

8 | Brazil, biofuels and food security in Mozambique

Kai Thaler

Introduction

Brazil today stands as one of the great development successes of the twentieth century. The country has greatly reduced its burden of poverty and hunger; it successfully transitioned from dictatorship to a vibrant democracy; and it has moved from a marginal role as a ‘sleeping giant’¹ in international affairs to an increasingly assertive position as one of the so-called emerging powers of the twenty-first century. Brazil has many lingering social problems, among the greatest being persistently high levels of inequality, but in its new position as a global leader and aspirant to greater power, the country has begun to turn its attention outward and take an active interest in other countries’ development.

One of the main drivers of Brazil’s twentieth-century development process was its advances in agricultural production, which drove economic growth while also helping to alleviate hunger in its rapidly expanding cities (though often at the cost of the food and land sovereignty of the rural population). As Brazil has increased its involvement abroad, agriculture has become a pillar of its development assistance programmes and foreign direct investment and is seen as one of Brazil’s particular strengths as it seeks to cultivate stronger relationships with other countries in the global South, particularly in Africa.

Food insecurity in Africa remains a constant concern for the continent’s governments and the international community. Many of the developing countries of Asia and Latin America greatly expanded agricultural production during the green revolution of the 1960s and 1970s, but the impacts of this shift in agricultural technologies and practices failed to take hold in Africa, leaving observers wondering when and how Africa should best achieve its own green revolution (see Diao et al. 2008; Gowing and Palmer 2008).² Brazil’s experience in greatly increasing its own agricultural production has granted it expertise that may be useful in helping African countries to meet their food needs.

Brazilian agricultural assistance and investments have not been limited to food production, however. Brazil has long been a global leader in the production and usage of biofuels – combustible liquid fuels produced from agricultural crops or crop waste.³ Biofuels have grown in prominence over the past

two decades as they have been presented as one potential option for meeting global energy needs while reducing greenhouse gas emissions. However, serious concerns remain about the balance of costs and benefits provided by the production of biofuel from different feedstocks, including the effect of biofuel feedstock cultivation on food security (see Chapter 7).

This chapter, therefore, explores the role of agriculture in Brazilian development assistance programmes and direct investment in Africa, focusing on the potential tensions between biofuel feedstock and food production. After a brief overview of the history of Brazil's own agricultural development and the country's relations with Africa, the chapter delves into an examination of Brazilian engagement in the conjoined agricultural and energy sectors of Mozambique, a country that possesses large tracts of arable land and is considered a prime site for biofuel production. The chapter critiques Brazil's development assistance and investment model and presents ways to improve its effectiveness in order to generate greater benefits for the Mozambican people.

Brazilian agricultural development and relations with Africa

Both Brazil's engagement with Africa and the country's agricultural development have grown by leaps and bounds during the period from the early 1970s to the present day. Throughout the 1960s, as Portugal was waging wars to hold on to its African colonies, Brazil remained deferent to its former colonial master. With the 1974 Carnation Revolution in Portugal that overthrew the Salazar–Caetano dictatorship, Brazil seized the opportunity to rapidly shift its approach, becoming the first country allied with the 'West' to recognise Angola's independence, and quickly recognising the independence of Mozambique, Guinea-Bissau and Cape Verde, an 'astute strategic manoeuvre' that has engendered goodwill towards Brazil in these countries up to the present day (White 2010: 224).

In the 1970s and 1980s, Brazilian policy in Africa was focused primarily on securing oil supplies, so diplomatic emphasis was given to relations with Angola and Nigeria. Brazilian development assistance was unheard of at the time, as Brazil remained focused on its own domestic socioeconomic development. Alongside increasing industrialisation, Brazil's economic policy was based around the expansion of agricultural production to promote growth, combat poverty and increase food security.

Brazil's domestic priorities: food and energy security as catalysts for growth

ACHIEVING FOOD SECURITY: PRIORITY NUMBER ONE To achieve increases in agricultural production, Brazil relied on a dual strategy of expansion of the area of land under cultivation and research and technological innovation. Brazil began to expand agriculture into its internal frontiers in the Amazon and the savannah of the *cerrado* region of the south-east and central western parts of the country, a process also aimed at consolidating state control of

these regions. To increase production, especially in the acidic *cerrado* soils, technological innovations were needed. In addition to taking advantage of global advances in fertilisers and mechanisation, Brazil began to ramp up its own agricultural research capacity, which had been extremely low (Graham et al. 1987).⁴ National efforts were organised through the founding in 1973 of the Empresa Brasileira de Pesquisa Agropecuária (Embrapa, or the Brazilian Agricultural Research Corporation), which is affiliated to the Ministry of Agriculture, to test and create crop varieties suitable for cultivation in the country's different climates.

Embrapa's first major task was increasing agricultural production in the *cerrado* region, and in this it was highly successful. According to Francisco Reifschneider, an Embrapa researcher: 'The general impression was that this was wasteland. Today this "wasteland" produces more than 45 per cent of the total grain of this country' (Akinola 2010). Brazil has now become a net exporter of food, and food insecurity has fallen thanks to reduced income inequality, lower prices due to greater domestic food production, and the efforts of the administration of President Luiz Inácio Lula da Silva (2003–10), the keystone of whose social policy was the multifaceted Fome Zero (Zero Hunger) initiative (see, for example, Neves do Amaral and Peduto 2010). The agriculture and livestock sector grew at an average annual rate of 2 per cent from the 1970s to 2005 (Akinola 2010) and is currently growing at over 6 per cent per year (De Onis 2008: 113), making Brazil today the world's second-largest agricultural producer, behind only the United States.

ACHIEVING ENERGY SECURITY: PRIORITY NUMBER TWO Beyond food security, Brazil has also used its improved agricultural production to boost its energy security, becoming an international leader in the production of biofuels. Biofuels are liquid fuels produced directly from renewable natural sources (i.e. plant feedstocks or biological waste). In the mid-1970s, in response to the 1973 oil crisis, Brazil began to pursue the production of ethanol from sugar cane to use as a substitute for imported petrol. The choice of using sugar cane was also made in order to support sugar-cane farmers, whose investments in mechanisation and modernisation had been followed by falling sugar prices (see, for example, Hall et al. 2009). Thanks to this early start, Brazil has become an international leader in biofuel production. In fact, Brazil has been exporting its biofuel expertise to Africa for several decades now; as early as the 1970s a Brazilian company had installed its production technology in a methanol plant in Zimbabwe (Forrest 1982: 14).

The benefits of biofuel production for the Brazilian economy have been quite clear, as it has given the country greater energy security and kept more wealth within Brazil. The social and environmental impacts have been less impressive. Sugar cane ethanol production has mainly benefited the wealthier

states in the country, has contributed to land concentration, and has led to the consolidation of the market under the control of a small group of large corporations. Efforts have been made to avoid this outcome as Brazil steps up its production of soya bean and castor seed-based biodiesel, with policies in place to keep more feedstock production in the hands of small-scale farmers. However, stakeholders in the biodiesel industry believe that this strategy will fail, stating that without massive government intervention 'biodiesel is going to be another [ethanol] with only large-scale producers' and that 'the whole social program is not going to work' (Hall et al. 2009: S83).

These issues remain concerns as Brazil becomes increasingly involved with African countries as a development partner and investor, at the same time as many of these countries are seeking to convert arable land to biofuel feedstocks. Biofuel crops are frequently competing with food crops in Africa, a serious problem in countries struggling with food insecurity. In Mozambique, biofuel production is currently expanding and is seen as holding great potential for economic development, with involvement from the Brazilian government and private sector, but it is also contributing to social and political conflict. The next section examines the rise of biofuels in Mozambique, Brazil's role, and the implications of biofuel production for food security in the country.

Biofuels, land use and food security in Mozambique

Mozambique has made great strides towards reconstruction in the two decades since it emerged from almost 30 years of war. Yet peace has not significantly changed the country's status as one of the world's poorest and most deprived states. Mozambique currently ranks as 184 out of 187 countries in the United Nations Development Programme's Human Development Index (HDI), and while its overall HDI score has been rising slowly, it has not kept pace with the advances of other countries (UNDP 2011). The country's child mortality rate is one of the highest in the world at 142 per 1,000 (ibid.). According to the Food and Agriculture Organization (FAO), over one-third of all Mozambicans (38 per cent) are undernourished (FAOSTAT 2011), and the majority of those in poverty suffer from acute malnutrition. One study in 2006 estimated that malnutrition has productivity costs in Mozambique of at least US\$185 million annually, or about 6 per cent of the gross domestic product (GDP) at the time (Dista and Vicente 2009).

Poverty and hunger are incendiary political and social issues in Mozambique, as the global community was reminded in September 2010 when riots erupted in the capital of Maputo and the nearby industrial city of Matola in response to government-mandated price increases on staple foods and other necessities, such as water and electricity. In the aftermath of the riots, which occurred against a backdrop of high global commodity prices, many commentators referred to the events as 'food riots' and sought to tie them to

food prices on the international market, although food prices in fact remained lower than in 2008, when riots had previously taken place, and the crisis in Mozambique was a result of deeper structural problems that have hobbled the country's development (see Thaler 2010a for a longer discussion).

The agricultural and fisheries sectors in Mozambique provide employment and subsistence for over 80 per cent of the population (FAOSTAT 2011), with the vast majority of this activity taking place on small family farms. Mozambique's development strategy, which has frequently been externally determined due to the country's high level of aid dependence,⁵ has been focused mainly on large-scale extractive and industrial projects. These projects have succeeded in boosting Mozambique's GDP, allowing the country to be presented as a success story by groups such as the World Bank, yet they have done little to uplift the majority of the population, creating a two-tiered development system whereby domestic elites and transnational corporations prosper from the country's natural resources while the poor masses are accorded secondary attention unless they create a situation, such as the 2010 riots, in which their voices are heard.⁶

Much of Mozambique's economic growth has occurred in the energy and mining sector, as foreign capital has been used to undertake large-scale exploration and exploitation of the country's coal, oil, gas and mineral resources to meet the global demand for fossil fuels and metals. The human capital for these types of projects, however, tends to be imported, reducing the potential job creation impact, and projects are often initiated on the condition of tax breaks or exemptions, depriving the state of potential revenues that could be used to fund social programmes. The Mozambican government continues to focus on industrial mega-projects to drive growth,⁷ but it has also begun to recognise the need to invest in agriculture as part of its development strategy. The government's 2010–14 Poverty Reduction Action Plan (Plan d'Action pour la Réduction de la Pauvreté or PARP) makes the improvement of agricultural and fisheries productivity its primary objective, with promoting employment given the next most importance (Republic of Mozambique 2011), a welcome emphasis in the face of the continued growth of extractive industries.

The PARP is consistent in its calls to improve the situation of small-scale, family farmers, through improved access to factors of production and better market access. This supposed focus on small-scale farmers and food crops, however, is belied by the actions of the Mozambican government in advancing its overall agricultural policy. Instead of seeking to improve small-scale agriculture to boost food production, the government has sought foreign investment to capitalise on the global spike in demand for biofuels.

The development of biofuels in Mozambique Mozambique is considered to have one of the greatest potentials in the world for the production of biofuels due to the availability of uncultivated or underused land, favourable climate and

low population density (see Nhantumbo and Salomão 2010: 7). According to government estimates from 2006, only about 10 per cent of Mozambique's 36 million hectares of potential agricultural land are currently under cultivation; however, more recent land-zoning exercises have determined that only 7 million hectares are 'available for allocation to land-based economic activities, including biofuels' (ibid.: 13) and there are questions as to the accuracy of the zoning that has been conducted. Mozambique's population has also been growing at an increasing rate since 2000, so land use estimates may quickly become outdated as demand from family farmers increases. Critics are wary of government statistics on the stock of so-called 'uncultivated or underused land', as quite often it refers to land that is used by the community as common land or to forest areas that are useful for maintaining the country's biodiversity – both flora and fauna.

New zoning efforts are planned, but, in the meantime, Mozambique's government, in concert with foreign investors, has made a strong push to turn the country into a world leader in biofuel production. The ultimate goal of this endeavour is clearly to increase foreign investment and exchange; a study by Mozambique's national oil company has determined that domestic demand for biofuels is essentially negligible, due to the small size and unindustrialised character of the Mozambican economy (Petromoç 2008).

Mozambique began its biofuel initiatives in the mid-2000s, with the 2007 rural development strategy including a specific objective:

to promote the production, consumption, transformation and export of fuels alternative to conventional ones, namely biofuels produced from crops such as sugarcane, soybeans, sunflower, ground nuts, and jatropha, among others. (Republic of Mozambique 2007: 46)⁸

This initial official catalyst for biofuel development was followed in 2009 by the formulation of an elaborated national 'Policy and Strategy for Biofuels' (Republic of Mozambique 2009). The policy was presented as possessing two primary motivations: i) the promotion and exploitation of agriculturally produced biofuels to improve energy security and sustainable development (while reducing greenhouse gas emissions); and ii) responding to a need to reduce the importation of processed fossil fuels. The policy includes a laudable statement of principles, which highlights the need for inclusion of small-scale farmers; for transparency in the development of biofuel projects; for environmental and social sustainability; and for fiscal sustainability. Special mention is also given to the necessity of evaluating potential biofuel projects 'to avoid unacceptable risks in terms of food security, loss or degradation of habitat or biodiversity, and other environmental damage' (ibid.: 16). Surprisingly, though, given the pessimistic assessment by Petromoç (a semi-government entity dealing with energy issues) of the potential for a domestic biofuel market in Mozambique,

the strategy emphasises plans for the establishment of a national biofuel market; these plans required the enactment in 2012 of regulations stating that all petrol and diesel should be blended with ethanol and biodiesel respectively, forcing the creation of a market.

More recently, the increased interest in biofuel production in Mozambique in response to European Union (EU) requirements for biofuel use has spurred a further examination of the sustainability of biofuel production in the country. To help meet the sustainability provisions of the EU regulations, the Brazilian government partnered with the EU to create a Sustainable Development of Bioenergy project. Under the auspices of this project, an investigation is currently being carried out by the Brazilian Fundação Getulio Vargas (FGV) into the viability of sustainable, environmentally responsible biofuel production in Mozambique. The study is funded with US\$800,000 from Brazilian mining giant Vale (Companhia Vale do Rio Doce) (Agência de Informação de Moçambique 2011), which operates the Moatize coal mine in Mozambique and has been involved in sugar cane ethanol production in Brazil. This Brazilian assistance is imbued with a heavy dose of self-interest – Brazilian ethanol is subject to high EU tariffs, but ethanol produced by Brazilian companies in Mozambique is taxed minimally (Reuters 2010).

Since the initial political and strategic groundwork was laid for biofuel development in Mozambique, dozens of projects have been proposed, although few have come to fruition. The biofuel strategy called for concentration on a few feedstock crops, namely sugar cane and sweet sorghum for ethanol production and jatropha and coconut for the production of biodiesel (Republic of Mozambique 2009: 17), but the vast majority of projects have involved sugar cane and jatropha.

Sugar cane ethanol Sugar cane ethanol has been the major biofuel that has entered into production in Mozambique. Sugar production throughout southern Africa has increased sharply in recent years as global ethanol demand has soared, with sugar production and exports nearly quintupling in Mozambique from 2000 to 2008 (F. O. Licht in Richardson 2010: 926). African countries have been attempting to emulate Brazil's success in sugar cane ethanol production, and to do so have relied greatly on Brazilian expertise and development assistance, their demand coinciding with Brazil's desire to increase South–South cooperation and leverage its historical and cultural ties to Africa for mutual economic development.

Brazil's official cooperation with Mozambique in the area of biofuels dates back to 2007, when Mozambique's President Guebuza signed an accord with Lula, the Brazilian president at the time, to establish technical assistance and exchange programmes and to explore market development, goals that have been reaffirmed and further formalised in subsequent agreements, with Brazil

planning to invest US\$6 billion in biofuel development in Mozambique (for example, Katerere 2009). The two countries joined with the European Commission in 2010 to sign an agreement establishing 'their commitment to work together with the objective of fostering the development of the bioenergy sector, focusing on biofuels and bioelectricity' (Agência de Informação de Moçambique 2010). Biofuels may even provide a nexus for South-South cooperation among the emerging economic powers, with the director of Mozambique's Investment Promotion Centre, Mahomed Rafik, suggesting, in light of Mozambique's free trade agreement with China, that a sugar cane project could emerge in which:

A South African company in partnership with a Mozambican company, and with the raw material being processed by a Brazilian company, may gain access to the Chinese market, because the product will be regarded as Mozambican. (Agência de Informação de Moçambique 2009)

A number of Brazilian corporations have developed plans to produce ethanol in Mozambique, generally through partnerships. Açúcar Guarani, a Brazilian subsidiary of transnational sugar company Tereos, has been involved in projects since buying a 75 per cent stake in Mozambican Companhia de Sena for US\$17.5 million in 2007 (Benitez 2007). The Sena mill is capable of processing 1.2 million tons of sugar cane per year, and plans have been developed with the Brazilian national oil corporation, Petrobras, to use molasses from Sena to make ethanol (Caminada and Nielsen 2011). As part of the partnership between Petrobras and Guarani, Petrobras is investing 1.6 billion reais (about US\$900 million) to purchase a 45.7 per cent share in Guarani (Tereos Internacional 2010). In August 2011, Petrobras announced plans to build its own ethanol factory in Mozambique for production for the domestic market in response to new Mozambican government requirements for ethanol to be added to all petrol at a 10 per cent level; Petrobras stated that if plans go forward, the factory would be built by Guarani (Macauhub 2011a). Brazil's sugar industry trade association, União da Indústria de Cana-de-Açúcar, has argued for increased involvement in biofuel development in Mozambique to attempt to replicate Brazil's success in producing ethanol and integrating it into the economy (UNICA 2011), and in 2009 ETH Bioenergia, a subsidiary of Brazilian construction giant Odebrecht, announced plans to build an ethanol plant in Mozambique, with an anticipated investment of approximately 2 billion reais (US\$1.1 billion) (TheBioenergySite News Desk 2011). Brazilian diplomats have also suggested that other corporations, such as oil and biofuel producer Cosan and sugar company Copersucar, may be interested in starting ethanol operations in Mozambique (Reuters 2010).⁹

Jatropha biodiesel *Jatropha* is a hardy plant that until recently was used mainly for windbreaks and to avoid erosion, although in Africa its oily seeds have

been used for bioenergy in Mali since the early 1990s (Henning 1996). *Jatropha* has frequently been touted by biofuel advocates because it is able to grow on marginal, degraded and semi-arid lands where it would be difficult or impossible to cultivate other plants, thus avoiding concerns about displacing food crops. This is perhaps one of the reasons why *jatropha* has received such emphasis in Mozambique, where President Armando Guebuza has been personally involved in the promotion of *jatropha* cultivation, as noted in the official biofuel strategy (Republic of Mozambique 2009: 14).

The most successful *jatropha* project to date was that of Sun Biofuels, a British company, which cultivated *jatropha* for the production of biodiesel that it planned to export to Europe for airline use. Sun made its first shipments from its fields in the central province of Manica to the German company Lufthansa in mid-2011, and was planning to expand its *jatropha* production from 3,000 hectares to 11,000 hectares. To achieve this expansion, the company was, according to Manager for Corporate Affairs Sergio Gouveia, seeking to draw in smallholder farmers to disperse *jatropha* cultivation beyond a plantation model. Gouveia dismissed concerns about impacts on food security by suggesting that farmers could use the income from *jatropha* production to buy food (TradeMark SA 2011), yet given the instability of food prices that led to the 2008 and 2010 riots, substituting *jatropha* cultivation for subsistence food production would seem to be a wholly irresponsible choice. However, shortly after its initial shipments, Sun Biofuels collapsed, destroying the livelihoods of farmers in Mozambique and Tanzania who had become dependent on the company (Carrington 2011).

Another major *jatropha* project was initiated by German company Elaion Africa in Sofala province, with plans to cultivate 1,000 hectares of *jatropha*. After planting initial test plots, however, the company determined that the soil quality was too low for profitable *jatropha* production, and instead switched to a forestry project on the land (Nhantumbo and Salomão 2010: 10). This case illustrates a problem that has emerged as research on *jatropha* has intensified: as expressed by Rob Bailis of the Yale University School of Forestry and Environmental Studies:

while *jatropha* can indeed grow on lands with minimal water and poor nutrition, ‘if you plant trees in a marginal area, and all they do is just not die, it doesn’t mean you’re going to get a lot of oil from them’. (Luoma 2009)

In order to be produced profitably, *jatropha* needs significant rainfall or irrigation, for it requires more water than any other biofuel feedstock crop (Gerbens-Leenes et al. 2009). It is possible that climate change in the coming decades will see increased rainfall in Mozambique, which could help alleviate this problem, but climate change models remain highly variable and uncertain (see Tadross 2009).

While most jatropha investors have been European, this sector has also felt Brazil's influence. The overall growth in biofuel production and policy development in Mozambique has been seen by some as galvanised by the interest and engagement of Lula, and Mozambican government plans for jatropha biodiesel production were modelled on a Brazilian system of smallholder cultivation of feedstocks to be sold to biodiesel companies, 'thereby increas[ing] rural incomes' (Justiça Ambiental and União Nacional de Camponeses 2009: 9). The Portuguese and Mozambican-owned Moçamgalp biodiesel project has also used Brazilian seeds for its jatropha plantation in Chimoio, with plans to grow 1,250 plants per hectare on a total of 10,000 hectares (ibid.: 36). Petrobras also signed an agreement in 2007 with Italian oil company Eni to jointly explore biodiesel production in Mozambique (Petroleum Africa 2007), though these plans have not yet resulted in any concrete projects.

Policy versus practice in Mozambican biofuel projects and effects on food security

The ProCana project provides a stark illustration of the potential social, economic and environmental problems posed by biofuel production in Mozambique and other developing countries, and also demonstrates the failure of the government of Mozambique to uphold the principles it outlined in its own biofuel policy. ProCana was a project developed by a British corporation that planned to grow sugar cane and produce ethanol on 30,000 hectares in Massingir, in the southern province of Gaza. ProCana had signed a renewable 50-year lease on the land; all land in Mozambique is the property of the government, allowing favoured investors to secure huge tracts of land under long-term contracts with limited input from local stakeholders. This is symptomatic of the larger international problem of 'land grabbing', whereby foreign governments and corporations are buying or securing long-term leases to large portions of the arable land in developing countries (see, for example, GRAIN 2008; Cotula et al. 2009; Thaler forthcoming). Plans were made for Brazilian sugar company Dedini to supply a turnkey ethanol plant that would make use of Brazilian technology and would be capable of processing 438 million litres of ethanol per year (Christiansen 2008).

The allocation of land was immediately problematic. Despite claims that the land ProCana was acquiring was marginal and that therefore the project would not conflict with food production, outside researchers found the land in fact to be highly suitable and used for agricultural production, charcoal making and livestock grazing by local communities (Borras et al. 2011). The ProCana project also called for the displacement of several communities, including taking over land that had been allocated to people displaced by the creation of the Limpopo National Park (ibid.; Manuel and Salomão 2009). ProCana followed the letter of the law in that consultations were held with affected

communities, but agreements over land boundaries were then disregarded as ProCana encroached on family farmlands (*ibid.*), and there was a clear imbalance of power between an international corporation, which had already secured government support, and a group of poor peasant farmers (Borras et al. 2011). This power imbalance has been a problem with biofuel projects elsewhere in Africa and in the rest of the world (see, for example, Borras and Franco 2010). Consultations also tend to be gender-biased, with greater attention paid to male members of communities, even though women make up the majority of the rural labour force (Nhantumbo and Salomão 2010: 35).

Promises of job creation by ProCana and by biofuel projects that have been fully implemented have been dubious at best. ProCana's job creation estimates fluctuated based on assumptions about whether or not the project could be implemented on a mechanised basis or a non-mechanised plantation basis, with the latter option creating more jobs (Borras et al. 2011: 224). The sugar industry also has relatively low labour intensity, with many jobs only seasonal, and labour requirements far below those of other crops; in nearby Zambia, 'while 7,500 are formally employed in the sugar industry, around 200,000 people are informally engaged as outgrowers in the similarly sized cotton industry' (Tschirley and Kabwe in Richardson 2010: 993). Brazilian ethanol production, meanwhile, may be the most advanced in the world, but Mozambique and other countries should not emulate the manner in which the sugar cane that feeds it is produced: by workers toiling in dangerous 'slavery' conditions for wages of approximately US\$1,000 or less for a five- to six-month season (Höges 2009).

Some jobs may be created by biofuel projects, but the livelihoods of other community members are threatened. Biofuel projects frequently involve the permanent clearing of forests, removing opportunities for localised sustainable forestry and charcoal production. Sugar cane, like *jatropha*, also uses massive amounts of water, with the ProCana project, for instance, planning to irrigate its sugar cane with 407 million cubic meters of water per year from a nearby dam, depriving downstream subsistence farmers of water needed to grow their own crops and competing with cleaner hydroelectric power production (Borras et al. 2011: 223). The biofuel boom has also driven up land prices in much of the developing world, increasing the pressure on smallholder farmers to sell their land, while the relatively high prices of energy crops in comparison with food crops may induce farmers to join outcropping schemes in which they grow feedstock for large corporate producers. Increased landholding by bioenergy producers or industrial export farmers, as well as outcropping, shrinks local food production and shifts subsistence farmers from being autonomous food producers to being consumers at the mercy of the market and its fluctuations. The ProCana project collapsed in late 2009 after investors pulled out, and, similarly, Mozambique Principle Energy's ethanol factory project has ground to a halt and may also collapse due to market conditions (Macauhub 2011b),

highlighting the volatility of biofuel investments and the potential for negative outcomes for those whose livelihoods come to depend on the biofuel industry.

Brazil has been involved in some more general or food-focused agricultural initiatives in Mozambique. Embrapa is working on a US\$4.6 million soil conservation and recuperation project in northern Mozambique, looking to develop a successful model that can be applied across Africa (Barbosa et al. 2009: 77). Brazil is working with Japan to develop new crop varieties and to disseminate agricultural techniques and technologies that will allow a transformation of the Mozambican savannah into productive agricultural land, as occurred in Brazil's *cerrado*, and there are other collaborative efforts to improve agricultural research in Mozambique (ABC 2010c; World Bank 2011b). The Brazilian embassy in Mozambique also launched a programme in 2003 to give food subsidies to families in exchange for their children's school attendance, an initiative funded with donations from the Brazilian business community (Massingarella and Nhate 2006). In its initial stage, the programme provided grants of US\$20 to 100 families (ABC 2012), and total project costs were under US\$90,000 (AidData 2012). More recently, Brazil has committed to working to give about US\$2.4 million to the World Food Programme and FAO for a scheme to provide locally produced food to schools and vulnerable groups in Mozambique and four other African countries (FAO 2012). These projects are tiny, however, when compared with the hundreds of millions of dollars being invested in the biofuel sector in Mozambique, sending a strong signal about Brazil's priorities in Mozambique and in the rest of Africa.

Conclusions: Brazilian ambitions, African economies and defining development

Brazil has sought to position itself as an equal development partner of, rather than a more detached donor to, African countries, building on its cultural ties and its own experience of socioeconomic development during the twentieth century. In practice, Brazil has taken a middle road in comparison with the competing emerging economies:

between the Chinese-style of engagement – which is highly political and supported by the weight of the state-run machinery behind investments and development initiatives – and the Indian approach – which is characterised more by private sector investments and entrepreneurial activities across the continent. (White 2010: 229)

So far, Brazil has been successful in constructing a 'softer' approach, in contrast to China, developing local capacity and building new markets rather than simply extracting resources (see, for example, Lewis 2011).

To its credit, Brazil has created and become involved with a number of initiatives in Mozambique and elsewhere in Africa that have the potential to

boost food security and improve livelihoods, such as the Africa–Brazil Agricultural Innovation Marketplace, which brings together Embrapa and African researchers, and efforts to create seed banks for family farmers. The majority of Brazilian aid and investment, however, aims to improve agricultural production for the global market in ways that are not sustainable. Biofuel projects in Mozambique are designed to meet the demand created by EU regulations. These regulations are supposed to reduce fossil fuel dependence and greenhouse gas emissions, but the carbon- and water-intensive farming practices and land use changes involved in the production of biofuel feedstocks may offset any environmental benefits (see, for example, Solomon 2010 for a review). A leaked internal World Bank memo places the blame for the rising prices that sparked the 2008 global food crisis squarely on increased biofuel production (Mitchell 2008), and biofuel production worldwide has been linked to negative effects on the land tenure and food security of smallholder farmers and other rural residents (for example, Dauvergne and Neville 2010).

Brazil's programmes are beginning to put more emphasis on the inclusion of smallholder farmers, and Mozambique's biofuel policy specifically seeks their inclusion in the production of feedstocks (Republic of Mozambique 2009: 19). However, this inclusion may come at the cost of the farmers' autonomy, subjugating them to the demands of large agro-industrial firms in outcropping schemes, forcing them to switch to more expensive technologies, and curtailing independent food production, changes designed to bring the farmers into the transnational capitalist system that is already exploiting Mozambique's limited resources.

Brazil claims that its overseas development assistance is to help other countries emerge from poverty, yet Brazil's interests in development assistance and its corporate investment interests are tied together in a 'neo-mercantilist' web (White 2010: 239), making it difficult to view Brazil's altruistic rhetoric as sincere and giving some credence to the critique that emerged as early as the 1960s of Brazil's interest in Africa as seeking a piece of the 'new scramble for Africa' (Ribeiro 2010: 76). The recent 'land grab' of over 6 million hectares of land in northern Mozambique for Brazilian farmers to produce soya beans, corn and cotton for export (IHU 2011) bears out these suspicions of Brazilian neocolonial leanings.

For food security to be promoted and protected in Mozambique and elsewhere in Africa, notions of development must be decoupled from the concept of economic growth within a capitalist system. Agricultural production for the global market has led to an unsustainable system in which crop diversity has plummeted; small-scale farmers have been forced off their land or into the service of large corporations; and a small group of companies controls the production and distribution of inputs and processed products, with, for instance, five transnational corporations controlling 65 per cent of the global

pesticide market (Gonzalez 2004: 425). Biofuel feedstocks in Mozambique are symptoms of a broken system of agriculture and aid; these crops are promoted and consumed by international actors who either blindly or wilfully ignore their negative effects. Emphasis needs to be placed on production for domestic markets, on production of food crops, and on the improvement of less capital-intensive farming techniques that will allow small-scale farmers to sustain themselves while maintaining their independence. At present, Brazilian development assistance and investments are more benign and less cold-bloodedly profit-driven than those of China and some other competing countries, but they remain exploitative nonetheless.

relief for HIPC countries in exchange for poverty reduction strategy papers in the 2000s; and ‘good governance’ conditions, which can in theory be effective but in practice often end up setting politically or economically motivated double standards.

8 Thaler

1 This description has been used frequently in the case of Brazil. For one relatively early use, see Lopez and Kepp 1984.

2 The green revolution has been criticised, however, for improving agricultural production but maintaining and even exacerbating socioeconomic inequalities (Gonzalez 2004: 441).

3 Some critics prefer the term ‘agro-fuels’, as they feel it better highlights biofuels’ ‘problematic environmental and social consequences’ (McMichael 2010: 609).

4 The state of São Paulo had successful research programmes for coffee and cotton, but this was a rare exception (Graham et al. 1987: 3).

5 Mozambique is ranked by the World Bank as the eleventh most aid-dependent country in the world, with aid still responsible for over 20 per cent of gross national income (World Bank 2011b), and the country has long found itself beholden to the demands of donor countries, development agencies and banks after years of fighting for independence and to protect the country’s sovereignty from Rhodesian and South African interference (see also Plank 1993).

6 The 2010 riots led the government to reduce the magnitude of some price increases and cancel others. For further analysis of Mozambican development, one of the best and most persistent critics of the development model in Mozambique is Joseph Hanlon (for example, Hanlon and Smart 2008).

7 See Thaler 2010b for a brief critique of such mega-projects.

8 Despite the discussion of biofuel

production as a broad strategy for rural development, biofuel producers tend to cluster where infrastructure and market access are already well established (Schut et al. 2010), limiting the potential for large-scale biofuel investments to provide benefits to the most needy rural Mozambicans.

9 The fact that diplomats would mention specific companies as potential beneficiaries of their policies is symptomatic of the increasing influence of multinational corporations in Brazilian diplomacy (see Marques 2010).

11 Xiuli and Xiaoyun

1 The per capita requirement of 400 kilograms is a crude benchmark considered sufficient to meet the needs of the Chinese population, as well as the feed and seed requirements of farmers, given current food consumption patterns.

2 Based on the most recent complete information by country.

3 Note: data in value terms in this table are calculated at current prices. The new classification for the national industry has been implemented since 2003, and gross output values include services in support of agriculture, forestry, animal husbandry and fisheries.

4 In Chinese parlance, ‘basic’ means the provision of at least 95 per cent of China’s basic food (i.e. grain) needs from domestic sources.

12 Cheru and Modi

1 Food and Agriculture Organization of the United Nations (2012) *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*, Rome: FAO; United Nations Human Rights Council (2010) *Report of the Special Rapporteur on the right to food, Olivier De Schutter: Large-scale land acquisition and leases: A set of minimum principles and measures to address the human rights challenge*, A/HRC/13/33.

References

- ABC (2010a) *Diálogo Brasil-África em Segurança Alimentar, Combate à Fome e Desenvolvimento Rural*. Brasília: Agência Brasileira de Cooperação (ABC).
- (2010b) *A Cooperação Técnica do Brasil para a África*. Brasília: ABC.
- (2010c) *Brazilian Technical Cooperation in Africa*. Brasília: ABC.
- (2012) *Cooperação Brasil-PALOP: Moçambique*. Brasília: ABC.
- AEO (2010) *African Economic Outlook 2011*. Addis Ababa and Paris: African Development Bank, Organisation for Economic Co-operation and Development, United Nations Development Programme, United Nations Economic Commission for Africa.
- AFP (2011) 'China's farm subsidies soar but OECD states' at record low'. Paris: Agence France-Presse (AFP), 21 September. www.google.com/hostednews/afp/article/ALeqM5jLhm9mFizKxB1snlyeUSpsZ6doiA?docId=CNG.45a44728e048f5f22cf3b6bd7a4e34b.e1 [accessed 31 January 2013]
- (2012) 'UN adopts norms against "land grabbing"'. Paris: AFP, 12 May.
- African Union (2003) 'Declaration on agriculture and food security in Africa'. From the Assembly of the African Union, Second Ordinary Session, Maputo, Mozambique, 10–12 July. Addis Ababa: African Union.
- (2006) *Declaration of the Abuja Food Security Summit*. From the Summit on Food Security in Africa, Abuja, Nigeria, 4–7 December. Addis Ababa: African Union.
- (2007) *Action Plan for the Accelerated Industrial Development of Africa*. EXT/MIN/PA(I). Adopted at the AU Conference of Ministers of Industry, Midrand, South Africa, 24–27 September. Addis Ababa: African Union.
- (2008) *Comprehensive African Agriculture Development Programme: Pillar III: Framework for African Food Security (FAFS)*. Addis Ababa: African Union. www.africa-union.org/root/ua/Conferences/2008/avril/REA/01avr/Experts_FAFS.pdf [accessed 31 January 2013]
- (2011) 'Progress with CAADP: Partnership development issues in perspective'. Draft input for preparation of the Economic Report on Africa, 2012. African Union/AfDB/UNECA (2010) *Framework and Guidelines on Land Policy in Africa*. Addis Ababa: African Union, African Development Bank (AfDB) and UN Economic Commission for Africa (UNECA).
- African Union and NEPAD (2012) *Treat for the chairs of committees of parliament responsible for agriculture environment and Pan African Parliament: 21–22 November 2012. Concept note and agenda*. Johannesburg: New Partnership for Africa's Development (NEPAD). www.nepad.org/system/files/Concept%20Note%20African%20Parliamentarian%20sensitization%20on%20CAADP%20V11.pdf [accessed 31 January 2013]
- Afrol (2011) 'Ethiopian "sacred forests" sold to Indian tea producer'. Afrol News, 18 February. www.afrol.com/articles/37365 [accessed 31 January 2013]
- Agência de Informação de Moçambique (2009) 'Mozambique: Country and Brazil seek partnerships in biofuels'. AllAfrica, 19 November. <http://allafrica.com/stories/200911191037.html> [accessed 31 January 2013]

- (2010) 'Africa: Mozambique, Brazil and EU cooperate on biofuels'. All Africa, 16 July. <http://allafrica.com/stories/201007161071.html> [accessed 31 January 2013]
- (2011) 'Mozambique: Mixing biofuels with fossil fuels to become compulsory'. AllAfrica, 25 February. <http://allafrica.com/stories/201102281334.html> [accessed 31 January 2013]
- Agrawal, S. (2005) 'Zambian safari'. Feature Stories, Media Room, Tata Africa website, June. www.tataafrica.com/Mediaroom/articles_and_interview_zambian_safari.htm [accessed 31 January 2013]
- AidData (2012) 'Bolsa-Escola (school scholarship – cash transfer program conditional on enrollment) in Mozambique'. AidData. www.aiddata.org/project/show/3002081 [accessed 31 January 2013]
- Ajakaiye, O. (2007) 'Recent economic development experiences of China, India, Malaysia and South Korea: some lessons from capacity building in Africa'. Commissioned paper for the second Pan-African Capacity Building Forum, Maputo, 1–3 August.
- Ajayi, S. Ibi (2006) 'FDI and economic development in Africa'. Paper presented at the African Development Bank/African Economic Research Consortium international conference on Accelerating Africa's Development, Tunis, 22–24 November.
- Akinola, L. (2010) 'Brazil aspires to be partner, not donor'. This Is Africa, 28 July. www.thisisafrikaonline.com/Development/Brazil-aspires-to-be-partner-not-donor [accessed 31 January 2013]
- Alden Wily, L. (2008) *Whose Land Is It? Commons and conflict states: Why the ownership of the commons matters in making and keeping peace*. Washington, DC: Rights and Resources Initiative.
- Alexander, J. (1994) 'State, peasantry and resettlement in Zimbabwe'. *Review of African Political Economy* 21(61): 325–45.
- Altieri, M. (2011) 'Modern agriculture: Ecological impacts and the possibilities for truly sustainable farming'. *Agroecology in Action*. http://nature.berkeley.edu/~miguel-alt/modern_agriculture.html [accessed 31 January 2013]
- Amanor, K. S. (2008) 'Sustainable development, corporate accumulation and community expropriation: Land and natural resources in West Africa'. In Amanor, K. S. and S. Moyo (eds) *Land and Sustainable Development in Africa*. London and New York: Zed Books.
- Amarasinghe, U. A., M. Giordano, L. Yongsong and S. Zhongping (2005) *Water Supply, Water Demand and Agricultural Water Scarcity in China: A basin approach*. Country Policy Support Program (CPSP) Report 11. New Delhi: International Water Management Institute (IWMI) and International Commission on Irrigation and Drainage (ICID).
- Amin, S. (1972) *Neo-colonialism in West Africa*. London: Penguin.
- (1974) *Unequal Development*. New York: Monthly Review Press.
- Antil, A. and S. Touati (2009) 'Crisse alimentaire, émeutes de la faim et enjeux agricoles en Afrique subsaharienne'. Report commissioned by the French Ministry of External Affairs.
- Arkhangelskaya, A. (2010) 'India, Brazil and South Africa Dialogue Forum: A bridge between the three continents. Challenges, achievements and policy options'. Policy Notes 2010/8. Uppsala: Nordic Africa Institute.
- Arrighi, G. (1973) 'International corporations, labour aristocracies, and economic development in tropical Africa'. In Arrighi, G. and J. Saul (eds) *Essays on the Political Economy of Africa*. New York: Monthly Review Press.
- Ash, R. (2010) 'The Chinese economy after 30 years of reform: Perspectives from the agricultural sector'. *Copenhagen Journal of Asian Studies* 28(1): 36–62.
- Assefa, T. (ed.) (2008) *Digest of Ethiopia's National Policies, Strategies and Programs*. Addis Ababa: Forum for Social Studies.

- Ayllón Pino, B. and I. Costa Leite (2010) 'La cooperación Sur-Sur de Brasil: Proyección solidaria y política exterior'. In Ayllón, B. and J. Surasky (eds) *La Cooperación Sur-Sur en Latinoamérica: Utopía y realidad*. Madrid: Los Libros de la Catarata/Instituto Universitario de Desarrollo y Cooperación (IUDC)/Universidad Complutense de Madrid (UCM), pp. 69–101.
- Bagchi, I. (2009) 'The new landlords'. *The Times of India*, 26 September.
- Barbosa, A. de Freitas, Narciso, T. and Biancalana, M. (2009) 'Brazil in Africa: Another emerging power in the continent?' *Politikon* 36(1): 59–86.
- Barrionuevo, A. (2011) 'China's interest in farmland makes Brazil uneasy'. *The New York Times*, 26 May.
- Bates, R. (1981) *Markets and States in Tropical Africa: The political basis of agricultural policies*. Berkeley, CA: University of California Press.
- Baye, F. M. and S. A. Khan (forthcoming) 'Land-tenure arrangements, migrant labour and land struggles in rural Cameroon'. In Moyo, S. D. Tsikata and Y. Diop (eds) *Land in the Struggle for Citizenship in Africa*. Dakar: Council for the Development of Social Science Research in Africa (CODESRIA) Multinational Working Group.
- Benin, S., A. Kennedy, M. Lambert and L. McBride (2010) *Monitoring African Agricultural Development Processes and Performance: A comparative analysis*. ReSAKSS-Africa Wide Annual Trends and Outlook Report. Washington, DC: Regional Strategic Analysis and Knowledge Support System (ReSAKSS), International Food Policy Research Institute (IFPRI).
- Benitez, R. F. (2007) Açúcar Guarani press release, 21 December. www.mzweb.com.br/tereosinternacional/web/arquivos/Guarani_Comunicado_ao_mercado_20071221_eng.pdf [accessed 31 January 2013]
- Berg, R. (1981) *Accelerated Development in Sub-Saharan Africa: An agenda for action*. Washington, DC: World Bank.
- Bernstein, H. (2001) 'Agrarian reform after developmentalism?' Presentation at the Conference on Agrarian Reform and Rural Development: Taking Stock, Social Research Centre of the American University in Cairo, 14–15 October.
- Bhatia, B. M. (1970) *India's Food Problem and Policy since Independence*. Bombay: Somaiya.
- Bhattacharya, A., P. J. Montiel and S. Sharma (1997) 'How can sub-Saharan Africa attract more private flows?' *Finance and Development*, June.
- Biney, A. (2009) 'Land grabs: Another scramble for Africa'. *Pambazuka News*, 17 September.
- Birara, A. (2012) 'Dr Aklog Birara's protest letter to Indian ambassador to the US'. Ethioedia.org, 16 May. www.ethioedia.com/2012_report/3801.htm [accessed 31 January 2013]
- Bird, K., D. Booth and N. Pratt (2003) 'The contribution of politics, policy failures, and bad governance to food security crisis in Southern Africa'. Paper commissioned by the Forum for Food Security in Southern Africa.
- BMI (2012) *China Food and Drink Report Q3 2012*. Industry Forecast and Survey Service, June. London: Business Monitor International (BMI).
- Borras Jr, S. and J. Franco (2010) 'From threat to opportunity? Problems with the idea of a "code of conduct" for land-grabbing'. *Yale Human Rights and Development Law Journal* 13(1): 507–23.
- Borras Jr, S. M., D. Fig and S. M. Suárez (2011) 'The politics of agrofuels and mega-land and water deals: insights from the ProCana case, Mozambique'. *Review of African Political Economy* 38(128): 215–34.
- Bratton, M. (1994) 'Land redistribution 1980–1990'. In Rukuni, M. and C. Eicher (eds) *Zimbabwe's Agricultural Revolution*. Harare: University of Zimbabwe.
- Bräutigam, D. (2010) *China, Africa and the International Aid Architecture*. Working Paper Series No. 107. Tunis-Belvédère, Tunisia: African Development Bank. www.afdb.org/fileadmin/uploads/

- afdb/Documents/Publications/
WORKING%20107%20%20PDF%20E33.
pdf [accessed 31 January 2013]
- and T. Xiaoyang (2009) 'China's engagement in African agriculture: "down to the countryside"'. *The China Quarterly* 199: 686–706.
- Bravo, E. W. (2011) *The Concentration of Land Ownership in Latin America: An approach to current problems*. Rome: International Land Coalition (ILC).
- Brett, E. A. (1973) *Colonialism and Underdevelopment in East Africa: The politics of economic change 1919–1939*. New York: NOK Publishers.
- Broadman, H. G. (2007) *Africa's Silk Road: China and India's new economic frontier*. Washington, DC: World Bank.
- Brown, L. (2011) 'The new geopolitics of food'. *Foreign Policy*, May–June.
- Bruce, J. W. and Z. Li (2009) "Crossing the River While Feeling the Rocks": Incremental land reform and its impact on rural welfare in China. Discussion Paper No. 926. Washington, DC: International Food Policy Research Institute (IFPRI).
- Bryceson, D. F. (2002) 'The scramble for Africa: reorienting rural livelihoods'. *World Development* 30(5): 725–39.
- Byerlee, D. (2009) 'Drivers of investment in large-scale farming: evidence and implications'. Presented at the conference Land Governance in Support of the Millennium Development Goals: Responding to New Challenges, 9–10 March. Washington, DC: World Bank.
- Caminada, C. and S. Nielsen (2011) 'Tereos, Petrobras may make ethanol at Mozambique sugar mill'. *Bloomberg Business Week*, 14 December. www.businessweek.com/news/2011-12-14/tereos-petrobras-may-make-ethanol-at-mozambique-sugar-mill.html [accessed 31 January 2013]
- Campbell, K. (2011) 'SA achieving IBSA trade success – Zuma'. *Engineering News*, 18 October.
- Carrington, D. (2011) 'UK firm's failed biofuel dream wrecks lives of Tanzania villagers'. *Observer*, 30 October.
- Casale, C. (2011) 'Tecnologia significa produtividade'. *Agroanalysis*, April.
- Cassel, G. (2010) 'Políticas para o desenvolvimento do Brasil Rural, 2003–2009'. Paper presented at the international conference on the Dynamics of Rural Transformations in Emerging Economies, New Delhi, 14–16 April.
- CEIC 2011. www.ceicdata.com [accessed 31 January 2013]
- CEIRI (2011) 'Cooperação entre Brasil e África é comemorada pela ONU'. *CEIRI Newspaper* (Centro de Estratégia, Inteligência e Relações Internacionais), 23 December.
- Chachage, C. (2009) 'A tale of two laws: dual democratization of land governance in Tanzania'. Paper presented at the conference Democratisation in Africa, Leeds, 4–5 December.
- Chambers, R. (1989) *The State and Rural Development: Ideologies and an agenda for the 1990s*. Discussion Paper No. 269. Brighton: Institute of Development Studies (IDS), University of Sussex.
- Chang, H.-J. (2003) *Kicking Away the Ladder: Development strategy in historical perspectives*. London: Anthem Press.
- Chaponniere, J. R., J. J. Gabas and Z. Qi (2010a) 'Will Africa feed China? An investigation in China Africa trade and investment in agriculture'. Paper presented at the African Development Bank Seminar, Bamako, Mali, 27–28 April.
- (2010b) 'China Africa in agriculture: a background paper on trade, investment and aid in agriculture'. Conference paper for the second event of the China–DAC Study Group, Bamako, Mali, 27–28 April.
- Chen, S. and M. Ravallion (2008) *The Developing World is Poorer than We Thought, but No Less Successful in the Fight against Poverty*. Policy Research Working Paper No. 4703. Washington, DC: World Bank Development Research Group.
- Cheru, F. (1989) *The Silent Revolution in Africa: Debt, development and democracy*. London and Harare: Zed Books.
- (1997) 'The silent revolution and the

- weapon of the weak: transformation and innovation from below'. In Gill, S. and J. H. Mittelman (eds) *Innovation and Transformation in International Studies*. Cambridge: Cambridge University Press, pp. 153–69.
- and C. Obi (2010) *The Rise of China and India in Africa: Challenges, opportunities and critical interventions*. London and New York: Zed Books.
- Chichava, S. (2011) 'As economias "emergentes" no sector agrícola moçambicano: leituras, implicações e desafios'. In de Brito, L., C. N. Castel-Branco, A. Chichava and A. Francisco (2011) *Desafios para Moçambique 2011*. Maputo: Instituto de Estudos Sociais e Económicos (IESE).
- China–DAC Study Group (2011a) *Economic Transformation and Poverty Reduction: How it happened in China, helping it happen in Africa. Vol. 1: Main findings and policy implications*. Beijing: China Financial and Economic Publishing House, pp. 36–41.
- (2011b) *Economic Transformation and Poverty Reduction: How it happened in China, helping it happen in Africa. Vol. 2: Synthesis reports*. Beijing: China Financial and Economic Publishing House, pp. 32, 34–61.
- China Statistical Yearbook (2011) *China Statistical Yearbook 2011*. Beijing: China Statistics Press.
- Choudhary, A. (2011) Interview with Ashok Choudhary of the National Forum of Forest People and Forest Workers at the Sangharsh to UPA: Ensure Land Rights: Stop Land Acquisition and Displacement rally in New Delhi.
- Christiaensen, L. and L. Demery (2007) *Down to Earth: Agriculture and poverty reduction in Africa*. Washington, DC: World Bank.
- Christiansen, R. C. (2008) 'BioEnergy Africa to build Mozambique plant'. *Ethanol Producer Magazine*, 8 September. www.ethanolproducer.com/articles/4758/bioenergy-africa-to-build-mozambique-plant/ [accessed 31 January 2013]
- CII-EXIM Bank (2012) 'Background note'. Eighth Confederation of Indian Industry (CII)-EXIM Bank Conclave on India–Africa Project Partnership, New Delhi, 18–20 March.
- CMIE (Centre for Monitoring Indian Economy) (2012) Database accessed through Export-Import Bank of India, Mumbai.
- CONSEA, FAO and IICA (2009) *Building up the National Policy and System for Food and Nutrition Security: The Brazilian experience*. Brasília: Conselho Nacional de Segurança Alimentar e Nutricional (CONSEA), Food and Agriculture Organization of the United Nations (FAO) and Inter-American Institute for Cooperation on Agriculture (IICA).
- Cotula, L., N. Dyer and S. Vermeulen (2008) *Fuelling Exclusion? The biofuels boom and poor people's access to land*. London and Rome: International Institute for Environment and Development (IIED) and Food and Agriculture Organization of the United Nations (FAO).
- Cotula, L., S. Vermeulen, R. Leonard and J. Keeley (2009) *Land Grab or Development? Agricultural investments and international land deals in Africa*. London and Rome: International Institute for Environment and Development (IIED), Food and Agriculture Organization of the United Nations (FAO) and International Fund for Agricultural Development (IFAD).
- Crowder, M. (1968) *West Africa Under Colonial Rule*. Evanston, IL: Northwestern University Press.
- D'Almeida, K. (2011) 'Colonial-style land grabbing back on the table'. Inter Press Service, 19 April.
- Da Silva, E., E. Baydoun and A. Badran (2002) 'Biotechnology and the developing world'. *EJB Electronic Journal of Biotechnology* 5(1).
- Dauvergne, P. and K. J. Neville (2010) 'Forests, food, and fuel in the tropics: the uneven social and ecological consequences of the emerging political economy of biofuels'. *Journal of Peasant Studies* 37(4): 631–60.

- Davis, S. and J. Woetzel (2010) 'Making the most of Chinese aid to Africa'. *McKinsey Quarterly*, June. www.mckinseyquarterly.com/Making_the_most_of_Chinese_aid_to_Africa_2609 [accessed 31 January 2013]
- Dawit, T. (2010) 'CETU requests government to take measures against cross-border companies'. *Ethiopian Reporter*, 10 November.
- de Brauw, A., J. Huang and S. Rozelle (2004) 'The sequencing of reform policies in China's agricultural transition'. *Economics of Transition* 12(3): 427–65.
- De Onis, J. (2008) 'Brazil's big moment: a South American giant wakes up'. *Foreign Affairs*, November–December 2008.
- de Paula Herrmann, P. S. and J. A. Brum (2009) 'Developing world advances nanotech for clean water'. Science and Development Network, 6 May.
- De Schutter, O. (2011) 'G20 action plan addresses the symptoms, not the causes of the problem'. srfood.org, 27 June. www.srfood.org/index.php/en/component/content/article/1424-g20-action-plan-addresses-the-symptoms-not-the-causes-of-the-problem [accessed 31 January 2013]
- and G. Vanloqueren (2011) 'The new green revolution: how twenty-first-century science can feed the world'. *Solutions* 2(4): 33–44.
- Deininger, K. et al. (2011) *Rising Global Interest in Farmland: Can it yield sustainable and equitable benefits?* Washington, DC: World Bank.
- Del Grossi, M. E. (2010) 'Assessment of social inclusion policy in rural areas: transformations through family allowance policy and public policy for family farming'. Paper presented at the international conference Dynamics of Rural Transformations in Emerging Economies, New Delhi, 14–16 April.
- Delegation of the European Union in China (2011) *China's Twelfth Five Year Plan (2011–2015) – the Full English Version*. Beijing: Delegation of the EU to China. http://cbi.typepad.com/china_direct/2011/05/chinas-twelfth-five-new-plan-the-full-english-version.html [accessed 31 January 2013]
- Denoon, D. (1973) *Southern Africa Since 1800*. New York: Praeger.
- Dey, A. (2011) 'Ministries deliberate over overseas direct investment policy'. *Business Standard* (Mumbai), 12 June.
- DGCIS (2012) 'Statistics of the foreign trade of India'. Directorate General of Commercial Intelligence and Statistics (DGCIS), Indian Ministry of Commerce. www.dgciskol.nic.in [accessed 31 January 2013]
- Diao, X., D. Headey and M. Johnson (2008) 'Toward a green revolution in Africa: what would it achieve, and what would it require?' *Agricultural Economics* 39(S1): 539–50.
- Dietz, T. (2011) 'Silverlining Africa: From images of doom and gloom to glimmers of hope; from places to avoid to places to enjoy'. Inaugural address, Leiden University and African Studies Centre, 14 January.
- Dista, S. and C. Vicente (2009) 'Estimating the potential GDP losses due to hunger in Mozambique'. In Acosta, A. (ed.) *Food Security Policy: Insights from Mozambique*. Maputo: Food and Agriculture Organization of the United Nations (FAO) Representation for Mozambique and Swaziland and Netherlands Partnership Programme.
- Dollar, D. (2008) *Lessons from China for Africa*. Policy Research Working Paper No. 4531. Washington, DC: World Bank.
- Dorward, A., J. Kydd and C. Poulton (1998) *Smallholder Cash Crop Production Under Market Liberalization*. Wallingford, Oxfordshire: CABI Publishing.
- Douglass, R. (2006) 'US crisis aid and strategic interests: Lyndon B. Johnson's short leash food aid to India'. In Kirlin, T. M. and J. M. Parker (eds) *A Dialogue on Presidential Challenges and Leadership: Papers of the 2005–2006 Center Fellows*. Washington, DC: Center for the Study of the Presidency and Congress, 2006. <http://rexdouglass.com>

- wdfiles.com/local-files/publications-and-papers/Rex%20Douglass%2C%20U.S.%20Crisis%20Aid%20and%20Strategic%20Interests%2C%20September%2015%2C2006%20ofV.pdf [accessed 31 January 2013]
- Doya, D. M. (2011) 'Karuturi Global plans \$500 million investment in Tanzania food production'. Bloomberg, 18 August.
- EchoGéo* (2010) 'Land for agribusiness international? A dilemma for land policy in Madagascar'. *EchoGéo* 11, December 2009/February 2010.
- Economic Times* (2011) 'Ethiopia offers India farmland for investment'. *The Economic Times* (Mumbai), 2 February.
- Ehui, S. and E. Tsigas (2006) 'Identifying agricultural research and development investment opportunities in sub-Saharan Africa: a global, economy-wide analysis'. Paper presented at the International Agricultural Economics conference, Queensland, Australia, 12–18 August.
- Eicher, C. and M. Rukuni (eds) (1994) *Zimbabwe's Agricultural Revolution*. Harare: University of Zimbabwe.
- Ernst & Young (2011) 'A new world of opportunity: India Africa partnership potential'. Report prepared for the Creating Possibilities: Delivering Values conference at the 7th Confederation of Indian Industry-EXIM Bank Conclave on India-Africa Project Partnership, New Delhi, 27–29 March.
- Ethiopian Review* (2011) 'Local official dismissed over land grab protest'. *Ethiopian Review*, 8 February.
- EXIM Bank (2010) 'Presentation on potential for agricultural investment in Africa: role of EXIM Bank'. Conference on South-South Cooperation: India, Africa and Food Security, Centre for African Studies, University of Mumbai, 10 January.
- (2011) 'Recent economic developments in the African region'. *EXIMUS: Export Advantage* XXV(1): 1–2. www.eximbankindia.com/ea-mar11.pdf [accessed 31 January 2013]
- (2012) 'Operative lines of credit (as on August 2012)'. www.eximbankindia.com/loc.asp [accessed 23 August 2012]
- Fagnani, E. (2011) 'As lições do desenvolvimento social recente no Brasil'. *Le Monde Diplomatique Brasil*, December.
- Fan, S. (1991) 'Effects of technological change and institutional reform on production growth in Chinese agriculture'. *American Journal of Agricultural Economics* 73(2): 266–75.
- (2009) *Setting priorities for public spending for agricultural and rural development in Africa*. IFPRI Policy Brief No. 12. Washington, DC: International Food Policy Research Institute (IFPRI).
- and P. Pardey (1997) 'Research, productivity, and output growth in Chinese agriculture'. *Journal of Development Economics* 53(6): 115–37.
- B. Nestorova and T. Olofiniyi (2010) 'China's agricultural and rural development: implications for Africa'. Paper presented at the China-DAC Study Group on Agriculture, Food Security and Rural Development, Bamako, Mali, 27–28 April.
- L. Zhang and X. Zhang (2002) *Growth, inequality, and poverty in China: The role of public investments*. Research Report 125. Washington, DC: IFPRI.
- X. Zhang and S. Robinson (1999) *Past and Future of Sources of Growth for Chinese*. EPTD Discussion Paper No. 53. Washington, DC: IFPRI.
- FAO (2005) *The State of Food Insecurity in the World 2005*. Rome: Food and Agriculture Organization of the United Nations (FAO).
- (2009) '2050: A third more mouths to feed'. Food and Agriculture Organization of the United Nations (FAO) Media Centre. www.fao.org/news/story/en/item/35571/icode/ [accessed 31 January 2013]
- (2010) *FAO Statistical Yearbook 2010*. Rome: FAO.
- (2011a) 'FAO head warns on land-grabbing: foreign investment as tool for development'. FAO Media Centre,

- 12 May. www.fao.org/news/story/en/item/74229/icode/ [accessed 31 January 2013]
- (2011b) *The State of Food and Agriculture: Women in agriculture: Closing the gender gap for development*. Rome: FAO, pp. 65–6, 90, 111.
- (2012) 'Brazil to fund food purchasing in five African countries'. FAO Media Centre, 21 February. www.fao.org/news/story/en/item/123551/icode/ [accessed 31 January 2013]
- FAOSTAT (2010) FAOSTAT database. Production: crops.
- (2011) 'Mozambique'. <http://faostat.fao.org/site/666/default.aspx> [accessed 31 January 2013]
- FAPRI (Food and Agricultural Policy Research Institute) (2011) 'FAPRI-ISU 2011 World Agricultural Outlook'. www.fapri.iastate.edu/outlook/2011/ [accessed 31 January 2013]
- Federal Democratic Republic of Ethiopia (2002) 'Re-enactment of the investment proclamation'. Proclamation No. 280. Addis Ababa: Federal Negarit Gazeta.
- (2003a) 'A proclamation to amend the investment re-enactment proclamation no. 280/2002'. Proclamation No. 375. Addis Ababa: Federal Negarit Gazeta.
- (2003b) Council of Ministers regulations on investment incentives and investment areas reserved for domestic investors'. Regulation No. 84. Addis Ababa: Federal Negarit Gazeta.
- (2008) Council of Ministers regulation to amend the investment incentives and investment areas reserved for domestic investors regulation. Regulation No. 146. Addis Ababa: Federal Negarit Gazeta.
- FGV Projetos (2011) 'Projeto cinturão tropical: África e América Central'. Presentation in São Paulo, 15 June.
- FICCI (n.d.) 'Sector overview: agriculture'. New Delhi: Federation of Indian Chambers of Commerce and Industry (FICCI). www.ficci-b2b.com/sector-overview-pdf/Sector-agri.pdf [accessed 31 January 2013]
- Financial Express* (2006) 'India to sign Bipa with Ethiopia'. *The Financial Express* (New Delhi), 18 October.
- Fisher, M. (2011) 'In Zimbabwe, Chinese investment with hints of colonialism'. *The Atlantic*, 24 June. www.theatlantic.com/international/archive/2011/06/in-zimbabwe-chinese-investment-with-hints-of-colonialism/240978/ [accessed 31 January 2013]
- FOCAC (2006) 'Forum on China–Africa Cooperation Beijing Action Plan (2007–2009)'. Beijing: Chinese Ministry of Foreign Affairs.
- (2012) 'The Fifth Ministerial Conference of the Forum on China–Africa Cooperation Beijing Action Plan (2013–2015)'. Beijing: Chinese Ministry of Foreign Affairs.
- FOEI (2010) *Africa: Up for grabs. The scale and impact of land grabbing for agro-fuels*. Amsterdam: Friends of the Earth International (FOEI).
- Forrest, T. (1982) 'Brazil and Africa: geopolitics, trade, and technology in the South Atlantic'. *African Affairs* 81(322): 3–20.
- Fosu, A. (2009) *Understanding the African Growth Record. The importance of policy syndromes and governance*. Discussion Paper No. 2009/02. Helsinki: United Nations University and World Institute for Development Economics Research (UNU-WIDER).
- França, C. (2009) *O Censo Agropecuário 2006 e a Agricultura Familiar no Brasil*. Brasília: Ministério do Desenvolvimento Agrário (MDA).
- Freeman, D., J. Holslag and S. Weil (2008) 'China's foreign farming policy'. *Brussels Institute of Contemporary China Studies Asia Paper* 3(9).
- Freemantle, S. (2011) 'The five trends powering Africa's enduring allure. Trend 4: Africa's dormant resources potential'. Africa Macro Insight & Strategy, 6 October. Johannesburg: Standard Bank.
- and J. Stevens (2010) 'Brazil weds itself to Africa's latent agricultural potential'. Economics, 1 February. Johannesburg: Standard Bank.
- Gerbens-Leenes, W., A. Y. Hoekstra and

- T. H. van der Meer (2009) 'The water footprint of bioenergy'. *Proceedings of the National Academy of Sciences* 106(25): 10219–23.
- Ghosh, J. (2008) 'The global oil price story'. International Development Economics Associates (IDEAs). www.ideaswebsite.org/articles.php?aid=451 [accessed 31 January 2013]
- Gibbon, P. and S. Ponte (2005) *Trading Down: Africa, value chains, and the global economy*. Philadelphia, PA: Temple University Press.
- Gonzalez, C. G. (2004) 'Trade liberalization, food security and the environment: the neoliberal threat to sustainable rural development'. *Transnational Law and Contemporary Problems* 14(2): 419–98.
- Goswami, R. (2010) 'African landrush'. InfoChange India, 5 April.
- (2011) 'In field and for food, the return of structural adjustment'. Fahamu, 2 March.
- Government of India (2011–12) 'Cotton technical assistance programme for Africa'. TAP for Cotton. <http://cottontapafira.org/home.html> [accessed 31 January 2013]
- (2012a) *State of Indian Agriculture 2011–12*. New Delhi: Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. <http://agricoop.nic.in/SIA111213312.pdf> [accessed 31 January 2013]
- (2012b) 'Agricultural statistics at a glance 2011'. New Delhi: Directorate of Economics and Statistics, Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. <http://agricoop.nic.in/agristatistics.htm> [accessed 31 January 2013]
- Government of the Federal Republic of Brazil (2010) 'Brazil and African countries cooperation: opportunities for enhancing smallholder farming productivity through small scale irrigation and rainwater harvesting'. Outcome document of the Brazil–Africa ministerial meeting, Brasília, 10–12 May.
- Gowing, J. W. and M. Palmer (2008) 'Sustainable agricultural development in sub-Saharan Africa: the case for a paradigm shift in land husbandry'. *Soil Use and Management* 24(1): 92–9.
- Graham, D. H., H. Gauthier and J. R. Mendonça de Barros (1987) 'Thirty years of agricultural growth in Brazil: crop performance, regional profile, and recent policy review'. *Economic Development and Cultural Change* 36(1): 1–34.
- GRAIN (2008) 'Seized: the 2008 landgrab for food and financial security'. GRAIN briefing, 24 October. www.grain.org/article/entries/93-seized-the-2008-land-grab-for-food-and-financial-security [accessed 31 January 2013]
- (2009) 'Grabbing land for food'. *Seedling*, January.
- (2011) 'Pension funds: key players in the global farmland grab'. Against the Grain, 20 June. www.grain.org/article/entries/4287-pension-funds-key-players-in-the-global-farmland-grab [accessed 31 January 2013]
- (2012) *The Great Food Robbery: How corporations control food, grab land and destroy the climate*. Oxford: GRAIN with Fahamu Books and Pambazuka Press.
- Graziano da Silva, J. (1981) *A modernização Dolorosa: Estrutura agrária, fronteira agrícola e trabalhadores rurais no Brasil*. Rio de Janeiro: Zahar Editores.
- GTZ (2009) *Foreign Direct Investment (FDI) in Land in Madagascar*. Eschborn, Germany: Division 45 – Agriculture, Fisheries and Food, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). www2.gtz.de/wbf/4tDx9kw63gma/gtz2010-0063en-foreign-direct-investment-madagascar.pdf [accessed 31 January 2013]
- Guarany, C. L. (2011) 'Desafio para exportações de máquinas e equipamentos'. *Agroanalysis*, February.
- Guardian* (2012) 'Tanzania: seven Brazilian firms ready to do large-scale farming'. *The Guardian Reporter*, 21 August. www.ippmedia.com/frontend/index.php?1=45011 [accessed 31 January 2013]
- Gulati, A. and S. Fan (2007) *The Dragon and the Elephant: Agricultural and rural*

- reforms in China and India. Baltimore, MD: Johns Hopkins University Press and International Food Policy Research Institute (IFPRI).
- Guzman, R. (2010) 'Global land grabbing eroding food sovereignty'. *Turning Point* 1. Penang, Malaysia: Pesticide Action Network Asia and the Pacific. www.indiaenvironmentportal.org.in/files/TurningPoint_GlobalLandGrabbing.pdf [accessed 31 January 2013]
- Haggard, S. (1990) *Pathways from the Periphery: The politics of growth in the newly industrializing countries*. Ithaca, NY: Cornell University Press.
- Hall, J., M. Stelvia, L. Severino and N. Beltrão (2009) 'Brazilian biofuels and social exclusion: established and concentrated ethanol versus emerging and dispersed biodiesel'. *Journal of Cleaner Production* 17(S1): S77–S85.
- Hallam, D. (2009) 'International investments in agricultural production'. In Kugelman, M. and S. L. Levenstein (eds) *Land Grab? The race for the world's farmland*. Washington, DC: Woodrow Wilson International Center for Scholars.
- Hanlon, J. (1983) *Mozambique: The revolution under fire*. London: Zed Books.
- and T. Smart (2008) *Do Bicycles Equal Development in Mozambique?* Woodbridge: James Currey.
- Haralambous, S., H. Liversage and M. Romano (2009) *The Growing Demand for Land: Risks and opportunities for smallholder farmers. Discussion paper prepared for the round table organized during the thirty-second session of IFAD's Governing Council, 18 February 2009*. Rome: International Fund for Agricultural Development (IFAD).
- Harvey, D. (2006) *Spaces of Global Capitalism: Towards a theory of uneven geographical development*. London: Verso.
- Havnevik, K., D. Bryceson, L. Birgegård, P. Matondi and A. Beyene (2007) *Africa Agriculture and the World Bank*. Policy Dialogue No. 1. Uppsala: Nordic Africa Institute.
- Heckett, T. and N. Aklilu (eds) (2008) *Agro-fuel Development in Ethiopia: Rhetoric, reality, recommendations*. Addis Ababa: Forum for Environment.
- Henning, R. (1996) 'Combating desertification: the jatropha project of Mali, West Africa'. *Arid Lands Newsletter* 40, Fall/Winter.
- Hofman, B. and J. Wu (2009) *Explaining China's Development and Reforms*. Working Paper No. 50. Washington, DC: International Bank for Reconstruction and Development and World Bank, on behalf of the Commission on Growth and Development.
- Höges, C. (2009) 'A "green tsunami" in Brazil: the high price of clean, cheap ethanol'. *Der Spiegel*, 22 January.
- Hu, A., L. Hu and Z. Chang (2006) 'China's economic growth and poverty reduction (1978–2004)'. *Journal of Tsinghua University (Social Science Edition)* 5: 107–17.
- Huang, J. and H. Bouis (1996) *Structural Changes in the Demand for Food in Asia*. Food, Agriculture and the Environment discussion paper. Washington, DC: International Food Policy Research Institute (IFPRI).
- Huang, J. and S. Rozelle (1996) 'Technological change: rediscovery of the engine of productivity growth in China's rural economy'. *Journal of Development Economics* 49(2): 337–69.
- (1998) 'Market development and food demand in rural China'. *China Economic Review* 9(1): 25–45.
- (2009) *Agricultural Development and Nutrition: The policies behind China's success*. Occasional Paper No. 19. Rome: World Food Programme.
- Huang, J., K. Otsuka and S. Rozelle (2008) 'Agriculture in China's development: past disappointments, recent successes and future challenges'. In Brandt, L. and T. G. Rawski (eds) *China's Great Economic Transformation*. Cambridge: Cambridge University Press, pp. 395–429.
- Huang, J., Q. Zhang and S. Rozelle (2007) 'The determinants of China's rural poverty alleviation and pro-poor

- economic growth'. Beijing: International Poverty Reduction Center of China (IPRCC). www.iprcc.org.cn/ppt/2007-12-20/ [accessed 31 January 2013]
- Hunt, D. and M. Lipton (2011) *Green Revolutions for Sub-Saharan Africa?* Briefing Paper AFP BP 2011/1. London: Chatham House.
- IAASTD (2009) *Agriculture at a Crossroads: Global report*. Washington, DC: International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD). www.agassessment.org/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Global%20Report%20%28English%29.pdf [accessed 31 January 2013]
- IAFS (2008a) 'Delhi declaration'. India–Africa Forum Summit (IAFS), Ministry of External Affairs of India, New Delhi, 8–9 April.
- (2008b) 'India–Africa Framework for Cooperation'. IAFS, New Delhi, 9 April.
- (2008c) 'Plan of action of the framework for cooperation of the India–Africa Forum Summit'. IAFS, New Delhi, 5 April.
- (2008d) 'PM addresses the first India–Africa Forum Summit'. Press Information Bureau, Government of India. <http://pib.nic.in/newsite/erelease.aspx?relid=37177> [accessed 31 January 2013]
- (2011a) 'India–Africa framework for enhanced cooperation'. Second IAFS, Addis Ababa, 25 May. www.indiaafrica.summit.nic.in/staticfile/framework-en.pdf [accessed 31 January 2013]
- (2011b) 'Address by PM at the plenary session of the 2nd Africa–India Forum Summit'. Second IAFS, 24 May, Addis Ababa. www.indiaafricasummit.nic.in/?1209 [accessed 31 January 2013]
- Ibrahim Forum (2011) 'African agriculture: from meeting needs to creating wealth'. London: Mo Ibrahim Foundation.
- IBSA (2006) 'Memorandum of Understanding on Trilateral Co-operation in Agriculture and Allied Fields between the Governments of the Republic of India, the Federal Republic of Brazil, and the Republic of South Africa under the India–Brazil–South Africa (IBSA) Dialogue Forum Initiative'. Official document signed in June.
- (2010) 'Future of Agriculture Co-operation in India, Brazil and South Africa (IBSA)'. www.ibsa-trilateral.org [accessed 31 January 2013]
- (2011) 'India–Brazil–South Africa (IBSA) Dialogue Forum Fifth Summit of Heads of State and Government Tshwane Declaration'. www.ibsa-trilateral.org [accessed 31 January 2013]
- (2012) '5th Summit'. IBSA Dialogue Forum Official Website. www.ibsa-trilateral.org [accessed 31 January 2013]
- IHU (2011) 'O neocolonialismo brasileiro em Moçambique'. Instituto Humanitas Unisinos (IHU), 25 August. www.ihu.unisinos.br/noticias/46703-o-neocolonialismo-brasileiro-em-mocambique- [accessed 31 January 2013]
- IL&FS (Infrastructure Leasing & Financial Services Ltd) (2012) pers. comm.
- IMF (2012) World Economic Outlook Database, April 2012. International Monetary Fund (IMF). www.imf.org/external/ns/cs.aspx?id=28 [accessed 31 January 2013]
- India–Latin America Conclave (2010) 'Agri-business opportunities in South America'. Presentation by Dave Ramaswamy, partner at Allied Venture, given at the Confederation of Indian Industry's India–Latin America and Caribbean Conclave, New Delhi, 29 April.
- Ipea (2010a) *Cooperação Brasileira para o Desenvolvimento Internacional: 2005–2009*. Brasília: Instituto de Pesquisa Econômica Aplicada (Ipea) and Agência Brasileira de Cooperação (ABC).
- (2010b) *Objetivos de Desenvolvimento do Milênio: Relatório nacional de acompanhamento*. Brasília: Ipea.
- ITC (2011) 'Trade map: trade statistics for international business development'. Geneva: International Trade Centre (ITC). www.trademap.org/Index.aspx [accessed 31 January 2013]

- Jadhav, R. and M. Sharma (2012) 'India's 2011/12 cotton imports to treble on thin supply'. Reuters, 26 July. <http://in.reuters.com/article/2012/07/26/india-cotton-imports-idINL4E8IQ4B420120726> [accessed 31 January 2013]
- Jain Irrigation Systems Ltd (2011) 'Jain Irrigation in Africa: a brief note'. Presentation made at the conference South-South Cooperation: India-Africa and Food Security, Centre for African Studies, University of Mumbai, 10 January.
- Jefferson, G. (1993) *Are China's Rural Enterprises Out-performing State-owned Enterprises?* Research Paper No. CH-RPS#24. Washington, DC: World Bank.
- Jin, S., J. Huang, R. Hu and S. Rozelle (2002) 'The creation and spread of technology and total factor productivity in China's agriculture'. *American Journal of Agricultural Economics* 84(4): 916-39.
- Johnston, B. F. and J. W. Mellor (1961) 'The role of agriculture in economic development'. *American Economic Review* 51(4): 566-93.
- Juma, C. (2011) *The New Harvest: Agricultural innovation in Africa*. New York: Oxford University Press.
- Justiça Ambiental and União Nacional de Camponeses (2009) *Jatropha! A socio-economic pitfall for Mozambique*. Maputo: Justiça Ambiental and União Nacional de Camponeses.
- Kalibwani, F. (2005) *Food Security in Southern Africa: Current status, key policy processes and key players at regional level*. Paper for 'Promoting the use of CSOs' evidence in policies for food security: an action research project in Southern Africa'. Johannesburg: Southern African Regional Poverty Network (SARPN).
- Kaplinsky R. and M. Farooki (2010) *What are the Implications for Global Value Chains when the Market Shifts from the North to the South?* Policy Research Working Paper No. 5205. Washington, DC: World Bank.
- Kapur, S. (2009) 'Outsourcing farming for food security'. *The Economic Times*, 27 July. http://articles.economic-times.indiatimes.com/2009-07-27/news/27663800_1_food-security-cultivable-land-international-food [accessed 31 January 2013]
- Katerere, F. (2009) 'Brazil to invest \$6 billion in Mozambique biofuels, O Pais says'. Bloomberg, 19 November. www.bloomberg.com/apps/news?pid=newsarchive&sid=aY3EtpcM2W7c [accessed 31 January 2013]
- Kelbessa, E., N. Aklilu and T. Woldemariam (eds) (2009) *Agrofuel Development in Ethiopia: Findings of an assessment*. Addis Ababa: Forum for Environment.
- Kiernan, P. (2011) 'Brazil's Petrobras, Tereos study Mozambique's ethanol potential'. Dow Jones, 14 December. www.epcengineer.com/news/post/6873/brazils-petrobras-tereos-study-mozambiques-ethanol-potential [accessed 31 January 2013]
- Kirloskar Brothers Limited (KBL) (2008) *Cascade* 15(2), July-September. www.kirloskarpumps.com/Spanish/images/downloads/cascade/Cascade%20Eng_Jul-Sept-08.pdf [accessed 31 January 2013]
- (2011) 'KBL: partnering with Africa in its quest towards food sufficiency'. Presentation to 7th Confederation of Indian Industry-EXIM Bank Conclave on India-Africa Project Partnership, New Delhi, 27 March.
- (2012) *KBL: Enriching Lives*. Corporate brochure. www.kirloskarpumps.com/pdf/corporate-profile/KBL_Corporate_profile.pdf [accessed 31 January 2013]
- Kitching, G. (1980) *Class and Economic Change in Kenya: The making of an African petite-bourgeoisie*. New Haven, CT: Yale University Press.
- Kragelund, P. (2008) 'The return of non-DAC donors to Africa: new prospects for African development?' *Development Policy Review* 26(5): 555-84.
- Kumar, S. (2010) 'Agriculture outsourcing and food security: a way towards mutual cooperation. India, Africa and

- LAC under South–South cooperation'. *Indo-African Business*, May–July.
- Kumashiro, T. and F. Paiva (2011) 'Tropical Savannah Agriculture Development Program: Japan–Brazil–Mozambique triangular cooperation. A case supported by Collaborative Agricultural Research'. Japan International Cooperation Agency (JICA) and Agência Brasileira de Cooperação (ABC) presentation at the G20 Meeting of Ministers of Agriculture, Montpellier, France, 6–7 May.
- Landesa (2011) 'Summary of 2011 17-province survey's findings'. Landesa. www.landesa.org/china-survey-6/ [accessed 31 January 2013]
- Landim, R. (2010) 'Brasil já é o terceiro maior exportador agrícola do mundo'. *O Estado de São Paulo*, 6 March.
- Le Monde* (2009) 'In Madagascar, an Indian company plans to rent nearly 500,000 ha'. *Le Monde*, 21 March. Unofficial translation by GRAIN. <http://farmlandgrab.org/2847> [accessed 31 January 2013]
- Leo, S. and M. Watanabe (2010) 'Grau de abertura cai, apesar do recorde de importações'. *Valor*, 27 September.
- Lewis, D. (2011) 'Special report: in Africa, can Brazil be the anti-China?' Reuters, 23 February. www.reuters.com/article/2011/02/23/us-brazil-africa-idUSTRE71M1420110223 [accessed 31 January 2013]
- Leys, C. (1975) *Underdevelopment in Kenya: The political economy of neo-colonialism, 1964–1971*. London: Heinemann.
- Li, X., G. Qi, L. Tang, L. Zhao, L. Jin, Z. Guo, J. Wu and J. Keeley (2010) *Smallholder-based Agricultural Development: A comparison of Chinese and African experience*. Beijing: Social Science Academic Press, pp. 1–20, 45–82, 121, 236.
- Li, X., L. Tang, X. Xu, G. Qi and H. Wang (2012) 'What can Africa learn from China's experience in agricultural development?'. *Journal of China Agricultural University* (Social Science Edition) 28(4): 18–25.
- Lin, J. Y. (1992) 'Rural reforms and agricultural growth in China'. *American Economic Review* 82(1): 34–51.
- (1998) *How Did China Feed Itself in the Past? How will China feed itself in the future?* Second Distinguished Economist Lecture. Mexico: CIMMYT.
- Lopez, L. and M. Kepp (1984) 'Brazil: waking the sleeping giant'. *Time Magazine*, 23 April.
- Low, P. S. (ed.) (2005) *Climate Change and Africa*. Cambridge: Cambridge University Press.
- Lucky Group (2011) 'Cotton production strategies for African countries'. PowerPoint presentation to 7th Confederation of Indian Industry-EXIM Bank Conclave on India–Africa Project Partnership, New Delhi, 28 March.
- Luoma, J. R. (2009) 'Hailed as a miracle biofuel, jatropha falls short'. *Yale Environment* 360, 4 May. <http://e360.yale.edu/content/feature.msp?id=2147> [accessed 31 January 2013]
- Macauhub (2011a) 'Brazil's Petrobras Bio-combustível to build ethanol factory in Mozambique'. Macauhub, 12 August. www.macauhub.com.mo/en/2011/08/12/brazil%E2%80%99s-petrobras-bio-combustivel-to-build-ethanol-factory-in-mozambique/ [accessed 31 January 2013]
- (2011b) 'Project to build ethanol factory in Mozambique at a standstill'. Macauhub, 7 September. www.macauhub.com.mo/en/2011/09/07/project-to-build-ethanol-factory-in-mozambique-at-a-standstill/ [accessed 31 January 2013]
- Maddison, A. (2008) *Chinese Economic Performance in the Long Run: 960–2030 AD*. Shanghai: World Publishing Company and Shanghai People's Publishing House, pp. 75–7.
- Mafeje, A. (2003) *The Agrarian Question, Access to Land, and Peasant Responses in Sub-Saharan Africa*. Civil Society and Social Movements Programme Paper No. 6. Geneva: United Nations Research Institute for Social Development.
- Magubane, B. M. (1979) *The Political Econ-*

- omy of Race and Class in South Africa. New York: Monthly Review Press.
- Mamdani, M. (1996) *Citizen and Subject: Contemporary Africa and the legacy of late colonialism*. Princeton, NJ: Princeton University Press.
- Manji, A. (2006) *The Politics of Land Reform in Africa: From communal tenure to free markets*. London and New York: Zed Books.
- Manuel, L. and A. Salomão (2009) 'Bio-fuels and land rights in Mozambique – the ProCana case'. *Hamarata* 54: 17–19.
- Marks, S. (2008) 'China and the great global land grab'. *Pambazuka News*, 12 November.
- Marques, J. C. (2010) *Business and Diplomacy in the Age of Globalization: Brazilian multinational corporations*. Occasional Paper No. BSP-07-10. Oxford: Brazilian Studies Programme, University of Oxford.
- Massingarella, C. and V. Nhate (2006) *The Politics of What Works: A case study of food subsidies and the Bolsa-Escola in Mozambique*. Background paper for the *Chronic Poverty Report 2008–09*. Manchester: Chronic Poverty Research Centre.
- Mathew, J. C. and C. Narayanan (2012) Interview with K. V. Thomas, minister for consumer affairs, food and public distribution. *Business World* 32(13), 13 August.
- Matondi, P. (2012) *Zimbabwe's Fast Track Land Reform*. London: Zed Books.
- K. Havnevik and A. Beyene (2011) *Bio-fuels, Land Grabbing and Food Security in Africa*. London: Zed Books.
- McKinsey Global Institute (2010) 'Lions on the move: the progress and potential of African economies'. McKinsey and Co. www.mckinsey.com/mgi/insights/mgi/research/productivity_competitiveness_and_growth/lions_on_the_move [accessed 31 January 2013]
- McLure, J. (2009) 'Ethiopian farms lure investor funds as workers live in poverty'. Bloomberg, 30 December.
- McMichael, P. (2010) 'Agrofuels in the food regime'. *Journal of Peasant Studies* 37(4): 609–29.
- McMillan, J., J. Whalley and L. Zhu (1989) 'The impact of China's economic reforms on agriculture productivity growth'. *Journal of Political Economy* 97(4): 781–807.
- Meinzen-Dick, R. and H. Markelova (2009) 'Necessary nuance: toward a code of conduct in foreign land deals'. In Kugelman, M. and S. L. Levenstein (eds) *Land Grab? The race for the world's farmland*. Washington, DC: Woodrow Wilson International Center for Scholars.
- MELCA Mahiber (2008) *Rapid Assessment of Biofuels Development Status in Ethiopia and Proceedings of the National Workshop on Environmental Impact Assessment and Biofuels*. Addis Ababa: Movement for Ecological Learning and Community Action (MELCA) Mahiber.
- Mello, P. C. (2011) 'Moçambique oferece terra à soja brasileira'. *Folha de S. Paulo*, 14 August.
- Metho, O. (2010) 'Response to Karuturi CEO on his Ethiopia land grab'. Solidarity Movement for a New Ethiopia (SMNE), 10 November, Addis Ababa. www.google.co.in/url?sa=t&ret=j&q=&e&src=s&frm=1&source=web&cd=3&ved=0CCwQJfJAC&url=http%3A%2F%2Fwww.solidaritymovement.org%2Fdownload%2F100930OpenLetterToGennetZewide.doc&ei=nvw5UI6MlcfhrAfO8YBA&usg=AFQjCNEs9OHG-5EIwKYpbCiiHOynaS8Nw [accessed 31 January 2013]
- (2011) 'An open letter to the people of India, a day light robbery in Ethiopia: "doing business" with African dictators'. SMNE, Addis Ababa, 15 June. www.oaklandinstitute.org/open-letter-people-india-day-light-robbery-ethiopia-%E2%80%9Cdoing-business%E2%80%9D-african-dictators [accessed 31 January 2013]
- Mielitz Netto, C. G. A. (2011) 'Policy dialogue on agricultural family farming project – Brazil'. In FIDA MERCOSUR, FIDA, MDA (eds) *Policy Dialogue on Family Farming in Middle Income Countries*. Montevideo: MERCOSUR.

- Migot-Adholla, S. E. (1994) 'Land, security of tenure and productivity in Ghana'. In Bruce, J. W. and S. E. Migot-Adholla (eds) *Searching for Land Tenure Security in Africa*. Dubuque, IA: Kendall Hunt Publishing, pp. 169–98.
- Mihalache-O'Keef, A. and Q. Li (2011) 'Modernization vs. dependency revisited: effects of foreign direct investment on food security in less developed countries'. *International Studies Quarterly* 55(1): 71–93.
- Mihretie, K. (2010) 'Ethiopia on the verge of colony of many'. Abbay Media, 31 January.
- Ministry of Agriculture of People's Republic of China (2011) *Highlights of South-South Cooperation in Agriculture: China's participation under the Framework of the Special Programme for Food Security of Food and Agriculture Organization of the United Nations*. Beijing: Department of International Cooperation, Ministry of Agriculture of China.
- Ministry of Food and Agriculture, Republic of Ghana (2010) 'Ghana's Medium Term Agriculture Sector Investment Plan (METASIP) 2011–2015'. Accra: Ministry of Food and Agriculture.
- Minot, N. (2008) 'Implications of the food crisis for long-term agricultural development'. International Food Policy Research Institute (IFPRI), 5 June. www.ifpri.org/pubs/testimony/minot20080605.pdf [accessed 31 January 2013]
- Mitchell, D. (2008) *A Note on Rising Food Prices*. Policy Research Working Paper No. 4682. Washington, DC: Development Prospects Group, World Bank.
- Mittal, A. (2011) Email discussion with Anuradha Mittal, Executive Director of the Oakland Institute, Oakland, California, regarding recent reports on land grabbing in Africa, 5 August.
- Mkandawire, T. (2010) 'On tax efforts and colonial heritage in Africa'. *Journal of Development Studies* 46(10): 1647–69.
- and C. Soludo (1999) *Our Continent, Our Future: African perspectives on structural adjustment*. Dakar, Ottawa and Asmara: Council for the Development of Social Science Research in Africa (CODESRIA), International Development Research Centre (IDRC) and Africa World Press (AWP).
- MOARD (2008) 'Agricultural investment potential of Ethiopia'. Addis Ababa: Ministry of Agriculture and Rural Development (MOARD).
- (2009a) 'List of investment projects in agricultural sector from July 1992–6 February 2009 (compiled from regional investment data)'. Addis Ababa: MOARD.
- (2009b) 'Guideline for agricultural project/business planning'. Addis Ababa: MOARD.
- (2009c) 'Planned system for administration of investment land'. (In Amharic.) Addis Ababa: MOARD.
- (2009d) 'Directives for implementation of rental fees for agricultural investment land'. (In Amharic.) Addis Ababa: MOARD.
- (2009e) 'Revised directive for the implementation of agricultural investment land use follow-up and support'. Addis Ababa: MOARD.
- (2010) 'General brushure [sic]'. Addis Ababa: MOARD.
- Modi, R. (2011) 'India–Africa project partnership: creating possibilities, delivering values'. *Africa Quarterly* 15(1).
- MOFCOM (2010) *China–Africa Trade and Economic Relationship Annual Report 2010*. Beijing: Ministry of Commerce (MOFCOM), Chinese Academy of International Trade and Economic Cooperation. Plus various unpublished reports (in Chinese).
- (2011) *China–Africa Trade and Economic Relationship Annual Report 2011*. Beijing: Ministry of Commerce (MOFCOM), Chinese Academy of International Trade and Economic Cooperation, pp. 12–13.
- MOFED (2003) *Rural Development Policy and Strategies* Addis Ababa: Ministry of Finance and Economic Development

- (MOFED), Government of the Federal Democratic Republic of Ethiopia.
- (2006) *Ethiopia: Building on progress: A plan for accelerated and sustained development to end poverty (PASDEP)*. Addis Ababa: MOFED.
 - (2010a) 'Updated 2nd PASDEP agric. sec. plan (2003–07) [2011–15]'. PDF file.
 - (2010b) 'PASDEP – 2011 plan. Final'. PDF file.
 - (2010c) 'Implementation of first five-year development plan (1998–2002 [Eth. Cal.]), and preparation of next five year plan for growth and transformation (2003–07 [Eth. Cal.])'. (In Amharic.) PowerPoint presentation, July, Addis Ababa.
- Molomo, M. G. (2008) 'Sustainable development, ecotourism, national minorities and land in Botswana'. In Amanor, K. S. and S. Moyo (eds) *Land and Sustainable Development in Africa*. London and New York: Zed Books.
- Mourão, J. (2011) 'Programa de Cooperação Triangular para o Desenvolvimento Agrícola das Savanas Tropicais de Moçambique ProSAVANA-JBM'. Division for Triangular Cooperation and Social Programs, Japan International Cooperation Agency (JICA)-Brazil, 19 September.
- Moyo, S. (2000) *Land Reform under Structural Adjustment in Zimbabwe*. Uppsala: Nordic Africa Institute.
- (2008) *African Land Questions, Agrarian Transitions and the State: Contradictions of neo-liberal land reforms*. Dakar: Council for the Development of Social Science Research in Africa (CODESRIA).
 - (2010) 'Agrarian question and the developmental state in southern Africa'. In Edigheji, O. (ed.) *Constructing a Democratic Developmental State in South Africa: Potentials and challenges*. Cape Town: HSRC Press.
 - (2011) 'Land concentration and accumulation after redistributive reform in post-settler Zimbabwe'. *Review of African Political Economy* 38(128): 257–76.
- and P. Yeros (2005) 'The resurgence of rural movements under neoliberalism'. In Moyo, S. and P. Yeros (eds) *Reclaiming the Land: The resurgence of rural movements in Africa, Asia and Latin America*. London: Zed Books.
- Nandi, J. (2012) 'India among top ten land grabbers, sellers: report'. *Times of India*, 27 June.
- NASA (2009) 'Satellites unlock secret to northern India's vanishing water'. National Aeronautics and Space Administration (NASA), 12 August. www.nasa.gov/home/hqnews/2009/aug/HQ_09-185_India_water.html [accessed 31 January 2013]
- National Bureau of Statistics of China (2011) www.stats.gov.cn [accessed 31 January 2013]
- Nelson, D. (2009) 'India joins "neo-colonial" rush for Africa's land and labour'. *The Telegraph* (Calcutta), 28 June.
- NEPAD (2009) *CAADP Pillar III: Framework for African Food Security (FAS)*. Midrand, South Africa: New Partnership for Africa's Development (NEPAD).
- Neri, M. C. (ed.) (2010) *A Nova Classe Média: O lado brilhante dos pobres*. Rio de Janeiro: Fundação Getulio Vargas (FGV) and Centro de Políticas Sociais (CPS).
- Neves do Amaral, W. A. and A. Peduto (2010) *Food Security: The Brazilian case*. Winnipeg: International Institute for Sustainable Development.
- NGOs (2010) 'Stop land grabbing now!' A public statement led by La Via Campesina, FIAN, Land Research Action Network and GRAIN and signed by several dozen other organisations. <http://focusweb.org/sites/www.focusweb.org/files/WB-FIN-EN%2022-4-10%201225.pdf> [accessed 31 January 2013]
- Nhantumbo, I. and A. Salomão (2010) *Bio-fuels, Land Access and Rural Livelihoods in Mozambique*. London: International Institute for Environment and Development (IIED).
- Nin-Pratt, A., M. Johnson, E. Magalhaes, X. Diao, L. You and J. Chamberlin (2009) *Priorities for Realizing the*

- Potential to Increase Agricultural Productivity and Growth in Western and Central Africa*. IFPRI Discussion Paper No. 00876. Washington, DC: International Food Policy Research Institute (IFPRI).
- O País Económico* (2012) 'Garantida materialização do PROSAVANA este trimestre'. *O País*, 13 January.
- Oakland Institute (2011a) 'Special investigation: understanding land investment deals in Africa'. Overview of the research report series of several African country case studies. Oakland, CA: Oakland Institute. www.oaklandinstitute.org/special-investigation-understanding-land-investment-deals-africa [accessed 31 January 2013]
- (2011b) *Understanding Land Investment Deals in Africa. Country report: Ethiopia*. Oakland, CA: Oakland Institute.
- OECD-DAC/IPRCC (2010) *Agricultural Transformation, Growth and Poverty Reduction*. China-DAC Study Group background paper prepared for the international conference on Agriculture, Food Security and Rural Development, Bamako, Mali, 27–28 April.
- OECD-FAO (2010) *OECD-FAO Agricultural Outlook 2010–2019*. Paris and Rome: Organisation for Economic Co-operation and Development (OECD) and Food and Agriculture Organization of the United Nations (FAO). www.agri-outlook.org/pages/0,2987,en_36774715_36775671_1_1_1_1_1,00.html [accessed November 2011]
- Ong'wen, O. and S. Wright (2007) *Small farmers and the future of sustainable agriculture*. EcoFair Trade Dialogue Discussion Paper No. 7. Berlin, Aachen and Wuppertal: Heinrich Böll Foundation, Misereor and Wuppertal Institute for Climate, Environment and Energy.
- Onimode, B. (ed.) (1989) *The IMF, the World Bank and the African Debt. Vol. 2: The social and political impact*. London: Zed Books.
- Oxfam International (2004) *Dumping: The beginning of the end? Implications of the ruling in the Brazil/US cotton dispute*. Oxfam Briefing Paper No. 64. Oxford: Oxfam.
- (2011) *Land and Power: The growing scandal surrounding the new wave of investments in land*. Oxfam Briefing Paper No. 151. Oxford: Oxfam.
- Palmer, R. and N. Parsons (eds) (1977) *The Roots of Rural Poverty in Central and Southern Africa*. Berkeley, CA: University of California Press.
- Park, A., H. Jin, S. Rozelle and J. Huang (2002) 'Market emergence and transition: arbitrage, transition costs, and autarky in China's grain market'. *American Journal of Agricultural Economics* 84(1): 67–82.
- Patel, R. (2007) *Stuffed and Starved: Markets, power and the hidden battle for the world's food system*. London: Portobello Books.
- Patkar, M. (2011) Interview with Medha Patkar of the Narmada Bachao Andolan and the National Alliance of People's Movements at the Sangharsh to UPA: Ensure Land Rights: Stop Land Acquisition and Displacement rally in New Delhi, 5 August. For the GRAIN/Economic Research Foundation report (see Rowden 2011). www.grain.org/bulletin_board/entries/4342-india-s-role-in-the-new-global-farmland-grab [accessed January 2013]
- Patnaik, P. (2008) 'The accumulation process in the period of globalisation'. International Development Economics Associates (IDEAs), 28 May.
- Patnaik, U. (2003) 'Global capitalism, deflation and agrarian crisis in developing countries'. *Journal of Agrarian Change* 3(1–2): 33–66.
- (2011) 'The agrarian question in the neoliberal era'. In Patnaik, U. and S. Moyo with I. G. Shivji *The Agrarian Question in the Neoliberal Era: Primitive accumulation and the peasantry*. Cape Town, Dakar, Nairobi and Oxford: Pambazuka Press and the Mwalimu Nyerere Chair in Pan-African Studies, University of Dar es Salaam.
- Petras, J. (2008) 'The great land giveaway: neo-colonialism by invitation'.

- GlobalResearch, Centre for Research on Globalization, 1 December. www.globalresearch.ca/index.php?context=va&aid=11231 [accessed 31 January 2013]
- Petroleum Africa (2007) 'Eni and Petrobras to jointly develop biofuels projects in Africa'. Petroleum Africa, 28 March. www.petroleumafrica.com/en/news/article.php?NewsID=3459&format=print [accessed 31 January 2013]
- Petromuç (2008) 'Project development strategy'. Maputo: Petróleos de Moçambique (Petromuç).
- PIB (2011) 'Ministry of Finance: India and Ethiopia sign double taxation avoidance agreement'. Press Information Bureau (PIB), Government of India, 27 May.
- Ping, L. (2008) 'Hopes and strains in China's overseas farming plan'. *Economic Observer*, 3 July.
- Pires, C. (2011) 'A savana vai virar cerrado'. *Presença Internacional do Brasil IV*(15), September–October.
- Plank, D. N. (1993) 'Aid, debt, and the end of sovereignty: Mozambique and its donors'. *Journal of Modern African Studies* 31(3): 407–30.
- Population Reference Bureau (2008) *2008 World Population Data Sheet*. www.prb.org/pdf08/08WPDS_Eng.pdf [accessed 31 January 2013]
- Rabobank (2011) 'China's increasing investments in South American agribusiness'. Rabobank press release, 28 July.
- Rahmato, D. (2009) *The Peasant and the State: Studies in agrarian change in Ethiopia 1950s–2000s*. Addis Ababa: Addis Ababa University Press.
- (2010) 'Globalization and food security: can Ethiopia meet the challenge?' Paper prepared for the international conference on the Ethiopian economy, Ethiopian Economic Association, Addis Ababa, June.
- Rakotondrainibe, M. (2011) Email discussions with Mamy Rakotondrainibe of the Collective for the Defence of Malagasy Lands (Collectif TANY), Paris, about 'land grabbing' in Madagascar, July–August.
- Ravallion, M. (2009) 'Are there lessons for Africa from China's success against poverty?' *World Development* 37(2): 303–13.
- and S. Chen (2007) 'China's (uneven) progress against poverty'. *Journal of Development Economics* 82(1): 1–42.
- Republic of Mozambique (2007) *Estratégia de Desenvolvimento Rural (EDR)*. Maputo: Republic of Mozambique. www.portaldogoverno.gov.mz/docs_gov/estrategia/adminEst/estrategia_desenvolvimento_rural.pdf [accessed 31 January 2013]
- (2009) 'Política e estratégia de biocombustíveis'. *Boletim da República*, 3rd supplement, 1(20): 13–21.
- (2011) *Poverty Reduction Action Plan (PARP) 2011–2014*. Country Report No. 11/132. Washington, DC: International Monetary Fund. www.imf.org/external/pubs/ft/scr/2011/cr11132.pdf [accessed 31 January 2013]
- Reserve Bank of India (RBI) (2012) 'India's foreign trade: 2011–12'. *RBI Monthly Bulletin*, June. <http://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/01AIIFo80612.pdf> [accessed 31 January 2013]
- Reuters (2010) 'EU, Brazil, Mozambique to sign bioenergy pact'. Reuters, 12 July. www.reuters.com/article/2010/07/12/ozatp-eu-brazil-bioenergy-idAFJ0E66BoSL20100712 [accessed 31 January 2013]
- Ribeiro, C. O. (2010) 'Adjustment changes: a política africana do Brasil no pós-guerra fria'. *Revista de Sociologia e Política* 18(35): 55–79.
- Richardson, B. (2010) 'Big sugar in southern Africa: rural development and the perverted potential of sugar/ethanol exports'. *Journal of Peasant Studies* 37(4): 917–38.
- Roche, E. (2012) 'India goes from aid beneficiary to donor'. *Livemint*, 1 July. www.livemint.com/Politics/BToxm8wd11xe45wSBbkqGO/India-goes-from-aid-beneficiary-to-donor.html [accessed 31 January 2013]
- Rodell, M., I. Velicogna and J. S. Famiglietti (2009) 'Satellite-based estimates of

- groundwater depletion in India'. *Nature* 460: 999–1002.
- Rowden, R. (2011) *India's Role in the New Global Farmland Grab: An examination of the role of the Indian Government and Indian companies engaged in overseas agricultural land acquisitions in developing countries*. Barcelona and New Delhi: GRAIN and the Economic Research Foundation. www.grain.org/bulletin_board/entries/4342-india-s-role-in-the-new-global-farmland-grab [accessed 31 January 2013]
- Rubinstein, C. (2009) 'China's eye on African agriculture'. *Asia Times*, 2 October.
- Sachs, J. (2011) 'Need versus greed'. Project Syndicate, 28 February.
- Saggi, K. and A. J. Glass (2002) 'Multinational firms and technology transfer'. *Scandinavian Journal of Economics* 104(4): 495–513.
- Saraiva, A. and M. Ciarelli (2012) 'Cresce a presença do Brasil na África'. *O Estado de São Paulo*, 3 January.
- Schut, M., M. Slingerland and A. Locke (2010) 'Biofuel developments in Mozambique: update and analysis of policy, potential and reality'. *Energy Policy* 38(9): 5151–65.
- Schütte, G. R. and P. S. Barros (2010) 'A geopolítica do etanol'. *Boletim de Economia e Política Internacional* (Ipea), No. 1, January–March.
- Scoones, I., N. Marongwe, B. Mavedzenge, J. Mahenehene, F. Murimbarimba and C. Sukume (2010) *Zimbabwe's Land Reform: Myths and realities*. Harare, Johannesburg and Oxford: Weaver Press, Jacana Media and James Currey.
- Scott, J. C. (1985) *Weapons of the Weak: Everyday forms of peasant resistance*. New Haven, CT: Yale University Press.
- Seidenberg, D. A. (1996) *Mercantile Adventurers: The world of East African Asians, 1750–1985*. New Delhi: New Age International.
- Shiva, V. and G. Bedi (2002) *Sustainable Agriculture and Food Security: The Impact of Globalization*. New Delhi: Sage Publications.
- Shivji, I. G. (1975) *Class Struggle in Tanzania*. Dar es Salaam: Tanzania Publishing House.
- (2009) *Accumulation in an African Periphery: A theoretical framework*. Dar es Salaam: Mkuki na Nyota Publishers.
- Sibanda, A. (1988) 'The political situation'. In Stoneman, C. (ed.) *Zimbabwe's Prospects: Issues of race, class, state and capital in Southern Africa*. London and Basingstoke: Macmillan.
- Singh, G. (2007) 'The new scramble for African trade: EU–Africa negotiation for economic partnership agreements'. *Global Vista* 6(2 & 3): 18–22.
- (2009a) 'India's role in the agriculture and rural development of Ethiopia'. Address by Gurjit Singh, Ambassador of India, to the Parliamentary Standing Committee on Agriculture and Rural Development, 8 June.
- (2009b) 'The emerging opportunities in agriculture and floriculture in Ethiopia'. In Singh, G. (2009) *The Injera and the Parantha: Enhancing the Ethiopia-India relationship*. Addis Ababa: Shama Books, pp. 183–90.
- SMNE (Solidarity Movement for a New Ethiopia) (2011) 'SMNE: major loopholes in land lease contracts raise many questions'. Food Crisis and the Global Land Grab, 12 May. <http://farmlandgrab.org/post/view/18590> [accessed 31 January 2013]
- Solomon, B. D. (2010) 'Biofuels and sustainability'. *Annals of the New York Academy of Sciences* 1185(1): 119–34.
- Sonalika International Tractors Ltd (2012) 'Agriculture in Africa: the story so far'. Presentation to the 8th Confederation of Indian Industry-EXIM Bank Conclave on India–Africa Project Partnership, New Delhi, 18–20 March. www.ciafricaconclave.com/images/sonalika.ppt [accessed 31 January 2013]
- South Africa Government (2011) 'India–Brazil–South Africa dialogue forum seventh trilateral commission meeting ministerial communiqué'. South African Government Information. www.info.gov.za/speech/

- DynamicAction?pageid=461&tid=29668 [accessed 31 January 2013]
- South Commission (1990) *The Challenge to the South: The report of the South Commission*. Oxford: Oxford University Press.
- Spencer, R. (2008) 'South Korean company takes over part of Madagascar to grow biofuels'. *Telegraph*, 20 November. www.telegraph.co.uk/earth/agriculture/3487668/South-Korean-company-takes-over-part-of-Madagascar-to-grow-biofuels.html [accessed 31 January 2013]
- Spring, A. (2009) 'Chinese development aid and agribusiness entrepreneurs in Africa'. In Sigué, S. P. (ed.) *Repositioning African Business and Development for the 21st Century: International Academy of African Business and Development (IAABD). Peer-reviewed proceedings of the 10th international annual conference*. Alberta: IAABD, pp. 23–34.
- State Statistical Bureau (SSB) (2009) *Xinzhongguo 60nian* [Sixty Years of New China]. Beijing: China Statistics Press, pp. 17, 49–51, 161, 637.
- (2010) *Zhongguo nongcun tongji nianjian* [China Rural Statistical Yearbook]. Beijing: China Statistics Press, pp. 29, 55.
- (2011) *Zhongguo tongji nianjian* [China Statistical Yearbook]. Beijing: China Statistics Press. www.stats.gov.cn/tjsj/ndsj/2011/indexch.htm [accessed 31 January 2013]
- Swainson, N. (1980) *The Development of Corporate Capitalism in Kenya, 1918–1977*. Berkeley, CA: University of California Press.
- Tabb, W. K. (2008) 'The global food crisis and what has capitalism to do with it?' International Development Economics Associates (IDEAs), 18 July. www.networkideas.org/feathm/jul2008/ft18_Global_Food_Crisis.htm [accessed 31 January 2013]
- Tadross, M. (2009) *Climate Change Modelling and Analyses for Mozambique*. Maputo: Instituto Nacional de Gestão de Calamidades. http://web.csag.uct.ac.za/~cjack/Climate_modelling_Final.pdf [accessed 31 January 2013]
- Takagi, M. and J. Graziano da Silva (2011) 'New and old challenges to achieve food security in the 21st century'. In Graziano da Silva, J., M. E. Del Grossi and C. G. de França (eds) *The Fome Zero (Zero Hunger) Program: The Brazilian experience*. Brasília: Ministry of Agrarian Development.
- Task Team on South–South Cooperation (2010) 'IBSA-Guinea Bissau: boosting food self-sufficiency'. Boosting South–South Cooperation in the Context of Aid Effectiveness. www.southsouth.org [accessed 31 January 2013]
- Tereos Internacional (2010) 'Petrobras and Tereos form partnership in the sugarcane and biofuel industry'. Tereos Internacional press release, 30 April. www.tereos.com/upload/pdf/uk/20100430_Press_Release_ING.pdf [accessed 31 January 2013]
- Thaler, G. M. (forthcoming) 'Land grabbing: issues and implications'. In Herring, R. J. (ed.) *The Oxford Handbook of Food, Politics and Society*. New York: Oxford University Press.
- Thaler, K. (2010a) 'The political economic problem behind Mozambique's riots'. *IPRIS Lusophone Countries Bulletin* 11 (September 2010): 5–8.
- (2010b) 'Mega-projects, pollution, and divergent development models in Mozambique'. *IPRIS Lusophone Countries Bulletin* 13 (November 2010): 2–3.
- TheBioenergySite News Desk (2011) 'ETH Bioenergia eyes Africa'. TheBioenergySite. www.thebioenergysite.com/news/9036/eth-bioenergia-eyes-africa [accessed 31 January 2013]
- Thompson, C. (2008) 'Bio-fuels for Africa?' Revised paper (6 May) for the National Consultative Workshop on Current Issues Affecting Agro-Biodiversity for Civil Society Positions to CBD-COP9, Norton, Zimbabwe, 28–30 April.
- Times of Africa* (2011) 'Brands and businesses: WAPCOS'. *Times of Africa* 3(4), September–October. www.thetimes

- ofafrica.com/#/wapcos/4560238022 [accessed 31 January 2013]
- (2012) 'Brands and businesses: International Tractors Limited'. *Times of Africa* 4(1), January–February. www.thetimesofafrica.com/#/internationaltractors-limited/4562117499 [accessed 31 January 2013]
 - Tiwari, D. and R. Tiwari (2012) 'Government mulls private purchase of farm land abroad'. *The Economic Times* (India), 5 March.
 - TradeMark SA (2011) 'Mozambique: first exports of bio-fuels to European markets'. TradeMark Southern Africa, 26 July. www.trademarksa.org/news/mozambique-first-exports-bio-fuels-european-markets [accessed 31 January 2013]
 - Trans-Frontier Conservation Initiative Task Force (2010a) 'Prospecting the Omo-Gambella landscape for the establishment of a network of protected areas'. PowerPoint presentation by Sanne van Aarst, Parks and Buffer Zones Management Programme, Addis Ababa.
 - (2010b) *Aerial Survey Report: Gambella Reconnaissance 2009 and Census 2010*. Addis Ababa: Trans-Frontier Conservation Initiative Task Force.
 - Trinh, T., S. Voss and S. Dyck (2006) 'China's commodity hunger: implications for Africa and Latin America'. Current Issues: China Special. Frankfurt: Deutsche Bank Research.
 - UNCTAD (2005) *Economic Development in Africa: Rethinking the role of foreign direct investment*. Geneva: United Nations (United Nations Conference on Trade and Development [UNCTAD]).
 - (2007a) *Economic Development in Africa: Reclaiming policy space. Domestic resource mobilization and developmental states*. Geneva: United Nations.
 - (2007b) *Asian Foreign Direct Investment in Africa: Towards a new era of cooperation among developing countries*. Geneva: United Nations.
 - (2009) 'The role of South–South and triangular cooperation for sustainable agriculture development and food security in developing countries'. Note by the UNCTAD Secretariat, TD/B/C.II/MEM.2/5, Geneva, 14–16 December.
 - (2010) *Economic Development in Africa Report 2010. South–South cooperation: Africa and the new forms of development partnership*. Geneva: United Nations.
 - UNDP (2009) *Enhancing South–South and Triangular Cooperation*. New York: United Nations Development Programme (UNDP).
 - (2011) *Human Development Report 2011. Sustainability and equity: A better future for all*. New York: UNDP.
 - (2012) The IBSA Trust Fund website. <http://tcdc2.undp.org/IBSA/> [accessed 31 January 2013]
 - UNECA (2004) *Assessing Regional Integration in Africa: ECA policy research report*. Addis Ababa: United Nations Economic Commission for Africa (UNECA).
 - (2006) *Economic Report on Africa 2006: Capital flows and development financing in Africa*. Addis Ababa: UNECA.
 - (2009a) *Economic Report on Africa 2009: Developing African agriculture through regional value chains*. Addis Ababa: UNECA.
 - (2009b) 'The status of food security in Africa'. UNECA, Committee on Food Security and Sustainable Development, Sixth Session, Regional Implementation Meeting for CSD-18, Addis Ababa, 27–30 October. www.uneca.org/csd/csd6/StatusFoodSecurity-inAfrica.pdf [accessed 31 January 2013]
 - UNECA and AUC (2011) *Economic Report on Africa 2011: Governing development in Africa – the role of the state in economic transformation*. Addis Ababa: United Nations Economic Commission for Africa (UNECA) and African Union Commission (AUC).
 - (2012) *Economic Report on Africa 2012: Unleashing Africa's potential as a new pole of global growth*. Addis Ababa: UNECA and AUC, pp. 8–15.
 - UNEP (2002) *Africa Environment Outlook: Past, present and future perspectives*.

- Nairobi: United Nations Environment Programme (UNEP).
- Unger, J. and A. Chan (1999) 'Inheritors of the boom: private enterprise and the role of local government in a rural south China township'. *China Journal* 42: 45-74.
- UNICA (2011) 'Ethanol: Brazilian support for Mozambique biofuels a "textbook example" worth repeating, says UNICA'. UNICA (Brazilian Sugarcane Industry Association), 15 April. <http://english.unica.com.br/noticias/show.asp?nwsCode={3FoE4C28-7364-440E-A92C-B2759Bo4D8F4}> [accessed 31 January 2013]
- United Nations (1978) 'Report of the United Nations conference on technical cooperation among developing countries, Buenos Aires, 30 August-12 September 1978'. Sales No. E.78.II.A.11. New York: United Nations.
- (2009) *World Investment Report 2009: Transnational corporations, agricultural production and development*. New York and Geneva: United Nations.
- (2010a) *Africa's Cooperation with New and Emerging Development Partners: Options for Africa's development*. New York: United Nations, Office of the Special Adviser on Africa.
- (2010b) 'World population prospects: the 2010 revision'. United Nations, Department of Economic and Social Affairs. www.un.org/esa/population/ [accessed 31 January 2013]
- USDA (2011) 'China agricultural and economic data'. United States Department of Agriculture (USDA). www.ers.usda.gov/data-products/china-agricultural-and-economic-data.aspx [accessed 31 January 2013]
- Vadala, A. A. (2011) 'International land acquisitions and food security: India in Ethiopia'. Paper presented at the conference South-South Cooperation - India, Africa and Food Security: Between the Summits, organised by the Centre for African Studies at the University of Mumbai in collaboration with the Nordic Africa Institute, the World Trade Centre Mumbai, the Ministry of External Affairs of the Government of India and the Special Unit South-South Cooperation at the UNDP, Mumbai, 10-11 January.
- Van Zwanenberg, R. M. A. and A. King (1975) *An Economic History of Kenya and Uganda 1800-1970*. Atlantic Highlands, NJ: Humanities Press.
- von Braun, J. (2007) *The World Food Situation: New driving forces and required actions*. Food Policy Report. Washington, DC: International Food Policy Research Institute (IFPRI). www.ifpri.org/sites/default/files/pubs/pubs/fpr/pr18.pdf [accessed 31 January 2013]
- and R. Meinzen-Dick (2009) "'Land grabbing" by foreign investors in developing countries: risks and opportunities'. IFPRI Policy Brief No. 13. Washington, DC: International Food Policy Research Institute (IFPRI).
- Wade, R. (2003) *Governing the Market: Economic theory and the role of government in East Asian industrialization*. Princeton, NJ: Princeton University Press.
- Wang, J. (2000) 'Property right innovation, technical efficiency and groundwater management: case study of groundwater irrigation system in Hebei, China'. PhD thesis. Beijing: Chinese Academy of Agricultural Sciences.
- Watts, M. (1983) *Silence Violence: Food, famine and peasantry in northern Nigeria*. Berkeley, CA: University of California Press.
- WFP (2007) International Food Aid Information Systems (INTERFAIS). Rome: United Nations World Food Programme (WFP).
- White, L. (2010) 'Understanding Brazil's new drive for Africa'. *South African Journal of International Affairs* 17(2): 221-42.
- Wiggins, S. (2005) 'Southern Africa's food and humanitarian crisis of 2001-04: causes and lessons'. Discussion paper for Agricultural Economic Society annual conference, Nottingham, 4-6 April.
- World Bank (1989) *Sub-Saharan Africa:*

- From crisis to sustainable growth*. Washington, DC: World Bank.
- (2001) *The Alleviation of Poverty in China*. Washington, DC: World Bank.
 - (2007) *World Development Report 2008: Agriculture for development*. Washington, DC: World Bank.
 - (2011a) *Rising Global Interest in Farmland: Can it yield sustainable and equitable benefits?* Washington, DC: World Bank.
 - (2011b) *Bridging the Atlantic. Brazil and Sub-Saharan Africa: South-South partnering for growth*. Washington, DC: World Bank.
 - (2011c) *World Development Report 2012: Gender equality and development*. Washington, DC: World Bank, pp. 398, 399.
- World Bank Data (2011) 'Net ODA received (% of GNI)'. <http://data.worldbank.org/indicator/DT.ODA.ODAT.GN.ZS> [accessed 31 January 2013]
- Worldwatch (2011) "Land grabs" in agriculture: fairer deals needed to ensure opportunity for locals'. Worldwatch Institute, 26 July. www.worldwatch.org/node/8674 [accessed 31 January 2013]
- (2012) 'Despite drop from 2009 peak, agricultural land grabs still remain above pre-2005 levels'. Worldwatch Institute, 21 June. www.worldwatch.org/despite-drop-2009-peak-agricultural-land-grabs-still-remain-above-pre-2005-levels-0 [accessed 31 January 2013]
- Xiaoyun, L., W. Haimin and P. Zacchi (2012) *The Decoupling of Economic Growth, Agricultural Growth and Poverty Reduction in Tanzania: Lessons from China*. Working Paper Series No. 4. Beijing: International Poverty Reduction Center in China (IPRCC).
- Yang, Q. (2010) 'Financing and investment in China's agricultural and rural development'. Conference paper for the second event of China-DAC Study Group, Bamako, Mali.
- Yeros, P. (2011) 'Reclaiming Africa: scramble and resistance in the global crisis'. Unpublished concept note.
- You, L., C. Ringler, G. Nelson, U. Wood-Sichra, R. Robertson, S. Wood, Z. Guo, T. Zhu and Y. Sun (2010) *What is the Irrigation Potential for Africa? A combined biophysical and socioeconomic approach*. IFPRI Discussion Paper No. 00993. Washington, DC: International Food Policy Research Institute (IFPRI). www.ifpri.org/sites/default/files/publications/ifpridp00993.pdf [accessed 31 January 2013]
- Zafar, A. (2007) 'The growing relationship between China and Sub-Saharan Africa: macroeconomic, trade, investment, and aid links'. *World Bank Research Observer* 22(1): 103–30.
- Zhang, L., A. de Brauw and S. Rozelle (2004) 'China's rural labor market development and its gender implications'. *China Economic Review* 15(2): 230–47.
- Zhang, X., A. de Haan and S. Fan (2010) 'Introduction: policy reforms as a process of learning'. In Zhang, X., S. Fan and A. de Haan (eds) *Narratives of Chinese Economic Reforms: How does China cross the river?* Singapore: World Scientific Publishing Company.
- Zhu, J. (2010) 'China, Africa forge farming ties'. *China Daily*, 12 August.