38] Anseeuw *et al.* (2012a).
[39] Anseeuw *et al.* (2012a).
[40] FAO/UN (2012).

Corn yields - Top 12 producers 28

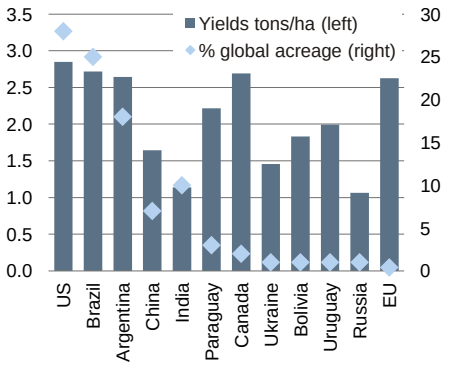
2005-2010 average



Sources: USDA, DB Research

Soybean yields - top 12 producers 29

2005-2010 average



Sources: USDA, DB Research

"Food security is now at the top of our national and foreign policy agendas, as well as that of so many other nations in the world, because we understand it is a humanitarian and moral imperative, but it also directly relates to global security and stability. I've seen in my travels how increased investments in agriculture and nutrition are paying off in rising prosperity, healthier children, better markets, and stronger communities."

Secretary Hillary Clinton, Feed the Future Event at United Nations, September 27, 2012

Improved governance

Security of land tenure

Security of tenure is key in order both to protect local farmers from eviction and to encourage investments related to land. Many tenure problems arise because of weak governance, and attempts to address tenure problems are affected by the quality of governance. "Weak governance marginalises the poor who lose out because they lack the political force to influence decisions, and because they lack the financial resources to bribe corrupt officials."[41] Women are particularly vulnerable since they are often socially and economically maginalized. Weak governance may discourage investments, thus hindering economic growth. It also affects environmental sustainability if it enables people to profit from over-exploiting resources.

The classical approach to security of tenure has been through property rights. Individual titling is viewed as a way to facilitate transactions related to land, with the effect that land would go to the most productive users[42]. A market for land rights thus promotes economic growth, key to decrease rural poverty and increase food security. Based on this view, the World Bank has promoted formal titling and land markets.

This approach, however, has limitations which are increasingly recognised, including by the World Bank.[43] Titling schemes have been historically associated with the capture of the process by local elites when fees are collected, either through corruption or due to the fact that they are unaffordable for poor farmers. Since titling schemes sometimes amount to a privatization of former communal lands, they also fail to protect access to natural resources for indigenous people depending on communal ownership of land for their livelihood.[44]

There is now a consensus about a fundamental opposition between two concepts of security of tenure: one oriented towards land marketability, the other towards broadening the entitlements of the groups involved in order to increase security of livelihoods. Alternatives to individual titling – still valid in many cases – include the adoption of anti-eviction laws combined with the registration of use rights based on customary forms of tenure – thus allowing the emergence of a market for rental rights.[45]

Guidelines and principles for responsible governance of land tenure

In order to mitigate the risks discussed above, principles or guidelines have been developed, looking at land rights and governance, transparency as well as participation of local land holders and other stakeholders in the land acquisition process. In 2010, the Principles for Responsible Agricultural Investment (RAI) were released by FAO, UNCTAD, IFAD and the World Bank[46] covering the following: 1- Land tenure and resource rights, 2- Food security, 3- Transparency, good governance and enabling environment, 4- Consultation and participation, 5- Economic viability and responsible agro-enterprise investing, 6- Social sustainability, 7- Environmental sustainability. Governments complained that they were not developed following an inclusive process.

[41] FAO (2012).
[42] de Soto (2010).
[43] World Bank (2007).
[44] De Schutter (2011a).
[45] De Schutter (2011b).
[46] World Bank (2010).

Foreign investment in farmland

Land tenure systems to be improved

- Globally, 60-70% of farms are being run by people who do not have contractual use
- 60-80% of food in many developing countries is produced by women. Women, however, own only a tiny amount of land (1% of titled land in Africa) and often lose their rights to land if they become widowed or divorced

Source: Wourld Bank

The founding principles of the Guidelines

States should:

- Recognize and respect all legitimate tenure rights and the people who hold them
- Safeguard legitimate tenure rights against threats
- Promote and facilitate the enjoyment of legitimate tenure rights
- Provide access to justice when tenure rights are infringed upon
- Prevent tenure disputes, violent conflicts and opportunities for corruption

Non-state actors (including business enterprises) have a responsibility to respect human rights and legitimate tenure rights.

Source: FAO (2012)

Mozambique gives itself some breathing space

- Mozambique has some of the most progressive land laws in Africa, the 1997 Land Law widely seen as striking a balance between protecting customary rights and encouraging investment.
- Implementation of these laws, particularly the obligation to consult affected communities, remains complex in practice, especially given both the pressure to fast-track privatization and the liberalization of regulation concerning land
- Between 2006 and 2008: FDI flows to Mozambique increased from USD 154 m to USD 587 m. The government received numerous expressions of interest in land from foreign investors, mostly in relation to biofuels and forestry. Institutional structures struggled to keep up with this rising interest.
- While the government recognized the potential benefits of such investment, it also realized that the process had to be managed properly.
- From October 2007 to October 2011, no new concessions over 10,000 ha were publicly agreed. During that period, the government completed a map of formal land tenure in the country.

This was the start of a more comprehensive mapping of land tenure. In 2008, Mozambique finished a set of guidelines on the kind of investment the government wanted to attract.

Sources: FAO, UNCTAD, Oxfam(2012)

In May 2012, the UN Committee on World Food Security (CFS) endorsed the FAO Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. These Guidelines were developed in an inclusive and participatory process which lasted more than 3 years and constitute the first international instrument which applies a rights-based approach to the governance of land (see box).

Principles for responsible investment in agriculture that respect rights,livelihoods and resources will be developed during a two-year consultation process, as approved in October 2012 by the Committee on World Food Security.The principles will be complementary to the “Voluntary guidelines” and “should address the concerns of both host countries and investors”[47].

More effort required for implementation

A critical next step, however, is to have an effective mechanism to enforce the guidelines. It is especially crucial since many developing country governments lack the capacity or the political will to do so. Until an international organisation has the authority to do so, the home countries of investors have a role to play, possibly through the export credit agencies making their support conditional upon full compliance with the guidelines[48].

In order to mitigate negative impacts of land investments, further progress is required in the areas of

- Land governance: encouraging developing country governments and providing them with capacity and support to undertake an inclusive national discussion on land policy and enforce the guidelines
- Informing local communities so that they can be compensated for loss of land or livelihoods
- Project transparency so that investors can be held accountable to affected communities and to the government.

Governments in target countries have a key role to play in ensuring that they comply with their human rights obligations, including the right to food, the right of all peoples to freely dispose of their natural wealth and resources and not to be deprived of their means of subsistence[49].

Some countries have already taken steps to, at least temporarily, control the situation. Some have implemented a moratorium on land purchases by foreigners including Cambodia (in May 2012) and Laos (in June 2012). Other countries have drafted legislation to limit land purchases by foreigners including Mozambique (see box in the margin), Argentina, Brazil and Tanzania (see box below). Some developed country governments are also becoming more responsive to public concerns over farm sales to foreigners by demanding benefits to local communities and jobs from deals with foreign investors. Australia will set up a foreign-ownership register for farmlands. In Canada, foreign investors need to prove there is a “net benefit” to Canada for any investment over USD 332 million. New Zealand reviews all foreign acquisitions of farmland above 5 hectares, so deals worth hundred of thousands of dollars (rather than tens of millions) can be examined[50].

[47] FAO Press release on 22/10/12.
[48] The Guardian. “Land deals in Africa have led to a wild west“. 29/10/12.
[49] De Schutter (2011b).
[50] Reuters. “What’s eating Australia? Foreign buyers at the farm gate“. 28/10/2012.

Legislation recently put in place in selected countries 30

Country	Date	Measures
Argentina	2011	- Rural land ownership by foreigners restricted to 15% - Ownership by persons or legal entities of the same foreign nationality not to exceed 30% of 20% of the national territory
Brazil	2010	- Foreign ownership restricted to 25% (down from 40% previously) of the area of any municipality - Caps to 10% ownership by any one nationality
Tanzania	1999	- Foreign companies and non-citizens may not acquire customary land - Non-citizens are only granted land if it is for investment purposes under the Tanzanian Investment Act

Source: Land acts

Role of financial investors in maximizing local benefits

Investors can also play an important role by integrating ESG (Environmental, Social, Governance) concerns into investment decisions and also by paying greater attention to inclusiveness issues.

A "good" investment starts with a realistic assessment of the capacity to manage the farming project. It implies a good understanding of the land deal (local context including land tenure) and long-term engagement with local interests, not just elites, promoting participation of the locals in economic activity. Beyond mitigating reputational risk – by avoiding being caught in long-lasting conflicts over competing claims for land and water, these features make sense from a buisness point of view.

Investors are in a position to ensure that the investment in land and agriculture will bring yield increases benefiting also the host country. For instance, in order to avoid potential conflicts with local food security if cash crops are produced mostly for exports in times of food shortages, it should be possible to include in the contract a clause stipulating to which extent and under which conditions the crops can be exported. (Maybe the first year the whole production is sold locally, the next years part of it).

Companies along the whole supply chain are also involved if they source out of land acquired by foreign investment. Customers increasingly demand transparency and are interested to know how their food is grown and how it affects local populations and the environment. This will bring more challenges to agribusiness companies which may have to not only identify suppliers but also the land they use.

The case for positive investment

Private investment can be a lever for economic development. Well-targeted investment, whether by foreign or domestic companies, can provide small-scale food producers with more productive technologies, entry to higher value-added markets, access to knowledge and market information, lower borrowing costs, and financing to cover foreign exchange costs. …

Private investment can have a positive social impact when ethical and sustainable business principles are followed.

Source: Oxfam (2012)

Beyond land governance: Positive private investment in agriculture

A regulation ensuring that investments in farmland are responsible and have benefits which are shared equitably is useful when these investments are the more favourable option. However, acquisition of farmland, leading to large-scale plantations, only provides one approach to investment in agriculture. The issue at stake is "how to best use land that is available or underutilized"[51]. External investments can happen without acquiring land, and the best forms of investment may be those that are not based on a model of land acquisition, with a stronger impact on poverty reduction[52]. Among the countries of interest to large investors in Africa, none reaches 25% of its potential yield: enormous gains can presumably be achieved by investments leading to increased productivity of smallholders on the land they already farm, rather than by costly expansion into uncultivated land[53]. The African Agriculture and Trade

[51] De Schutter (2011b).
[52] Anseeuw *et al.* (2012b).
[53] Arezki *et al.* (2012).

The investments required in developing countries to support the required expansion in agricultural output to meet projected demand in 2050 amount to an average net annual investment of USD 83 billion. This total includes investment needs in primary agriculture and necessary downstream services such as storage and processing facilities. This represents an increase of about 50 percent a year over current levels

Source: FAO

Partnership in Mali

Mali Biocarburant SA (MBSA), a company supported with Dutch capital, has partnered with local farmers' cooperatives for the production of biodiesel from jatropha, buying land only to build the small processing plant.

- The cooperatives have an equity sake in the joint venture with MBSA.
- The production of both food crops and energy crops are increased since jatropha is intercropped with maize
- Farmers get support from MBSA including technical assistance and access to inputs

Sources: Center for Human Rights and Global Justice (2010), de Schutter (2011a)

Investment Fund (AATIF) aims at uplifting Africa's agricultural potential through the promotion of economically, socially and environmentally sustainable projects across Africa by financing local projects and companies along the agricultural value chain and by developing financial markets.[54]

There is a full range of business models supporting smallholder farmers and linking them to buyers and consumers, such as contract farming or outgrower schemes. Small farmers may increase their welfare by renting their land to an investor at a rate, which added to self-cultivation, would match wages on a large farm. In many cases, this rent would be high, implying that investors may prefer to engage in contract farming rather than acquire land. Small farmers – possibly organised as a cooperative – and large investors can form mutually advantageous partnerships and large-scale investment does not necessarily have to result in the conversion from small-scale agriculture to large-scale agriculture[55]. An example in Mali (see box) shows how foreign investment can help improve livelihoods through supporting farmers by strengthening their own production systems rather than introducing a new one.

Now, more than ever, the world needs to increase investment in agriculture, for the sake of both food security and poverty reduction, and ensuring an efficient and sustainable production. A productive and responsible use of natural resources is particularly crucial in areas affected by hunger and malnutrition.The fact that agriculture has been neglected in many developing countries in the two decades preceding the 2008-09 spike in food prices makes the need for responsible investments in agriculture even more acute.[56] Both smallholder and large-scale agriculture have a role to play in boosting productivity and producing enough food to feed the world's poor. In order to move from subsistence to commercial farming, 1.5 billion people who rely on small farms need access to knowledge, assets, credit, markets, and risk management.

Conclusion

Those who acquire farmland decide what will grow on it and how it will be produced. Given the magnitude of the global land rush and the risks involved, an effort to implement the guidelines is needed. Documenting foreign investments would help as a start, both for the sake of transparency and to provide a basis to better understand and control the phenomenon. Such an effort is likely to be most effective if led by a multilateral institution working in collaboration with local governments.

Decisions currently taken on land use have major repercussions on the livelihoods and food security of many people. They will also determine much of the next decades' profits, politics, and conflicts. With increasing demand for food and energy in a context of limited natural resources and climate change, trade-offs will test the ability of politicians and governments to make the right choices with a long-term view – based on strategic thinking about the future of agriculture, the place of large and small-scale farming and the role and nature of external investment.

Although data on investments in farmland are scarce and often not reliable, there is increasing evidence that collaborative business models between small farmers and investors can be win-win-win, without necessitating massive transfer of land – for instance through contract farming or outgrower schemes providing small-holders with quality inputs, technology, know-how, access to markets and financing.

Claire Schaffnit-Chatterjee (+49 69 910-31821, claire.schaffnit-chatterjee.db.com)

[54] The AATIF Fund establishes its own social and environmental guidelines – covering minimum wage, school attendance and safe storage of agrochemicals (Annual Report 2011, http://aatif.lu).
[55] Deininger *et al.* (2011).
[56] More on this in Schaffnit-Chatterjee (2009).

References

Anseeuw, W. *et al.* (2012a). Transnational Land Deals for Agriculture in the Global South. Analytical Report based on the Land Matrix Database. April 2012 CDE/CIRAD/GIGA. Bern/Montpellier/Hamburg.

Anseeuw, W. *et al.* (2012b). Land Rights and the Rush for Land. International Land Coalition. Rome.

Arezki, R. *et al.* (2011). What drives the global land rush? IMF Working Paper 251. November 2011.

Arezki, R. *et al.* (2012). The global land rush. Finance & Development. March 2012.

Auer, J. *et al* (2012). Real assets: A sought-after investment class in times of crisis. Deutsche Bank Research. June 2012. Frankfurt am Main.

Brautigam, D. and T. Xiaoyang (2011). African Shenzhen: China's special economic zones in Africa. J. Of Modern African Studies. 49, Cambridge.

Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (2012). Investitionen in Land und das Phänomen des "Land Grabbing".

Börnecke, S. and A. Beste (2012). Die Ernte der Heuschrecken.

Center for Human Rights and Global Justice (2010). Foreign land deals and human rights: case studies on agricultural and biofuel investment. New York, NYU School of Law.

Cotula, L. and E. Polack. The global land rush. iied briefing. April 2012. International Institute for Environment and Development.

Cotula *et al.* (2009). Land grab or development opportunity? IIED/FAO/IFAD. London/Rome.

Deininger, K., D. Byerlee *et al.* (2011). Rising Global Interest in Farmland. The World Bank. Washington, D.C.

De Schutter, O. (2011a). How not to think of land-grabbing: Three critiques of large-sacle investment in farmland. Journal of Peasant Studies, 38 (2011) 2.

De Schutter, O. (2011b). The green rush: The global race for farmland and the rights of land users. Harvard International Law Journal 52(2). Summer 2011.

De Soto, H. (2000). The mystery of capital: why capitalism triumphs in the West and fails everywhere else. New York. Basic Books.

FAO (2012). Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security. Food and Agriculture Organization of the United Nations. Rome.

FAO/UN (2012). Agricultural Outlook. 2012

FAO/IFAD/UNCTAD/World Bank Group (2010). Principles for Responsible Agricultural Investments that Respect Rights, Livelihoods and Resources. January 25, 2010.

Giovannucci, D. et al. (2012). Food and agriculture: The future of sustainability. United Nations. New York.

GRAIN (2011). Extent of farmland grabbing for food production by foreign interests. December 2011.

GRAIN (2012). Land grab deals. January 2012.

GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) (2009). Foreign Direct Investment in Land in developing countries. German Federal Ministry for Economic Cooperation and Development. Eschborn. December 2009.

HighQuest Partners, US (2010). Private financial sector investment in farmland and agricultural infrastructure. OECD. Working papers, No. 33.

IEED briefing. The global land rush. April 2012.

International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD, 2009). Approved by governments attending the IAASTD Intergovernmental Plenary in Johannesburg. April 2008.

Litovsky, A. and P. Villalpando (2012). The Land Security Agenda. Earth Security Initiative. March 2012. London.

Oxfam (2011). Land and Power. Oxfam Briefing Paper. 22 September 2011.

Oxfam (2012). Our land, our lives. Oxfam Briefing Note. October 2012

Rudloff, B. (2012). Kein schöner Land. SWP Studie. September 2012. Berlin.

Schaffnit-Chatterjee, C. (2009). The Global food equation. Deutsche Bank Research, September 2009, Frankfurt.

Schaffnit-Chatterjee, C. (2010). Agribusiness and hunger – Threat to global food security drives collaborative business models. Deutsche Bank Research. February 2012. Frankfurt am Main.

Schaffnit-Chatterjee, C. (2011). Mitigating climate change through agriculture. Deutsche Bank Research. September 2011. Frankfurt am Main.

United Nations Economic Commission for Africa (2012). Natural resources and conflict management: The case of land. Expert group meeting. Tanzania. February 2012.

World Bank (2007). World development report 2008 – Agriculture for development. Washington, DC.

World Bank (2010). Principles for responsible agricultural investment that respects rights, livelihoods and resources. Washington, DC.

Current Issues

Our publications can be accessed, free of charge, on our website www.dbresearch.com
You can also register there to receive our publications regularly by E-mail.

Ordering address for the print version:
Deutsche Bank Research
Marketing
60262 Frankfurt am Main
Fax: +49 69 910-31877
E-Mail: marketing.dbr@db.com

Available faster by E-mail:
marketing.dbr@db.com

Printed by: HST Offsetdruck Schadt & Tetzlaff GbR, Dieburg

Print: ISSN 1612-314X / Internet/E-mail: ISSN 1612-3158