

Interpreting China-Africa Agricultural Encounters: Rhetoric and Reality in a Large Scale Rice Project in Mozambique

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This Working Paper series emerges from the China and Brazil in African Agriculture (CBAA) programme of the Future Agricultures Consortium. This is supported by the UK Economic and Social Research Council's 'Rising Powers and Interdependent Futures' programme (www.risingpowers.net). We expect 24 papers to be published during 2015, each linked to short videos presented by the lead authors.

The CBAA team is based in Brazil (University of Brasilia, Gertulio Vargas Foundation, and Universidade Federal do ABC), China (China Agricultural University, Beijing), Ethiopia (Ethiopian Agricultural Research Institute, Addis Ababa), Ghana (University of Ghana at Legon), Mozambique (Instituto de Estudos Sociais e Económicos, Maputo), Zimbabwe (Research and Development Trust, Harare), the UK (the Institute of Development Studies, the International Institute for Environment and Development and the Overseas Development Institute).

The team includes 25 researchers coming from a range of disciplines including development studies, economics, international relations, political science, social anthropology and sociology, but all with a commitment to cross-disciplinary working. Most papers are thus the result of collaborative research, involving people from different countries and from different backgrounds. The papers are the preliminary results of this dialogue, debate, sharing and learning.

As Working Papers they are not final products, but each has been discussed in project workshops and reviewed by other team members. At this stage, we are keen to share the results so far in order to gain feedback, and also because there is massive interest in the role of Brazil and China in Africa. Much of the commentary on such engagements are inaccurate and misleading, or presented in broad-brush generalities. Our project aimed to get behind these simplistic representations and find out what was really happening on the ground, and how this is being shaped by wider political and policy processes.

The papers fall broadly into two groups, with many overlaps. The first is a set of papers looking at the political economy context in Brazil and China. We argue that historical experiences in agriculture and poverty programmes, combine with domestic political economy dynamics, involving different political, commercial and diplomatic interests, to shape development cooperation engagements in Africa. How such narratives of agriculture and development – about for example food security, appropriate technology, policy models and so on - travel to and from Africa is important in our analysis.

The second, larger set of papers focuses on case studies of development cooperation. They take a broadly-defined 'ethnographic' stance, looking at how such engagements unfold in detail, while setting this in an understanding of the wider political economy in the particular African settings. There are, for example, major contrasts between how Brazilian and Chinese engagements unfold in Ethiopia, Ghana, Mozambique and Zimbabwe, dependant on historical experiences with economic reform, agricultural sector restructuring, aid commitments, as well as national political priorities and stances. These contrasts come out strikingly when reading across the papers.

The cases also highlight the diversity of engagements grouped under 'development cooperation' in agriculture. Some focus on state-facilitated commercial investments; others are more akin to 'aid projects', but often with a business element; some focus on building platforms for developing capacity through a range of training centres and programmes; while others are 'below-the-radar' investments in agriculture by diaspora networks in Africa. The blurring of boundaries is a common theme, as is the complex relationships between state and business interests in new configurations.

This Working Paper series is one step in our research effort and collective analysis. Work is continuing, deepening and extending the cases, but also drawing out comparative and synthetic insights from the rich material presented in this series.

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Abstract

In recent years, China's burgeoning agricultural investment in Africa has attracted tremendous attention from media, academics and policymakers worldwide. The macro-level discussions around the nature and significance of these engagements have been debated and well documented within a vast body of literature. However, little research had been done concerning the local encounters through a particular project, which constitutes a very important angle in understanding how success or failure of a development model is produced. In this article, the authors went beyond apolitical economic approach and examined how local encounters construct and reshape the practice of a particular agricultural investment project using actor-oriented approaches. The perspectives of both Chinese actors and their African counterparts were explored and analysed based on a large-scale Chinese rice project in Mozambique. The research found that the optimistic rhetoric of state actors and investors fell short of the reality of the many unacknowledged structures and chance events. However, despite the unintended outcomes, the rhetoric persists due to the project's significance – not only in its potential for economic profit, but also in terms of its political prestige.

Keywords: China-Africa agriculture encounter, rhetoric, reality, rice project, Mozambique

When we first walked into the 'home' of Wanbao in Xai-Xai, the so-called largest rice project in Africa, we were surprised by its humble simplicity. As we entered through the main gate, we saw a harvest weighing machine opposite a basketball court. Surrounding this, two rows of single-story buildings serve as offices, dormitories, a kitchen, showers, guestrooms and storage. They also provided space for rice processing, a small rice shop and shelter for agricultural machinery. Passing by the manager's office, we could see the records of basketball matches between Chinese staff and the local bank personnel pasted on the front wall.

Across a vast and beautifully prepared empty field there was an additional complex, the new headquarters of Wanbao, under construction. Four Chinese state farms, each with their own accommodation, farming area, storage and processing equipment were taking shape in the four zones of the vast field. Inside these farms' office areas, rows of big, new machinery with shining Chinese brand names were beautifully displayed.

Inside the courtyard, Mr. Li, an agronomist and senior staff member of Wanbao, was cutting the hair of one of his colleagues, Xiao Jiang. Mr. Li explained that even though he was very busy preparing for a month-long trip back to China the following day, he was taking the time to cut his junior colleague's hair because Xiao Jiang had come from another place specifically for a haircut.

Xiao Jiang explained that he did not trust the local barber. Two local teenagers were observing the scene while occasionally responding to calls for help in the kitchen from Mrs. Luo, kitchen assistant for the Chinese staff.

After the haircut was finished, Mr Li returned to his preparations and we joined the Chinese staff for dinner. A large roundtable with Chinese dishes was set in the combined kitchen and dining room adjacent to the dormitory. Only seven key staff sat with us while others simply came to serve themselves and eat elsewhere. There was also a large TV in the room, which is on nearly 16 hours a day.

Mr. Wu, a staff-member who had recently joined the project a month earlier, complained about feelings of loneliness and emptiness after coming to Mozambique. 'I don't think I can stay here for long,' he confessed. 'It's so difficult. I've got nobody to talk to and life here is so boring.' His disappointment stemmed from a mixture of homesickness and disconnect between what he expected to be doing, and the realities of the work on the ground. He explained that he was supposed to be in charge of running the rice processing machinery but there had recently been floods that destroyed much of last season's harvest, so there wasn't much to process. Instead he found himself supervising light work by local workers, mostly weeding the lawn in the courtyard. This reality was far from the image he had when he set out from China for a great adventure and hard work in Africa.

While other colleagues echoed Mr. Wu's sense of disappointment about the realities of their work in Mozambique, a few have found a real sense of purpose in their work. Mr. Chai and Mr. Han, the chairman and CEO respectively of Wanbao Grain & Oil, commute back and forth between China and Mozambique, alternating their schedules in the two countries. They stay in Mozambique for at least half a year with their family left behind in Hubei, China. Despite the long separations from loved ones, they feel that this lifestyle has provided opportunities they would have never had in China. As Mr. Chai put it, 'Mozambique is a country with a promising future. People here are lovely and I found a second chance to do something that I had always wanted to do when I was young but hadn't got a chance to do back in China. I miss this place if I am away from here for more than a month.'

Introduction

In recent years, China's burgeoning agricultural engagement in Africa has been growing rapidly and making an increasing impact on African development and agrarian change. This trend is often portrayed by western scholars as a threat to the continent's development, with the worry that China's approach may impact both Western and African control over land and politics on the continent (Buckley 2013). Chinese leaders,

however, hold the view that China's investments in Africa, especially in the agricultural sector, are not only good for Africa's agricultural development, but also benefit the whole world by contributing to solving global food security problems (CCICED 2011). As local African governments, experts and elites may often welcome China's agricultural engagements, others, including some civil society groups, may hold different views (Moyo 2010).

It is important to bear in mind that the China-Africa relationship in development cooperation is still relatively small-scale and evolving, unlike the continent's relationship with traditional donors which is more mature. It is also too early to make any definitive conclusions that Chinese engagements represent a threat or an opportunity since reliable data on the evolving nature of China's agricultural engagement 'can be difficult to obtain, and empirical observations of these engagements are scarce' (Buckley 2013). Furthermore, local perspectives, from both Chinese and African counterparts, are still regularly absent from the vast body of literature.

Mozambique is an interesting country within the context of the China-Africa relationship as it has become one of China's foremost investment destinations due to the country's rich natural resources and relatively stable political environment. Furthermore, China has also become Mozambique's second largest investor since 2008. One of the most salient reflections of these increased Chinese investments in Mozambique has been the Wanbao rice project in Xai-Xai, Gaza, which has already been subject to considerable debate (Chichava 2015; Ganho 2013; Bräutigam and Ekman 2012). To move beyond the limitations of much of the existing literature on China-Africa engagements more broadly, this research paper therefore aims to explore both the rhetoric and the realities on the ground through this specific agricultural rice project in Mozambique.

Literature Review

International narratives on China-Africa agricultural engagements can be categorised into three conflicting framings: China as i) development partner, ii) new coloniser or iii) economic competitor (Bräutigam 2011; 2010; Saferworld 2011; Cotula et al. 2009; Alden 2007: 5). The 'development partner' narrative emphasises the value of China's development experience and its relevance for transforming Africa through South-South collaborative efforts (Moyo 2010; Rotberg 2008; Le Pere 2007; Goldstein and Reisen 2006; Taylor 2006). The new coloniser framework, on the other hand, views China's recent aid and other related efforts in African countries' agricultural sectors as hegemonic and part of a bid to take control over resources and politics on the continent (McMichael 2012). Lastly, the 'economic competitor' narrative sees China engaged in a neo-classically driven, self-interested grab for resources to feed its own fast-paced economic growth (Rotberg 2008; Wild and

Mephram 2006; Fishman 2005). These analyses treat China as the dominant driving force in the relationship in a way that reduces Africans to passive actors, lacking in agency. Part of the problem with this approach is also the excessive focus on the state with relatively little consideration for actors at the local level (Mohan and Lampert 2012; Alden and Large 2011; Fishman 2005).

Within China, the research on China-Africa agricultural cooperation can be broadly categorised into three stages, starting from the late 1970s and early 1980s. The first stage was largely concerned with food security issues in African agriculture and agricultural geography (Xu 1985; Zhang 1984; Wu and Li 1983; Ji 1980). In the 1990s, scholars shifted their focus from food security to the cooperative modalities and potential opportunities for Chinese investment. Thirdly, at the turn of the new century, and with the establishment of the Forum on China-Africa Cooperation (FOCAC), three principles came to underpin the strategies of China-Africa agricultural cooperation as designed by mainstream scholars in this period: 1) engagements should not be short-sighted, but rather long-term planning and cooperation mechanisms should be established (Jiang 2008; Li 2005; Tang 2002); 2) agricultural cooperation should focus on mutually-beneficial (often referred to as 'win-win'), diversified, market-oriented and company-led investment projects (Yu 2009; Guo 2005; Lu 2003); and 3) government should provide some guidance and integrated support. In this case, Chinese academia played a significant role in affecting state rhetoric on African agricultural cooperation policy.

In the last few years, there have also been some efforts at dialogue with international scholars on the nature of China-Africa agricultural engagements (cf. Yan and Sautman 2010). However, most domestic scholars have continued to focus on the Chinese perspective, summarising modalities, challenges and difficulties and proposing countermeasures for Chinese actors (Gao 2014; Gao et al. 2014). As such it would be fair to say that there remains a divergence in how Chinese scholars and international scholars view China-Africa relationships.

Current literature on Chinese investments in Mozambican agriculture suggests they remain small by comparison with other investors. Before 2011, Chinese investments only accounted for 4 percent of total agricultural investments, among which timber and forestry dominated (44 percent), while food crops and agro-processing represented only 7 percent of agricultural investments between 2000 and 2010 (Chichava 2012). China's investors in timber and forestry also became notorious in Mozambique due to their negative impact on local ecosystems. Meanwhile, Chinese agricultural projects, especially on food crops in Mozambique, continue to remain few and of relatively small scale (Ganho 2013; Bräutigam and Ekman 2012; Chichava 2010).

The Wanbao project itself originally began in 2007 as the Hubei-Gaza Friendship Farm and has aroused great

interest from both media and academics since its inception (Ganho 2013; Bräutigam and Ekman 2012). These have tended to focus on arguments around land grabbing and technology transfer but are all too often subject to stereotyping and hyperbole from all sides. As such the fieldwork conducted for this study aimed to apply a greater level of scrutiny so as to properly assess the nature of the project as it stands from both Chinese and Mozambican perspectives, as well as to better situate it within the wider context of China-Africa relations.

Research Methodology

In this research, the realities on the ground are explored using a qualitative approach. The ethnographic observations were predominantly made through participatory observation methods and in-depth interviews. Drawing on the work of David Mosse, this aimed to capture the 'ethnography of everyday life and practice', whereby we sought to ask 'not whether but how development projects work; not whether a project succeeds, but how success is produced' (Mosse 2005: 1; Mosse 2004: 8).

The researchers of this paper got the opportunity to be 'insiders' of the project for 60 days in 2013 and 2014 thanks to an introduction from the Chinese Ministry of Commerce (MOFCOM) and the local Chinese Agricultural Technology Demonstration Centre (ATDC) in Maputo. During this period of time, the researchers spent more than 20 days in the project area, eating and living with Chinese staff, participating in their activities and observing interactions between the Chinese management and their Mozambican colleagues. This involved intensive observations of communications and interactions with the local stakeholders including Mozambican government officials, staff from the project's local partner and local farmers. Aside from ongoing participatory observations, open-structured interviews were also used to gather more detailed information from different actors. In total we interviewed 21 Chinese staff including the Chairman of the Wanbao project, a CEO, managers, technicians, contractors, agronomists, cooks, accountants and state farm managers, as well as six local workers, seven landless farmers, five local trainees, three Regadio do Baixo Limpopo (RBL) workers and three local government officials. These research efforts were facilitated by our local Mozambican partner and the local Mozambican staff of the project. In addition, we also visited another Chinese rice project in Beira for comparison, where four Chinese staff and several local workers and stakeholders were also interviewed. We also conducted interviews with nine outsiders who knew the project well, including the director of the ATDC in Maputo, four managers from Hubei Lianfeng China, two potential Chinese investors planning to invest in Mozambican rice from China and three Chinese agricultural experts. Finally, Chinese stakeholders and decision-makers in China were also interviewed in 2014 to gain a well-rounded perspective on the project.

An actor-oriented approach was applied throughout to analyse the research findings. This drew on the work of Norman Long, who argues that such an approach can be used 'to build an ethnographic understanding of the "social life" of a development project – from conception to realisation – as well as the responses and lived experiences of the variously located and affected social actors' (Long 2001:14-15). This is important because the relation between policy and practice is not an instrumental or scripted translation of ideas into reality, but often a messy free-for-all in which processes are uncontrollable and results uncertain (Mosse and Lewis 2006). The Wanbao project in this regard is a good example of how stakeholders' agency, the effectiveness of communication, and project implementers' flexibility and negotiation capabilities dominate this process. Within this we will analyse how technology transfers are influenced by a variety of factors such as environmental, social, technological and conceptual. These come together in the project in ways that are not foreseeable to the project executors but are shaped instead by time, space and culture (Pickering 1993). It also proves the truism that local agency cannot be ignored, as Mozambicans negotiate and shape much of the process of project implementation (Mohan and Lampert 2012).

Introducing Wanbao Case Study: Background and Practice

Background of China-Mozambique Agricultural Cooperation

China and Mozambique established diplomatic relations in 1975 following the latter country's independence from Portugal. Since then, China and Mozambique have maintained strong relations with frequent high-level exchanges; however, trade and investment opportunities between the two countries have been few. This has been largely due to the economic difficulties, foreign exchange shortages and insufficient supply in commercial goods in Mozambique. Following the end of Mozambique's civil war, the country's 1992 peace accords sought to prioritise growth in the agriculture sector by attracting overseas investments. Subsequently, from 1992 to 2001, area expansion and an increase in the labour force became the major driving forces of agricultural sector development in Mozambique (World Bank 2006).

Since 2001, China-Mozambique cooperation has grown smoothly. In 2001, China and Mozambique set up a Joint Economic and Trade Committee, as part of which China cancelled Mozambique's outstanding debt obligations. In 2002, a 'Sino-Mozambican Economic and Technological Cooperation Agreement' was concluded and both sides also signed a Memorandum of Understanding on cooperation between the Chinese Ministry of Agriculture and the Mozambican Ministry of Agriculture and Rural Development (MINAG).

In September 2005, the Party secretary of the Hubei Provincial Party Committee, who was also a member of the Communist Party of China (CPC) Central Committee, visited Mozambique and reached consensus on Sino-Mozambique agricultural cooperation. Based on the agreements signed between Hubei and Gaza provincial governments, Gaza Homeland Security Registration Department (SPGCG) granted 300ha of land to Hubei to grow rice, vegetables and other crops. Under this agreement, Gaza Provincial Department of Agriculture (DPAG) was responsible for providing all necessary services around this, including the import of agricultural machinery and seeds from China, choosing local farmers for training, the monitoring of seeds, tax payments, etc. For its part, Hubei was responsible for developing the land, improving the infrastructure, helping local producers improve their yield and transferring Chinese technology to them. Based on these agreements, in April 2007, Hubei-Gaza Friendship Farm was established in Xai-Xai, the capital city of Gaza province (documents from ATDC in Maputo, 2007). Hubei Farming Bureau (HFB) with expertise in managing large-scale agricultural projects was then designated by the Chinese government as the operator of the farm.

HFB is a department of Hubei's local government. They own 13 farms directly, but have responsibility for the administration and policy formation concerning a further 40 farms in their region. When they were asked by the Chinese government to manage the friendship farm in Mozambique, they originally did this by setting up a company in Mozambique (effectively a state-owned enterprise) called Hubei Lianfeng. They then populated this company with farm managers and staff from across 18 of their state farms. They also brought in funding from those 18 farms so that as shareholders of the friendship farm, the financial risks would be more widely spread within their company.

All of the managers continue to receive their salaries, pensions and so forth from the state farm from which they came, with the expectation that they can return to their old jobs as and when they return to China. More recently, since 2014, Wanbao has replaced the Hubei Lianfeng Chairman that came from HFB with a chairman they hired from the private sector themselves.

After three years of collaboration, Chinese workers remained impressed by the fertility of Mozambican land and the Mozambican government was likewise impressed by Chinese agricultural technology and unique approaches to land cultivation. Both sides decided to expand the scale of the project and initiate a longer-term cooperation with the common goal of contributing to solving food security problems in Mozambique. In 2011, the Chinese ATDC and the China Development Bank introduced Wanbao Grain & Oil, a private agricultural 'dragon-head' enterprise¹ from Hubei province, to join the project to scale up the existing Friendship Farm.

In China, Wanbao Grain & Oil is a private company based in Xiayang, Hubei province, focusing on the purchasing, storing, processing, sale and logistics of grain and oils. It is not directly involved in the production of any food goods at the farm level. It was first established in 1952 as a state-owned company and restructured as a private stockholding company in 2004. It forms part of the first batch of national agricultural 'dragon-head' enterprises in China. In recent years the company has actively participated in investments overseas to extend its industry-chain into production activities. At present, the company has five subsidiaries, including Wanbao Africa-Agricultural Development Project, which is currently the company's only one abroad (Wanbao Grain & Oil, Undated).

In May 2011, Mr. Chai, the Chairman of Wanbao, went to Mozambique and quickly decided to move forward with the investment. In an interview, he explained to us that the decision was easy to make because of his confidence in Chinese rice growing technologies and his perception of abundant natural resources, inexpensive labour and huge market potential in Mozambique. Soon after, Wanbao Africa Agricultural Development, Co. Ltd. was established for the purposes of implementing the investment in Mozambique. Wanbao made arrangements to partner with a local Mozambican counterpart called Regadio do Baixo Limpopo (RBL), a public company in charge of local irrigation schemes and land use who had previously partnered with the Friendship Farm. In a contract between the two parties, RBL was tasked with contracting 20,000ha of farmland in Xai-Xai to Wanbao, organising local farmers for trainings and supporting the general implementation of the project at the local level. According to the manager of Wanbao, the total investment would be about US\$250m.

Setting the project in motion

Wanbao began by renting Hubei Lianfeng Friendship Farm's original 1,000ha, and was then granted a 50 year concession to an additional 20,000ha at US\$1 per year per hectare in Xai-Xai. According to the contract with RBL, Wanbao was to invest in infrastructure improvements, provide training for local farmers in Chinese rice-growing techniques and fully exploit the area of 20,000ha within three years (2012-2015). This would involve land preparation, infrastructure construction and irrigation system improvements with a view to selling the rice produced in local Mozambican markets, thereby bolstering local food security. To implement this, Wanbao sub-contracted the China National Chemical Engineering (CNCEC)-6th Company to work on the infrastructure construction, and four Chinese state farms to implement the large-scale farming activities. The names and roles of each of these farms are listed in Table 1 below.

According to the contracts between Wanbao and the Chinese state farms involved, Wanbao was responsible for all infrastructure investments including irrigation

system improvements, road construction and the construction of both a processing factory and dormitories (for Chinese workers). Wanbao also made the initial purchase of all farming machinery, which the farms would then repay over the following 3 to 5 years. The farms were only permitted to plant rice and were required to sell the rice at a fixed price (2 Chinese yuan per kilogram) to Wanbao for processing regardless of market price fluctuations. However, contracting Chinese state farms indefinitely is expensive for Wanbao and in the future they aim to rely more on local farmers to do the production to allow the project to grow and be sustainable.

Regarding their training responsibilities, Wanbao brought in two groups of local stakeholders to grow rice using the latest Chinese technologies. The first group was a government-organised association, named Associação dos Agricultores e Regantes do Bloco de Ponele para o Desenvolvimento agro-pecuário e Mecanização agrícola de Xai-Xai (Ponela Block Association of Farmers and Irrigators for Agri-Livestock Development and Mechanisation in Xai-Xai, ARPONE).² Most of this group's members in 2013 were local political elites. This group would employ the agricultural methods and technologies provided on its own farms.

The second group mainly consisted of local peasants for whom Wanbao had set aside 70ha of its land for training. In 2013, 23 local families were chosen by Wanbao's local partner, RBL, and each family was given 2ha of land to be taught how to plant rice with all the necessary materials and inputs provided on loan. At harvest time, Wanbao would then buy the rice from them and deduct the loans from their income. If successful in the first season, the trained farmers would then receive 3-5ha of land for the following season. Again Wanbao provides seeds, fertiliser and agricultural machinery. They then buy the farmers' harvests but the farmers have to pay 50 percent of the service fee in advance. They can borrow money from the bank after signing their contract with Wanbao.

At the time of research in August 2014, 11,000 of the 20,000ha of land were under production in Xai-Xai, having received more than US\$100m in investments. According to interviews with management staff, the companies involved have employed about 700 Chinese workers, including managerial staff, construction workers and technicians. A further 2,000 local workers have also been employed as construction workers, farm workers, cooking staff and office workers. The detailed information is listed below in Table 1.

China-Mozambique Agricultural Encounter: Rhetoric vs. Reality

Rhetoric: Great Expectations

The remarkable achievements on poverty reduction over the last 30 years have qualified China to be an active

player in international development, not only through aid, but also through trade and investment. China's experience in agricultural development, feeding 22 percent of the world's population with 9 percent of the world's arable land, is seen as an important achievement that African countries can learn from in solving their own food security problems. In transferring these experiences and technologies, the Chinese aid apparatus regularly refers to its principles of 'win-win', 'mutual respect', 'friendship' and 'non-interference'. This language emerges throughout Chinese agricultural projects in Mozambique.

Regarding the Chinese companies investing in Africa, they often have expectations of abundant production and control of the value chain at a level that would be impossible in China. Yet despite the success of their technologies within China, many encounter unforeseen constraints when they get to Africa. In the Wanbao project, for instance, investors and Chinese government officials expected rice growing in Mozambique to be hugely successful because of the combination of China's advanced technologies, and Mozambique's abundance of i) natural resources, ii) human resources and iii) market prospects, all three of which will be discussed separately in the section below. However, the gap between rhetoric and reality revealed important constraints for the Wanbao project as well as China's agricultural cooperation programmes more broadly.

High Hopes for China's Technology Transfer to Mozambique

Prior to the Wanbao project, the primary objective of the Hubei-Gaza Friendship Farm was to transfer Chinese technology to Mozambican farmers. The farm started with the demonstration of Chinese agricultural technology on maize, rice and vegetables to the local people. 'With our technology,' explained one Chinese staff member, 'it is very easy to reach our yield in China: 7.5 tons per hectare.' Local producers similarly emphasised the high productivity of Chinese technology. Mrs. M., an APONE member who had been part of the technology transfer project since 2007, said,

Chinese technology is really good. I got so much rice. My yield can be as high as 15 tons per hectare. I sold my rice to almost everybody in my department. It's a really good experience. Chinese workers work really hard, they call me at 5 o'clock in the morning. Lucia, come to the field right now. It's time to drain off water...

RBL organised a meeting with local farmers for her to share her experiences, which caused a lot of interest and surprise given that local yields usually averaged only 2-3t/ha. The Chinese experts at the centre told us she was certainly exaggerating her yields, but they were still pleased that her experience of farming with their methods had been a success. As a government official, however, she did not have enough time to manage her land and so it was her house-keeper who worked the field everyday during the labour-intensive season.

Table 1: Contractors and business partners of Wanbao rice project in Mozambique

Names	Origins in China	Nature	Tasks from Wanbao	Relationship with Wanbao	No. of Chinese workers	No. of local workers	Length of duration in Mozambique
CNCEC-6 th Company	Xiangyang, Hubei	State-owned	All infrastructure construction and design, including 4 bases for 4 state farms and Wanbao's new headquarter in Chicumbane	Under contract	250 to 500	700 to 1,000	2011 to present
Junken Farm	Member of HFB, shareholder of Hubei Lianfeng	State-owned	In charge of 700ha rice land, responsible for training local peasants	Under contract	26	25 to 150 from low season to peak season	Since 2011
Shuangyashan Farm	Beidahuang Group, Heilongjiang Province	State-owned	In charge of more than 6,000ha rice land, cultivated 2,600ha last season		59	20 to 150 from low season to peak season	Since Sept. 2012
Yunlianghu Farm	Member of HFB, shareholder of Hubei Lianfeng	State-owned	In charge of 2,500ha rice land, cultivated 500ha last season.		16	20 to 150 from low season to peak season	Since May 2013
Jiangchuan Farm	Beidahuang group, Heilongjiang Province	State-owned	Shared land and machines with Shuangyashan last season, will move to Chokwe next season to cultivate 2000 ha land		51	20 to 150 from low season to peak season	Since Sept. 2013
Wanbao Construction Materials Company	All Chinese staff from Zhouji Farm, shareholder of Hubei Lianfeng	51% shares state-owned	Provides all construction materials needed by Wanbao except steels		Subsidiary	8 to 12	17 to 50

Source: Interviews of Wanbao management staff in August 2013 and 2014

Note: Beidahuang Group used to be Heilongjiang Farming Bureau System, which was called Heilongjiang Production & Construction Corps of People's Liberation Army, and was established in 1947. It enjoys a great reputation in China for its large-scale land, state-farm clusters with highest degree of mechanisation and the largest production base for commercialised grain, accounting for 5 percent of China's total grain production.

The initial success of this technology transfer programme also stirred interest in scaling up the project among the Chinese and Mozambican government counterparts. Armando Guebuza, then President of Mozambique, was a particularly strong supporter of this project, as food security had been an important issue within his administration. He visited the project site three times during his presidency and encouraged the Chinese government to expand the project further. It was at this point that in 2011 Wanbao was introduced to the project and took the farm over from Hubei Lianfeng with the additional purchase of 20,000ha. As the project grew in fame, Mozambican officials began referring to Mr. Chai,

the chairman of the project, as the 'Godfather of Rice Cultivation'. Equally optimistic, Mr. Chai's manager, Mr. Han, asserted to us in an interview, 'The reason that the people here are still in hunger, I think, is due to their way of cultivation. People here don't know how to cultivate their land. We want to change their way of cultivation.'

Thus, at the start of the Wanbao investment, both the Chinese and Mozambican leadership, along with the Wanbao investors, all had very high expectations for success. These expectations were based on assumptions of superior Chinese technologies and methods, and their transferability within the context of Mozambique's

natural resources, human resources and market opportunities.

Abundant Natural Resources

Compared with soaring land prices and over-cultivated land in China, land in Mozambique is perceived to be cheap and fertile, tempting Chinese investors looking to invest in agriculture. There are about 36mha of arable land suitable for agricultural production in Mozambique, only 10 percent of which are under cultivation. Furthermore, only about 118,000ha are equipped for irrigation, covering just 3 percent of the potential land (FAO 2013). The sub-tropical climate is also a tempting advantage in Chinese eyes, as in theory it is possible to have two seasons of cultivation. Situated between 11°S and 27°S of latitude, Mozambique has a warm, tropical climate with daytime temperatures of about 20-30°C in the summer (October-February) and 15-25°C in the winter (June-August).

In contrast, China's arable land is becoming increasingly scarce due to the fast pace of urbanisation, land degradation and pollution. According to statistics from the Ministry of Land and Resources of China, from 1996 to 2005, China's arable land reduced from 130m ha to 122m ha. Per capita land is currently at 0.09ha, which makes it only a third of the world average (Economic Information Daily 2010). Furthermore, it has been estimated that more than 10mha of land in China is polluted, which makes up more than 8 percent of the arable land (MLR 2007).

In Wanbao's native Hubei Province, per capita land stands at 0.086ha, which is lower than the national average (Xinhuanet 2014). As Mr. Chai, the chairman of Wanbao, told us,

Being in this industry for more than ten years, I deeply realised the difficulties of keeping this business prosperous in China due to the degradation of domestic land and increasing urbanisation. The raw material is the key bottleneck to the further development of the industry. In Mozambique we got an opportunity to do the whole industry chain development. We can have our own farm here.

The project site of Wanbao is located in the lower part of Limpopo Valley, a swamp with rich organic matter in its soil. Mr. Luo, the manager and agronomist of the Friendship Farm, told us that it was an ideal place for rice production:

The land here is really fertile. The black soil can be more than one meter thick. In China, only Heilongjiang province can have this kind of land resource advantage. With our mature technology, it is pretty easy for us to get 9 tons yield per hectare, which is equivalent to our domestic yield. We can also do this with less fertiliser and we don't need to

worry about the quality of the soil. We don't even need to use hybrid seeds, just normal rice seeds.

Mr. Han, the CEO of Wanbao, was very ambitious about the project. 'Currently, less than 10 percent of potentially arable land in this country has been cultivated,' he said. 'I am sure in five years, Mozambique can transform itself from a food importing country to a food exporting country with our technology.'

Thus, based on the combination of Chinese inputs and rich natural resources in Mozambique, Wanbao investors and Chinese government officials expected ideal growing conditions and high yields.

Idealising Human Resources

Relatively stable economic growth in Mozambique has not been matched by job creation or significant poverty reduction among the wider population. Agriculture remains a core driver of the economy and currently employs more than 80 percent of the labour force (FAO 2013). However, the agricultural sector in Mozambique also accounts for the lowest wages in the country, averaging about 2,300 Meticals per month (about US\$77) (ulandssekretariatet 2014).

Compared with the cheap labour resources in Mozambique, China's labour costs in rural areas have been increasing steadily over the past three decades as many people are moving out of farming into potentially better paid jobs in cities. The volume of rural-urban migration in the country in the last 30 years is the largest in human history (Chan and Bellwood 2011). In recent years, local governments have tried transferring abandoned land to companies or other farmers in a bid to keep it productive. As part of this, private investors can now contract large-scale plots of land and pay compensation to off-farm peasants on a yearly basis (e.g. 15,000yuan per hectare in Hubei). They might then also hire 'left-behind peasants' to work on larger plots of land, supported by inputs of machinery, seeds and fertiliser from the company. In these cases, though, the salary of the rural Chinese labourer can be as much as ten times that of a Mozambican labourer.

These stark wage-labour differences are not lost on the Chinese agricultural investors we spoke to. Indeed, Mr. Zhou, the Chairman of another Chinese rice project in Mozambique, told us,

If you were more than 50 years old, you can see that Mozambique is very similar to China in 1960s and 70s. Its economy and population are growing very fast. With this huge human resource advantage, I am sure in less than 30 years Mozambique will be quite different from now.

This perception of underemployment coupled with cheap agrarian labour in Mozambique was no doubt a similarly attractive prospect for Wanbao investors.

Maximising Market Potential

Rice is not a staple crop in Mozambique but it is consumed as a luxury good. For Chinese investors the market price is seen as very favourable relative to the low level of inputs needed for production.

In China, food processing companies are not only restrained by rural resource scarcities but also the minimum purchasing prices imposed by the Chinese government. Under the scheme, when market prices fall below a certain price the government buys rice or grain from farmers at state-set prices to both protect farmers' livelihoods and ensure food security. In the last few years, China's minimum procurement price for indica rice has increased from 0.7 yuan per jin³ to 1.4 yuan per jin. Meanwhile, the price of rice has fluctuated due to changes in major rice producing provinces such as Hubei (China Grain Website 2009). As a result, the profit margins for grain processing companies are getting smaller and smaller in China. In this context, investing abroad is an opportunity to escape these pressures, a point that was made explicitly by Mr. Chai of Wanbao.

Moreover, food insecure countries such as Mozambique can also present opportunities for agricultural investors. To date, Mozambique's rapid economic expansion over the past twenty years has had only a moderate impact on alleviating poverty, hunger and malnutrition (World Bank undated). According to Mr. Fernando Songane, a liaison officer for the National Program for Agricultural Development (PROAGRI), in 2008, the food shortages in Mozambique totalled 1.25m tons: 500,000t of maize, 400,000t of rice and 350,000t of wheat (Chinese Embassy 2008). As the manager of Wanbao put it,

Currently, Mozambique needs to import 400,000 tons of rice from abroad. Our yield now is nine tons per hectare. If we can cultivate 20,000ha, the food insecurity problem of this country will be solved. They wouldn't need to import food.

Harsh Realities on the Ground

From the rhetoric created and actions implemented over the last three years, it is clear that the project's ambition is to both develop its value-chain as well as change traditional cultivating skills in Mozambique. Mr. Huo, the manager who is in charge of the project's financial operations, explained to us,

There shouldn't be anything wrong with the model. As we all know, the bottlenecks of Mozambique's agricultural development are [due to a] lack of three important elements: capital, technology and human resources. We bring all these from China and try to help Mozambique realise its agricultural modernisation, transforming its traditional agriculture into modern one.

Apart from his rather inexplicable view that there is currently a dearth of human resources in Mozambique's

agricultural sector (in a country where 80 percent of the labour force is taken up by it), his optimism of Chinese solutions for Mozambican problems is reflective of a number of respondents interviewed. However, the reality has been far more complicated than many had expected, as will be explored in the following section.

Barriers to Technology Transfer

The agricultural technologies brought over through Wanbao faced a number of constraints. Poor infrastructure, limits to the technologies' transferability and a number of other factors all played their part. But significantly, these challenges were faced both by Chinese technicians training locals, and by Chinese state farms operating in the ways they know best. In both cases it appeared that unchecked expectations were largely to blame for these shortfalls.

In the case of technology transfers involved in the small-scale demonstration plots, the first major concern raised by farmers was the time demanded by the Chinese project. They are told that their work on the demonstration rice plots should take precedence over other activities. On the one hand this has meant many have had to give up other significant income-generating off-farm activities. For instance, one lady mentioned that she had to discontinue her business of sewing school uniforms for a local primary school after joining the training program. However, this has also meant many having to forego other activities important or necessary to them such as going to church or growing subsistence crops.

Secondly, many complained about the external costs associated with the project. For most participating families, the time it took them to get to their demonstration plots meant that the time they had available to work on their own plots at home was significantly reduced. During peak times, they also have to hire additional workers to help them on their own plots with weeding and scaring birds, all of which takes up more time. To try to reduce transport times, the project began offering pick-up trucks to transport local workers to their work on the Hubei Lianfeng farms, and the peasant farmers to their projects' demonstration plots. However, few farmers knew the exact location of the truck stop and some farmers simply did not know the existence of the pick-up truck. Lastly and most importantly though, many of the farmers complained that they were unable to reap a harvest from their demonstration plots because of devastating floods in 2013. Despite this, the 23 local farmers continued with the free training programme in 2014 and another 45 new families also joined the course.

From the training programme's perspective, one of their biggest challenges has been ensuring its sustainability. As such, the ARPONE farmers on the course, who tended to be local elites, were asked to pay 50 percent of the costs in advance. The Chinese manager responsible for training and demonstration of the project explained this process to us as follows:

At the beginning, we didn't ask them to pay in advance. They could pay after the harvest. But most of them never bothered to pay later. We lost a lot of money because of this. We asked them to pay and encouraged them to borrow money from the bank. If they presented their contract with us, it is easy for them to get money from the bank. But some people squandered their money on drinking or travelling. We have to change the rules of the game now. If they don't pay, they don't share any risk and accountability for the project. They never come to the land themselves.

In 2013, there were 13 ARPONE members involved in the project, but this number was reduced to nine in 2014 due to the failure to pay in advance. 'No pay, no commitment. This is the bottom line of the project,' Mr. Luo insisted. The flood in 2013 also caused losses for those 13 participants.

Another problem with the ARPONE candidates was that they often did not learn anything themselves, but instead would send a member of their staff or hire someone separately to take the course for them. Although a common problem with most of the ARPONE members, responsibility for their having been chosen in the first place lay with the local government and Wanbao's local partner, RBL. Wanbao training course leaders suggested that this could be a key impediment to the transfer of Chinese technologies and methods.

That said, some of the state-owned Chinese farming companies that Wanbao contracted also faced considerable difficulty applying their technologies and experience on Mozambican soil. Again, it seems likely that this was down to unchecked expectations, but in this case with regards to climates and soils.

Among the four farms, two are from Heilongjiang province in Northeast China and the other two from Hubei province. In China, farms in the Northeast typically use big machinery for large-scale planting and cultivation of *japonica* rice. Farms in Hubei by comparison are well-known for their delicate farming skills, needed for planting *indica* rice. The technology used in *indica* rice is similar to that used in Mozambique which has meant that they have fared better than their partners from Heilongjiang. While the two Heilongjiang farms have employed the same techniques that made Northeast China the largest rice producer in China, they do not have experience of any other techniques or methods. As a result, the Heilongjiang farms' first two seasons in Mozambique faced a number of setbacks and they have had to radically rethink their approach.

When we visited the facilities for preparing seeds to be transplanted, one of the Chinese technicians, Mr. Li, explained that these facilities were largely useless here, as 'in this place, we don't need to [plant seeds indoors then] transplant. Sowing [directly] is good enough. There is no yield difference between transplanting and sowing.'

He also shared with us the painful experiences that the farm had gone through:

They called me and asked, 'Teacher Li, please come and have a look at why the seeds are still not germinating after 15 days?' I went and saw all the seeds were rotten. Here, because the temperature and humidity is different, two days is long enough for seed soaking. After 12 hours, you take them out for ventilation for a further 12 hours. Repeating the procedure two times, the seeds will be ready for planting. Moreover, knowing the best moment to use herbicides and administer water in the field is also very important. If you miss the right time, even though you use herbicides, the weeds control may not be effective. Agricultural season waits for no man. If one procedure is wrong, everything else will be affected.

Land Disputes

Perhaps one of the biggest challenges faced by the Wanbao project was when groups of landless peasants turned up at their project threatening staff with hoes and other farm implements. 'This shouldn't be our problem,' said one of the managers.

It is their government who gave us this land. They should talk to their government to solve the problem. We also suggested to the government that these people might join our training project. We could teach them to plant rice and their life would improve, but the government didn't take our advice and we can't interfere with their selection process in line with the agreement.

Wanbao is one of many foreign companies that have come up against land dispossession disputes as part of their investments in Mozambique. According to a local expert in irrigation systems, the land where conflict occurred between Wanbao and local people was called Gaide, covering about 650ha. It was originally set up by the Portuguese with a good irrigation system in 1954, and at independence it was turned into a state farm. Later, following floods, the Mozambican government was said to have informally allowed local people to use the land until the plot was rented to Wanbao. However, the Chinese managers saw this differently. They argue that the land was wasteland and that the irrigation system was obsolete. Mr. Luo, the Wanbao manager in charge of technology transfers and local relations, drove us to the contested site. He told us,

You can see the state of the land yourself. It has not been cultivated for a long time. Nobody was planting this land. But when we moved our machinery near the land, people appeared and claimed that the land was theirs. The project has been delayed for a while because of this.

As companies from China, where the power of the State has rarely been challenged, Wanbao did not expect local farmers to challenge them when the land was given to them by the Mozambican government.

At the time of independence, Mozambique's government gave legal recognition to customary land systems whilst also establishing a nationalised land system. As such, although some lands may look like wasteland, they may be used by local peasants for grazing, firewood and building. Whatever the reality of the land Wanbao obtained, they have now been drawn into the conflict between local people and the government, which has affected the progress of the project.

Labour relations

Another area of difficulty in executing the project has been in terms of labour relations between Chinese staff and the Mozambican farmers or project employees. From the Chinese staff's perspective, local employees are often seen to be lazy and less efficient than Chinese workers. As one Chinese informant told us,

Their salary is low, but their efficiency is also about one tenth of a Chinese worker. Sometimes, it can be very tiresome to work with them. They make mistakes on simple tasks and often get injured. If small injuries occur, they will take a long time in sick leave. After they return, they will then ask you to find them a much easier job. Moreover, they need to go to church on Sundays and they are not interested in working overtime. In Agriculture, weather waits for no man.

Such views are not restricted to Chinese managers in Mozambique but have appeared across various countries and case studies looking at China-Africa engagements (French 2014; Lee 2014; Buckley 2013). The comparison between 'Chinese' work-ethics and 'Mozambican' or other African countries' work ethics is usually invoked through the term 'eating bitterness', which is best described as follows by Ching Kwan Lee regarding her work in Zambia:

The Chinese use the phrase "eating bitterness" to convey willingness to endure hardship, postpone gratification, submit to company discipline, save and reinvest for personal and corporate development. Invoking this narrative usually involves strong moral censure and a sharp nationalistic division between themselves and the Zambians. (Lee 2014)

One of the Mozambican workers we interviewed expressed the issue from their perspective as follows:

Why do Chinese people work? It seems that they never spend their money. They don't go out at weekends, no sex, no leisure, no family around them.

All they do here is work. What do they earn money for? To us, it's like self-sadism. We don't understand how Chinese people can be like this.

Again, Lee's work helps answer the questions raised by this informant. In the words of Zambian workers she interviewed, it was put forward that absenteeism and lack of commitment may certainly exist, but the problem for them was often one of precarious employment conditions, rather than African culture or any national culture. As one Zambian trade union official told her,

For the Chinese, who have no families here – they are here only to work – the sooner they finish the project, the sooner they get to go home. For Zambians, as soon as they finish their work, they think they will be out of a job. The other reason is that Zambians are not well paid. With a minimum income, you are not able to take good care of your family. You have to worry every day whether there is food on the table for your kids and wife, so you clock off early, or you take leave to look after them, or take on extra jobs. It's not that Zambians are lazy by nature. (Interview in Kitwe, Lee 2014)

This quote could just as easily be talking about Mozambican workers and miscommunications around these issues certainly played a part in Wanbao's strained labour relations. A local translator at Wanbao explained to us that people came to them every day to discuss conflicts and problems. Part of the problem may be down to the fact that there is a minimum of roughly 400 Chinese staff and 800 Mozambican staff at any one time (going up to a maximum of 700 and 2,000 respectively) with only a handful of translators at head office. The opportunities for misunderstandings are therefore huge. In the long term, such resentments between Chinese staff and Mozambican employees and farmers may pose a serious risk to the success of the project.

Uncertain Market Prospects

Lastly, Wanbao seems set to face challenges selling the rice it produces in local markets. At present this has been manageable due to the relatively low levels of output for the reasons mentioned above; however, there are three issues worth noting. Firstly, rice remains a luxury good with a small market in Mozambique. Wanbao rice costs slightly below average prices in Mozambique but is still not affordable to most local people. Secondly, it is hard for them to sell at a much lower price than the imported rice due to their high production costs. As mentioned earlier, a huge part of Wanbao's investment has gone into infrastructure construction. Lastly, the barriers to entry within the retail sector cannot be ignored because they lack the language skills and knowledge of local markets enjoyed by more established vendors. At present, Mozambique's food retail sector is mainly dominated by Indian and Pakistani groups.

The fact that rice is not typical to the Mozambican diet is a problematic oversight in terms of the project's desire to meet national food security needs; especially since this takes up such a large amount of the capital, labour and land at Wanbao's disposal. However, more recently the project has also established eight large-scale granaries at their new headquarters in Chicumbane and Wanbao hopes it will be able to move towards becoming Mozambique's national granary.

Ongoing Commitments

Despite the difficulties the Chinese project has faced, there has been a strong commitment from policymakers on both sides to support it based on its importance as a symbol of positive relations between the two countries. Furthermore, despite the setbacks of 2013 and 2014, local farmers on Wanbao's training programme have generally been positive about what they have learnt.

After the flood of 2013, the Chinese ambassador to Mozambique promised that Chinese companies would not abandon the project and provided 10t of rice in emergency food aid for the local population of Xai-Xai. He reiterated President Xi Jinping's statement that 'China will always be Mozambique's all-weather friend' (*Quantianhou Pengyou*) and the project has been heralded as a key reflection of this in China's national media (Ni 2013). As such, Wanbao and its state-farm partners immediately started a second-season trial after the floods.

Unfortunately, these efforts failed quickly because the area flooded once more in 2014 and some of the state farms were still struggling with inappropriate technologies as discussed above. In response, the Chair of Beidahuang Group insisted to his colleagues in Mozambique, 'These few difficulties mean nothing.... The fertility of land here is still excellent, and with our persistence and determination, we will eventually succeed.' Wanbao itself concluded that the severe effects of the flood were due to poor damming of the river and their project manager went so far as to describe the floods as more of a 'man-made disaster than natural'. As a result they reiterated their commitment to improve the infrastructure around the project following these two years of floods and bad harvests.

On the Mozambican side, there have been criticisms of the Wanbao project as well as Chinese engagements more generally, particularly within the media and groups such as the landless peasants (Chichava 2015). However, the Mozambican government has been keen to support this project as a means to adopt Chinese agricultural technologies, encourage Chinese agricultural investments and based on its value as a symbol of Mozambique-China relations. In this respect it has granted 400 free work permits for Chinese staff on the project, and the 20,000ha of land used for rice production.

More publically, President Guebuza also visited the project three times and met with Wanbao executives in

their China headquarters. While on fieldwork we also observed some government staff visiting the site asking for rice from the president, saying that he only likes to eat rice from this project. Chinese informants told us that this is a common occurrence. In fact, they sell the rice under the brand name 'Bom Gusto' meaning 'Delicious' or 'Good Taste' in English; a name that is said to have been suggested by the President himself.

Lastly, the ARPONE farmers and local peasant farmers working on the project's training plot that we interviewed also seemed satisfied with the results of the project so far. Whereas previously many in the Limpopo valley would have expected yields of around 1.5t/ha (Notícias 2013), farmers we spoke to had already successfully harvested up to 6t/ha. Having just emerged from two seasons of floods, it is significant that this programme is working again, yet it remains to be seen how commercially sustainable these farming methods will be once the farmers graduate from the programme.

Conclusion

This paper began by looking at the rhetoric surrounding the transferability of Chinese agricultural technologies in Mozambique within the Wanbao project. Chinese workers, investors and government officials all believed that growing rice in Mozambique would be a successful endeavour because of the abundant natural resources, human resources, and market potential. They also hoped that the project's aims of addressing food security issue would reflect well on the reputation of Chinese investors in Africa. Similarly, Mozambican officials believe this to be an important opportunity to learn from China.

This research finds, however, that the reality often falls short of the expectations. What happens when these technologies and methods arrive in Mozambique is far more complex and a number of obstacles have emerged. But despite the project facing an extremely difficult situation, the rhetoric and investment has continued. To achieve the few successes it has so far, adaptation to the circumstances has been important with regards to technologies, local politics and culture. These adaptations have occurred as their expectations and intentions have been directly challenged by actors at all levels in the remit of their project; from the farmers they train to the markets they are targeting.

Ultimately though, the main reason that the Wanbao project continues to receive funding and political support from both the Chinese and Mozambican governments is due to the important symbol of Sino-Mozambican cooperation it represents. Furthermore, there is also clearly still the genuine hope that Wanbao will ultimately be able to deliver on the goal of transferring successful Chinese agricultural practices to Mozambique and address some of the country's food security issues in a way that is beneficial to both sides. Ongoing communication and adaptation will be key to this and the coming months will hopefully shed much light on

the viability of such projects within other Chinese partnerships in Africa.

End Notes

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- 1 As part of China's economic reforms, leaders have adopted the concept of the dragon-head enterprise (longtougqiye) as a strategy for connecting small-scale farmers with modern markets. The concept comes from the dragon dance, where the dance leader wears the head of the benevolent dragon, and the rest of the dancers follow him in a line, making up the body of the dragon. In this way, the dragon-head enterprises are meant to lead a long line of farmers where they need to go – selling to markets – through example and through gathering information about markets, new techniques and standards. The dragon-head enterprises have been a key component of the 'agricultural industrialisation' strategy, with nearly half of all agricultural exports produced by these firms.
- 2 According to the President of ARPONE, Mr. Manjate, 'ARPONE is an association which is established to organise local people to learn Chinese agricultural technology. The government had an advertisement on local newspaper to recruit someone who would like to join the organisation. As required by Chinese, only those who had land and agricultural experience should be considered. 150 people applied but only 47 were selected to be ARPONE members. The government appropriated 500ha land to ARPONE and now 362ha have been developed and the rest are yet to be. Each ARPONE member has 5-10ha land and Chinese workers go to their land and teach them all necessary techniques used to plant rice and provide machinery service for them. But they need to pay for this service.' However, most ARPONE members are local political elites, as could be seen on the list provided to us by the company.
- 3 One jin is roughly equivalent to 0.5kg

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