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Class, politics and dynamic accumulation processes around the Sino-Mozambican rice project in the lower Limpopo, 2005–2014

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ABSTRACT

This study levels an international political economy lens at the development of the Sino-Mozambican rice project in the lower Limpopo, by examining how class relations shaped and were shaped by global trends, Chinese resources and Mozambican dynamic accumulation interests. The Sino-Mozambican rice project (2005–2014) is analysed as three projects benefiting different groups, with a focus on producer selection and allocation of means of production, in dialogue with the historical dynamics of agrarian accumulation and the political economy of Mozambique. The paper argues that the project has served the expansionist interests of the ruling capitalist group associated with central government circles, limiting land-based possibilities at province level. In addition, the plan to locally transform small producers into rural capitalists through 'modern' Chinese methods has failed to confront the historical interdependence of the commercial and so-called family sectors and the diversity of livelihood sources for the reproduction of food and labour.

KEYWORDS

Chinese; Mozambique; agrarian transition; agriculture; accumulation; land-grabs

PALAVRAS-CHAVE

Chinês; Moçambique; transição agrária; agricultura; acumulação; açambarcamento de terras

Classe, política e processos dinâmicos de acumulação em torno do projeto orizícola sino-moçambicano no baixo Limpopo, 2005-2014

RESUMO

O presente estudo aborda o projeto sino-moçambicano de produção orizícola no baixo Limpopo de uma perspetiva de economia política internacional, examinando como as relações de classe moldaram e foram moldadas por tendências globais, pelos recursos chineses e por interesses dinâmicos de acumulação moçambicanos entre 2005 e 2014. O projeto é analisado como três subprojectos com grupos-alvo diferentes. O enfoque incide na seleção dos produtores e atribuição dos meios de produção, em diálogo com as dinâmicas históricas de acumulação agrária e a economia política de Moçambique. O artigo argumenta que o projeto tem servido os interesses expansionistas do grupo capitalista dirigente, limitando as possibilidades fundiárias ao nível do governo provincial. Argumenta igualmente que o plano local de transformar pequenos produtores em capitalistas rurais por via dos métodos 'modernos' chineses não confronta a interdependência histórica da agricultura

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comercial e do chamado setor familiar, assim como a diversidade de fontes de rendimento para a reprodução da alimentação e mão de obra.

Just because you farm half or quarter of a hectare doesn't mean that you're practising real agriculture.

- Senior district representative (Interview, 6 June 2014)

Introduction

This study levels a Marxist political economy lens at the development of the Sino-Mozambican rice project in the lower Limpopo valley. Focusing on a defined time period, 2005–14, it interrogates the ways that class dynamics shaped, and were shaped by, China's development cooperation model for Mozambique, and examines changing Mozambican accumulation interests in the context of sudden price rises in agricultural commodities. The article aims to understand how this project relates to Mozambique's dominant strategy for capital accumulation, such as the dynamics it has enabled for capitalist factions in power. But it also seeks to comprehend the rural differentiation dynamics that the project has generated, particularly with regard to the desideratum to create a new group of rural capitalists. Together with historically situated challenges, this can provide crucial information about the form(s) that the agrarian question of transition to a capitalist agriculture is taking in Mozambique.

The case study is located in the lower Limpopo valley irrigation scheme, in the southern province of Gaza, or Regadio do Baixo Limpopo as it is known in Portuguese. Since late 2011, it has been managed by a public and centrally vested cognate company, Regadio do Baixo Limpopo, Empresa Pública (RBL-EP). At the time of its last rehabilitation in 2004–08, the perimeter was approximately 12,000 hectares, comprising drainage and irrigation blocks as well as non-irrigated areas. Rice has historically been the main crop. The Regadio was set up in 2010 under a decree (RoM 2010) that created the management company and set out its statutes but did not include a map or dimensions of the area. It soon expanded to accommodate the initial Mozambican–Chinese deal of 20,000 hectares and then by a further 70,000 hectares for future development. This entailed considerable land dispossession, resulting in reorganisation of people's labour and livelihoods. The goal was ostensibly to transfer Chinese cultivation methods and inputs for high-yield rice through assistance to selected producers, who then were supposed to continue on different allocated areas with a paid assistance package or on their own. Essentially, they would become rice outgrowers on the public scheme's land, holding a monopsonist relationship with the Chinese enterprise. The irrigation scheme is thus a potential site of social differentiation where paid and unpaid work, farming and off-farming livelihood sources are interdependent, determining actual directions of agrarian transitions. In what direction these transitions occur with Chinese capital and know-how is a key question.

The project's more concrete negotiations in 2005, along with further developments, took place as fuel and food price crises began to gather momentum. Many African countries had become net food importers, relying heavily on international markets. After decades (1980s–2005) of 'maladjustment' (Oya 2007) and neglect of agriculture in Africa, international investment rose sharply. However, it took different forms for traditional donors, compared with Chinese international development methods. Heterodox political economy has shown how global accumulation trends are always mediated in specific ways by national contexts (Ashman and Fine 2013; Castel-Branco 2017) and that the one cannot be understood without the other. Agrarian political economy has illustrated how agrarian transitions, to capitalism in particular, reflect social relations of production that oppose capital and labour in different historical configurations and, within them, determine social stratification dynamics (Bernstein 1979, 2010; O'Laughlin 1981, 1996; Byres 1986, 2016).

This study proposes to look at the project and beneficiaries in three stages, or as three related subprojects, as they seem to target different groups: medium local producers, Chinese production with Chinese labour, and a larger group of small and medium producers from less central areas. Its focus is on the projects' negotiated terms for producer selection, access to means of production and transfer of methods of production, as the basis to assess accumulation and social differentiation. These are interpreted in light of the convergence of historical trajectories for, and challenges to, rural accumulation, as well as of stated policy goals – rhetorically aligned with the World Bank's poverty reduction policies (World Bank 1990, 2002; GoM 2006).

As part of selection demands by the Chinese company, farmers were expected to dedicate themselves full-time to rice cultivation in the selected plots, although with a variable degree of mechanisation. This is a risky proposition, given on the one hand the dependence of production on contingent factors (weather, soil quality and family labour); and, on the other hand, that rice is a monocrop, and a cheap one at that, employing seasonal labour, therefore not guaranteeing stable wage work. Crucially, the production strategy should have taken into account the inadequate land redistribution and the reorganisation of social relations of production. In this context, the profitability of commercial agriculture is founded on the interdependence of wage work and household production. Failing to acknowledge this interdependence and insisting on vertically integrated monocropping has historically resulted in insufficient sources of livelihoods to subsidise family production. The Sino-Mozambican strategy promised to deliver increased productivity, whereas it appeared to increase social exclusion and class stratification. For this reason, the study took an approach that looks at socially differentiated impacts. While a full analysis of social differentiation would also entail information on further sources of livelihood, the focus here is on means of production, from finance and land access to labour, which is central in Marxism and to the project's so-called technology transfer.

The paper argues that the overall project was appropriated by the dominant Mozambican capitalist groups, owing to the centralisation of state control over foreign (especially Chinese) investment, including land-water administration in public irrigation schemes. This corresponds to the carving out of a particular space where communal land laws would be suspended and private businesses or partnerships pursued, but with enhanced proprietor rights for the state, akin to what Lunstrum defined as a 'neoliberal state space' (Lunstrum 2008), as in the Limpopo State Park. Further, at the local level, the project model not only reproduces the old dualistic view of subsistence agriculture versus commercial farming, but also challenges local residents' historical reliance on multiple livelihood sources, which is itself a consequence of the historical mode of accumulation to keep labour costs down.

The research was based on primary sources, collected during a part of doctoral fieldwork for approximately two months between May and November 2012 and one week in 2014 for follow-up. Specifically it comprised structured and semi-structured interviews conducted with 110 informants (including producers, central/local administration, Chinese company personnel and non-governmental organisation [NGO] staff) anonymised with pseudonyms, and field observation in Xai-Xai, Chicumbane and Maputo. This was complemented by archival work in Lisbon in 2013 and 2018–19 on the history of the hydrological scheme and by more recent secondary sources.

In the second section, we explore the importance of social differentiation alongside class and gender lines of analysis in relations of (re)production in dynamic processes of accumulation and agrarian transitions. Section three provides a historical dimension to the role of land and agriculture in the area's political economy and to the main issues of development of the lower Limpopo schemes, in order to highlight (dis)continuities with the current challenges. This sets the stage for the project analysis, in section four, of selected beneficiaries and means of production, as well as class-related outcomes, in light of the political economy and historical challenges to broaden the base's surplus. Section five brings together the two project dimensions: the predominant capitalist group's efforts to reinforce 'extractive' agriculture (rice) in its accumulation strategy and regarding the making of rural capitalists out of rice producers, and, second, the socio-economic outcomes for other producers. Section six concludes.

The continued relevance of class analysis for agrarian transitions

Analyses of socio-economic differentiation and class stratification as a feature of agrarian capitalist transition processes were less frequent by the mid 1980s and have maintained a discreet research presence since, while the debate has been revived with the coming of age of issues raised in the 'land grab' literature. The initial fading owes much to the inroads of neo-classical economics, and derived agricultural economics in policy and academic circles since the reforms of the Bretton Woods institutions' structural adjustment programmes. Neoliberalism there reflects an individualist ethos where the collective is only apparent in general social categories, 'a polity that is composed of individuals, officials, and "the poor"' (Harrison 2004, 101).

Much work on 'land grabbing' has fallen prey to neoclassical economics at the heart of neoliberalism, if unwittingly at times. This is manifest in the separation between state and markets, and in reductionist categories like 'local communities' and 'smallholders' for all producers. Further marks are sanitising the political through technical expertise and governance and taking macroeconomics for the systemic analytical level of capitalism, as noted respectively by James Ferguson (1990) and Ben Fine and Ourania Dimakou (2016). With respect to the 'land grab' literature, even as some attempt to undo dichotomies like state versus multinationals, assessment of the state oscillates, roughly, between two positions: a weak state, eviscerated by Bretton Woods reforms, bowing to external pressure or to corruption (White et al. 2012; Wolford et al. 2013), or focusing on an unproblematised category, the 'elites' (Keene et al. 2015), and a state in full control at the negotiation table (e.g. Lavers 2012).

In this context, questions of agrarian transition have resurfaced, prompting discussions about whether these represent a new trend or are a repetition of past waves of primitive accumulation and incomplete capitalist transitions. In this respect, Borras and Franco (2012) reasserted the primacy of class analysis to appreciate the socio-economic impacts for differentiated groups, as did Oya (2013) while observing the glaring absence of agrarian questions in the 'land grab' literature and, thus, the need to recentre the analysis around class and labour for in-depth comprehension of the phenomenon. However, some exceptions are noteworthy in research on southern Africa, with a focus on labour regimes and/or contestation, and class formation in relation to rice farms (Greco 2015), tobacco (Pérez-Niño 2016) and sugar (Martiniello 2021), with a new framework for analysing the precarious working lives of women in the contemporary fragmentation of their livelihoods (Stevano 2021).

Until the mid 1980s, Mozambique fostered a rich culture of analysis of social differentiation and agrarian transition in the context of colonial capitalism and socialist transition, not least thanks to the scholars at the Centre for African Studies (CEA) at Eduardo Mondlane University, especially under the leadership of Ruth First (inter alia, CEA 1977). Their work was also part of the wider debate over the need to overcome the dualist or traditionalist analyses of agriculture taking place in much of southern Africa (Greco 2015) that was predicated on the existence of a homogeneous, if vast, peasantry. Marxist scholarship identified classes within it confronting capital (Bernstein 1979, 2010; Byres 1986, 2016; O'Laughlin 1981, 1996).

In the 1990s, this culture found a continuation in heterodox political economy analyses (Fine and Rustomjee 1996; Castel-Branco 1994, 1996, 2002). Scholars have since investigated the logic of accumulation in Mozambique (Castel-Branco 2010, 2014, 2017), labour regimes, patterns of, and challenges to, employment, or working conditions for social and economic reproduction in relation to patterns of capital accumulation (e.g. Muianga 2012; Ali 2013; O'Laughlin and Ibraímo 2013; Ali and Muianga 2017;) and to gender (e.g. O'Laughlin 1998; Ali and Stevano 2019).

This study builds on this tradition to analyse the Sino-Mozambican deal, which so far has been considered from very different theoretical approaches, from historical bilateral, political and economic relations and/or China's model of development cooperation (Ekman 2012; Chichava et al. 2013; Brautigam 2015) to domestic politics by way of neo-patrimonialist analysis denouncing the local 'elite' (Chichava 2013, 2015); from a gendered livelihoods approach study (Porsani, Caretta and Lehtilä 2019) to an environmental rights approach (Zunguze 2012). The latter stands in sharp contrast to a management perspective highlighting the flexibility of the players involved for 'mutual adaptation' (Zhang et al. 2019, 244), even if with a participatory framework (Ussivane 2017; Ussivane and Ellwood 2019) by the scheme's CEO – intriguing, given the dispossession claims, as discussed later. Lastly, corrective fact-checking with insider knowledge, probably indicating official views, also features in the literature (Chuanhong et al. 2015).

These studies are class-blind and do not analyse social differentiation. In contrast to this scholarship, Ganho (2013b) has analysed the emergence of medium producers amid tensions between local and central government over the management of the scheme, for example over land distribution, reflecting on the domestic system of accumulation. These tensions between government branches (Ganho 2013a) played into how regulations adapted to global interest in agriculture and connections to the Sino-Mozambican deal, culminating in the creation of the management company (*ibid.*). In turn, Madureira (2013) noted the elements of a classic (English-style) agrarian transition to capitalism suggestive of deep processes of change in social structures, while Ganho used some elements of heterodox political economy in highlighting how de facto sovereign powers in agriculture (Ganho 2017, Chapters 6 and 7) develop differently in their encounters with the Chinese model versus private-equity-backed investments. A degree of social differentiation has been explored recently (Rosário 2020) concerning groups of small and medium-scale farmers. The next section thus highlights features of trajectories of domestic accumulation and of challenges vis-à-vis agrarian transitions in Gaza and in the Regadio in particular.

Historical accumulation and class formation: foreign capital, land and agriculture

Historical accumulation and class formation in Mozambique have evolved through four main phases. The first was the Portuguese *Estado Novo* period (1930s–1975), followed by a socialist transition (central planning) period (1975–83). The third period was marked by a transition to market economy (1983–86), which led to a fourth period of fully fledged liberalisation. A fifth period can be arguably added to underline the increasing importance of the 'extractive' economic mode that came along at the turn of the twenty-first century. While this mode derives originally from the coming onstream of extractive industries, it has massively shaped the economy as a whole (Castel-Branco 2014, 2010). This is characterised by the paramount importance of foreign direct investment (FDI) for multinational megaprojects in mineral resources for export that create very few jobs and industrial linkages, and skew economic priorities and policy (see also Fine and Rustumjee 1996). Colonially inherited, export-oriented cash-cropping and monocropping were already 'extractive' in character, if not in scale, and they frame the political economy of the agrarian question.

Relatedly, three issues are important to highlight historically for Mozambique. The first is that Mozambique has been dependent on, and subordinated to, foreign capital. This dependence-structured domestic capitalist accumulation (Wuyts 1980), which in colonial times was based on the provision of labour to the mines of neighbouring economies (South Africa and Rhodesia) for their economic development, restricted Mozambique to the role of servicing them there and from within (via ports, roads and railways). Consequently, migrant salaries and service taxes were major sources of state revenue (Wuyts 1980, 1978; CEA 1977; First 1983). This shaped efforts to develop commercial agriculture in Gaza province, creating competition for scarce labour (Roesch 1991). But migrant work and wage work in general also ensured a surplus for farming improvements, while marketed agriculture represented far less (Wuyts 1978) for state accumulation. Still, small producers generated 70% of domestic production; the south produced 14% of marketed production, corresponding to 21% of its own production (Wuyts 1978). It was necessary as a source of primary commodities for some industries, such as cotton, and to reduce food imports. Forced labour was crucial to the development of settler and private farms and to produce cheap food for own consumption, in order to ensure the social reproduction of cheap labour (O'Laughlin, 1981, 1996; Wuyts 1978, 1980). Cheap and forced labour was thus the basis of colonial accumulation of capital.

This dovetails with the second historical feature: since colonial times public policies have depicted a dualist agrarian system composed of two separate, independent sectors, namely the 'backward', family or subsistence farming on one side, and commercial and modern agriculture on the other. In Gaza, smaller-scale farms coexisted with much forced cropping, and family production was also for market. As O'Laughlin (1981) noted, these two realities were neither separate nor autonomous, but closely interdependent (*ibid.*, 34), linked by wage work on- and off-farm, including migrant wages. Rather than remaining pre-capitalist 'family farmers', small producers have long been incorporated into the circuits of capitalist development as petty commodity producers (Bernstein 2010). In this respect, the agrarian transition has been towards the condition of the semi-proletarianised, which is the common pattern in much of southern Africa, rather than a 'transitional location' (Bernstein 2010, 55) or stage towards advanced capitalism premised, for instance, on industrialisation.

The third historical feature can be considered a consequence of the dualist view. By negating the interdependence of the two sectors, public policies negated the actual diversification of livelihood sources – not least from migrant wage work – and the existing division of labour as key factors in rural class differentiation (O'Laughlin 1996), although these two dimensions may not keep up with one another. Integral to the division of labour is gender differentiation, as farming has historically been a female activity and often in the absence of men who migrate for work, adding significant gender dimensions that resist the reductionist take on the feminisation of poverty (O'Laughlin 1998).

Having highlighted the three interrelated historical features of the political economy of southern Mozambique, namely the dependence on foreign capital, the tension between migrant work and agriculture and, relatedly, the importance of wage work in the diversification of livelihood sources, let us now turn to a historical introduction to the area of our case study, the Regadio.

A brief history of the Regadio do Baixo Limpopo

The Regadio originated in the reclamation and parcelling out of the marshy areas (*machongos*), from around the Inhamissa Lagoon to the foot of the hills near Xai-Xai, then called Vila João Belo (see figure in Appendix). The work on the hydrological scheme and the settlement of Inhamissa began in 1951 (de Sousa Monteiro and Faria da Fonseca 1952), during Portugal's fascist *Estado Novo* (1933–75). It was inspired by the first commercial rice farm in the lower Limpopo, from 1936, a 600-hectare pilot irrigation project at Barra (Roesch 1991, 255). Inhamissa's origins are quite different to the better-known Chókwè scheme upstream (the Limpopo settlement, or *Colonato do Limpopo*), whose works began in 1953, and which was planned, executed and subsidised by the central colonial government in Lisbon – purportedly to show the world, with nationalist pride, the (certainly anachronic) Portuguese ways of colonisation.

In contrast, the Inhamissa scheme was the brainchild of the colonial Mozambican government and began as an inexpensive project for settling African families, although it received modest funds from a medium-term national plan (*Plano Intercalar do*

Fomento). It was not a formal or direct form of settlement (Henderson 1976), or even an indigenous 'pre-settlement' (de Sousa Monteiro 1955). In the Regadio, most of the 4000 hectares around the lagoon was reclaimed following drainage works; there are reports of only 15 families farming 155 hectares before the intervention. This may indicate a greater initial social stratification based on a lesser degree of expropriation of African producers in the Regadio than in Colonato, and greater local migration. Nevertheless, both were encumbered by the enormous efforts required to keep the schemes functional, not least with forced and low-paid work.

Drainage work was rudimentary and inexpensive, aiming to 'maximise the value of land at the minimum possible expense' (de Sousa Monteiro and Faria da Fonseca 1952, 36). The goal was to settle black Mozambican families 'voluntarily' and quickly, tying them to the land to farm both for subsistence and for the market while using compulsory, forced cash-cropping and forced labour – which confirms the pattern outlined in the economic section. These areas were deemed particularly suitable for rice farming as a cash crop and for African families for a few reasons: they required labour-intensive work to make them farmable; the high level of water in the soil made the *machongos* unsuitable for mechanisation; and they were of higher quality than the sandy hills they cultivated. At times of insufficient funds for maintaining canals mechanically, producers had to clear them themselves, by hand, or sometimes paid for the work themselves (JAPA Baixo Limpopo 1967). Most were forced to do it twice a year (Roesch 1991).

The parcelling of the *machongos* was extended to the adjacent, drier hills (*terras altas* or *serra*) for seasonal and supplemental use for subsistence agriculture by African families (de Sousa Monteiro and Faria da Fonseca 1952). But land reallocation there was fraught with tension, due to previous arrangements with traditional chiefs (*régulos*), and existing burial grounds. Expansion was also initially limited by private concessions, some for cattle ranching, that the state eventually acquired. In the 1960s, the scheme incorporated the Barra block. Overall, by 1957, 2481 hectares had been allocated to 4197 African families in five *machongo* areas (Table 1) (de Sousa Monteiro 1959). A 25-km-long dyke for city protection and drainage ditches were also built.

With figures like these, we need to consider the number of producers who could not actually work on the plots allocated for various reasons (lack of capital or labour). In 1964, only 50% of the 6933 families who had requested a plot actually farmed the land (Table 2). Proportions also varied after some floods ruined harvests or drains became clogged. At the same time, '[white] settlers eventually gave rise to a relatively successful capitalist farming sector in the Barra de Limpopo area' (Roesch 1991, 253).

Table 1. Number of families and farmable hectares in *machongo* blocks, 1957.

Blocks	No. of families	No. of ha
Inhamissa	1667	878.75
Siaia	1356	693.50
Bué	104	137.60
Sotuine	431	402.12
Nhancutze	639	367.75
Total	**4197**	**2479.72**

Source: Author's calculations, based on de Sousa Monteiro (1959, 94–98).
Note: the sum of the cumulative figures differs slightly from that given in the summary on p. 98.

Table 2. Number of African producers per block, 1964.

	Totals		Inhamissa		Sotuine		Siaia		Nhancutze	
	No.	%	No.	%	No.	%	No.		No.	%
a. Producers that have requested a plot	6933		2768		812		2303		1050	
b. Producers waiting for a plot	275		126		149		-		-	
c. Producers that have given up their plot and those eliminated	3182		1002		188		1437		527	
d. Producers actually working a plot (a − [b + c])	3476	**50.1**	1640	**59.2**	475	**58.5**	866	**37.6**	523	**49.8**

Source: Author's calculations, based on JAPA Baixo Limpopo (1964, 21).

The quantitative data that emerge from the field reports on migration and the gendered division of work are corroborated by CEA's later research. In 1964, in the total figures for the *machongo* blocks, women represented, on average, the bulk of the workforce, at 86.9%. Of these, 91% did not have a husband present or were in the category of 'divorced, widows, and single women' (JAPA Baixo Limpopo 1964, 21). Finally, 53% of married women had husbands who migrated to South African mines (*ibid.*).

In 1967, about 11,000 hectares had been reclaimed and most was under cultivation (Torres 1967, 250). While white Portuguese settlers and some commercial operators were given better-quality land, most black Mozambican settlers remained in the lower-quality *machongos*, which produced most of the rice at that time, except for the pre-existing Barra *machongo*. In the centre of the valley lay rich alluvial, heavy soils generally reserved for Europeans, although they were present too in *machongos*. There were also intermediate soils. Prior to the project, in 1949–50, only five families were reported to be farming in 52 non-irrigated hectares, but the number had exploded by 1964 to 8372 hectares, 3354 hectares of which were pump-irrigated, distributed among only 67 farmers (JAPA Baixo Limpopo 1964, 20) (see Figure 1 for the new irrigated blocks of Chimbonhanine, Magula and Ponela, which were parcelled in the early to mid 1960s).

Development also moved to areas outside this map, towards another river (Lumane), and to the other bank of the Limpopo across from Xai-Xai, and towards Chicumbane's lowlands – one of the contemporary sites of contention. The initial drainage works were planned to expand into 60,000 ha 'from Chibuto to the sea', providing the basis for a large-scale industrial farming and livestock complex. In any case, the producers' spatial segregation on the perimeter of the Regadio attests to the colonial dualist view of agriculture (despite transition areas), which was reproduced after Mozambique's independence (1975) and continues to this day (MASA 2016).

The settlement scheme was based on the acculturation ideal of transforming black farmers into orderly 'good petits bourgeois (never capitalists)' (de Sousa Monteiro 1955, 101). In 1952, the Department of Hydraulic Works tried to create an indigenous cooperative, to no avail (*ibid.*, 16). Associations were encouraged by the colonial state for the control of crops, extension knowledge, credit, and self-sufficiency within trade limits. They also aimed to prevent the emergence of an anti-colonial, more economically powerful stratum. Yet the settlement of African families set stratification in motion, based on the allocation of reclaimed/drained land and the ability to farm it – or

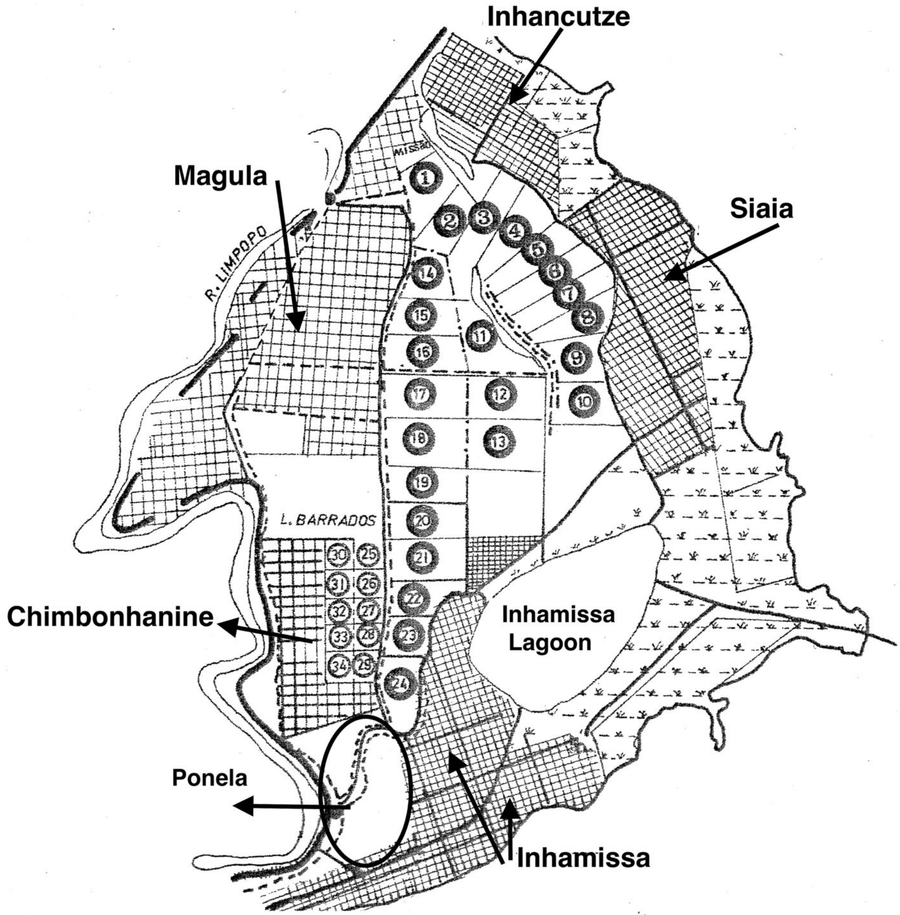

Figure 1. Map of the Regadio drainage and irrigation blocks. Source: JAPA Baixo Limpopo (1967).

enhanced it by enlisting the collaboration of traditional chiefs. Some individuals became relatively well-off producers (*machambeiros*) working a plot (*machamba*) with ploughs and oxen, often with earnings from mining. Others became petty producers and traders, but 'rice cash-cropping … never gave rise to a fully developed commercial peasant agriculture' (Roesch 1991, 260). Few Africans managed to become integrated in the rural administrative structure – most of them for subsistence and marketing. Most engaged with in- and off-farm wage work for meagre wages when not migrating. These social relations of (re)production underpinned colonial capitalist development. Production was therefore both sustained by income from other work and provided the basis of families' reproduction, as cheap labour for economic activity. Proletarianisation was well under way by independence (O'Laughlin 1996).

In 1975, when Mozambique became independent, job creation and the cheap production of affordable food became paramount, especially after the exodus of settlers, skilled workers, managers, public servants and commercial owners, along with the expatriation of their assets and reduced mining labour quotas from South Africa (Castel-Branco 1994; Newitt 1997). In 1977, FRELIMO's IIIrd Congress (FRELIMO 1977) designated agriculture as the basis of development and main source of accumulation (*ibid.*, 20) at an early stage. The economy was centrally planned up till 1983. Agriculture was reorganised into three sectors: large state farms/agro-industrial units ('state sector') formed from commercial farms and the agglomeration of settler farms for intensive monocropping; the cooperative sector (communal production); and the family sector (O'Laughlin 1981; Wuyts 1980). Chówkè and Xai-Xai districts retained their farming prominence.

Institutionally, production and irrigation functions were separated. In Xai-Xai area, production came under the state farm Baixo Limpopo Production Unit (UPBL), while irrigation came under the Lower Limpopo Irrigation System (SRBL). The UPBL was responsible for just under 25,000 hectares across seven units. It also kept 8500 hectares for cattle, supplying two milk production units. Rice was the most important crop, corresponding to 4500 hectares in 1977–78 (CEA 1979). External support for agriculture was supplied in kind – infrastructure works, technical expertise and inputs – from the former USSR and the Netherlands. The UPBL production unit had 13 communal villages in its area of influence from which to recruit permanent and seasonal labour, but it fundamentally failed to provide steady wage work (O'Laughlin 1981). Further, the dualist perception of agriculture persisted: most cooperatives/family plots remained in drainage areas and agro-industrial state enterprises in richer soils, absorbing most of the state's resources. This reorganisation of administration, demographics and production is important in order to understand some elements that resurfaced more recently in state land claims as challenges to livelihoods.

Between 1974 and 1977, agricultural production declined significantly (CEA 1979; Castel-Branco 1994, 1996) and came to a halt with the 1977 floods. The floods led to massive displacement of residents to higher grounds (*serra*), to new communal villages (de Souza Sobrinho 1981), to the eastern and northern areas of the scheme, causing some resentment.[1] Successive displacements were an important factor in the struggle for livelihoods and tension around land claims. For instance, some residents displaced in 1977 were unable to find work, and newly cleared land was reallocated to them in the same areas in 1981, in plots of 0.25 hectares (MDSAR 2003, 6). The following year, village-level *casas agrárias* (associations) were rehabilitated and entrusted to agrarian committees (*comissões agrárias*), effectively micro-level government entities, in charge of managing land conflicts and scheme maintenance (*ibid.*), although with little financial incentive to do so.

By 1983, the economy was in crisis (Wuyts 1985), compounded by the 1977–1992 war moving southwards and a severe drought also in the south.[2] This prompted FRELIMO to propose new changes at its IVth Congress (FRELIMO 1983), acknowledging that strategies to control private agricultural production yielded poor results and condemning the flourishing of illegal trade and the black market (*ibid.*) but effectively opening the door to private-sector operators (*ibid.*).

Long-term shortages of goods created opportunities for individual accumulation, especially around the irrigated, prime soil areas of state farms, roads and trading circuits. Cooperatives provided some chances for accumulation and differentiation: former contract workers competed with surrounding households for control, while a dominant class of 'older prosperous peasants' formed, and poor producers would seek their protection for livelihood strategies (O'Laughlin 1996, 24). The agrarian committees too, appointed by hierarchically senior FRELIMO representatives, provided opportunities for political alliances and struggles, deepening social differentiation (*ibid.*).

As per FRELIMO's IVth Congress reforms, the UPBL production unit was first to be divided up, keeping only 10% of its land, as was the case for four other state enterprises, and was shut down in 1986.[3] Likewise, cooperatives were reduced (Roesch 1988). Accession to the IMF (1984) resulted in an International Development Association (IDA) loan and a preliminary structural adjustment programme for 1984–86 (World Bank 1988) that precipitated a wave of privatisations (Castel-Branco, Cramer and Hailu 2001). Agriculture was left to the vagaries of undercapitalised private operators and given little support from the government and donors, except through some NGOs working with a decentralised state. Province-level administrative staff and officers had privileged access to land assets.

By 1991, irrigation infrastructure such as ditches and canals were once more blocked by vegetation. Some local farmers would manage to clear canals, often by hand, for example in 1996 (MDSAR 2003, 7). Small producers sought permission from the private companies to use land previously under their management, and NGOs played an important role in assisting functioning producers' associations and *casas agrárias* in the 1980s and 1990s.

The agricultural directorate granted informal authorisation on an individual basis to a few remaining mid- to large-sized producers (about nine) to cultivate parts of the Ponela block at their own cost: a couple of them remain in the area. The year 1991 saw the last contracts for the SRBL irrigation system (Roesch 1988), and in 1999 the SRBL was fully privatised. The huge damages caused by a heavy flood in 2000 represented the *coup de grâce*. It exacerbated private companies' financial difficulties, damaging the little that was left of the infrastructure and machinery and bringing all operations to a halt (Interview, Mário, former manager, 17 June 2012).

Structural changes in Gaza and in particular Xai-Xai were explicated here to illustrate the deteriorating state of agriculture, with effects on social differentiation, and the need to hold on to multiple *machambas*. From many elements in the key research (O'Laughlin 1981, 2002, 1996; Roesch 1988; CEA 1979), a few are highlighted to emphasise their significance, namely the continued tension between rice monocropping, insufficient wage work (and the need to search far) and seasonal labour shortages, with deteriorating terms of employment (e.g. a daily wage related to a defined work output) – and even the return of forced production work in the mid 1980s. Above all, agriculture under FRELIMO was still perceived dualistically. The marginalisation of the peasantry accentuated the colonial legacy FRELIMO had intended to mitigate, insofar as the interventions or lack thereof promoted class differentiation (O'Laughlin 1996).

Although agricultural activity declined dramatically, land was not formally privatised through liberalisation reforms, despite pressure from the World Bank. Land remained under the political control of the state, while land transactions took place on 'vernacular land markets' (Chimhowu and Woodhouse 2006). In the 1990s, Mozambique became one of largest receivers of official development assistance flows (Wuyts 1996), which constituted a source of state and private capital accumulation. Agriculture no longer occupied centre stage in development policies nor in the balance of payments. Production all but came to a halt, making livelihoods more difficult for small producers, assisted only by piecemeal projects, while remaining crucial for labour reproduction in a crisis.

The sugar and cashew industries represented exceptions to the general state of agriculture, with the former sector's stronger organisation resulting in protection from liberalisation measures (Castel-Branco 2002).

In 1993, after the 1992 Peace Accord, the government submitted a project proposal to rehabilitate the area – the Massingir Dam and Smallholder Agriculture Rehabilitation project (hereafter the Xai-Xai Agricultural Rehabilitation project) – to the African Development Bank. In 1997 the project was approved; it started in earnest only in 2003 and ended in 2008 (Interviews, management personnel, Julião 28 June 2012; Santini 9 July 2012). The agricultural rehabilitation part of the project at Xai-Xai aimed to consolidate water-land infrastructure into an interconnected 12,000-hectare irrigation/drainage perimeter 'based on the colonial economy's dualistic criterion' (Interview, Santini, 9 July 2012). According to the same source, the rehabilitation project's social goals were to have people return there, thus overcoming the fear caused by the 2000 flood. Work prioritised drainage ditches, the small producers' original blocks, fed by high-level, sub-surface water, a powerful drainage/irrigation central pump, and rehabilitation of a few irrigation blocks, like Ponela, Chimbonhanine and Magula. This was only possible for Ponela, because of inadequate funding, due to damage since the original plan (ADF 2007; MDSAR 2008). The focus was primarily on 'smallholders' and only after that on mid-size producers.

It is important to note here, beyond the lower Limpopo, that the accumulation core of the Mozambican economy had shifted since the 1980s. Agriculture exports did not contribute much to foreign currency reserves, and political economy was based on alliances with foreign financial flows, i.e. aid and then FDI-based megaprojects in extractive industry (Castel-Branco 2014). It took the triple crises of fuel, food and finance in the mid 2000s for agriculture to catch the interest of the Mozambican government, of donors and of private investment. Under Armando Guebuza's presidency (2005–2014), a flurry of interventionist policies aimed at taking advantage of international trends materialised in record time, focusing on biofuels, cereals and other food production. At the same time, the government prepared changes to the Gaza schemes to make them directly accountable to the Ministry of Agriculture in Maputo, and not to the Provincial Directorate of Agriculture in Xai-Xai. Faced with a regulatory void for these specific spaces, the Mozambican government changed the by-laws and regulations of the management companies of the schemes (Ganho 2013a) in ways that amounted not to the creation of neoliberal 'spaces of exception' to the state's authority (Ong 2006), but to an actual 'neoliberal state space' (Lunstrum 2008), with the central state in control of land-water management linked to strategies for accumulation through cash crops. One of the most striking examples was the ability of these management companies to retain proprietary rights, revoke previous land use rights, and instead issue production contracts (RoM 2010, Article 5, 1a) to facilitate investment management.

The insistence on using the Regadio has come with heavy costs due to climatic and geographic factors that have stymied consistent results. According to the National Plan for Rice Development (MASA 2016), most rice in Mozambique – 97.7% – 'is rainfed and produced by the family sector' (*ibid.*, 8), and the usual solution has been to intensify productivity through the use of water, chemicals and mechanical means. Additionally, rice imports since 2000 had been on average 365,800 tonnes per year (*ibid.*, 7). It was therefore urgent to find a solution to accelerate rice production – or so runs the efficiency narrative. The need for capital-intensive investment was a factor in selecting China as a partner, as was its long experience in growing high-yield rice.

The partnership deal in the Regadio: Projects 1, 2 and 3

The Sino-Mozambican project developed from its testing and initial production stages in the Regadio's Ponela block, later becoming three separate subprojects.[4] The first project (2007–11) developed local mid-sized producers in Xai-Xai municipality, some of whom were politically connected. At the end of 2011, the second project was allocated a vast track of land (6000 hectares), much of it expropriated by the state around Chicumbane town: this became home to two large-scale Chinese farms. The goal was to expand to around 20,000 hectares and potentially to 70,000 hectares, split into different administrative divisions. The third project, which materialised in 2013/14, also within the perimeter of the scheme, aimed to train many more mid- and small-scale producers every year to go into commercial rice production and become rural capitalists in other areas.

A 'friendship farm'

A series of diplomatic bilateral contacts, visits and agreements gave rise to a 'friendship farm' (Brautigam and Ekman 2012; Gu et al. 2016). Land was identified in 2006 in Xai-Xai (DPA 2010, 1); upon expiry of a 2007 memorandum of understanding, a twinning agreement (DPA-Hubei Lianfeng 2008) was signed in 2008 between the Provincial Directorate of Agriculture (DPA) and Hubei Lianfeng Mozambique Company (HLMC) for the development of local agriculture. The agreement committed an initial 300-hectare plot in the Ponela block (*ibid.*) to the project, with a US$1200 budget (IESE 2012). The stated goal was to transfer a Chinese technology package for growing high-yield rice to Mozambicans. The overarching goal to improve domestic food security was shared across development cooperation initiatives like the agricultural demonstration centres (Chichava et al. 2013) and has appeared in Mozambique's food production policy documents since 2007 (Ganho 2013a). But the fact that no specific beneficiaries were identified in the agreement (which mentions 'peasants' and 'local population', for example) (Ganho 2013b), is very relevant to an understanding of how producers from Project 1 came to be integrated and of the nature of the relationship with the other subprojects.

Meanwhile, a rehabilitation project developing in the same area was to shape the initial stage of the project. This was the Xai-Xai Agriculture Rehabilitation project, under way there since at least 2003 (Interview, Santini, 9 July 2012; MDSAR 2003, 2008), a large public project financed with the African Development Bank. However, its management knew nothing about the Sino-Mozambican project and had planned to allocate Ponela block to local medium-scale producers. Thus, two parallel lines of command coexisted at DPA, one connected to the Xai-Xai Rehabilitation project and the Ministry of Infrastructure and Public Works, another between the Chinese enterprise and a restricted circle of trusted people around President Guebuza, through provincial institutions. Eventually the two sides agreed to divide the block. Both as a test to candidates with more education and to sway the DPA to allocate plots, Xai-Xai Rehabilitation project officials included individuals in the selection process that had connections to the state and FRELIMO (Interview, Julião, 28 June 2012; Santini, 9 July 2012). The initial selection of 46 medium-size producers was therefore the result of this compromise as much as of objective criteria (PRBMDA-UIGP 2008). These producers formed the base of an association, ARPONE, in 2010,[5] and of Project 1. The next few paragraphs provide some information about the goals and means of production of the project, as part of a reflection on class differentiation.

Project 1: the ARPONE association

Technical assistance in Project 1 was very limited up to 2010 (DPA 2010). In late 2011, the newly created state management company Regadio do Baixo Limpopo, Empresa Pública (RBL-EP) was in in charge and selected between 46 and 51 candidates from the ARPONE group to cultivate plots of around 5 hectares in parts of Ponela. Under pressure from the government, the project was to be scaled up to 20,000 hectares (with possible expansion to 70,000 hectares) and investment to US$740,000 (GdPG 2012), as a result of a merger with Chinese private partner Wanbao Africa Agriculture Development company (Wanbao), a subsidiary of Wanbao Grain & Oil group.[6]

Responsibilities for support were shared between RBL-EP and the Chinese company HLMC. The former negotiated and split the costs of a revolving fund with development finance organisation GAPI, acting as intermediary with the Chinese company for technical inputs, and for the overall maintenance of the scheme.[7] As such, RBL-EP facilitated the rental of some machinery at subsidised rates, while HLMC was to provide the know-how and inputs for a higher fee. Earlier, the company MoçFer Indústria Alimentar, SA (MIA) had also worked with some of the same producers in the area on an outgrower scheme.

The technical assistance packages came in two forms. The full package consisted of services related to machinery, seeds, chemicals and transportation to the factory in order to sell back the unprocessed rice (Ganho 2013a). Only four participants had this option. The partial assistance package allowed for fewer options, but seed provision was key.[8] Labour was more intense for those not using all options. Many selected producers – for example, those holding jobs – paid plot overseers. Some resented the fees for a 'development cooperation' project – an observation corroborated by Rosário (2020).

Overall, the RBL-EP's late disbursement of funds, insufficient staff and machinery on both sides, some ARPONE members using credit for other purposes and a variety of other problems, including deficient communication of the transfer of methods of production, and heavy, unseasonal rains, hampered yields. In 2012–13, all harvests were lost to floods and credit debt was forgiven. In 2013–14, eight farmers cultivated land on the Ponela block, two of them self-funded and six supported by GAPI.[9] Yields failed to improve much, averaging 2.2 tonnes per hectare (*ibid.*). As a result, three of the eight producers were in the red.

Importantly, early on the managers at HLMC-Wanbao selected the farmers they wished to support based on observation, reflecting a mix of cultural bias and practical concerns (Interview, Patrício, 17 May 2012). They expected farmers to be 'hard working', which meant accepting labour-intensive techniques, working at weekends and using most family labour time to tend the rice plots. These expectations clashed with the historical diversification of sources of livelihoods, including off-farm activities and tending family plots. Many participants in the scheme were in fact holding posts in the local government as senior public officials or were current/former FRELIMO-linked individuals; others were retired or current public servants; a few were (ex-)military, or former skilled workers and extension officers of the Xai-Xai Agricultural Rehabilitation project and its past incarnations; and some were previously connected to NGOs and associations. Some also worked in other businesses such as livestock, transport, trade and crafts.

This shows many ARPONE members to be a product of the history of class differentiation in Xai-Xai, from colonial times and onward, associated with close access to irrigation, the ensuing private appropriation of agriculture-related goods and trade, land redistributions from traditional chiefs, divestment and state employment. They were not a homogeneous group, nor was farming the main occupation of the majority. There were tensions among them in relation to the ARPONE leader who was reportedly pursuing private business interests rather than following statutes, and not fighting for a better deal with Wanbao and RBL-EP, as many interviewees stated. Another member belonged to a well-known local NGO, representing a different group. Finally, only a handful of women were in the group, mostly with a high social profile. Having politicians among the ARPONE members also meant that RBL-EP staff dedicated more time to them, then prioritised farming of more profitable crops like potatoes and applied for funding for some storage facilities (Interview, Óscar, 17 July 2012) for 'improved small producers' in *machongos* (Interview, Francisco, 16 May 2012). But extensionists stated that there were too few of them to cover those areas (Interviews, 12 June 2012, 1 October 2012).

Arguably, most ARPONE members were allocated a plot due to their political and/or professional status or social position, which could lead to a neo-patrimonialist interpretation (Chichava 2013, 2015). However, in 2012 politicians publicly voiced dissatisfaction with the outcomes, reflecting the Ponela producers' opinions (Diário de Moçambique 2012). It becomes difficult to understand the supposed beneficiaries consistently lacking the necessary resources to enable a surplus. For a fuller understanding, it is necessary to analyse the role of the projects and of the various groups in the wider political economy of class formation and capital accumulation.

Project 2: Chinese state farms

In 2013, a different kind of project emerged on a large scale. Four new farms were established with two sets of Chinese farmers (Interview, Patrício, 5 June 2014) and a total of '110 workers' (Chuanhong et al. 2015). The plot size was 27–44 hectares per farmer (*ibid.*). According to Wanbao, the company was responsible for water-land infrastructure prior to their arrival and for maintenance of off-farm infrastructure, while farmers maintained their farms (Interview, Patrício, 5 June 2014). However, these consolidated the production of earlier, smaller Chinese farms north of Ponela, in Chimbonhanine block, reportedly intended for seed multiplication. Expansion of farms there led to a protest (Mabunda 2013).[10] The project expanded to a further 6000 hectares around the town of Chicumbane, out of a reserved 20,000 hectares set up as a renewable 50-year concession, with the promise that 10% of all land ceded to the Chinese would be reallocated to Mozambicans (however, no terms were provided).

This was achieved through state actions of expropriation, some based on proprietary land rights going back to colonial and socialist transition times, including state farm company Lezírias, as indicated in interviews with the RBL-EP management and two ARPONE farmers. However, history shows that Chimbonhanine was parcelled mostly for African producers during colonial times; the Chicumbane soil was especially fertile, thus disputed, as a result of livestock use (Telephone interview, former chief of administrative post, 4 June 2014). As a significant result of expropriations, many residents lost their best source of food production, which was essential to their diversified livelihoods.[11]

Despite investment in protective infrastructure construction, such as dykes, the 2012–13 floods in the rainy and low seasons had cost Wanbao US$10,000 in losses, including all seed (Interview, Patrício, 5 June 2014). Consequently, areas reserved for Wanbao were renegotiated: producers were promised an additional area of 2123 hectares (*ibid.*), with expansion to 6000 hectares in the Chókwè scheme (2000 hectares for own production, 4000 hectares for local producers). Works were visible there (Fieldwork notes, interview with Chinese construction engineer, 10 June 2014).

This project is important for two reasons. First, it contributed to the financial viability of the whole project. As such, it was in stark contrast with the less advantageous terms of assistance received by Mozambicans. Second, expansion to the Chimbonhanine block, then to Chicumbane, caused major conflict due to large-scale land expropriation, carried out under the banner of 'national interest' and mobilised by the government in support of the deals. Nonetheless, negotiations to calm the conflict had to take place with several local administrative and traditional leaders, as acknowledged by RBL-EP officials.

Project 3: Scaling up the transfer of methods

The project started towards the beginning of the 2013–14 campaign and RBL-EP promoted it as a 'public–private–population partnership' in a televised piece on the Regadio (Televisão de Moçambique, 8 June 2014). It partly resulted from the pressure for a demonstration farm (*machamba-escola*) after 2011 and aimed for more effective transfer of methods and broader reach, addressing unsatisfactory results and protests on the Mozambican side (Interviews, Pedro, extensionist, 6 June 2014, and RBL-EP manager, 12 June 2012). Wanbao's portion of Ponela was used for that purpose.

While the plan was to start with 23 small producers plus ARPONE member Marcelino (Ponela) and one extension officer in Chimbonhanine block, an additional 43 producers were integrated as well as another extension officer in training, making a total of 68. Plots were reduced to 1 hectare on average, totalling 77.4 hectares (Interview, Pedro, 6 June 2014). For technical assistance in Portuguese, Wanbao and RBL-EP hired two additional Mozambican extension officers, which represented significant progress. Otherwise, RBL-EP remained the state facilitator. Credit funding also came from a public fund within the Ministry of Agriculture, suggesting more control over it.[12] Yet again, disbursement was late – as in central planning. In light of losses, RBL-EP also had leeway to transfer part of the credit to the following season. According to Wanbao documents (WAAD 2013), yields averaged 3.4 tonnes per hectare, with a maximum of 4.9 tonnes per hectare – a modest improvement from Project 1. More recent research puts the number of trained producers at 170 and highlights production dependence on weather variability (Porsani, Börjeson and Lehtilä 2017, 1198).

Producers came from several surrounding areas, including drainage blocks, some having already received technical assistance from RBL-EP (blocks Siaia and Nhancutze), where plots were a bit larger, and where the *casas agrárias* were said to function better than average (Interview, Adriano, 12 June 2012) (see map at Figure 1). The selection also included a few small producers who had been evicted from Ponela as a result of the twinning agreement (Interview, Sónia, 6 June 2012), and also expropriated from Project 2, from Chicumbane areas. A second demonstration plot was also to begin in the latter location in the following year (2014–15) (Interview, Pedro, 6 June 2014).

Importantly, RBL-EP provided more input into processes of producer selection, through extension officers. This confirmed the goal of generating a large class of commercial producers, from 'emergent' local small/mid-sized producers. Names from community and traditional leaders and heads of localities (*chefes de localidade*) had to be considered, retaining a political practice established during colonial times, although extension officers seemed to eliminate candidates who lacked a farming background:

> the heads of village subdivisions [*chefes dos bairros*] are going to do the selection. I, as a technical officer, come with technical questions: who are they, sir? Have they cultivated a plot before? If they've never used a grub hoe, then it's going to be complicated. (Interview, Pedro, 6 June 2014)

Selection criteria reflected preconceptions about two groups of producers. First, the commercial producer was to make agriculture their only occupation, with a mid-sized plot (4–5 hectares), mechanisation, irrigation and other 'modern' methods, mirroring Wanbao's. One particular group of six producers appeared to showcase the Regadio's 'success' (MASA 2015), embodying the ideal profile promoted by the Guebuza government but also the global 'farmer–entrepreneur': initiative, motivation, education, competitiveness and modernisation ideals. But historical elements of class differentiation also mattered. Those producers lacked farming experience and failed to achieve encouraging results on their 10-hectare rice plots (Interview, Pedro, 6 June 2014) fell under suspicion of favouritism.[13]

Second, selection was not directed at the smallest producers – the 'backward' family sector now notionally separated from the 'new' medium/emerging producer, yet most in need of extension assistance. Likewise, their importance for labour reproduction remained unrecognised. Their plot size (0.25–2 hectares) and especially the soil condition (*machongos*) were deemed inadequate (in contrast to colonial times), due to Chinese mechanisation, and their mindset incompatible with gaining a surplus. The dualist perspective would say that they would continue to 'subsist' in a pre-capitalist stage. But selection of the most (potentially) competitive is a reminder of how much the intensification of capitalist production is actually achieved 'at the expense of their neighbours [poorer farmers]' in processes of land concentration which are not unidirectional either (Bernstein 2010, 105).

Concerted efforts from central government to form a new class of capitalist producers aimed to accelerate the logic of capital. In this respect, the package of methods reflects not an outside imposition but similarities with the central planning period of large-scale, monocultural agriculture as seen in the historical section. In contrast, small farming is viewed as being unlike 'real agriculture': '[j]ust because you farm half or quarter of a hectare doesn't mean that you're practising real agriculture' (Interview, senior district representative, 6 June 2014).

A few features emerge from the three projects (see Table 3). First, the means of production were very dependent on the Chinese managers, with most working credit depending on RBL-EP/GAPI. In Project 2, Wanbao actually controlled the full chain. Secondly, support for Project 2 was considerably more robust than for Mozambican producers in Projects 1 and 3. Chinese state support at different levels (from central to city level) included low-priced accommodation, a subsidy for farmers' families in China, receiving 100% of the credit upfront, with the possibility of owning machinery in three to five years (Interview, Patrício, 5 June 2014; Chuanhong et al. 2015). Contrary to the experience of Mozambican producers, part of the Chinese farmers' costs of labour reproduction was borne by the state. In addition, Wanbao had to scale back because of disastrous results due to floods (Rosário 2020). Although not all these factors were indicated as a cause, using state farms was considered to be 'too expensive' for Wanbao in the long run (Chuanhong et al. 2015, 8).

Thirdly, competition between Chinese farmers and Project 1 was also an issue, which can be related to one of Chris Alden's (2007) three views of China in Africa: China the competitor. Failing to have higher yields (at least by 2014) gave rise to rumours among

Table 3. Key information for Projects 1, 2 and 3.

	Project 1	Project 2	Project 3
Date(s)	[MDSAR: 2003–2008] RBL-EP: 2011–	Start: 2012 (construction)	Start: 2013/14 campaign
Producers targeted	Mid-size (ARPONE)	Large-scale, Chinese	Small and mid-size
Number of producers	RBL-EP: 40 down to 8 2011→2014	110	60
Total area size and location	385 ha, some areas unusable Ponela 2/South	1000 ha at Chimbonhanine and Ponela 1; then 6000 ha at Chicumbane	Demonstration farm in Ponela 1/ North. Moving to identified areas in/ outside perimeter
Plot size	5–20 ha	27–44 ha	Starting at 4 ha
Length of use	Productive use requirement (at least 50% of season)	49-year concession but productive use requirement	One season in demonstration farm then plot allocation; productive use requirement
Stated goal/market	Domestic local	Domestic: niche, export ambitions	Domestic local and Maputo Chinese supermarket
Infrastructure (construction, maintenance)	Public (MDSAR, RBL-EP)	Wanbao: access roads, soil levelling.	Wanbao in demo farm; mixed for producers' plots
Source of operating funds	GAPI revolving fund; then entrepreneur lines of credit and insurance	Wanbao credit	Domestic and general budget support
Facilitating institution	Mostly RBL-EP	Chinese	Mostly RBL-EP
Paying off credit	Selling rice: first to any buyer, then only to HLMC/Wanbao	Selling rice to Wanbao	Selling rice to Wanbao

Source: author's compilation. HLMC is the Hubei Lianfeng Mozambique Company.

ARPONE members of ill will and incomplete transfer of methods (Ganho 2013b). There was widespread disbelief among them about the outputs, with many believing that the Chinese wanted them out of Ponela, while Mozambican producers were barely meeting the costs of production. By 2014, claims of cheating also circulated widely, with accusations of fraudulent reporting of weights in the Chinese production figures. These elements cast doubt on the scope of the technology transfer. Fourthly, some stated that the government and the Chinese enterprise seemed like 'the same thing' owing to their close relationship – certainly regarding the RBL-EP's facilitating role.

Connecting land, capital, labour, social differentiation and accumulation

This section aims to bring together two overarching dimensions of the projects: first, the dominant capitalist group's class-reinforcing efforts to widen its overall accumulation strategy to other 'extractive' agriculture (e.g. rice); and, second, the development of a class of rural capitalists as rice producers. In doing this, the section focuses on the challenges to producing food and making a surplus as determinants of social differentiation.

On the first point, the strategy for accumulation of the predominant faction of capital seems to have seen the high prices of agriculture commodities in the food price crisis as an opportunity to expand through alliances with certain foreign capital – historically one of the features of Mozambican political economy. For instance, former environment minister Alcinda Abreu was reportedly a partner in Ubuntu Limitada, a Gaddafi-regime-funded rice project (Nhamirre 2011); Massingir Agro-Industrial, the restructured Procana project for sugar/ethanol production, in Massingir (Gaza), was partly owned by former Minister of Industry Octavio Muthemba (APANEWS 2012); associations between Chinese logging enterprises and former Minister of Agriculture José Pacheco have also been documented (Africa Confidential 2013). The Wanbao project, tightly controlled by Guebuza, and a megaproject at that, certainly fits the profile. The brand name, *Bom Gosto* (good taste), seems to have been suggested and 'intensely promoted' by him (Wise 2019). This could arguably indicate an income stream from the venture.

In pursuing capitalist class goals, the initial programme and its scaling up were ostensibly about growing rice and possibly corn for the domestic market, using the Chinese technological packages. Goals were in line with government documents like the 'Strategy for the Green Revolution in Mozambique' (MINAG 2007) that already mentioned the need to increase food production and cash crops, as reiterated in subsequent documents. Supportive factors would also be considered: the weight of food imports in the balance of payments (Banco de Moçambique 2005), and the rising domestic gap between domestic production and imports, on average 365 tonnes per year for 2000–14, as previously mentioned (MASA 2016, 7). In 2012, the internal formulation of the project goals (RBL-EP 2012) still included contributing to gross domestic product (GDP), although this would be highly unlikely given the much larger scale of extractive industries. More importantly, the aggregate character of GDP says nothing about the distribution of wealth and poverty, or inequality. In public information communicated to Chicumbane residents, 'the Chinese' were said to have come 'to help us end poverty, to eat, to sell food until our country develops' (Interview, Inácio, 13 November 2012).

There are divergences of view over the overall project strategy. In interviews with HLMC-Wanbao and RBL-EP's management teams, the production strategy had remained that of supplying the domestic market first, followed by export to surrounding areas and/or China (Interviews, Patrício, 17 May 2012, 21 September 2012; Francisco, 16 May 2012), whereas the Chinese company narrative included a growing domestic niche of discerning consumers willing to pay higher prices (Ganho 2013b). Unsurprisingly, this rice could not be found in the local market but sold for twice as much as cheap brands at HLMC-Wanbao's facilities (Ganho 2015, 170). Recent research suggests that the company has been targeting the middle class with a Portuguese brand name, but also selling the 50-kg bag at slightly below the price of an Asian brand (Rosário 2020). Without a fuller price sample, it is difficult to say if this represented a wider marketing strategy.

To achieve food security, besides producing cheap food, employment was promised (GdPG 2012, slide no. 11, emphasising construction), for wage work as part of families' surplus. For producers, high production costs, little independent storage and no distribution network resulted in low prices at Wanbao's gate (group meeting, 4 June 2012, interviews 2014). Diversified livelihoods would also include wage work on/off farm. Wanbao's management stated that it created 'over 1000' jobs over time (2011–14), including for infrastructure construction. Chuanhong et al. (2015) estimated a lower figure (700–1000).

In a spontaneous group interview with Mozambican workers (13 November 2012) outside the factory they were building, the main informant was reinforced by others' statements about how the salary for heavy construction work was the same as for agriculture work (2300 MZN [*meticais*]/month), and was below the legal minimum wage requirements in 2012 (3386 MZN/month); that they had to pay for 'flimsy' overalls, and shoes, and could see their wages reduced without clarification. Asking questions was considered a risk for fear of dismissal. A precarious scenario thus emerges, where workers absorbed additional costs for labour reproduction. Mozambican mid-sized producers (in upstream Chókwè district), however, paid the equivalent daily casual work rate, about 80 MZN.[14]

Wage work resulting indirectly from medium-scale production was difficult to ascertain. Granted, beneficiaries of Wanbao's methods needed to employ some labour for scaring away birds, weeding and other manual work in avoiding fees. In 2014, it was too early to judge the results of Project 3. However, information in Rosário (2020), from a small sample of 89 individuals out of a group of about 9000 producers (*ibid.*, 89) from the central perimeter and hills,[15] presents some differentiation along three groups, in growing order of plot size: 1) family sector affiliated with *casas agrárias*; 2) independent family producers; and 3) cultivators of irrigated blocks, comprising 3a) 'emergent', mid-sized producers with Wanbao's technology and 3b) mid-sized producers cultivating and marketing their rice independently. The latter type, 3b), seems to be the better off, and includes public employees previously in ARPONE. These did not now need state support – some 83.3% of those interviewed hired casual work, but most work was also mechanised (*ibid.*, 137–138). In contrast, the smallest producers (cultivating 0.5–2 hectares) constituted more than a third of the total numbers on the Regadio scheme (*ibid.*). Further, Wanbao's monopsonist relations observed in 2012 (Ganho 2013b) were confirmed, as for common outgrower schemes, in group 3a). This puts a ceiling on surplus for smaller areas and encourages producers to place all their proverbial eggs in the same basket (i.e. rice monoculture).

Conclusion

This article examined the Sino-Mozambican project from a historical and material perspective, focusing on processes of rural social differentiation and accumulation patterns. It observed the Regadio's history from new sources regarding its beginnings and initial transformations, bearing witness to both the specificities and commonalities, with differentiation from social relations of production processes developing elsewhere. The history of farming in the Xai-Xai surrounding area has brought into focus persisting patterns of inadequate support to small producers due to the lack of good-quality wage work, the enduring myth of agricultural dualism that negates social differentiation, and the historically situated trajectories of selected producers in the Sino-Mozambican project. This offers a window onto the dilemmas of capitalist development, with its decreasing ratio of relative labour components in favour of mechanisation in tension with the need to cheapen food and labour supply to the point that they cannot serve social reproduction.

Rice production remains central to the governmental efforts to alter the political economy of food and agriculture in the lower Limpopo, with the ambition of enhancing political legitimacy in both rural and urban areas but without resolving the historical dilemma outlined above, which stands as the crux of agrarian transition in the South.

The model behind the overall Sino-Mozambican project is one of intensive, large-scale mechanised agriculture, reminiscent of the dualistic vision of agriculture established in colonial times and retained under socialist transition, which perpetuates the marginal participation of the smallest producers without acknowledgment of their importance in food production historically. In this respect, the Chinese model appeared not as an imposition but rather as reminiscent of a recent past.

In exploring the Sino-Mozambican project in its genesis and evolution into three separate (sub)projects, controlled by an alliance of the dominant domestic capitalist faction and Chinese capital in a development cooperation modality that involves doing business, it is argued that what appears to be a single project or collaboration should be analysed as three separate, albeit interrelated, projects resulting from a dynamic relationship between the main actors. Project 1 participants – state-sponsored mid-scale producers, some politically connected – decreased significantly in number due to poor outputs, and hence low surplus. This would suggest that local representatives and state employees were not the intended beneficiaries but rather the result of a compromise between former central and provincial authorities vying for the control of administrative land access for large investments in the Regadio. This eventually prevented most of the ARPONE producers from having access to state-mediated finance. Many had been local beneficiaries of redistributions of land and other means of production from the 1980s and 1990s. As a consequence of reforms, the Regadio emerged as a newly carved 'neoliberal state space', with enhanced powers to manage partnerships directed by the central state supported by foreign capital. This can be interpreted as a power struggle between two factions of capital, each of which enabled different patterns of accumulation in the area, i.e. land speculation and small land use permits or titles, and large foreign investment.

Project 3 also targeted many medium and small producers that were deemed to show the potential to go into commercial rice production, accelerating a process of rural capitalist formation. The project showcased a few 'successful' entrepreneurs, but it also suggests that food production had effectively been made into a form of patronage and control over nascent capitalists and old allies (local chieftaincies), under the banner of addressing food security. In so doing, the project illustrated class and social differentiation within the peasantry. As we know, this is a fragile process, far from being linear or unidirectional, as medium producers are still vulnerable to risk and, thus, to the threat of going back to being small producers. Mechanisation and expropriation could lead to a decrease in autonomous production and an increase of proletarianisation in a context of low wages. In turn, this could undermine the production of cheap food that has helped labour reproduction for other economic activities.

The Regadio's class-differentiated history, which remains less studied than that of other schemes, has shown an early process of rural class formation primarily based on reclaimed and drained land, between families with the means to farm the allocated plots and those without, and local alliances. But it has also shown the essential role of forced labour and production in the travails of commercial agriculture both competing with, and supplemented by, migrant work and job seasonality in order to keep labour costs down.

This case study shows the centrality of class in socio-economic differentiation in the countryside, and the role of large schemes in deepening and accelerating these processes of differentiation, depending on the terms of the projects. These processes interact with broader domestic patterns of accumulation of an 'extractive' nature in Mozambique, including again processes of land expropriation and agricultural surplus-value extraction mediating international commodity trends.

The argument is that the Sino-Mozambican project has resulted in accentuated differentiation among small producers, advancing only an uncertain number of them to the ranks of commercial agriculture. Whether stratification will continue in the same direction depends on its commercial profitability – largely contingent on climatic conditions – and the scheme's strategy on technological packages and control over rice marketing, but also on the social processes associated with time-consuming rice farming competing with other (re)productive activities, including farming in other areas, especially for women. For the excluded small producers, it is also a matter of how much farm wage-work is generated from rice (and other) farmers in good years. This presents excellent avenues for further research on the ground on labour and capital.

The historical information analysed here on the colonial making of Regadio through its twenty-first century rehabilitation and the earlier days of the Sino-Mozambican project in its constitutive stages aimed to contribute to the knowledge of the land politics, accumulation and evolving challenges facing this understudied area.

Postscript

After completing this article, the author uncovered some 2021 news suggesting that Wanbao in Mozambique may be reaching a new stage, at least according to its promotion in the Chinese press ('Africa partnership yields rich bounty' – Xiaodong 2021). It now appears to cover the full 20,000 hectares and to be called Wanbao Mosang Agricultural Park.

Notes

1. Nhancutse, Poimbo, Siaia, Nhocuene, Chongoene, Fidel Castro and Inhamissa (MDSAR 2003, 6).

2. The *Directivas Económicas e Sociais* of FRELIMO's Fourth Congress (FRELIMO 1983) for 1977 to 1981 showed that agriculture had the lowest growth rates, at 8.8%, as opposed to 25% and 15% in other sectors (*ibid.*, 22, 30).
3. These included Agro-Pecuária de Gaza (probably the colonial Empresa das Lezírias), Agro-Pecuária do Lumani, Socas (near Barra), Empresa Magula and Empresa Mundiani (Languene) (Hermenegilgo, 7 June 2014).
4. The need to analyse such a project as three somewhat different subunits was already apparent at the time of writing of Ganho 2017.
5. ARPONE is a farmers' association. It stands for *Associação dos Agricultores e Regantes do Bloco de Ponela para o Desenvolvimento Agro-Pecuário e Mecanização Agrícola de Xai-Xai* (GdPG 2010).
6. Private investment was complemented with central diplomatic/financial backing, partly from the Chinese government, through the China Development Bank Capital Corporation and the Macau Industrial Development and Commercialisation Fund (Macauhub 2013).
7. There were discrepancies in figures for the number of producers involved. Reasons for this included the source of funding (GAPI, Chókwè mutual institution or self-funding); applicants giving up as a result of late disbursement of funds; and unclear plot allocation with 'borrowing' for actual production. The former RBL-EP operations manager stated that out of a total of 53 producers selected, there were only 39 left that they were supporting financially, due to a lack of suitable plots (Jaime, 11 May 2012). An RBL-EP Excel sheet indicates 46 (RBL-EP 2012), probably from an earlier stage.
8. Based on interviews with two senior figures at RBL-EP and with ARPONE members, and also on documents (RBL-EP 2012). For further details, see Ganho (2013b).
9. The source for this is an Excel document of data on the remaining Ponela producers working with Wanbao in 2013/14. The data were produced by an institution that wished to remain anonymous (6 June 2014, Xai-Xai).
10. It is unclear how spontaneous or (politically) organised the protest was, but the issue cannot be developed here.
11. Numbers cannot be determined with accuracy but may amount to approximately 1500 families or 9000 people in Chicumbane alone (see Madureira 2013, 25). Data promised by the late leader of Fórum de Organizações não Governamentais de Gaza (FONGA) were not forthcoming in 2014. This person was gunned down in 2019, reportedly in connection with his role as an election observer.
12. The Fund for Agricultural Development (FDA) is generally considered as coming from 'internal sources', including revenue from provinces and not from donors; however, it can actually include the latter, channelled through general budget support (World Bank 2011, 53).
13. This paragraph uses information from an interview with the NGO Forum (FONGA) leader in June 2014. It also draws on photos by the Agro-Nhancutse agricultural cooperative (see https://facebook.com/Agronhancutse/photos). These show traditional ceremonies attended by the governor, and visits by President Guebuza to the Agro-Nhancutse site.
14. The minimum wage of 2300 MZN/month divided by 30 working days.
15. Rosário (2020, 84) indicates that of these 9000 producers, 8274 are located on 4309 hectares in the drainage areas organised around seven *casas agrárias*, according to the RBL-EP census completed in 2017.

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Appendix. Map of the Regadio do Baixo Limpopo

The figure shows the area of the Regadio's beginnings, with Inhamissa scheme between the town of João Belo (Xai-Xai) to the west and the Inhamissa Lagoon to the north, and the second scheme at Siaia further north.

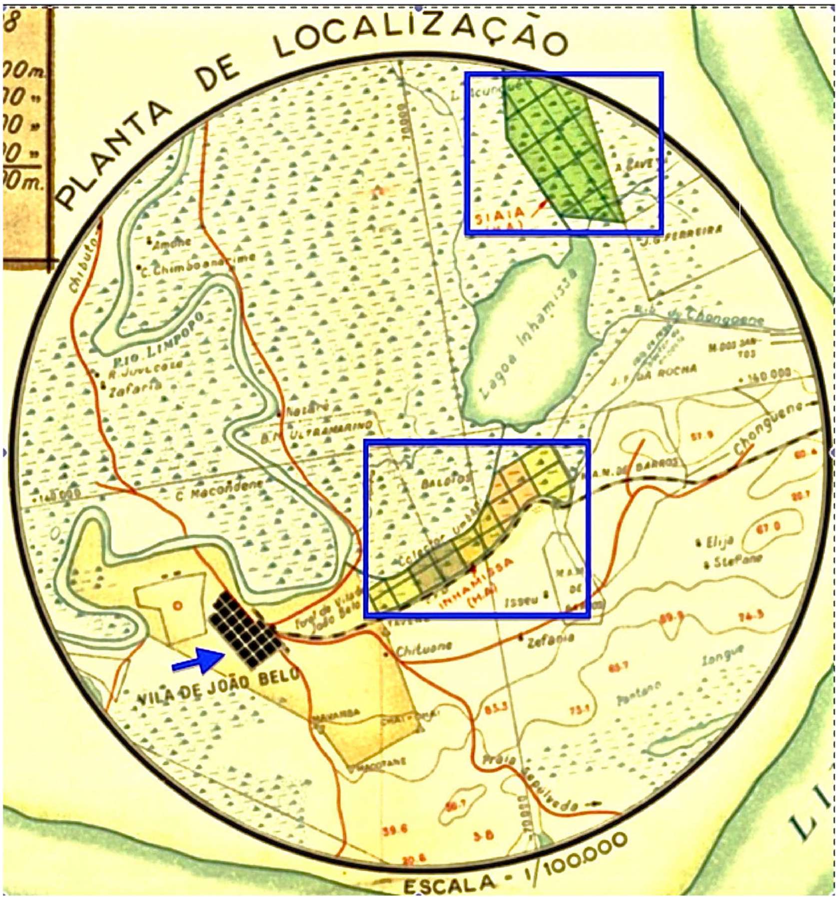

Figure. Map of Inhamissa hydro-agricultural development scheme, lower Limpopo (1952). Source: de Sousa Monteiro and Faria Fonseca (1952, last unnumbered page, 'Aproveitamento Hidroagrícola da Inhamissa - Baixo Limpopo').