Future Agricultures

CBAA Working Paper

Chinese and Brazilian Cooperation with African Agriculture: The Case of Mozambique

Sérgio Chichava, Jimena Duran, Lídia Cabral, Alex Shankland, Lila Buckley, Tang Lixia and Zhang Yue

March 2013

This paper was produced as part of the China and Brazil in African Agriculture (CBAA) Project work stream

China and Brazil in African Agriculture (CBAA) project Working Paper series

The **ESRC (UK Economic and Social Research Council - ES/J018317/)** funded CBAA project is exploring the new development cooperation engagements in agriculture across four African countries. The project is examining the politics of aid and investment policy in China and Brazil, exploring how understandings of agricultural development are translated in aid and investment projects.

The project is being carried out as part of the Future Agricultures Consortium, connecting researchers from institutions in the UK and Africa with colleagues from China and Brazil. The research involves a mapping phase that is generating a geo-referenced database of Chinese and Brazilian agricultural development cooperation projects in Ethiopia, Ghana, Mozambique and Zimbabwe. In addition, in-depth case studies of a sample of these projects, are examining the ways in which experience and expertise from China and Brazil engage with the realities of African agriculture and the perspectives of African scientists and farmers.

Comparative analysis across projects, countries and types of intervention are addressing the question of whether a "new paradigm" of development cooperation is emerging, and assessing the implications for the future of agricultural aid and investment policy.

The CBAA Working Paper series publishes work in progress by CBAA team members. All papers are technical research papers which have been peer reviewed, and are available in open access format. Please consult the project web pages at http://www.future-agricultures.org/research/cbaa or be in touch with the author(s) for further information.

Acknowledgements

The authors would like to thank everyone in Mozambique who generously made time available to share their knowledge and perspectives during the course of this research. We would like to address special thanks to Nei Bitencourt (Brazilian Embassy), Thais Braga (ABC), José Bellini Leite (Embrapa), Shinga Kimura (JICA), Cleber Guarany, Marcos Matos and Ralph Levermann (FGV Projetos), Vicente Adriano and Eugnelio Bouquine (UNAC) and Júlio Pêssego and Abdul Magomba (UNAC-Niassa) for valuable inputs and their willingness to help the researchers. We would also like to thank Carvalho Ecole (IIAM) and Henoque Da Silva (Embrapa) for welcoming us at the Umbeluzi Research Station of IIAM.

We are also grateful to all ARPONE members, RBL staff in Xai-Xai and Wanbao's project leader Mr. Lu and workers who gently accepted to meet us and clarify all our queries about the Chinese rice farm

Summary

Mozambique, a country undergoing important transformations driven by the recent discovery of mineral resources, is one of the top destinations of Chinese and Brazilian cooperation and investment in Africa. It makes, therefore, an interesting case for understanding the nature of the Brazil-Africa and China-Africa encounters, as well as analysing commonalities and differences between these two rising powers in international development. The purpose of this paper is to provide an account of the policies, narratives, operational modalities and underlying motivations of Brazilian and Chinese development cooperation in Mozambique. It is particularly interested in understanding how the engagements are perceived and talked about, what drives them and what formal and informal relations are emerging at the level of particular exchanges. The paper draws on three experiences representing a variety of engagements and suggesting the increasingly blurred motivations shaping cooperation encounters: (i) ProSavana, Brazil's current flagship programme in Mozambique, which aims to transform the country's savannah land spreading along the Nacala corridor, drawing on Brazil's own experience in the Cerrado; (ii) the Chinese Agricultural Technology Demonstration Centre (ATDC) in the outskirts of the Mozambican capital; (iii) a private Chinese rice investment project in the Xai-Xai irrigation scheme, which builds on a technical cooperation initiative. The conclusion discusses the extent to which observed dynamics on the ground suggest the emergence of distinctive patterns of cooperation and identifies issues for further research on Brazilian and Chinese engagements in Mozambique.

Key words: Mozambique, Brazil, China, rising powers, development cooperation, discourse, ProSavana, Chinese Agricultural Technology Demonstration Centre.

Context

1. Introduction

It has become a cliché to say that Brazil and China are rising powers in international development and that debates on development and aid can no longer overlook their roles. Their growing presence and influence in Africa has attracted much attention from the development community, press and social scientists and is leading to a quickly expanding body of literature, most notably on China (Chichava and Alden 2012; Brautigam 2009; Alden 2007). But as with any new topic, there is still much to be learned and analyses on the political economy of China-Africa and Brazil-Africa development encounters are yet to be undertaken in a systematic way, particularly at the level of specific policy domains, such as agriculture. This is the gap the present study aims to start addressing.

This study is part of a larger research project on Chinese and Brazilian engagements with African agriculture, led by a team of researchers from the Future Agricultures Consortium (FAC). The project aims to fill gaps in the literature on the so-called 'rising powers' and discuss the novelty and value added of the approaches used and their implications for African agriculture.

The overarching research question guiding the analysis is whether new paradigms for development cooperation and agricultural development are being forged by the rising powers in Africa. In attempting to answer it, this paper therefore focuses on the particular policy discourses (the ways policies and issues are framed or talked about), imaginaries of agriculture and development (the social constructed visions of modernity and how agriculture should develop) and the interests of actors and networks playing out in the encounters between China and Mozambique and between Brazil and Mozambique. It draws on empirical material collected through participant observation[i] and key informants' interviews undertaken during 2012 in Lichinga, Maputo, Nampula, Umbeluzi and Xai-Xai, and on additional background material collected during scoping research Brazil and China, whose findings are discussed more fully in other papers in this series (Cabral and Shankland 2013; Buckley 2013).

This scoping exercise will be followed by an in-depth enquiry into some of the issues raised by the initial study, including a detailed analysis of ProSavana and its underlying imaginaries of agro-ecological zoning and regional economic development, of Chinese encounters with Mozambican elites and of similarities and differences between Brazilian and Chinese technology development and dissemination models.

This paper is organised into five sections. Following this introduction, Section 2 sets the scene by providing a very brief overview of Mozambique's agricultural policy and aid landscape. Section 3 introduces Brazil and China as development partners and highlights the particular features of the partnership with Mozambique, analysing a selection of ongoing initiatives in some detail. For the Brazil-Mozambique partnership, we look into the case of ProSavana. For the China-Mozambique partnership, we consider the cases of the Agriculture Technology Demonstration Centre at Umbeluzi and the Xai-Xai irrigation scheme. Section 4 discusses Chinese and Brazilian policy discourses, imaginaries of development and underlying political and economic drivers of cooperation, and provides a preliminary comparative perspective on how these two rising powers are perceived by different actors. Section 5 concludes with a proposed agenda for further research.

2. Mozambique's agriculture and aid context: an overview

Since Mozambique's independence in 1975, agriculture has been repeatedly represented by official policy discourse as the backbone of the economy. The sector's economic and political significance is undeniable. Agriculture is the main source of livelihoods for about 80 percent of the active population and its contribution to Gross Domestic Product (23 percent in 2010) remains significant (MINAG 2010: 4), despite the rapid expansion of the mining and energy sectors. Yet, the country's enormous agricultural potential remains largely untapped. Of its 36 million hectares of arable land, distributed across 10 different agro-ecological zones, only 10 percent are farmed and only 50,000 hectares are currently irrigated (60 percent of which in sugar cane plantations) (ibid). The devastating effects of civil war, the poor infrastructural base, low productivity levels, vulnerability to extreme weather events, limited investment and weak institutional capacity are amongst the factors frequently put forward as explanations for disappointing performance. Rosário (2012) emphasises, instead, the political motivations underlying agricultural governance, arguing that private interests and electoral objectives have been the key drivers of policy decisions that have broadly failed to produce developmental outcomes for the majority of the rural population. Despite some stories of success, mostly in cash crop sectors (such as sugar, cashew nuts, tobacco and horticultures), the dominant smallholder sector[ii] remains poor, vulnerable and dependent on subsidised inputs from the state. An official government report, published immediately after the 'hunger riots' that erupted in Maputo in September 2010, stresses that there has not been any positive evolution in poverty since 2003, and that, in some provinces, it has increased, particularly due to the inefficiency of the agricultural sector (MPD 2010). The issue of whether policy should prioritise poor peasant or commercially-viable farming remains highly contested, particularly when associated with the issue of land access, as revealed by the recent protest against the Brazilian- and Japanese-sponsored ProSavana programme by the Mozambican National Peasants' Union (UNAC 2012).

In order to situate the analysis of Brazilian and Chinese engagements in agricultural development in Mozambique it is worth briefly reviewing the country's agricultural policy trajectory and underlying visions of agricultural development, modernization and the roles of peasant and commercial farming.

In the early days of independence and during the period influenced by socialist ideology, cooperatives, state farms and communal villages were at the heart of the rural collectivization policy of the ruling party, Frelimo. These failed however to deliver the envisaged social and economic transformation. At that time, official discourse advocated for special attention to be given to family farming[iii], due to the fact that it employed most Mozambicans and accounted for the bulk of production in agriculture. Nonetheless, and even in its most radical moments of socialist-influenced governance, particularly from 1977 to 1983-1984, Frelimo's agrarian policies seriously neglected the so-called peasant family sector, giving priority to the state farm sector (Castel-Branco 1994; Bowen 1989). According to Castel-Branco (1994), despite the fact that, during that period, the state sector received more than 90 percent of investment and technical assistance, it failed to produce tangible results.

At the time, Frelimo was strongly guided by the idea of modernising the country, where modernisation was framed as building the 'new man' who spoke Portuguese and believed in science, rather than superstition (Geffray 1988: 76-78). For agriculture this vision translated as a highly intensive and mechanized sector, neglecting the family farming sector which was expected to be absorbed by the state and modern sector.

The prolonged Mozambican civil war (1976-1992) had a devastating effect in the agricultural economy, destroying the transport network, agro-processing structures and relocating the rural population across the country. The state of calamity, coupled with the collapse of the 'socialist' ideal and the change in leadership in Mozambique, opened the ground for the adoption of structural adjustment policies. Towards the end of the 1980s, a new period began, characterized by a combination of, on the one hand, policies and reforms informed by neo-liberal ideas sponsored by the Bretton Woods institutions and many other development agencies (such as withdrawal of the state from production and marketing, privatisation of state enterprises, streamlining of public institutions) and, on the other hand, the persistence of socialist visions of the state, agriculture and the economy more broadly. The difficulty of producing clear coherent policies (as noted by De Renzio and Hanlon, 2007) could be argued to reflect the medley of perspectives and the failure to bring points of underlying tension (such as on land, and the issue of establishing a market for land titles) to the fore.

After the end of the civil war in 1992, humanitarian and development assistance flooded the country and Mozambique would eventually emerge, towards the end of the 1990s, as Africa's largest single recipient of foreign aid (Batley 2005). The proliferation of aid agencies in agriculture, as well as in other sectors, quickly led to coordination problems. At the policy level, the failure to coordinate donor agendas coupled with the absence of clear policy direction from government led to the accumulation of (not always coherent) agricultural policies and strategies. Since the end of the 1990s, the most important official policy instruments have included the National Agriculture Development Programme (PROAGRI)[iv], the Action Plan for Food Production (PAPA), the Rural Development Strategy, the Green Revolution Strategy, the Biofuels Strategy and most recently the Strategic Plan for the Development of the Agricultural Sector (PEDSA).

Attempts to address aid (and therefore governance) coordination difficulties failed to see the political nature of the problem, which was underpinned by fundamental differences with regards to roles of the state and priorities for agricultural development. Instead, lack of coordination has been treated as a technocratic failure, as reflected by the establishment of coordination fora at sectoral (for agriculture as well as other sectors) and macro levels (at the macro level, the G19 was established to coordinate the group of development agencies providing general budget support to the government, which in 2013 accounted for around 30 percent of the state budget), making little difference to actual sector performance or indeed poverty reduction (MPD 2010; Cabral et al. 2007).

In recent years, poor coordination and unclear policy direction have been exacerbated by high institutional instability; between 2005 and 2010, under Armando Guebuza's administration, the Ministry of Agriculture had four different ministers.[v] Such instability may be read as simply the reflection of the complex political economy of agriculture, discussed by Rosário (2012).

The government's strategy for the sector is likely to remain ill-defined but there are some new trends in agricultural political dynamics and discourse that are worth highlighting for a better understanding of the context in which engagements with Brazil and China are unfolding.

One trend is the widespread frustration with the failure of the large donor-sponsored sector programme, PROAGRI, to produce any tangible results and, as result, the erosion of the donor-government coordination and donor harmonisation ideals behind such experiment and the increasing attraction of alternative forms of development cooperation, such as the ones Brazil and China claim to offer.

Another noticeable trend is the growing emphasis on the private sector and the need to attract foreign investment. Such emphasis is not totally new, as private sector development has been a constant element of official discourse in agriculture, by either government or donors, since the days of structural adjustment. Indeed, over the years, there has been a succession of donor-sponsored programmes and projects aiming to create enabling conditions for private-sector investment to emerge, although success has been limited – private investment in the sector remains low and is mostly of foreign origin.[vi] What is new is the central role attributed to the private sector in operationalising public policy. PEDSA, for example, puts agribusinesses and public-private partnerships at the core of its implementation strategy – guiding principles for the strategy include following a value chain perspective with an agribusiness

model and establishment of public-private partnerships to reduce costs and improve efficiency across value-chains (MINAG 2010: 32-33). This stands in stark contrast with PROAGRI's state- and public service-centric perspective. Furthermore, a number of fiscal policy measures have recently been introduced to attract investments into the sector, including, inter alia, an exemption from payment of Value Added Tax on goods and internal transmission services within the farming, forestry and animal husbandry, including farm inputs and equipment (Hamela 2007).

A third trend is a renewed emphasis on technological modernization of agriculture and the development of research oriented to the commercial sector. Again the focus on technology is not new. Over the years, many donors supported the institutional strengthening of Mozambique's deprived research and extension systems. But the reality is that low technological development and poor access to extension continue to feature amongst the main reasons for low agricultural productivity records in Mozambique, particularly for the so-called family sector. According to the Ministry of Planning and Development, 'between 2002 and 2008, the proportion of households receiving extension decreased from 13.5 percent to 8.3 percent. Likewise, the use of pesticides decreased from 6.8 percent to 3.8 percent' (MPD 2010: 50).[vii] What is new is an explicit redirection of focus towards the commercial sector. The Director of the Mozambican Institute for Agrarian Research (IIAM), Mr. Domingos Dias, recently commented in the press: 'Since the decline of agricultural production, agrarian research in Mozambique remained focused on the family sector. This was the priority as this sector comprised, and still does, the majority of producers in the sector, yet such approach does not increase sufficiently quickly production and productivity (…) there is a need to redirect agrarian research towards commercial agriculture' (Diário do País 2012: 4-5).

The arrival of Brazilian and Chinese cooperation in agriculture has therefore been very welcome in a context of low levels of private investment, underdeveloped agricultural technology and widespread fatigue towards the complex rules imposed by traditional development partners and loss of faith in their actual impact. There is currently a great deal of speculation around what these new partners can bring to the Mozambican development process and its agriculture sector in particular. The remainder of this paper attempts to characterise emerging patterns concerning Brazilian and Chinese development cooperation in agriculture and deconstruct misconceptions and (positive and negative) myths about their practices.

3. The rising powers in Mozambique

3.1. Brazil

3.1.1 Brazilian development cooperation

Brazil has recently emerged as an international development partner, with widespread recognition of its own development achievements and its potential contributions to other countries' development processes. Over the last couple of decades, Brazil has made significant inroads across a range of policy domains, from macroeconomic management, publicly funded scientific research (particularly in tropical agriculture and health), social policy and participatory governance. Its claimed successes are now being packaged as examples that other developing countries can replicate, with direct assistance from the Brazilian civil service, under the label of South-South cooperation.

It has been since the administration of former president Luiz Inácio Lula da Silva[viii] that development cooperation has become a central instrument of Brazil's foreign policy. From the start, Africa has taken centre stage in Lula's 'Presidential diplomacy', for reasons related to both the geopolitical and economic agendas (Matos 2011).

Brazil's South-South cooperation is claimed to be shaped by the principles of solidarity, non-interference and demand-driven action. Affinities with Africa (history, agroecology, epidemiology and, in some cases, language) are often said to make Brazilian technology and expertise particularly suitable and easy to transfer to the African context. And the horizontal character of the engagement is presented as an alternative to the vertical interaction between Northern donors and developing countries.

Diplomacy is the main entry point for cooperation relations. Its operational arm is the Brazilian Cooperation Agency (ABC), a department of the Ministry of Foreign Affairs tasked with the coordination of technical cooperation activities. The delivery of expertise and technology as such is done by specialised institutions, which are mostly, but not exclusively, governmental. In the agricultural domain there are more than 20 active institutions directly involved in the operationalisation of technical cooperation projects in Africa (Cabral and Shankland 2013).

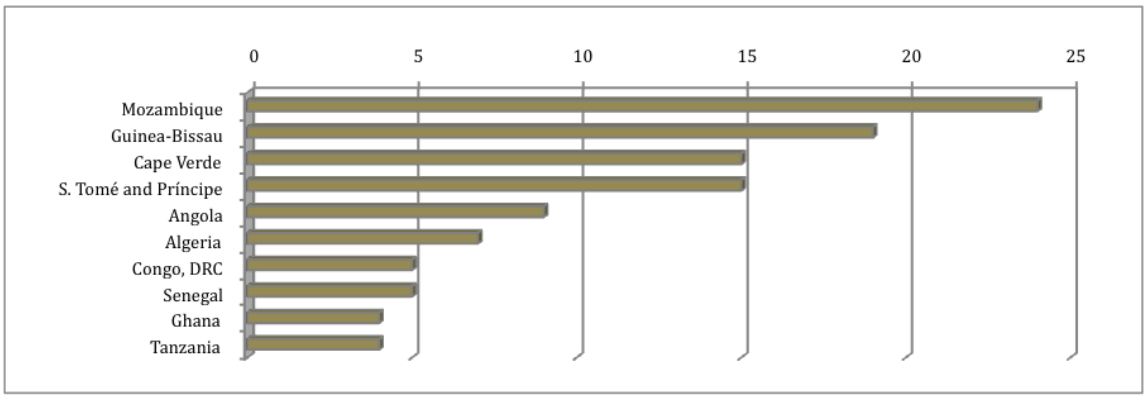
3.1.2 Brazil-Mozambique partnerships for agricultural development

Overview of the Brazil-Mozambique partnership

Mozambique occupies a prominent position in Africa-Brazil relations, which stems from a combination of historical affinities, common language, diplomatic bonds and, increasingly, business opportunities. The relationship between the two countries intensified in recent years, driven by President Lula da Silva's vigorous 'presidential diplomacy' toward Africa (Matos 2011). Mozambique was one of the African countries most frequently visited by the former president of Brazil and his foreign minister. It was also one of the three countries visited by President Dilma Rousseff in her first, and thus far only, visit to Africa in 2011. It is, unsurprisingly, the top beneficiary of Brazilian technical cooperation programme in Africa (Figure 1). At the end of 2011, Brazil's technical cooperation portfolio in Mozambique comprised 21 active projects, with 9 new projects in the process of negotiation.[ix] Agriculture, education and health are the main areas of focus, taking the number of active projects as the measurement criteria (ABC 2010a). Although disaggregated country data on inter-sectoral resource allocation is not yet readily available, Mozambique is likely to display a similar pattern to that found for Africa as a whole (Figure 2).

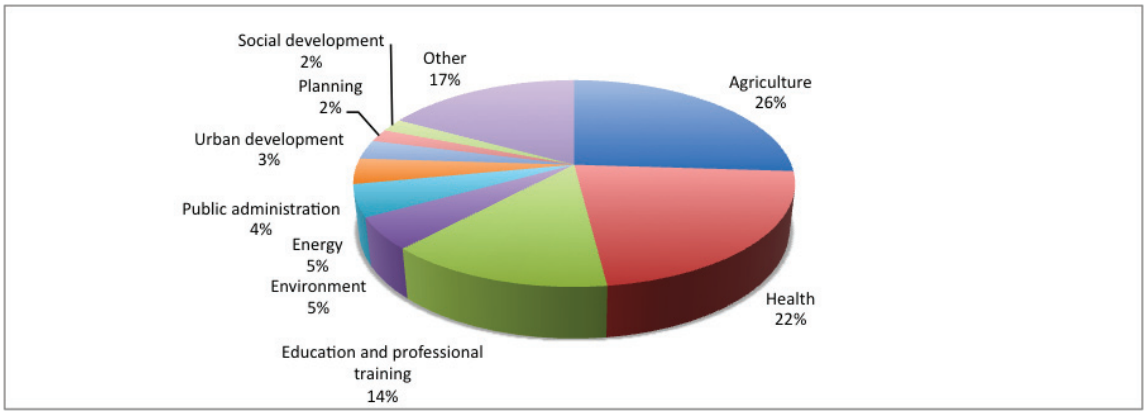
Apart from technical cooperation, Mozambique is also an increasingly important destination for Brazilian private capital, particularly in the mining and construction sectors (Figure 3). Vale, the second largest mining company in the world, has a coal-mining concession at Moatize, Tete Province, and has recently been the focus of attention due to a controversial population relocation away from the mining site. Camargo Correa, Odebrecht and Andrade Gutierrez are also significant presences, holding contracts for the construction of large mining, energy, roads and airport infrastructure. Brazil's National Economic and Social Development Bank (BNDES) has been playing a central role in expanding Brazilian businesses and promoting Brazilian exports in Africa (Cindes 2011). Trade between Brazil and Mozambique has, as result, been displaying an increasingly dynamic upward trend.[x]

Figure 1: Top ten beneficiaries of Brazilian technical cooperation in Africa, number of projects in implementation in 2011



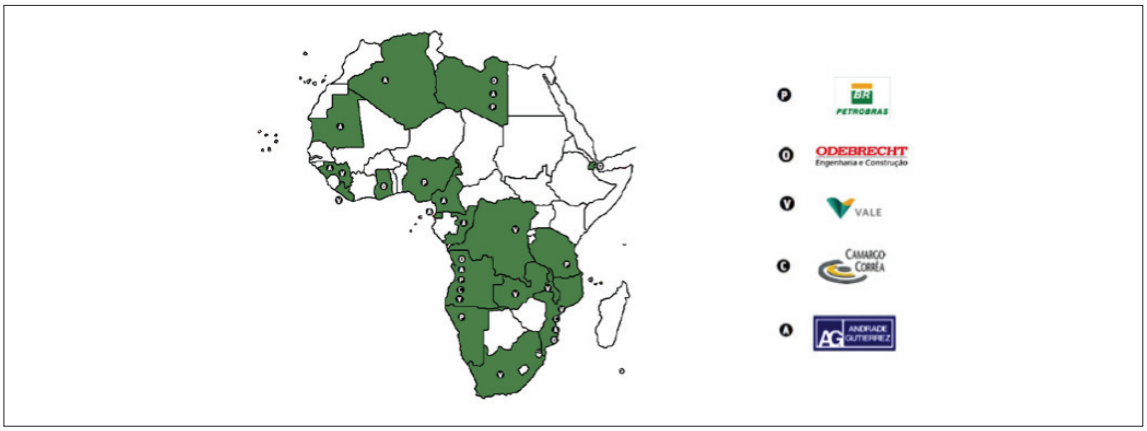
Source: Cabral and Shankland (2013), drawing on ABC (2011).

Figure 2: Brazilian technical cooperation in Africa, sectoral distribution of resources in 2003-10



Source: Cabral and Shankland (2013), drawing on ABC (2011).

Figure 3: Large Brazilian corporations in Africa, 2011



Source: Presentation by Head of Africa Department, Ministry of Foreign Affairs, at CEBRI-CINDES seminar "África na agenda econômica do Brasil". Rio de Janeiro, November 2011. http://www.cebri.org/midia/documentos/nedilsonjorge.pdf

Technical cooperation in agriculture – overview, trends and issues for investigation

As noted, agriculture is a major area of Brazilian cooperation in Mozambique. A sign of this is the creation by ABC of a Maputo-based coordinator post to oversee all agriculture-related projects in the country, a pilot initiative for Brazilian cooperation more generally (see also section 3.1.3). Mozambique also hosts the largest number of researchers from the Brazilian Agricultural Research Corporation (Embrapa) in Africa and the corporation has appointed a general coordinator based in the country to oversee Embrapa-led projects. The Embrapa contingent is hosted by the Mozambican Institute for Agrarian Research (IIAM), an institution subordinated to the Ministry of Agriculture (MINAG) and Brazil's main Mozambican counterpart for agriculture-related projects. Embrapa has been actively involved in strengthening IIAM's capacity, through a variety of cooperation initiatives, and it is not surprising that IIAM looks up to Embrapa as a model of inspiration.

Table 1 summarises all agricultural development cooperation activities identified by the study. A number of trends are noticeable regarding this portfolio. Unsurprisingly, Embrapa is the dominant Brazilian cooperating institution, with several of its research units involved in project implementation. Other Brazilian institutions have recently joining the agricultural cooperation domain, including government agencies, such as the Ministry of Agrarian Development (MDA), the Ministry of Social Development (MDS), and the General Secretariat of the Presidency, as well as Brazilian social movements, such as the Popular Peasant Movement and the Peasant Women's Movement. Whether the involvement of these other agencies will become a feature of Brazilian cooperation in agriculture and, if so, how that may shape Brazil's approach to agricultural development in Africa, are questions to be explored in future research.

Another trend concerns the move from one-off training initiatives towards programmes with a longer timeframe and a more systemic approach to capacity building, the so-called 'structural cooperation' programmes. The largest of this type at the moment in agriculture is ProSavana, a programme that has been subject to much attention and controversy in recent months and that was was selected as case-study for detailed investigation by the present study (see section 3.1.3).

Linked to the above, the transfer into Africa of Brazil's own agricultural policies, or elements of those policies, is an additional noticeable trend. ProSavana, More Food Africa and the Food Acquisition Programme are all examples of cooperation programmes aiming to reproduce in Africa Brazil's own policy experiments with agricultural development, for which claims of domestic success have been made. It needs to be established whether the selection of these particular experiences complies with the demand-driven principle of Brazilian cooperation – it is striking, for example, that the idea for ProSavana did not originate inside of Mozambique but emerged at an international forum, as part of a discussion between Brazil and Japan.[xi]

A further trend is the establishment of triangular cooperation arrangements, whereby Brazil works alongside traditional donors in providing cooperation to Mozambique. The Japanese Development Cooperation Agency (JICA) and the United States Agency for International Development (USAID) are thus far Brazil's main trilateral cooperation partners for agricultural projects in Mozambique. The UN's World Food Programme and Food and Agriculture Organization are also expected to be partnering with Brazil in the multi-country Food Acquisition Programme, although there is currently limited available information about this. Furthermore, it is worth noting discussions Brazil has had with the World Bank (Brasília office) and the European Commission (Headquarters) on possible joint initiatives. In addition to creating a platform for synergies in technical expertise, trilateral cooperation also allows Brazilian technical cooperation to be complemented by financial cooperation provided by traditional donors. The

implications that trilateral cooperation will have for Brazil's stated development cooperation principles, as well as the compromises that may arise from such arrangements, is something to be explored in further research.

Brazil is also starting to offer mixed-modality arrangements under the same bilateral cooperation project. In agriculture, the More Food Africa programme provides an example of this. It combines technical cooperation with a concessional loan to assist Mozambican farmers to buy agricultural machinery and equipment (expected to be mostly tractors) from Brazilian suppliers (Cabral and Shankland 2013).

Finally, another noticeable trend is the gradual permeation of private interests and capital into development cooperation initiatives in the agricultural sector. As noted above, More Food Africa is an example of this. The creation of the Nacala Fund (discussed in

Table 1: Agricultural development cooperation projects in Mozambique

Project name	Focus	Project type	Leading Mozambican institutions	Leading Brazilian technical institutions	Bilateral or trilateral	Status	Source
II International Course on the Sustainable Horticulture Production	Training of technicians from PALOP countries (course delivered in Brazil)	Training	IIAM/MINAG	Embrapa Hortaliças	Bilateral	Concluded (2007-08)	ABC website [xii]
International Course on Cassava Production and Processing	Training of technicians from PALOP countries and East Timor on cassava production and processing (course delivered in Brazil)	Training	IIAM/MINAG	Embrapa (Centro Nacional de Pesquisa Mandioca e Fruticultura)	Trilateral (with JICA)	Concluded (November 2007)	ABC website
IV International Course on Tropical Fruits	Training of 12 technicians from PALOP countries and East Timor (course delivered in Brazil)	Training	IIAM/MINAG	Embrapa (Centro Nacional de Pesquisa Mandioca e Fruticultura)	Bilateral	Concluded (November 2008)	ABC website
Support to the development of Horticultures	Training of technicians for the establishment of a research programme for the improvement the genetic material of fruits and vegetables	Training	IIAM/MINAG	Embrapa Hortaliças	Bilateral	Concluded (2007-08)	ABC website
Technical capacity building on conservation agriculture	Training of 15 Mozambican technicians	Training	IIAM/MINAG	Embrapa Cerrados	Trilateral (with CIRAD, France)	Ongoing?	ABC catalogue 2010
Plataforma	Strengthening agriculture and livestock research institutions and systems	Technical cooperation	IIAM/MINAG	Embrapa	Trilateral (with USAID)	Ongoing	ABC catalogue 2010
ProSavana	Agricultural research and extension programme, with local development component, focused on Nacala corridor. Strong focus on improving institutional capacity of IIAM	Technical cooperation	IIAM/MINAG Provincial Directorates of Agriculture in Nampula and Niassa provinces	Embrapa (various units) EMATER SENAR	Trilateral (with JICA)	Ongoing	ABC catalogue 2010
ProAlimentos	Capacity building and adaptive research project focused on horticultures, with local market development components, aiming to address nutrition and food security objectives in the Maputo greenbelt	Technical cooperation	IIAM/MINAG	Embrapa	Trilateral (with USAID)	Ongoing	Authors' fieldwork

Table 1 (cont): Agricultural development cooperation projects in Mozambique

Project name	Focus	Project type	Leading Mozambican institutions	Leading Brazilian technical institutions	Bilateral or trilateral	Status	Source
Community native seeds banks (also in implementation in South Africa)	Provide farmers, technicians and community leaders with training in procedures for rescuing, multiplying, storing and using native seeds, with aim of promoting development of small scale farming in sustainable manner	Technical cooperation	National Directorate of Agricultural Extension, MINAG Ministry of Planning and Development National Farmers Union (UNAC?)	General Secretariat of the Presidency Brazilian Institute for Social and Economic Analyses (IBASE) Popular Peasant Movement Women Peasants Movement – Movimento das Mulheres Camponesas (MMC)	Bilateral	Ongoing (2011-14)	ABC website
More Food Africa (also launched in Ghana, Zimbabwe, Senegal and Kenya)	Adapts similar programme in operation within Brazil. Combines (i) concessional credit facility to support African farmers buying Brazilian agricultural machinery and equipment with (ii) technical assistance component. It aims to improve productivity of small farms	Technical cooperation with concessional loan (mixed modality)	MINAG or MPD?	Ministry of Agrarian Development (MDA)	Bilateral	Ongoing (2011-2013)	ABC website
Food Acquisition Programme (also launched in Ethiopia, Malawi, Nigeria and Senegal)	Adapts similar programme in operation within Brazil, aiming to address food insecurity and strengthen local food markets	Technical cooperation	Ministry of Education or Ministry of Women and Social Affairs?	MDA and Ministry of Social Development	Trilateral (with WFO and FAO)	Launched	Press[xiii]
Africa-Brazil Agricultural Innovation Marketplace	Fostering knowledge sharing for integrated natural resource management in agricultural landscapes of Southern Africa	Scientific cooperation	International Centre for Research in Agro-Forestry (ICRAF) – CGIAR on behalf of ?	Embrapa Solos	Trilateral or plurilateral? (with FARA, World Bank, DFID, IFAD, Gates Foundation, etc.)	Approved	Africa-Brazil Agricultural Innovation Marketplace website[xiv]

section 3.1.3 below), which seeks to mobilise Brazilian and Japanese capital into the region that ProSavana is targeting, is another manifestation of the trend. ProSavana itself is targeting a region whose principal strategic economic importance is as an export corridor for the output of Brazilian mining operations in landlocked Tete Province. Beyond these initial elements, the full extent to which business drivers are coming to the fore and influencing the future shape of Brazilian development cooperation is an issue to be explored in further research.

3.1.3 The case of ProSavana

Overview

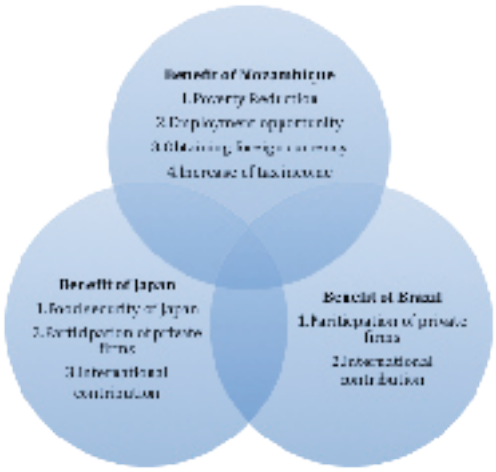
ProSavana is perhaps the most ambitious and high-profile initiative in the recent history of Brazil's

international cooperation for development in Africa. The programme has been described by the media as an example of 'Brazil's neo-colonialism in Africa' (Rafael 2011) and of how Mozambique is in line to become 'Brazil's new agricultural frontier' (Folha de São Paulo 2011). In fact, ProSavana is expected to cover 14 million hectares of land along the Nacala corridor, an area spreading across three provinces of northern Mozambique (Niassa, Nampula and Zambézia), to reshape the region's economic landscape and transform it into a highly productive agriculture zone addressing food security issues.[xv] Within this large region, provincial government representatives from Niassa and Nampula, meeting in Brasília with their Brazilian counterparts, initially designated Ribauê and Malema in Nampula and Mandimba and Cuamba in Niassa as priority districts, on the basis of their strategic economic position (ABC/Embrapa 2011). However, the initial focal area was subsequently expanded to incorporate regions that were considered more suitable for the application of Brazilian agricultural techniques, especially for soybean cultivation[xvi].

The ProSavana initiative is inspired by the development experience of the Brazilian tropical savannah (known as Cerrado), accomplished through Prodecer, a 30-year cooperation programme between Japan and Brazil. This programme is credited with transforming the Cerrado into one of the most productive regions in the country, and for turning Brazil into a leading global producer of soybeans (Hosono and Hongo 2012).

ProSavana is being implemented through a triangular partnership between Japan, Brazil and Mozambique. The bilateral partnership between Japan and Brazil to collaborate in international development was initially established between Japanese Prime Minister Taro Aso and Brazilian President Lula da Silva at the L'Aquila G8 meeting in July 2009, as part of the Global L'Aquila Food Security Initiative. Mozambique was subsequently identified as the third party and beneficiary of the Japan-Brazil partnership. The Memorandum of Understanding for ProSavana was officially signed by Brazil, Japan and Mozambique in September 2009.

Figure 4: Brazil-Japan-Mozambique partnership: a 'win-win-win' perspective



Source: JICA (2011).

As a trilateral programme, ProSavana is justified as 'win-win-win' cooperation initiative (JICA & Oriental Consultants 2011) with the distribution of benefits specified in Figure 4.

As an agricultural development initiative, ProSavana envisages supporting both commercial and subsistence agriculture production systems, of large and small scale, largely through research and extension, drawing on Brazil and Japan's experiences and technologies. The programme has three main components (Embrapa 2012): (i) improvement of research and extension capabilities for the agricultural development of the Nacala Corridor, focusing particularly on strengthening the institutional capacity of IIAM; (ii) implementation of pilot productive projects for small and commercial growers; and (iii) design of an integrated agro-industrial master plan for the development of the Nacala corridor, looking not only at agricultural production and productivity, but also at broader regional development issues, such as infrastructure and markets. It is this latter component that is linked to the dimension of 'Participation of private firms' identified as an area of benefit in the JICA framing presented in Figure 4, by laying the groundwork for Brazilian and Japanese private investment in agriculture in the region – though ProSavana itself does not include any such investments. Implementation of the programme started in 2011; the overall timeframe is at least 20 years, with startup of the different components staggered over the period between 2011 and 2013. The first component, focused on strengthening local research capacity, is described in Embrapa's official documentation as the 'absolute priority' for the initial phase (ibid: 11).

Institutional set up

The leading institutions managing ProSavana are IIAM, on the Mozambican government side, Embrapa and ABC, on the Brazilian side, and JICA, on the Japanese side. The central coordination of ProSavana is the responsibility of the Joint Coordination Committee, a high-level decision-making body where all three parties are represented. The triangular cooperation model for development assistance is a relatively recent innovation. Although Brazil and Japan have worked together on various triangular development cooperation projects since 2000, the modalities are still evolving (Abdenur 2007). ProSavana is the first time that Japan and Brazil have collaborated with Mozambique in this way, bringing together different types of organization. In this sense, the systems and procedures implemented for the development of ProSavana are pilot experiences, which could potentially have a strong impact on Brazil's still-emerging international cooperation frameworks.

Brazil's representation in the country has been considerably strengthened with this particular programme. Embrapa now has an office in Maputo, and ABC has, since July 2012, established a representation function with responsibility for managing ProSavana and other agricultural cooperation projects on ABC's behalf.

The latter is a pilot experience, as it is the first time ABC has established formal representation in Africa. The ABC representative is hosted by IIAM in its headquarters in Maputo, in an office shared with the JICA representative for ProSavana and the programme's Mozambican director, while Embrapa's Mozambique director is housed in another office in the same building. When interviewed during fieldwork for this study, the ABC representative summarised her role as follows: 'I'm here to coordinate the triangular programmes in agriculture (ProAlimentos, Plataforma and ProSavana) but 90 percent of my time is dedicated to ProSavana. The opening of a representation in Mozambique addresses a demand and a particular moment of ProSavana.'[xvii]

For operational purposes, ProSavana's components have been turned into individual projects, each of which has its own institutional arrangements. The projects are: *ProSavana-Projecto de Investigação* (ProSavana-PI), ProSavana-Plano Director (ProSavana-PD) and *ProSavana-Projecto de Extensão* (ProSavana-PE).

ProSavana-PI (initially known as ProSavana-TEC) was the first to be established. Its implementation started in 2011 and it is due to run for an initial period of five years. Its main aims include reinforcing IIAM's research and institutional capacities, conducting agricultural research and establishing productive agricultural systems. Its specific objectives are described as follows: (i) strengthening the operational and research capacity of the IIAM centres in Nampula and Lichinga, (ii) assessing socioeconomic conditions and developing methods and criteria for assessing social and environmental impacts resulting from the use of new technologies, (iii) identifying the natural resource base for agriculture and providing technologies for its sustainable use, (iv) delivering effective technology solutions for agriculture and livestock production ,and (v) working with local communities of producers to develop and validate agricultural technologies at agricultural demonstration units in selected areas. Priority crops were chosen by the Mozambican government in collaboration with teams from Brazil and Japan and include: peanuts, cassava, cotton, rice, beans, cowpea, potatoes, corn, sorghum, soybean and wheat. The research guidelines for work on these crops focus on developing recommendations for the use of fertilizers, drought and irrigation tolerance, value chains, postharvest technology, validation of production systems, microorganisms, varieties of mulch, management techniques, conservation agriculture and soil correction and pest and disease monitoring (ABC/Embrapa 2011).

In line with Embrapa's role as the main implementing agency for this particular project, one of its researchers has been posted at the provincial office of IIAM in Nampula to act as the focal person for ProSavana in the region. Embrapa had also intended to place one of its researchers at the Lichinga office of IIAM (in Niassa province), but ended up hiring someone local who had studied in Brazil and had the advantages of having a good knowledge of the region and speaking one of the local languages (Macua).[xviii] On the Japanese side, a team comprising representatives from JICA, JIRCAS (Japan International Research Center for Agriculture Sciences)[xix] and NTC International (a Japanese consultancy firm), has been in place in Nampula since 2011, based at IIAM and the Provincial Directorate of Agriculture (DPA). On the Mozambican government side, IIAM's Lichinga and Nampula offices have each appointed a focal person for ProSavana-PI. Their capacity to respond to the project's demands is, however, limited, as noted by the focal person at IIAM-Nampula: 'the regional administrations have the responsibility to ensure the availability of equipment and resources for ProSavana, but it's a delicate subject because if we make available all the human resources needed, we will end up working exclusively for ProSavana'.[xx]

A Joint Technical Committee has been established specifically for ProSavana-PI. According to JICA's focal person for ProSavana-PI, this was a Brazilian demand intended to enable Embrapa to participate: 'JICA is independent to manage its budget. Embrapa is not, it is an execution agency that depends on ABC. For this reason, implementation and coordination are different spheres on the Brazilian side. So, they asked to have two different coordination committees: one Technical Committee where Embrapa participates, with JICA and MINAG, and one Joint Coordination Committee where JICA, ABC and MINAG participate, for top-level decision making.'[xxi]

ProSavana-PD was launched in 2012, with the aim of producing a master plan for the region. This has led to the creation of new institutional arrangements and structures, especially the subcontracting of Getúlio Vargas Projects (FGV-Projetos), the consultancy arm of a well-known business school, the Getúlio Vargas Foundation (FGV), as an implementation agent. For the moment, FGV is not considering establishing a base in Maputo, and the development of the Master Plan is coordinated by a Brazil-based FGV agronomist, who makes frequent visits to Nampula and Lichinga. On the Japanese side, Oriental Consultants, a Tokyo-based consultancy firm, is in charge of this project.

ProSavana-PE will be launched in 2013. Its institutional arrangements are still being designed and, as part of this process, fact-finding missions from the Brazilian Association of State Agricultural Extension Bodies (*Associação Brasileira das Entidades Estaduais de Assistência Técnica e Extensão Rural*, ASBRAER) and the National Rural Training Service (*Serviço Nacional de Aprendizagem Rural, SENAR*) have already taken place.

Initial developments

One of the components of ProSavana-PI is the strengthening of the regional IIAM centres in Nampula and Lichinga, principally via the construction of laboratories at each agricultural research station and the training of human resources (ABC/Embrapa 2011). It has been agreed that Japan will build the Nampula laboratory and that Brazil will build the one in Lichinga, but the specifications of the laboratories have to be established jointly. It appears that there have been some difficulties

in coordinating action in this component. Since January 2012 there have been several missions from Embrapa for this purpose. But, according to JICA's Agriculture Portfolio Coordinator in Maputo, while JICA is ready to start building the Nampula laboratory there are delays on the Brazilian side, possibly reflecting uncertainty over resource availability given that recent cuts to ABC's budget could affect Brazil's capacity to take the project forward.[xxii]

The implementation of ProSavana-PI and ProSavana-PD has been accompanied by parallel developments concerning private-sector engagement in the region, in response to the business opportunities opened up by the programme. Since the launch of ProSavana, different promotional activities have taken place in Brazil, Japan and Mozambique to present the programme to the private sector, other cooperation agencies and stakeholders. An example of these is the event that took place in April 2011 in Brazil on 'Agribusiness in Mozambique: International Cooperation Brazil-Japan and the Investment Opportunities'. Among the participants were the Director of ABC, the Brazilian Minister of Agriculture, the USAID representative in Brazil, the JICA representative and the Mozambican Minister of Agriculture. One of the sessions at the event focused on the internationalization of Brazilian agribusiness and was led by the President of the Brazilian Confederation for Agriculture and Livestock (CNA), Senator Katia Abreu, and the President of the Higher Council of Agribusiness (COSAG) from the São Paulo State Federation of Industries (FIESP). Brazilian and Japanese entrepreneurs were also present, including Mitsubishi Co. (Loureiro 2012). Another event on 'Investment Opportunities in Mozambican Agribusiness' was held at the Federation of Agriculture and Livestock of Mato Grosso (FARMATO) in Cuiabá, organized by the Mato Grosso Association of Cotton Producers (AMPA), ABC and the Brazilian Ministry of Foreign Affairs (AMPA 2011).

Following these business promotion activities, more than 100 Brazilian farmers, especially from the Brazilian state of Mato Grosso, are reported by key informants to have visited Mozambique. In 2010, Senator Katia Abreu led a visit to Mozambique in her capacity as president of the CNA.[xxiii] According to the FGV Projetos ProSavana coordinator, Brazilian farmers are keen to come to Mozambique because of the low cost of land as compared to Brazil, the incentives offered by the Brazilian government within ProSavana, the opportunities offered by the Nacala Fund (discussed below) and Mozambique's location with its easy access to Asian markets. The head of AMPA has also referred to the lack of stringent environmental regulations in Mozambique (by comparison with Brazil) as an incentive to invest there (Folha de São Paulo 2011). The Mozambican government's Centre for the Promotion of Agriculture (CEPAGRI) notes that, currently, there are no confirmed Brazilian investments in agriculture but expects that, with the development of ProSavana, such investments will soon flow in and the interest that has already been expressed by Brazilian farmers visiting the country will take more concrete shape. Whether or not a wave of exclusively Brazilian land deals is imminent, Brazilian managers are already a feature of Zimbabwean and Mozambican-owned commercial farms in the Nacala Corridor region, and Brazilian investors have begun to form joint ventures with Mozambican and Portuguese agribusiness concerns like Agromoz, which recently began soybean, cotton and maize operations in Gurué District of Zambézia.[xxiv]

FGV's presence in Mozambique started in 2012 and has two aspects. One concerns its involvement in ProSavana-PD, through the subcontracting of FGV-Projetos to represent the Brazilian side and perform the required tasks. The other is the launch of the Nacala Fund, a private fund aiming to mobilise capital in Brazil and Japan to support agribusiness projects along the Nacala corridor.[xxv] The Fund is expected to mobilise around USD$ 2 billion, in Brazil and Japan, and support: (i) large-scale production systems through the creation of associations led by Brazilian farmers, who will work with Mozambican farmers to transfer expertise and strengthen capacity; and (ii) integrating smallholders into value chains (the mechanism for which has yet to be defined).[xxvi] It was launched in July 2012 at high-profile events in Brasília and Maputo which had significant Brazilian and Mozambican government participation, despite its ostensibly private-sector identity. The Fund has already received expressions of interest from major Brazilian and Japanese conglomerates, such as Votorantim and Sumitomo, and is currently being promoted through a series of road-shows with the aim of being fully-subscribed by the time the ProSavana Master Plan is due to be delivered in July 2013.[xxvii]

The Master Plan is expected to include: (i) proposals for agricultural development projects in the corridor; (ii) proposals for management structures to support the corridor's development; and (iii) proposals for quick impact projects.[xxviii] The latter should consist of pilot initiatives focusing on small-scale agribusinesses.

The Fund for ProSavana's Development Initiative (*Fundo para a Iniciativa de Desenvolvimento ProSavana*) was set up in September 2012 in Nampula, as a bilateral initiative between Mozambique and Japan, to support different pilot models for the integration of smallholders into selected value chains. Like the Nacala Fund, this is a parallel initiative that is not formally part of ProSavana. It was originally conceptualised as being part of the programme but, according to one JICA official, ABC decided to withdraw because it did not consider it to be sufficiently 'horizontal' in its scope for ABC participation in the definition of the initiative. It is unclear to what extent ABC's institutional and budgetary constraints (including legal restrictions on Brazil's ability to transfer cash overseas as aid, as opposed to providing technical assistance) also played a role in this decision. An initial budget of USD 750,000 (Savana 2012) and a first credit package of MZN 11.5 million (about USD 390,000) have already been approved to fund the activities of several companies operating in the Nacala corridor: Lozane Farms (in Alto-Molócuè district), IKURU (in Monapo and Mogovolas), Orwera Seed Company (in Mogovolas and Murrupula), Matharia Empreendimentos (in Ribaué) and

Santos Agricola (in Meconta) (ibid). Loans to these companies will be offered at an interest rate of no more than 10 percent and they have to commit to integrate smallholders through contract farming and not as waged labourers. Besides the loan, these companies will benefit from technical assistance from MINAG, JICA and GAPI-SI, a Mozambican financial institution supporting business development (Notícias 2012).

Emerging local expectations and perceptions

ProSavana, Brazil's most ambitious agricultural development programme in Africa, has been both praised and strongly criticized in Mozambique. ProSavana's perceived importance for Mozambican government actors is evidenced by the fact that it has attracted several senior MINAG officials – the programme's director is the former director of IIAM, and the former director of MINAG's International Cooperation Department has been hired as an adviser. The Mozambican elites and government officials look forward to replicating the Cerrado experience, as well as emulating Embrapa's role as a world leading agricultural research corporation. They are also compelled by the prospective inflow of private investment and the modernization of agriculture, both because it is seen as representing the fulfilment of the modernisation discourse discussed in section 2 above, and because of the opportunities for individual as well as collective economic benefit. One Mozambican journalist has argued that ProSavana's appeal is that it serves the private interests of members of the ruling party (Mabunda 2012).

ProSavana's combination of technology transfer and private capital is contrasted with traditional donor-funded projects where private capital mobilisation is often not sufficiently taken into account. When asked about the major advantage of having Brazil as a development partner in agriculture, government officials' answers often include: (i) an allusion to Brazil's modernization of agriculture and the 'tropicalisation' of soybean that transformed the Cerrado into one of the most productive regions in Brazil; (ii) the recognition of Brazilian technology and know-how, particularly of Embrapa; and (iii) the cultural and language affinities which make the technology transfer easier.

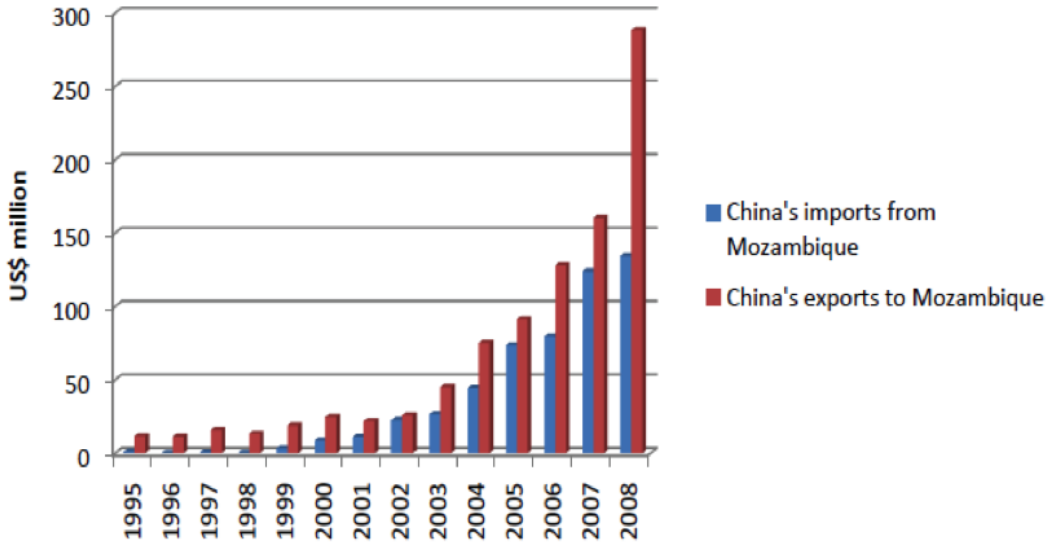
Civil society has, on the other hand, voiced concerns about ProSavana's potential negative impacts, in terms of social inclusion as well as environmental sustainability. The Mozambican National Peasants' Union (UNAC) has recently accused the programme of being top-down and failing involve farmers and civil society in a meaningful way (UNAC 2012). It has also warned about the danger of creating a wave of landlessness in the country, impoverishing rural communities by making them dependent on large-scale investments, and damaging the environment and compromising sustainability. There has also been much speculation in the media about the interests which ProSavana is serving. Following some dissemination activities about the programme in Brazil, articles in the Mozambican and Brazilian blogosphere referred to it as an example of 'Brazilian neo-colonialism' and of how technical cooperation is the 'Trojan horse' of Brazilian economic interests in Africa (Loureiro 2012; Rafael 2011).

3.2. China

3.2.1 China-Mozambique partnerships for agricultural development

China's relationship with Mozambique reaches back many decades. During Mozambique's struggle for independence in the 1960s, China provided political, economic and military support for the Liberation Front of Mozambique (Centre for Chinese Studies 2009). In 1975, when Mozambique gained independence, China established formal diplomatic relations with the country.

Figure 5: 1995-2008 China-Mozambique Trade



Source: Centre for Chinese Studies (2009), using data from the World Trade Atlas

Since then, China and Mozambique have conducted frequent high-level exchanges and maintained friendly cooperative relationship. Chinese-Mozambique agriculture development partnerships take place in the context of rich economic, trade and investment relations.

In recent years, China-Mozambique cooperation in the field of trade and economics has been developing well. In 2001, China and Mozambique set up a Joint Economic and Trade Committee and China announced it would forgive debts accrued by Mozambique since 1999. In 2002, this cooperation was further strengthened by the establishment of the Sino-Mozambican Economic and Technological Cooperation Agreement and a Memorandum of Understanding on cooperation between the Chinese Ministry of Agriculture and the Mozambican Ministry of Agriculture and Rural Development. In February 2011, China and Mozambique signed and exchanged notes on Asian countries granting zero-tariff treatment to 60 percent of the goods imported from Mozambique (Ministry of Foreign Affairs of the People's Republic of China 2011). According to the Commercial Office of Chinese Embassy in Mozambique and the 'National Statistical Yearbook 2010' of Mozambique National Institute of Statistics, China became Mozambique's fourth largest trading partner in 2010.

Figure 5 shows that trade volume between China and Mozambique witnessed significant and rapid growth over the past decade. The CCS report notes that in 2008, the total trade value between China and Mozambique reached $ 442.7 million, up 48 percent over the previous year. This rapid growth is mainly a result of the increase in China's imports of oil seeds, sawn wood products and chromium ores from Mozambique (Centre for Chinese Studies 2009). In 2009, the bilateral trade volume between the two countries amounted to $517 million, with a year-on-year growth of 22.5 percent, of which $339 million was China's exports to Mozambique and $178 million was China's imports from Mozambique, respectively with a year-on-year increase of 14.6 percent and 41 percent. In 2010, the trade volume between China and Mozambique came to $697 million. In 2011, this figure soared to $957 million, of which $700 million was China's exports to Mozambique and $257 million was China's imports from Mozambique, respectively up 41.1 percent and 27.7 percent. China mainly exports machinery and transport equipment, textiles, footwear, cereal and cereal products, metal products and pharmaceuticals to Mozambique. It mainly imports timber, iron ore and concentrates, as well as sesame from Mozambique. From 1995 to 2011, China has been in trade surplus Mozambique and this surplus continues to increase.

Data from the Investment Promotion Centre of Mozambique show that China's investment in Mozambique has been increasing in recent years and China has been among the top ten countries investing

Table 2: China's direct investment flow and stock in Mozambique, 2003-2010 (in 10,000 USD)

Year	Flows	Proportion in Africa	Year-end stock	Proportion in Africa
2003	-	-	242	0.5%
2004	66	0.2%	560	0.6%
2005	288	0.7%	1468	0.9%
2006	-		1468	0.6%
2007	1003	0.6%	3424	0.8%
2008	585	0.1%	4300	0.6%
2009	1585	1.1%	7496	0.8%
2010	28	0.01%	7524	0.6%

Source: data from the '2010 Statistical Bulletin of China's Foreign Direct Investment' jointly issued by the Ministry of Commerce, National Bureau of Statistics and the State Administration of Foreign Exchange http://hzs.mofcom.gov.cn/aarticle/date/201109/20110907741156.html. Note: 2003-2006 investment flows referred to non-financial direct investment flows.

Table 3: List of China-Mozambique development cooperation projects

Projects before 1997	
1983-1985	Agricultural technical cooperation
1976-1998	Agricultural technical cooperation in Maputo
1986-1989	Agricultural technical training
1990-1991	Passenger-cargo ship building supervision technical experts
1991-1995	Passenger-cargo ship building supervision
1987-1991	Garment factory
1987-1994	Limote Shoe Factory
1989-1995	Well digging in Maputo
1985-1994	Nampula textile mills

1997-2001 projects	
	36 well repairing projects
	Parliament office building of 3600 square meters
	Residential area of 9800 square meters in New Military Region
	Office building of 10,000 square meters of the Ministry of Foreign Affairs
	Residential area of 2000 quare meters in New Military Region (Phase II)
	A conference center of 4500 square meters
	China Investment and Trade Promotion Center (12,000 square meters, 16 floors)
	Aquaculture and fishing
	Anshan Farm
	Anshan Steel Mill
	The 13th Medical team composed of 15 persons
Projects after 2001	
	Agricultural processing plant construction projects (including cotton processing plant, the cornmeal flour mill, rice processing plant) in Zambezi Valley
	National Stadium
	Medical teams
	Second phase of the Maputo airport project
	150 affordable housing projects
	Agricultural technology demonstration center

Source: Website of Economic and Commercial Counselor's Office of the Embassy of PRC in Mozambique: http://mz.mofcom.gov.cn/aarticle/zxhz/sbmy/200207/20020700033969.html.

in Mozambique since 2007. According to the Economic and Commercial Counsellor's Office of the Embassy of the People's Republic of China in Mozambique, China's investment ranking in Mozambique rose from sixth place in 2007 to second in 2008, coming in only behind South Africa.[xxix] As of 2008, China's total investment in Mozambique amounted to $76.8 million. In 2011, Investment Promotion Centre data showed that in the first three quarters of 2011, the United States, China and Norway were the top three largest foreign investors in Mozambique.[xxx]

Chichava (2010) observes that Chinese-funded companies account for an increasing proportion in Mozambique's economy, with industry as the primary sector for Chinese investment. In 2010, Chinese investments in industry accounted for 71 percent of total investments, with investments in construction, services, agriculture and agro-industry representing 21 percent, 6 percent and 2 percent respectively. Investments by Chinese entrepreneurs in South Mozambique (Maputo Province and Maputo City) accounted for more than 85 percent of the total.

In addition to economic inputs, Chinese investments in Mozambique are meant to promote local jobs. If all the approved projects in 2010 are implemented, China's investments would create 2391 jobs, accounting for 3.5 percent of the total (67,500) jobs in private industry (Chichava 2010).

As shown in Table 2, from 2003 to 2010 China's direct investment flows in Mozambique varied wildly, peaking at $15,850,000 in 2009. Compared to investment in other countries in Africa, China's direct investment in Mozambique is relatively small. From the perspective of investment flows, the proportion of China's investment in Mozambique has been less than 1 percent, and even the peak amount in 2009 accounted for only 1.1 percent of total investments in the continent. Thus while China represents a key trade and leading investment partner for Mozambique, relatively speaking, Mozambique has not been a major destination for China's investment in Africa.

Supporting these trade and investment trends, a series of development cooperation projects and various forms of economic and technical assistance efforts have also been carried out. Table 3 lists development cooperation projects between China and Mozambique during the past three decades.

In addition, under the framework of the Forum on China-Africa Cooperation, China has announced the exemption for due debts of 294 million RMB owed by Mozambique as of the end of 2005.[xxxiii]

3.2.2 The case of the Agriculture Technology Demonstration Centre: a window of opportunity?

At the Beijing Summit of the Forum on China-Africa Cooperation (FOCAC) in November 2006 Hu Jintao offered the first ten agricultural demonstration centres in Africa, as part of the eight steps for the consolidation

of China-Africa partnership. The objective of the centres is to perform agricultural demonstrations, rural extension and technical training to boost the productivity of the beneficiary countries and to assure food security. The first fourteen African countries chosen were Benin, Cameroon, Congo, Ethiopia, Liberia, Mozambique, Rwanda, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia and Zimbabwe. This commitment today reaches 20 countries (FOCAC 2012).

China is recognized for its experience in traditional and modern agriculture. By global standards Chinese agricultural technologies are advanced and have had a major impact on the country's performance, such as the development of hybrid rice. The purpose behind the Agriculture Technology Demonstration Centers (ATDC) is still diplomacy accompanied by the idea that aid should generate mutual benefit. The former can be illustrated on how the centres were announced in a multilateral sphere (FOCAC) as donations from the Chinese government and as an example of the Chinese commitment to help the African countries on their effort to develop agriculture production, making China a supporter of global food security. The economic gains behind the centres include the promotion of Chinese agricultural technology in the African potential market, the introduction of Chinese companies to invest in the continent and the search for more trade opportunities. In addition, Chinese engagement aims to increase overall food production in Mozambique. In this sense, the China's National Development and Reform Commission plan for investment in Africa included the importance of agriculture, especially seeds improvement technology and agricultural inputs are conceived as two potential sectors where 'China could create opportunities for its own companies by offering products that will be useful and profitable' (Brautigam and Tang 2009).

The ATDCs represent one of the many forms that take economic and aid cooperation by China in Africa. It has been argued that Chinese agricultural aid projects have been evolving towards more business oriented logic (Brautigam 2010; Brautigam and Tang 2009). From the Chinese perspective, business is seen as a more sustainable way of engaging in agriculture in Africa because pure aid approaches are not profit-driven and thus tend to die out after a project is completed (Buckley 2013). This view comes from China's agriculture development experience domestically, as well as in historical engagement in agriculture in Africa. China's engagement in agriculture in Africa dates to the 1950s, where its actions consisted mostly on large state owned farms with highly political value. China's engagement continued in the diplomatic battle against Taiwan and agriculture was a privileged sector demanded by the African partners. Nevertheless, at the start the Chinese proved efficiency, all the projects faced problems with having a sustainable economic impact; the continuity after the Chinese was not assured. Taking account of China's past experiences, the transition and the mix of aid with business is part of a scheme to assure mutual benefit and the success of the projects. In the case of ATDC, the construction and the management of the centres will be in charge of a Chinese company or research institute chosen by the Chinese government and which will account with a grant support from the central government during the first three years; thereafter the centres have to be self-sufficient.

Even though the announcement of the ATDCs was made in the framework of a multilateral forum, the negotiations for each centre were made on a bilateral basis. Hu Jintao announced the Mozambican centre in its visit to the country in 2007, to be the first one to be implemented in the continent. 'In 2008 the project was approved, in 2009 the construction started; in 2011 the infrastructure was completed and in 2012 the center started to function.'[xxxiv]

The case of ATDC in Mozambique

The ATDC in Mozambique is located in Boane district (Southwest of Maputo – Capital city). The first study of feasibility, conducted by a Chinese mission of experts was organized between the 30th May and the 6th June 2007, and counted with the technical and logistic support from the Ministério de Agricultura (MINAG) and the Ministério de Ciência e Tecnologia (MCT) of Mozambique (MCT 2007). During this Chinese mission to Mozambique were negotiated and defined several issues about the centre, i.e. the localization, the technologies and topics, and the responsibilities of each part. For the site selection of the centre, the Mozambican side proposed two potential locations: the district of Moamba (Northeast of Maputo, the capital) or the district of Boane (Southwest of Maputo). Boane district was chosen for its proximity to Maputo (20 km) and to Matola (the biggest industrial centre of Mozambique), and for use of the existing Umbeluzi Agricultural Station of IIAM (Duran and Chichava 2012). The Umbeluzi station was created in 1909 and occupied a total area of 700 hectares (ibid). For the Chinese ATDC, 52 hectares of the existing Umbeluzi station were designated for the construction of the centre, to include two buildings for classrooms, dormitories, and laboratories and fields to grow corn, rice, cassava and vegetables (ibid). The ATDC is now using an area within the facilities of the Umbeluzi station.[xxxv]

The centre is evaluated in RMB 40 million (around 6 million USD) and its functioning is assured by the donation of RMB 1,200,000 annually by the Chinese government (for three years only, as was discussed earlier).[xxxvi] Its management was attributed to Hubei Lianfeng Agricultural Development Corporation, which was already present in Mozambique. Hubei Lianfeng had signed a twining agreement with Gaza province in 2008 for the establishment of a rice production project in the Baixo Limpopo irrigation system (around 200 km North Maputo) that started with 300 hectares but in 2012, with the entry of a private investor (Wanbao), the project is expanding to 10 to 20 thousand hectares in the next years. This project is known as the Hubei-Gaza friendship farm.

The choice for Hubei Lianfeng Agricultural Development Corporation is a strategic choice because it was already present in the country, which allowed the entry of Wanbao. An article on Hubei Daily affirms how 'Lianfeng undertook the aid project of Mozambique Agriculture Demonstration Centre which covered an area of 52 hectares, and proposed to construct the grain, vegetable growing, livestock, agricultural products processing base, and student training centre, and therefore drove more Hubei agricultural enterprises to "go out"… Xiangyang Wanbao Grains & Oil was attracted' (Triangle of Central China 2012). Investment promotion in Hubei has had a good effect on agricultural products trade: 'In 2011, the province's agricultural exports reached $1.43 billion, an increase of 32.1 percent' (Triangle of Central China 2012). This places the efforts of the Hubei agriculture companies in Mozambique within the Chinese leadership's efforts to encourage agriculture investments globally through its 'Going Out' policy (Li et al. 2012). This has been a central driving for Chinese integration into the global economy for the past decade.

Meanwhile, on the Mozambican side the coordination of the different governmental institutions interested in the centre has been complicated by misunderstandings and power conflicts between the Ministry of Agriculture (MINAG) and the Ministry of Sciences and Technology (MCT) (Duran and Chichava 2012). The location of the ATDC belongs to MINAG, but the project is officially managed by the MCT. This engagement remains unclear and limited. Information about the ministries conflict over the centre is very vague but according to the IIAM technicians, the MCT is running the centre because a mistake made by the Ministry of Agriculture. The Director of National Services from the Ministry of Agriculture referred to the situation as odd because Mozambican functionaries should work together for the development of the country but added that the problem must be about political influences and the importance of having a Chinese project under command. In fact, IIAM technicians do a follow-up of the Chinese activities or they use the installations to do their own formations but there is no experience exchange between Chinese and Mozambican technicians from IIAM. The total production area is 35 hectares of corn, rice and vegetables. The production statistics are summarised in Table 4.

In the Memorandum of Understanding there is no information about the destination of production. However, according to the Chinese manager of CITAU, the production serves for the subsistence of its Chinese staff and the remainder is sold outside the centre below the market price. The majority of Boane's population belongs to the family farming sector (67 percent) and according to the Mozambican workers at the Centre, the local farmers are buying from the Chinese to sell at the market for higher prices when the production is not good enough. According to the Chinese manager: 'We have to sell food at a very low price because here everybody is very poor and they don't have the means to pay more'. The Chinese team in February 2012 consisted of four men and one woman. They arrived to Mozambique in November 2011 for the preparation of the field and the crops from Hubei. Besides them, there are around 15 Mozambican day labourers, depending on the amount of work each day (ibid). In March 2012 the first seminars started on rice, vegetables and animal production and the new team of Chinese expert, in charge of implementing the courses arrived to the country.

3.2.3 The case of the Xai-Xai irrigation scheme

The Regadio do Baixo Limpopo (RBL), more commonly known as the Xai-Xai irrigation scheme is located in Gaza province and covers an area of 12,000 hectares. It is one of the largest irrigation schemes in the region, second only to Chokwe with 28,600 (Ganho 2012). Created in 1951 during the Portuguese colonialism period and after being used for some years after Mozambican independence, this irrigation scheme was in disuse for many years. From 2003 the Massingir dam rehabilitation project started important infrastructure ameliorations and institutional and agricultural development. The arrival of new Chinese investors in Xai-Xai in 2005 and others is seen by the Mozambican authorities as a new hope in its efforts to boost Mozambican agriculture.

Initial contact between Chinese and Mozambican actors started in 2005 through meetings between the provincial governments of Gaza and Hubei, and site visits throughout Gaza (Direcção Provincial de Gaza 2008). These two provinces signed an initial agreement in 2007, which was replaced shortly after by a new agreement in 2008, valid for a period of five years through 2012 (ibid). This bilateral agreement was for a Chinese enterprise from Hubei to establish a rice production project in the Ponela block, and to transfer Chinese rice production technology to local farmers. It also envisaged developing horticultural production in Moamba district, Maputo province (ibid). The text did not specify what was to be done with the rice produced, or what technology would be transferred to which local farmers.

Table 4. Production Results ATDC-Mozambique

Culture	Chinese Varieties	Ton/ha	Mozambican Varieties	Ton/ha
Tomato	Aeyouhongshuai	45	HTX	20
Pepper	Eshu108	52.2	Gloria	18
Lettuce	Xiauiwang3	30	Great Lakes	8
Rice	Lianfenghanyou	6	Limpopo, IR64 and ITA312	3
Corn	Huayu5hao	6	Matuba, Pan64	4

Source: MCT (2012).

According to CPI data, the project budgeted USD$1.2 million and would be implemented in an area of 300 hectares.[lx] It was foreseen by the agreement, however, that this area would increase to 10,000 hectares in the future (Direcção Provincial de Gaza 2008). The company named to carry out this work was the Moçambique Lianfeng Desenvolvimento de Agricultura Co., Limitada (also referred to as Hubei Lianfeng Mozambique Co, Lda, HLMO, CO, LDA). HLMO, CO, LDA is a subsidiary of Lianfeng Overseas Agricultural Development Co Ltd, a Chinese state-owned enterprise. It must be highlighted that HLMO, CO, LDA is also running the Agricultural Technology Demonstration Center (ATDC).

Parallel to these activities, a group of Chinese scientists from the Chinese Academy of Agricultural of Sciences (CAAS) visited Xai-Xai during 2008-2009 to perform rice yield tests with the support of Bill and Melinda Gates Foundation under the framework of 'Green Super Rice Program'.[xxxviii] According to CAAS, thirty varieties of Chinese hybrid rice and one Mozambican variety, called 'Limpopo rice', were tested with success (CAAS 2009). Yet, according the same source, the yields of the Chinese rice varied between 7.64-10.26 tons per hectare while the average of the Mozambican rice variety was 7.61 tons per hectare. As part of the Green Super Rice Program, CAAS is developing similar research projects in two other African countries (Nigeria and Uganda) and a number of Asian states. In Nigeria, the tests had poor results because of 'the poor water management and land preparation', and in Uganda it wasn't implemented due to unknown reasons (ibid). In Africa, only Mozambique had favourable results (ibid).

Despite successful initial testing of the rice varieties, HLMO, CO, LDA never managed to fully develop the 300 ha granted by the Mozambican government during the five years of activity due to financial and material limitations (Direcção Provincial de Gaza 2010).[xxxix] According to an evaluation of the project carried out by the provincial government of Gaza, the company was also unable to fulfil other aspects of the bilateral agreement (ibid). For example, the arrangement had been for HLMO, CO, LDA to help local farmers improve their productivity from original levels of 1-3 ton per hectare to 7-10 ton through the transfer of Chinese technology (ibid). However, upon implementation, the Chinese required payments for their training services, which was not mentioned in the original agreement. The majority of local farmers were unable to pay for these services and therefore only well-off individuals were able to access the benefits. According to interviews by authors of this paper with employees of the Chinese company, their view is that the technology transfer failed because the Mozambican farmers lack commitment to agriculture. As one employee of HLMO, CO, LDA explained, 'We are here to help farmers, but the farmers are not interested in agriculture'.[xl] This issue remains a main source of local disappointment in the Chinese engagement in the region.

In 2012 because of the above difficulties faced by HLMO, CO, LDA, Wanbao Grain and Oil Investment Limited (private Chinese company from Hubei) took over the project. In Mozambique, this company is represented by Wanbao Africa agriculture Development Limitada (WAADL). In terms of management direction, the structure remains more or less the same as under HLMO, CO, LDA management. Haoping Luo, the former manager of HLMO, CO, LDA, remains the head of WAADL project in Xai-Xai.

WAADL comes with more financial resources than HLMO, CO, LDA and was granted an area of 20,000 hectares to produce rice and to establish agro-processing facilities. It is estimated that the total investment reaches $200 million.[xli] It is important to note that WAADL concession is bigger than the area of Xai-Xai irrigation scheme.

According to Hubei authorities, the aim of the Mozambique project was to 'construct the grain, vegetable growing, livestock, agricultural products processing base, and student training center, and therefore [drive] more Hubei agricultural enterprises to "go out"' (Hubei Daily 2012). The Hubei authorities consider this investment as one of the province's most important overseas investment in agriculture, a shining example of the 'successful "going out" of Hubei agriculture' and wining 'honor for the country' (ibid).

Equally, in Mozambique, the achievement of Wanbao Grain & Oil Investment Limited is seen as an opportunity to overcome the country's rice deficit by Mozambican politicians and officials of Ministry of Agriculture (MINAG.)[xlii]

There is no doubt that amongst all the Chinese agriculture investments in Mozambique, this is the largest, in terms of volume of investment and concessional area.

Even though the activities of WAADL are still at an early stage, some concerns and fears are beginning to appear in the local press; for example it was claimed that the Chinese were displacing more than 80 thousand small farmers to put in place their project.[xliii] Besides forced resettlement of the local population, another concern relates to water management. According to local NGO Fórum de Organizações Nacionais de Gaza (FONGA), because of the intensity use of water that this project will need, it may bring drought in Baixo Limpopo (Canal de Moçambique 2012).

Likewise HLMO, CO, LDA, WAADL is required by Hubei and Xai-Xai province's agreement to help local farmers to improve their efficiency and productivity. At this stage, it is too early to know if WAADL will be more successful than HLMO, CO, LDA.

4. Discourse, imaginaries and underlying drivers

This section analyses discourses, imaginaries and the drivers that underpin the development encounters between Mozambique and the two rising powers. We first look at Brazil and China individually and then discuss

commonalities and differences in their current engagements in Mozambican agriculture.

4.1. The Brazil-Mozambique encounter

The official discourse promoted by Brazil favours concepts of 'international cooperation for development', 'technical cooperation' or 'development partner' over conventional terms like 'official development assistance', 'technical assistance' or 'donor' (Costa Vaz and Inoue 2007). In this sense, development cooperation is conceptualized according to the principles of South-South cooperation, i.e. as a mutually beneficial horizontal partnership among countries that experience the same problems and challenges. Furthermore, as Brazil was until recently a net recipient of aid it claims that this allows it to have a better understanding of the needs of recipient countries. It stresses that the Brazilian projects in Africa are demand-driven – though this is not always the case, especially in the case of triangular projects like ProSavana, which as noted in section 3.1.2 above was first discussed between Brazil and Japan at an international event in Italy.

Brazil also claims that its limited experience as a provider of international cooperation is an advantage in the sense that 'we are all learning together'.[xliv] For example, the Embrapa representative in Maputo states: 'Embrapa and Brazilian cooperation are going through a learning and maturing process in Africa. We are defining what Brazilian cooperation for the development of agriculture is. Firstly, we thought of Embrapa Africa, but when we arrived to the continent, the demand from the African countries was huge – in 2009, I visited 11 African countries – and for this reason we decided to think bigger and to create Embrapa International. Our interests are what are best for our African partners and for Mozambique'.[xlv]

Brazilian professionals working on ProSavana (whether from ABC, FGV or Embrapa) in Mozambique put forward the view that the value added of Brazilian cooperation is that it provides first-hand expertise and technical cooperation without intermediaries. The close relations between Embrapa and Mozambican institutions are portrayed as guaranteeing a more horizontal relationship and better government ownership. The representative of Embrapa in Maputo explains: 'Embrapa never works alone. Our partners are always the local research institutions – in the case of Mozambique, IIAM. Because Brazil's interests are the local government's interests, our close working relationships – both government-to-government and local experts-to-Brazilian experts – are a guarantee of that'.[xlvi]

The emphasis on the technical character of cooperation in official discourse underplays the importance of commercial and political motivations. Despite adhering to the South-South principle of mutual advantage or shared gains ('win-win') Brazil presents its cooperation activities as free of commercial interest and, at the highest political level, Brazil's presence in Mozambique and Africa more broadly is framed, especially by Lula, primarily in terms of solidarity and moral debt linked to the history of slave trade (Instituto Lula 2012). There is recognition that Brazil seeks to gain diplomatic advantage from its 'solidarity diplomacy', but this is framed in terms not of bargaining over specific international issues but rather of a general accumulation of goodwill, as part of the country's rise to prominence as a 'cordial power' (Vidigal 2010).

Above all, Brazil attributes the fact that its perceived potential as a partner in developing commercial and family agriculture carry great weight in Africa and in Mozambique to the legitimacy afforded by the country's own experience. In the words of a senior diplomat at the Brazilian Embassy in Maputo, 'Brazilian cooperation is legitimate because we are bearers of a successful development experience'.[xlvii] Brazil is presented often as a successful model for the development of agribusiness or commercial agriculture as well as family agriculture. For example, the development of the Cerrado (which inspires ProSavana) is often referred as 'a miracle' (The Economist 2012) or 'one of the great achievements of agricultural science in the 20th century (Hosono and Hongo 2012).

Brazil's own versions of the Cerrado narrative not only emphasise the role of agricultural science and the enabling policy environment promoted by a strong state with a long-term development vision, but also a particular social imaginary of the 'conquest of the wilderness'. This centres on the myth of the pioneering Southern farmers (known in Brazil as Gaúchos) who arrived in the barren savannah lands of central Brazil taking with them investment and technology (Heredia et al. 2010). An FGV representative interviewed during a visit to Mozambique referred to this during a discussion of the objectives and procedures of the Nacala Fund: 'Agriculture is a high-risk economic activity. A way to minimize risks is to bring in people who have the knowledge and experience – and these people are Brazilians. Brazil is recognized worldwide as a global food producer, and the Brazilians know how to do it. In Brazil, for the Cerrado we used to say: "Cerrado, neither given nor inherited".[xlviii] It was worse than the Wild West'.[xlix] This same narrative was present in the discourse of another FGV representative interviewed in Brazil, who cited his family's experience as pioneer commercial farmers in Rondônia (on the border between the Cerrado and the Amazon) as evidence that he understood conditions in the region covered by ProSavana. In his account, the fact that pioneers like his family had overcome all the challenges of a remote 'Wild West' region with precarious infrastructure in Brazil showed that they had the necessary experience to overcome the challenges that would face agribusiness ventures in the Nacala Corridor.[l]

Seen from the Mozambican side, there are two clashing perceptions of Brazilian cooperation. Government officials, mostly from institutions like MINAG, CEPAGRI or IIAM, conceive the Brazilian experience as a successful one. They hope that access to Brazilian technology will

help to boost agriculture production and productivity and perhaps replicate the Cerrado miracle. According to an official from MINAG: 'Brazil has a valuable experience in agriculture. The Brazilians succeed in the tropicalisation of soybean, for example. So, Mozambique is going to acquire Brazilian know-how. Thanks to Brazilian technology, our farmers are going to be stronger and we are going to establish agriculture value chains. And it is not just ProSavana, but we are also establishing institutional links between Embrapa and IIAM'.[li]

Mozambican government officials also praise the 'win-win' dimension of Brazilian cooperation and are less inclined to downplay the political and commercial interests involved. The same official emphasised that 'ProSavana is a highly ambitious programme and the important political and economic mutual interests are a guarantee for its success. For example, today the FAO director is a Brazilian, José Graziano da Silva. For his election, Brazil negotiated with Guebuza the support of Mozambique for his candidacy. Brazil pressured the PALOPs[lii] to support Graziano by committing to a South-South cooperation policy. With Brazil, the main objective is technical assistance. For example, with ProSavana we are going to benefit from the Brazilian technical assistance and institutional strengthening of IIAM; our farmers will be stronger; and Japan will support the project financially. Brazilian farmers will be able to come here, where they can expand their production and markets, to sell to China and India. In the end, everything is done with a commercial perspective'.[liii]

From a different perspective, ProSavana and the enthusiasm around replicating the Cerrado experience have been fiercely criticised by organised civil society inside and outside Mozambique. UNAC, in contact with Brazilian social movements through Vía Campesina, has publicly voiced its concerns (UNAC, 2012). Japanese social movements and NGOs are also mobilizing against ProSavana.[liv] As noted earlier, such critical voices are supported by arguments emphasising the social and environmental damages of large-scale 'agribusiness' associated with the Cerrado model. It has been argued that the expansion of highly mechanized agriculture has damaged the Cerrado ecosystem and that large-scale production drives out small landholders, thereby creating poverty and inequality (Weinhold et al. 2011).

The dichotomous way in which the Brazil-Mozambique partnership is portrayed reflects not only differences in conceptualisations of development by different actors but also different motivations. These include a desire among Mozambican organisations to establish relationships with different Brazilian actors – who may occupy opposing positions in Brazil's contested agricultural policy landscape – in order to learn from their strategies for success. While IIAM is eager to strengthen connections with Embrapa and perhaps attempt to emulate its muscular institutional model, UNAC, while asserting its position in Mozambique's still amorphous civil society, certainly looks with fascination at Brazil's dynamic rural social movements and the country's history of vigorous political contestation.

4.2. The China-Mozambique encounter

According to Chichava (2008: 2) Mozambican politicians and elites have been receptive to China's renewed interest in the country; for example, President, Armando Guebuza, refers to China, 'as a partner and not a colonizer'.

In agriculture there is a great enthusiasm from the Mozambican government towards cooperation with China. President Guebuza has stated how China has successful development experience, especially in relations to promoting agriculture and rural development, and he emphasises that Mozambique can learn from China to be self-sufficient in grains. In this sense, Mozambique welcomes Chinese enterprises to foster cooperation for agriculture development (Revista Macau 2011). As a high official from MINAG explains: 'The relation between China and Mozambique has multiple faces. There is the commercial feature on one side and the technology transfer feature on the other. For example, the ATDC in Boane is a project focused on technology transfer and is a donation from the Chinese government. On the other hand, projects like the processing factories in Zambézia or the rice production project in Xai-Xai have a more commercial perspective'.[lv]

However, perceptions and reactions to China's actual engagements on the ground with agriculture development in Mozambique are divided. The Mozambican government officials and elites see with enthusiasm the Chinese investments and assistance for the increase of productivity and food security. There is shared understanding among the Ministries officials that for Mozambique to develop agriculture it needs to modernize the production systems and increase the use of inputs as fertilizers, improved seeds, etc. China is seen as holding the answer to the perceived lack of technology in Mozambique's agriculture. Armando Guebuza (Mozambican president) stated during the Centre's inauguration in 2011: 'The aim is not just to increase productivity because it can be done in different ways. Productivity is not always increased by the expansion of the production area. We need to keep in mind the other component of increasing production through the rise of productivity in small areas'. Besides the technology, Chinese work capacity and discipline is highly praised as a bonus: 'Mozambican farmers don't live in the machamba [farm in local language]. The Chinese do, they are always there, working. In a Mozambican machambas, for three men there are three beds. The Chinese only have two beds for three men because there has to be someone working'.[lvi]

Nevertheless, the opinion of lower rank officials is more cautious and marked by stereotypes and misunderstandings. These are exacerbated by language barriers and cultural differences arising in the cooperation with Chinese actors on the ground; these in turn affect the functioning, the relations and the transfer of technology and knowledge. Firstly, language barriers

hinder communication among local technicians from IIAM, the day labourers and the beneficiaries of the courses given in the centre. There is no trust among the Mozambican and Chinese, for example, one Chinese employee of ATDC referred to Mozambican employers of the centre as bandits because of robberies they experienced (Duran and Chichava 2012: 135). Likewise, there is mistrust among the Mozambican technicians at the centre regarding the Chinese knowledge and the work conditions: 'The Chinese don't speak Portuguese or English. We don't talk to them. And they say they are agricultural experts but they don't follow the regulations for the chemicals they use. I think there is something wrong in that centre'.[lvii] The new team, which is in charge of the teaching speaks English and all the courses are given in English but: 'The Chinese only speak a little of English. The majority of the people assisting didn't understand anything, so I helped to translate. I think is good but because of the language the Chinese cannot transmit anything to us.' Furthermore, where transfer of knowledge is achieved, it is not clear to recipients how to apply the information the Chinese are providing. For example, one farmer explained, 'I learned some things but at the end everything goes to the garbage because we don't have the means to implement what we learned'.[lviii]

According to the MCT engineer, in order to assure the capacity of the Mozambican farmers to apply what they learned in their own fields, after each course the participants must have inputs and tools for their use. But, from what it is stated by a participant in a course of vegetable production in the centre, the Mozambican farmers who beneficiate don't have the means to apply what is learned. It is questionable how to make technological transfer without communication (Duran and Chichava 2012). More research is required on specifically what the Chinese aim to provide in terms of technology transfer, and what different Mozambican groups feel they need.

Local officials highly praise the work capacity and discipline of Chinese people: 'One of the great advantages of the Chinese is their work culture. In Mozambique, the boss stays home and calls the workers to tell them what to do in the machambas; the Chinese boss is different. He is working next to the farmers and workers. If there are three men working, the Chinese will have only two beds because there has to be someone working always. So, the Chinese model is made to increase productivity'.[lix]

In the field, perceptions between Mozambican and Chinese actors are more complex. The Chinese managers of the Xai-Xai rice project and of the ATDC expressed the need to transform the Mozambican way of thinking; according to interviews with Chinese workers at the ATDC, they had been unable to achieve successful cooperation because the Mozambicans did not believe that was possible to produce more by working more. Secondly, a Chinese manager at Wanbao criticized the fact that the majority of Mozambicans working on agriculture were involved in a range of off-farm activities and so were not dedicated to agriculture. Mozambican bureaucrats from RBL echoed these sentiments, arguing that Mozambican farmers 'are not committed to the agriculture tasks' and that they therefore 'showed limited interest to learn from the Chinese' (Chichava forthcoming).

4.3. A comparative perspective on actors' perceptions about Brazil and China as Mozambique's development partners in agriculture

In their official discourses, both China and Brazil frame their engagement in Mozambican agriculture through narratives of historically-derived solidarity with Mozambique. However, the bases of this solidarity are different: while Brazilian policy actors (especially Lula) express a sense of moral debt to Africa linked to the history of the slave trade, China portrays itself as a longstanding partner with Mozambique against the colonial powers of the world.

Another commonality in official discourse is the emphasis on a shared experience of having been aid-recipient countries until recently. This gives both Brazil and China the moral authority to contrast their own 'demand-driven' approaches with traditional donors' top-down and conditionality-heavy models. Particularly in China's case, however, resisting the idea of conditionality does not mean that the aid model does not require reciprocity: the emphasis on 'win-win' provides a legitimating framework for the expectation of commercial or diplomatic advantage in return for development cooperation.

While both Brazil and China see development cooperation (in agriculture as in other fields) both as a foreign policy instrument and as a means to create new economic opportunities, there are differences in emphasis. In Brazil's case the discourse of 'solidarity diplomacy' highlights the fact that the country seeks diplomatic advantage from its development cooperation engagements, but the picture is much less clear with regard to commercial advantage. While there is a strong emphasis on the purely technical nature of agricultural development cooperation among some Brazilian actors, others place an equally strong emphasis on its potential to open up investment opportunities. China, by contrast, has a more consistent discourse: the commercial aspects of development cooperation are emphasized as integral to what a wide range of Chinese actors see as a more effective, economically sustainable approach to agricultural development cooperation.

Both countries frame the agricultural development models they seek to share with Mozambique as based on their own successful development experience. Both sets of experience include a strong emphasis on the guiding role of the state and the complementary importance of private investment, but the nature of the

agricultural transformations to which these factors contributed is very different. Brazil's highest-profile agricultural development success story is the transformation of the Cerrado; a land-extensive, labour-substituting, technology- and capital-intensive shift towards export-oriented agriculture. For China, the key achievement was the country's conquest of food security in a context of labour abundance but extreme land scarcity, via the leap in productivity achieved in cultivation of the country's main staple crop, rice.

The narratives deployed in both countries to explain these successes are also very different. China emphasises the hard-working virtues of its farmers, and their skill in making productive use of the scarce natural resources of the country's densely-populated countryside. Brazil, by contrast, has a national narrative of pioneering gaúchos taming the wild and empty interior of the country's Centre-West. Both sets of narratives translate across into social imaginaries of Mozambican agriculture; Chinese development cooperation practitioners attribute Mozambique's low agricultural productivity to wasteful use of resources, while Brazilians are more inclined to emphasise the need for enterprising spirit and sustained investment to overcome the constraints imposed by geographical remoteness, natural hazards and poor infrastructure.

The self-affirming nature of these narratives means that both Chinese and Brazilians tend to believe that they have much to teach and little to learn. This contradicts the discourse of 'mutual learning' that is common among advocates of South-South cooperation. Brazil's agricultural development cooperation practitioners are happy to acknowledge what they have learned in the past from richer countries (especially the US and Japan), but few if any of them recognise that they may have something to learn from Mozambican farmers or agricultural researchers.

On the Mozambican side, the country's policy elites share with both Brazil and China a tendency to emphasise technologically-driven modernisation as the key to the future of agricultural development in the country. In addition, they see China and Brazil as important sources of capital as well as technology – something they perceive as lacking in the cooperation models offered by established Northern donors. Mozambican government officials idealise both Chinese and Brazilian agricultural experience, with an emphasis on technology inputs for productivity increases. However, these idealising narratives are contested by Mozambican NGO and media discourses which sound a much more cautious and critical note on the potential for local farmers to benefit from Chinese and Brazilian involvement.

Mozambican front-line bureaucrats and farmers share some of the idealising discourses of their superiors, but they are also more inclined to emphasise differences between Brazilian and Chinese cooperation approaches. Perhaps due to the fact that their presence is currently linked exclusively to technical cooperation, a field in which they face significant administrative and budgetary constraints, the Brazilians are perceived as having less money than either the Chinese or a traditional donor like Japan (their partner in the ProSavana initiative). The Brazilians have attracted some criticism for delays in following through on their promises; this is a factor of differentiation in relation to the Chinese, who have a reputation for acting quickly to fulfil their promises, unhampered by bureaucratic delays and procurement rules. The Chinese are also perceived as more commercially-driven, not least because their 'sustainability model' includes charging for agricultural extension services that have traditionally been provided for free in Mozambique, whether by the state or by international NGOs.

The perceived Chinese tendency to establish enclaves, which are often difficult for even Mozambican government officials to access, is contrasted unfavourably with Brazilian agricultural cooperation workers' perceived informality, flexibility and openness. Brazil's commitment to strengthening existing institutions (rather than China's preferred option for developing new stand-alone ones) is also welcomed, particularly by IIAM staff who have acquired a powerful image of Embrapa as a model which their own institution should aspire to emulate. In day-to-day engagements with Mozambican farmers and front-line bureaucrats, language barriers are a major issue for Chinese agriculture cooperation. As a Portuguese-speaking country, Brazil benefits from an initial perception that Brazilian cooperation practices are better suited to Mozambican realities. However, misunderstandings are also evident in the initial Brazilian engagements with Mozambican agriculture, and both sides are coming to realise that shared language does not automatically equate to shared understandings.

The perceptions of Mozambican actors directly involved in engagements with Chinese and Brazilian agricultural development cooperation are also shaped by a number of stereotypes that are current among the country's population as a whole. Brazil's image is favourably influenced by the prowess of the national football team and pervasiveness of cultural products such as the popular TV soap operas (telenovelas), along with a general perception of openness and affability. However, very few Mozambican farmers have as yet come into direct contact with Brazilians – particularly the 'pioneer farmers' who are lining up to export the Cerrado development model to Mozambique, a group who are perceived within Brazil itself less as easy-going good companions than as hard-nosed tamers of the 'savage interior'. The Chinese are already present in Mozambique in much larger numbers, mostly working on construction projects but increasingly engaged in petty trading, natural resource exploitation and agriculture. Popular perceptions combine admiration for their supposed qualities as hard workers who are prepared to get their hands dirty (unlike the pampered Northern aid workers with whom Mozambicans have become familiar) with bemusement and suspicion fuelled by language barriers and rumours of strange social and dietary habits.

5. Conclusion and research agenda

This scoping study constitutes a first effort towards building a systematic understanding of the nature of the Brazil-Africa and China-Africa encounters in the agriculture sector. This is done not only by describing in some detail the policies, discourse and practices of Brazil and China individually but also by discussing commonalities and differences between these two rising powers in the context of Mozambican agriculture. The analysis highlighted the multifaceted nature of the encounters, where actors' discourses, interests, perceptions and imaginaries come together and constantly reconstruct the experience of development cooperation. A multidimensional perspective is therefore required to capture the complexity and richness of these encounters. It is with this in mind that the proposed agenda for further research combines a variety of foci and methodologies.

Issues for further research emerging from the analysis in this study comprise: (i) in-depth ethnographic analyses of the encounters between Chinese and Mozambican elites at the local level; (ii) comparative analyses of Brazilian and Chinese models of agricultural technology transfer, drawing on their neighbouring experiences at IIAM's Umbeluzi agrarian station; (iii) political economy analyses of Brazil's trilateral engagements in Mozambique considering how such engagements are shaping the particular agricultural technologies and success stories that are pushed forward and how these are talked about; (iv) research on the spatial imaginaries of regional development for both Brazil and Mozambique underlying the ProSavana experiments; and (v) analyses of social mobilisation in rural Mozambique and links to Brazil's experience, drawing on ProSavana-related interactions between UNAC and Brazilian social movements. These are part of the research agenda that the Future Agricultures Consortium is now set to take forward.

End Notes

[i] Participant observation included (i) attending meetings of Brazilian technical cooperation missions to Mozambique; (ii) attending meeting between members of the Regadio do Baixo Limpopo and local farmers, in Xai-Xai, Gaza province; (iii) visit to Chinese farm in Xai-Xai; and (iv) visit to the site of Brazilian and Chinese technology demonstration projects at Umbeluzi agrarian station, in the outskirts of Maputo.

[ii] Smallholder farms are defined in Mozambique as farmed plots with a total area of less than 25 hectares, and a permanent cultivated area of less than 10 hectares. It is estimated that smallholders are responsible for about 95% of total agriculture production (MINAG 2010: 14).

[iii] In Mozambique, the term "family farming" (agricultura familiar) is often used to refer to subsistence agriculture or peasant farming (agricultura camponesa). It may include also farmers who occasionally trade their excess production, but family farming is not usually included within the private (commercially viable) sector category.

[iv] PROAGRI was a large sectoral programme funded by a group of donors for more than 10 years. The programme focused primarily in improving institutional capacity of the Ministry of Agriculture and has been criticised for failing to provide tangible results for farmers and the sector more broadly (Cabral et al, 2007).

[v] Tomas Mandlate (2005-2007), Erasmo Muhate (2007), Soares Nhaca (2007-2010) and José Pacheco (since 2010).

[vi] Between 1990 and 2008, the investment in the agriculture sector accounted for only 13% of all approved private investment in the country, the majority of which was FDI. About 80% of private investment in agriculture was concentrated in only four products: sugar, tobacco, cotton and forestry (Castel-Branco, 2010: 39). Low levels of investment reflect the sector's low productivity, vulnerability to external shocks and unfavourable terms of trade due to large increases in international prices of food and fuel (MPD 2010).

[vii] TThis poor access and use of agricultural technologies is, according to the Ministry of Agriculture, due to the poor interaction between research and extension services, limited supply and poor coverage of extension services, low purchasing power of farmers, and poor technology uptake following dissemination (MINAG 2010).

[viii] Lula da Silva became the President of Brazil in 2003.

[IX] http://www.abc.gov.br/abc_por/webforms/interna.aspx?secao_id=105&Idioma_id=1.

[x] http://www.bloomberg.com/apps/news?pid=newsarchive&sid=awyJqqwvrPhU.

[xi] The L'Aquila G8 meeting of 2009 and specifically the discussions around the Global L'Aquila Food Security Initiative. See Cabral and Shankland (2013).

[xii] The ABC website contains a project database, with project information disagregated by country and sector of activity: http://www.abc.gov.br/abc_por/webforms/projeto.aspx?secao_id=132&Idioma_id=1. Prospection missions by Brazilian institutions listed in the database were not included in Table 2 as projects (most of these related to the specified project in the table).

[xiii] http://www.mds.gov.br/saladeimprensa/noticias/2012/junho/brasil-e-onu-levam-programa-de-aquisicao-de-alimentos-para-africa.

[xiv] http://www.africa-brazil.org/projects/active.

[xv] See Annex for map indicating the project's geographical location.

[xvi] Interview with Embrapa Mozambique representative, Maputo, 17 July 2012.

[xvii] Interview with ABC's agriculture portfolio coordinator in Maputo, 2 August 2012.

[xviii] Ibid.

[xix] JIRCAS is the Japanese national institute that undertakes research on agriculture, forestry and fisheries technology; it played a prominent role in the development of Prodecer and the strengthening of Embrapa.

[xx] Interview with ProSavana's focal person at IIAM-Nampula, 12 January 2012.

[xxi] Interview with JICA's coordinator of ProSavana-PI in Nampula, 13 January 2012.

[xxii] Interview with JICA's Agriculture Portfolio Coordinator, 13 December 2012, Maputo.

[xxiii] http://agenciabrasil.ebc.com.br/noticia/2010-11-19/com-apoio-do-brasil-cna-aposta-em-mocambique-como-grande-produdor-de-alimentos.

[xxiv] See http://www.pinesso.com.br/noticias/agronegocio/agromoz-grupo-agricola-interessado-na-cultura-de-milho-e-algodao-no-pais.

[xxv] FGV has been involved in other private capital mobilisation activities supported by the Brazilian government, including the setting up of a fund to support biofuels development in Central America and another one for biofuels and food agribusinesses in Africa.

[xxvi] Interview with ProSavana focal person at FGV Projetos, 20 November 2012.

[xxvii] Interview with PGV Projetos representative, São Paulo, 19 October 2012.

[xxviii] Interview with MINAG's coordinator for ProSavana, 24 July 2012.

[xxix] Xinhuanet: China has become the second largest investing country in Mozambique: http://news.xinhuanet.com/fortune/2009-04/15/content_11188942.htm

[xxx] Website of Economic and Commercial Counsellor's Office of the Embassy of PRC in Mozambiquehttp://mz.mofcom.gov.cn/aarticle/jmxw/201201/20120107930253.html

[xxxiii] Website of the Embassy of PRC in Mozambique, http://mz.chineseembassy.org/chn/zmgx/zmhz/

[xxxiv] Interview with Engineer from MCT in Maputo, 8 February 2012.

[xxxv] IIAM has also made available an area inside the Umbeluzi agrarian station for experiments under the technology development project ProAlimentar, sponsored by a trilateral partnership between Brazil, the United States and Mozambique.

[xxxvi] Ibid.

[xxxvii] Interview with the Chinese Manager at ATDC in Boane, 2 February 2012.

[xxxviii] This partnership program has been implemented in fifteen African and Asian countries, including some Southwestern Chinese provinces. According to Bill Gates Foundation, this program is built to help poor farmers improving their rice production. For more information about this program please visit http://thegsr.org/.

[xxxix] Interview with many ARPONE farmers and RBL employees, May 2012, Xai-Xai.

[xl] Interview with employee of HLMO in Xai-Xai, February 2012.

[xli] Interview with Senior Executive of CPI, Maputo, April 2012. A Chinese source says that Wanbao invested $ 95 million. Danqing, X., Yongsheng, C. (2012). "Xiangyang's first overseas investment of $95 million in agricultural project in Mozambique", Xiangyang Daily, available at: http://en.xiangyang.gov.cn/publish/cbnews/201205/04/cb416_1.shtml (Retrieved 21 June 2012).

[xlii] Interview with senior official of the Ministry of Agriculture, 1 August 2012, Maputo.

[xliii] At this stage of our research, it wasn't possible to verify this information.

[xliv] Interview with Counselor Minister from the Brazilian Embassy in Mozambique, 6 December 2011, Maputo.

[xlv] Interview with Embrapa's General Coordinator, 17 July 2012, Maputo.

[xlvi] Ibid.

[xlvii] Interview with Counselor Minister from the Brazilian Embassy in Mozambique, 6 December 2011, Maputo.

[xlviii] In the original Portuguese, "Cerrado – nem dado nem herdado".

[xlix] Interview with representative of FGV Projetos, 20 November 2012, Maputo.

[l] Interview with representative of FGV Projetos, 19 October 2012, São Paulo.

[li] Interview with the National Director of Agriculture Services from MINAG, 9 February 2012, Maputo.

[lii] Portuguese-speaking African countries.

[liii] Ibid.

[liv] UNAC members have travelled to Brazil to meet the Brazilian NGOs and social movements and they are organizing a meeting in Japan in March 2013.

[lv] Interview with the National Director of Agriculture Services in Maputo, 9 February 2012.

[lvi] Ibid.

[lvii] Interview with Technology Transfer Department of IIAM-Maputo, 17 February 2012.

[lviii] Interview with local farmer from Xai-Xai and member of Association of the Ponela Irrigation System (ARPONE), 18 October 2012, Xai-Xai.

[lix] Interview with the National Director of Agriculture Services, 9 February 2012, Maputo.

[lx] Our source from CPI said that the Wanbao Grain & Oil Limited investment is estimated in $ 200 million (personal communication, April 2012).

References

ABC (2010) A cooperação técnica do Brasil para a África, Agência Brasileira de Cooperação, Brasília.

ABC (2011) Brazilian technical cooperation, Agência Brasileira de Cooperação, Brasília.

ABC/Embrapa (2011) ProSavana-TEC: Projeto de melhoria da capacidade de pesquisa e de transferencia de tecnologia para o desenvolvimento da agricultura Do corredor de Nacala em Moçambique, Resumo Executivo. Brasília: ABC and Embrapa.

Abdenur, A. (2007) The Strategic Triad: Form and Content in Brazil's Triangular Cooperation Practices, International Affairs Working Paper 2007-06, New York: The New School.

Alden, C. (2007) China in Africa, London: Zed Books.

AMPA (2011) Pinesso planta 10 mil hectareas de algodão no Sudão. Available at: http://www.ampa.com.br/home/noticia/pinesso-planta-10-mil-hectares-de-algod%C3%A3o-no-sud%C3%A3o [accessed 19 November 2012]

Batley, R. (2005) Mozambique: The costs of owning aid, Public Administration Development, 25, pp. 415–424.

Bias, C. (2012) ProSavana. Uma Oportunidade para o Desenvolvimento de Agronegócios no Corredor de Nacala, Presentation delivered in March 2012, Maputo.

Bowen, M. (1989) Peasant Agriculture in Mozambique: The Case of Chokwe, Gaza Province, Canadian Journal of African Studies (23), 3, pp. 355-379.

Brautigam, D. and Tang, X. (2009) China's Engagement in Africa Agriculture: Down to the Countryside, The China Quarterly, 199, p. 686-706.

Brautigam, D. (2009) The Dragon's Gift: The Real Story of China in Africa. Oxford: Oxford University Press.

Buckley, L. (2013) Narratives of China-Africa Cooperation for Agricultural Development: New Paradigms?, Working Paper 053, Future Agricultures Consortium.

CAAS (2009) Green Super Rice for the Resource Poor in Africa and Asia (BMGF grant ID#: 51587), Semi Annual Report Submitted to the Bill & Melinda Gates Foundation (BMGF) by Chinese Academy of Agricultural Sciences (July).

Cabral, L. and Shankland, A. (2013) Narratives of Brazil-Africa Cooperation for Agricultural Development: NewParadigms?, Working Paper 051, Future Agricultures Consortium

Cabral, L., Shrivastava, A. and Muendane, C. (2007) Sector-Wide Approaches in Agriculture and Rural Development: Mozambique – The Case of PROAGRI, Global Donor Platform for Rural Development, Bonn.

Canal de Moçambique (2012) Chineses desalojam 80 mil pessoas para projecto Wanbao agriculture, Canal de Moçambique, 25 0ctober 2012.

Castel-Branco, C. (2010) Economia extractiva e desafios de industrialização em Moçambique, In Castel-Branco C. et al. (eds.), Economia extractiva e desafios de industrialização em Moçambique. Maputo: Instituto de Estudos Sociais e Económicos, pp. 19 – 109.

Castel-Branco, C. (1994) Problemas estruturais do desenvolvimento agrário, Castel-Branco, C. (org.), Moçambique: perspectivas económicas, Maputo, Faculdade de Economia/ Friedrich Ebert, pp.31-86.

CCIABM (2012) Regadios no norte de Moçambique serão reativados através de iniciativa brasileira, Câmara de Comércio, Indústria e Agro-pecuária Brasil-Moçambique. Available at: http://www.cciabm.com/regadios-no-norte-de-mocambique-serao-reativados-atraves-de-iniciativa-brasileira [accessed 22 Januay 2013].

Centre for Chinese Studies (2009) Patterns of Chinese investment, aid and trade in Mozambique, briefing paper prepared for World Wide Fund for Nature, October.

Chichava, S. Xai-Xai Chinese Rice Farm and Mozambican Internal Political Dynamics: A Complex Relation (forthcoming).

Chichava, S. (2008) Mozambique and China: From Politics to Business?Discussion Paper n°05/2008, Maputo: IESE.

Chichava, S (2010) Investimento Directo Chinês em 2010 em Moçambique: Impacto e Tendências, IDeIAS 39, Maputo: IESE.

Chichava, S. and Alden, C. (2012) A Mamba e o Dragão: Relações Moçambique-China em Perspectiva. Maputo and Johannesburg: Instituto de Estudos Sociais e Económicos (IESE) and South African Institute of International Affairs (SAIIA).

Cindes (2011) A África na agenda econômica do Brasil: comércio, investimentos e cooperação, Breves Cindes 61, Centro de Estudos de Integração e Desenvolvimento, Rio de Janeiro.

Costa Vaz, A. and Inoue, C. (2007) Emerging donors in international development assistance: the case of Brazil, IRDC: Partnership & Business Development Division.De Renzio, P. and Hanlon, J. (2007) Contested Sovereignty in Mozambique: The Dilemmas of Aid Dependence, GEG Working Paper.

Diário do País (2012) Agricultores exigem investigação agrária orientada para sector comercial, Diário do País, Edition nº 1313, Year VI, 23 November 2012.

Duran, J. and Chichava, S. (2012) Centro de Investigação e Transferências de Tecnologias Agrárias de Umbeluzi. A historia de um 'presente' chinês a Moçambique, In: Alden, C. and Chichava, S. (eds.) A Mamba e o Dragão. Maputo: IESE & SAIIA, ch. 7.

Embrapa (2012) Moçambique: Apoio ao Sistema de Inovação no Setor Agropecuário. Brasília: Empresa Brasileira de Pesquisa Agropecuária.

FOCAC (2012) FOCAC ABC. Available at: http://www.focac.org/eng/ltda/ltjj/t933522.htm.

Folha de São Paulo (2011) Moçambique oferece terra para os agricultores brasileiros. Available at: http://www.agora.uol.com.br/brasil/ult10102u959442.shtml [accessed 11 February 2012].

Ganho, A.S. (2012) A terra e a água para os novos agro-investimentos em Moçambique: o que está em jogo?, III Conferência Internacional do IESE, Maputo: Instituto de Estudos Sociais e Económicos.

Hamela, H. (2012) O IVA no sector da agricultura em Moçambique, USAID, Maputo.

Heredia, B., Palmeira, M. and Leite, S.P. (2010) Sociedade e economía do 'Agronegocio' no Brasil, RBCS, Vol. 25 N. 74, pp. 159-196.

Hirst, M., Soares de Lima, M.R. and Pinheiro, L. (2010) A política externa brasileira em tempos de novos horizontes e desafios, Nueva Sociedade, Especial em Português, pp. 22-41.

Hosono, A. and Hongo, Y. (2012) Cerrado Agriculture: A Model of Sustainable and Inclusive Development, Japan International Cooperation Agency Research Institute, Tokyo.

Hubei Daily (2012) Hubei Achieves Progress in Overseas Agricultural Development. Available at: http://english.rikes.gov.cn/4/288/291/4085.html (accessed 21 June 2012).

Instituto Lula (2012) O Brasil tem um débito de solidariedade com a África, diz Lula em entrevista ao Financial Times. Available at: http://www.institutolula.org/o-brasil-tem-um-debito-de-solidariedade-com-a-africa-diz-lula-em-entrevista-ao-financial-times/ (accessed 8 February 2013).

JICA & Oriental Consultants (2011) Preparatory Study on Triangular Cooperation Program for Agricultural Development of the African Tropical Savannah among Japan, Brazil and Mozambique (ProSavana JBM), Final Report

JICA (2011) Overview of the JICA's Development Plan of Northern Mozambique, Japan International Cooperation Agency, Mozambique Office, Maputo.

Li, X., Qi, G., Tang, L., Zhao, L., Jin, L., Guo, Z. And Wu, J. (2012) Agricultural Development in China and Africa: A Comparative Analysis. Routledge.

Loureiro, G.L. (2012) Projeto ProSavana: cooperação ou cavalo-de-Tróia? A ambiguidade da presença brasileira em África, Matutações, 6 July. Available at: http://matutacoes.wordpress.com/2012/07/06/projeto-prosavana-cooperacao-ou-cavalo-de-troia-a-ambiguidade-da-presenca-brasileira-em-africa/ [accessed 17 December 2012].

Mabunda, L. (2012) O governo vendeu 24 distritos a brasileiros, O País, 19 August. Available at: http://www.opais.co.mz/index.php/opiniao/86-lazaro-mabunda/16037-governo-vendeu-24-distritos-a-brasileiros.html [accessed 29 November 2012].

Matos, P. (2011) Política africana do governo Lula, Outras Palavras, blog post, posted on 21/06/2011. Available at: www.outraspalavras.net.

MINAG (2010) Plano Estratégico para o desenvolvimento do sector agrário (PEDSA 2011-2020), Maputo: Ministério da Agricultura.

Ministry of Foreign Affairs of the People's Republic of China (2011) China and Mozambique, http://www.mfa.gov.cn/eng/wjb/zzjg/fzs/gjlb/3044/t16542.htm [accessed 9 February 2013].

MPD (2010) Pobreza e bem-estar em Moçambique. Terceira avaliação nacional, Maputo: Ministério da Planificação e Desenvolvimento.

Rafael, A. (2011) O neocolonialismo brasileiro em Moçambique, O País. Available at: http://www.opais.co.mz/index.php/analise/92-adelson-rafael/16099-o-neocolonialismo-brasileiro-em-mocambique.html [accessed 11 February 2012].

Revista Macau (2011) Uma Plataforma entre Moçambique e Ásia, Revista Macau, 24, Setembro, pp. 77-79.

Rosário, D. (2012) From negligence to populism: an analysis of Mozambique's agricultural political economy, Working Paper 34, Future Agricultures Consortium.

The Economist (2012) The miracle of the Cerrado. Available at: http://www.economist.com/node/16886442 [accessed 30 November 2012].

Triangle of Central China (2012) Hubei Achieves Progress in Overseas Agricultural Development. Available at: http://english.rikes.gov.cn/4/288/291/4085.html [accessed 30 November 2012].

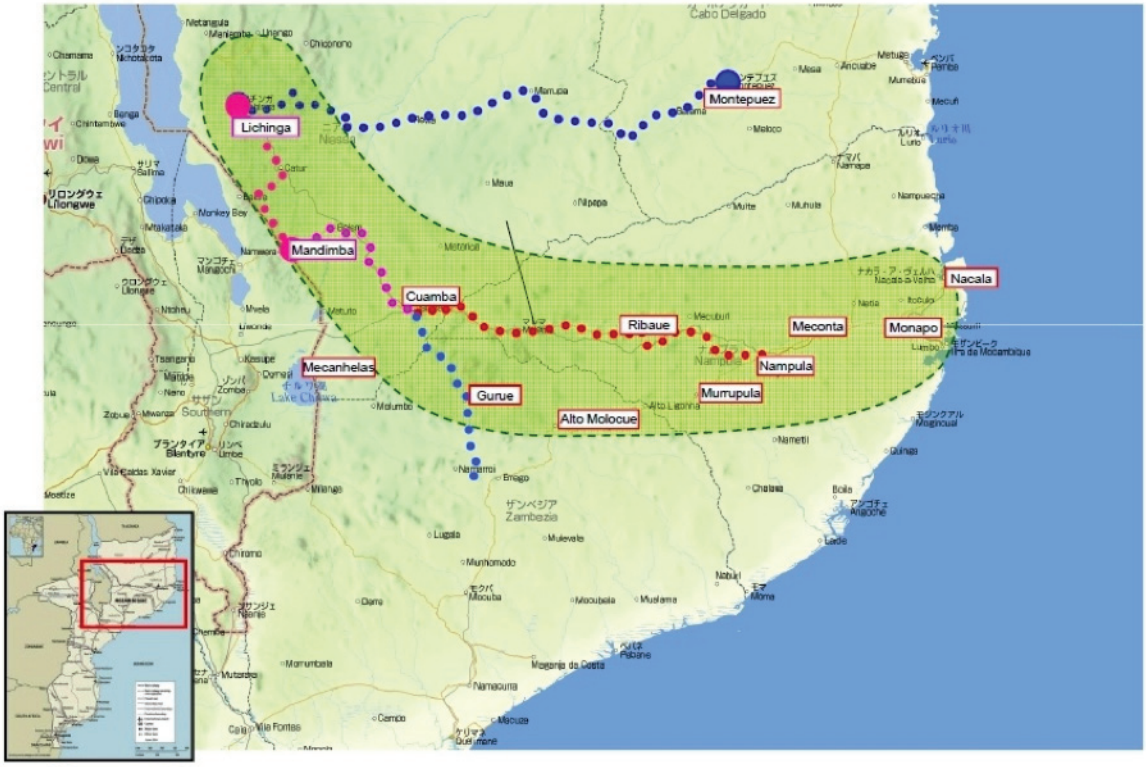
UNAC (2012) Pronunciamento da UNAC sobre o programa ProSavana, União Nacional de Camponeses. Available at: http://www.unac.org.mz/index.php/7-blog/39-pronunciamento-da-unac-sobre-o-programa-prosavana [accessed 17 December 2012].

Vidigal, C. (2010) Brasil: potência cordial? A diplomacia brasileira no início do século XXI, Revista Eletrônica de Comunicação Informação e Inovação em Saúde 4(1).

Weinhold, D., Killick, E. and Reis, E.J. (2011) Soybeans, poverty and inequality in the Brazilian Amazon, MPRA, Paper N. 29646, pp. 1-26.

Xinhua (2006) Beijing Summit adopts declaration, highlighting China-Africa strategic partnership. Available at: http://www.gov.cn/misc/2006-11/05/content_433188.htm [accessed 18 February 2013].

Annex: Map of location of ProSavana in Mozambique



Source: Bias (2012).

Future Agricultures

This **Working Paper** was written by **Sérgio Chichava, Jimena Duran, Lídia Cabral, Alex Shankland, Lila Buckley, Tang Lixia and Zhang Yue** for the **Future Agricultures Consortium**. The series editors are **Rachel Whitfield** and **Beatrice Ouma**. Further information about this series of Working Papers at: **www. future-agricultures.org**

The Future Agricultures Consortium aims to encourage critical debate and policy dialogue on the future of agriculture in Africa. The Consortium is a partnership between research-based organisations across Africa and in the UK. Future Agricultures Consortium Secretariat at the University of Sussex, Brighton BN1 9RE UK **T** +44 (0) 1273 915670 **E** info@future-agricultures.org

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

FAC appreciates the support of the UK Economic and Social Research Council and UK Department for International Development (DfID)

UKaid from the British people

The views expressed do not necessarily reflect the UK Government's official policies.