

Large scale foreign land acquisitions: what interactions, opportunities and risks for different local farming systems? A case-study in Madagascar

Medernach, K.^{*} Burnod, P.^{**} Rakotomalala, H.^{***}

^{*} Master thesis with the Malagasy Land Observatory, Antananarivo, and ISTOM, Paris (in 2011)

^{**} CIRAD – UMR Tetis and Malagasy Land Observatory, Antananarivo

^{***} SIF and Malagasy Land Observatory (in 2011), Antananarivo¹

Keywords: Agrarian diagnostic, agribusiness, cattle herding, farming system, jatropha, large scale land acquisitions, land rights, Madagascar

Abstract

Important foreign land acquisitions in developing countries can lead to structural transformation in existing farming systems. But does the development of mega-farms create the same opportunities and risks for the diversity of local rural households? Based on a case study in Madagascar, this paper deciphers the transformations of the local agrarian systems due to the implementation of an agrobusiness company, aiming to produce jatropha on 5000 hectares. Focusing on the local level, it deciphers the ongoing impacts and tries to overcome a vision of the “local community” as an homogenous and congruent entity.

Even if the plantations are still small (230 hectares), the company implementation impacts on the local labor market (wage increase, transition accelerated from mutual aid system to labor market), migration flows (new immigration and less seasonal emigration), the local farming systems (vegetable production stops due to commoditization of manure, development of onions thanks to new comers' experience, adaptation of cattle breeding). Above all, the company plots encroach on appropriated land and generate conflict with the villagers. While the smaller farmers benefit from the company implementation (jobs, infrastructures access), the larger famers and herders are the ones who lose access to land, experience an income decrease and then oppose the company implementation. The company development also reactivates land conflicts between villagers (schematically *Betsileo* farmers and *Sakalava* herders) who both compete to have control over land access. Hence, neither investor nor local landwners manage to have secure and legal land rights.

A better understanding of the agrarian system and the local tenure practices is necessary to identify the diverse stakeholders and interests in welcoming/opposing the company. A better view on whom benefit/lose from the company development, whom has land rights and whom has control over land access gives opportunités to enhance negotiation processes, improve legal empowerment and avoid violent conflictual situation, detrimental for the investor and the local inhabitants.

Introduction

Beyond the recognition of a renewed phenomena of large-scale land deals (Cotula et al. 2009; Shepard & Mittal 2009; Von Braun & Meinzen-Dick 2009; Deininger et al., 2011; Oxfam, 2011,

¹ **Katy Medernach** – Agronomist, 26 years old. She did her studies in ISTOM in Paris and her Master Thesis on large-scale land acquisitions in Madagascar and the interactions with the local community, with the **Land Observatory – Madagascar and CIRAD**. She is currently continuing her studies in Economics in University UPMF in Grenoble; katy_medernach@yahoo.fr

Perrine Burnod, CIRAD – UMR Tetis – **Land Observatory – Madagascar**. Economist. 33 years old. She did her Phd Thesis on migration and land access in Comoros islands and a post-doc on foreign direct investment in land in Mali and Madagascar in the biofuel sector. She is currently working on large scale land acquisitions process and land reform issues in Madagascar, in partnership with the Malagasy Land Observatory; perrine.burnod@cirad.fr.

Heriniaina Rakotomalala – SIF – Madagascar. Agronomist, 24 years old. He did his agronomy studies in the University of Antananarivo, and his Master Thesis on the subject of land certificates used as a guarantee to loans from financial institutions, with the **Land Observatory – Madagascar**. He is currently working with the platform of organizations working on land issues - SIF in Madagascar.

Anseeuw and al., 2012), questions are still pending on the long term effects of this phenomena on agrarian structures, local markets and rural social differentiation. But before addressing this big picture questions and debating the appropriate policies, more data have to be gathered - through a political economical lens - on the effective impacts and their distribution (Li, 2011; Borras et Franco, 2012). Detailed case-study are needed to focus on the local level, to describe the ongoing impacts and to overcome the vision of the "local community" as an homogenous and congruent entity (Borras and Franco, 2012). Case studies are also needed to analyse how the legal framework is implemented and how policies can be strenghtened.

One main issue is resource access and land-use competition between investors and local populations, notably when local communities' land rights are not legally recognized and the land is considered as State-owned (Cotula et al., 2009; Von Braun and Meinzen-Dick, 2009; Deininger et al., 2011). In Madagascar, beyond the well publicized abandonment of Daewoo's huge agricultural project (targeting 1.3 million hectares of land) large-scale appropriations continue (Andrianirina Ratsialonana, 2011). But, unlike other southern countries, a pro-smallholder land reform is ongoing. Since 2005, profound legal changes have been implemented in matters of local land rights protection. The 2005 land reform challenges the state-ownership of a large part of the country's land, legally recognizes individual and collective local land rights and promotes land management decentralization (Teyssier et al., 2009). Then, according to these new laws, land allocation to investors should not encroach on existing land rights and should be granted with prior consent of local landholders, local government and the state land services.

Another main issue is the development or decrease of local socio-economical activities following the company implementation. In the Malagasy rural sector, 86% of the labor force is involved in agricultural or pastoral activities (EPM, 2010). About 85% are working mainly on their small farm - the average farm size is about 1,4 hectare (EPM, 2010) - while 15% are mainly agricultural workers (Minten and Randrianarison, 2003). Rural labor markets, very developed in the main rice production areas, are mostly seasonal in the other regions (rice transplanting and harvesting time). In addition, lots of labor transfers are still embedded in mutual aid system (Minten and Randrianarison, 2003; Gannon and Sandron, 2006).

Based on a case study (cf. Medernach, 2011 in partnership with Rakotomala), this paper deals with the interactions between an European company aiming to produce jatropha on a 5000 hectares and the local population, in the *Boeny* region in north-western Madagascar. What transformations do this large-land scale acquisition and the large farm development induce ? Are the opportunities and the risks the same for the diversity of local rural households? Do the legal framework impact on these changes ?

Through a qualitative analysis of the agrarian system², this article draws on data collected during a 5 months field study thanks to a 150 short and 50 in-depth and repeated interviews with interalia farmers, herders, the agribusiness farm' team and political authorities. The study presents significant but not representative changes. Moreover, the company implementation being still recent (2009), changes cannot yet be defined as structural ones.

This paper first describes the local farming systems and the agribusiness farm (section 1). It deciphers then the interactions relative to labor issue (section 2), land access, use and management (section 3), and finally relative to social and political reactions and tensions (section 4).

² The methodological approach is referring to the French school of « *Système agraire* ».

Results

I. Diversity of farms: from gradual to rapid changes

First occupation and immigration

In the early 19th century, *Sakalava*³ were the first occupant of the “Mivili”⁴ area. Mainly herders, they used to make their cattle pasture on the vast and non cultivated hilly zones. Semi-nomads or settled, they developed villages in the eastern part of the area (see figure 1).

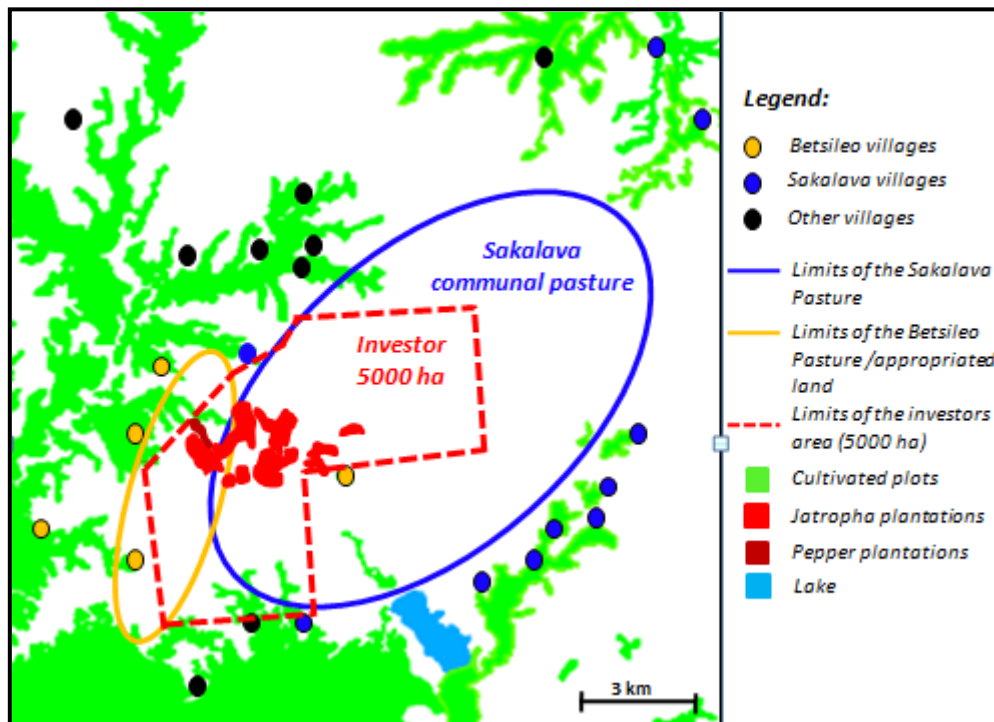


Figure 1 “Mivili” area, cultivated areas, pasture land and the investor’s area. Source: Authors

During colonization time, *Betsileo*⁵ farmers emigrated from the central region of Madagascar to the north western region, notably to “Miassa”, one of the biggest irrigated agricultural plain of the country. Few decades later, some of their descendants emigrated from “Miassa” to neighboring areas in a global movement starting from the plain and going upstream of the main rivers. In the mid of the 20th century, some families settled in the western part of Mivili area, developed villages and grew rice in the well irrigated lower zones. During interviews, *Betsileo* farmers stated that their ancestors did not ask *Sakalava* leaders, living in distant villages, any permission to access land. Nevertheless, all *Betsileo* villagers declared that they systematically honored the *Sakalava* ancestors (gifts, sacrifice) when they had to clear or develop a new plot. Also during interviews, *Sakalava* herders stated that they had, as their ancestors did, to progressively displace their cattle to the north-eastern part of Mivili.

The family farming systems nowadays

Schematically, *Betsileo* appropriated the western part of Mivili while *Sakalava* appropriated the main part of the central and eastern part of the area. Both farmers and herders, respectively valorize the different agro-ecological zones (figure 2).

³ *Sakalava* and *Betsileo* are two ethnic groups in Madagascar.

⁴ The names have been changed for confidentiality.

⁵ Immigrants that came to Mivili were in majority *Betsileo*, but there were also other ethnic groups like *Betsirebaka* and *Merina*. To simplify, we will call the population that has immigrated and its descendants “*Betsileo*”, in oppositions of the first inhabitants who are *Sakalava*.

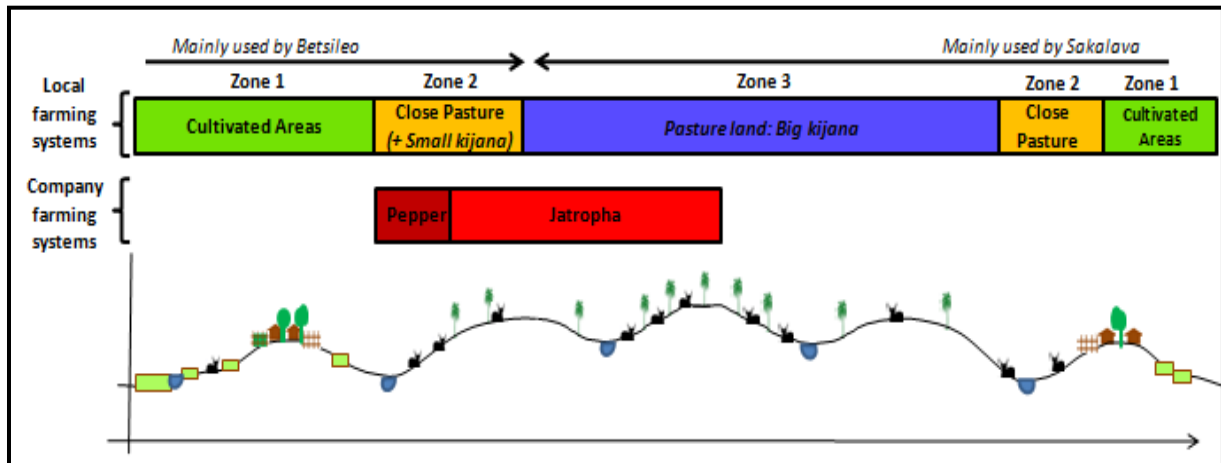


Figure 2 Landscape transect and land use for different agricultural activities (local and investor's farming systems). Source : Authors

Paddy fields and other cropping systems (vegetables, cassava) are in the lower areas next to water resources or on close hills (zone 1), while pastures are on the hilly zones (zone 2 and 3). *Betsileo* herders –having from 5 to 15 zebus each – modify their breeding system depending on the season. During the dry season, the cattle graze on pastures close to villages and spend the night in cattle pens. During the rainy season, the rice growing season, they graze night and day on pastures distant from villages and agricultural plots (« *small kijanas*⁶ » - zone 2). Farer at east, *Sakalava* herders - having from 50 to 300 zebus each - practice more extensive cattle breeding system. Cattle from different herders graze all the year round on a vast communal pasture (« *big kijana* » - zone 3), a 12 km diameter circular grazing area delimited by villages (see figure 1). As the zebus fear human presence – except the one of their herders coming once a week - they stay away from potential thieves and villages. Hence, the dozen of villages form a sort of fencing.

Schematically, 4 types of farming systems co-exist in Mivili (see table 1): (i) *Betsileo* smallholders (ii) *Betsileo* large farmers (iii) *Betsileo* large farmers and herders (iv) *Sakalava* large cattle farmers. The different farming systems cohabit but also experience tensions and competition over land use. Schematically, tensions occur between farmers and herders but are generally presented in a way stigmatizing the identity of the social groups: “the *Sakalava* cattle frequently devastate at night the farmers’ rice fields”, while “the *Betsileo* rice producers progressively develop new lowlands in the (*Sakalava*) grazing areas”.

⁶ *Kijana* is a malagasy word referring to cattle pasture and rest area.

	<i>Betsileo</i>			<i>Sakalava</i>
	1. Small farmers	2. Large farmers	3. Large farmers and herders	4. Large cattle keepers
Cultivated land	0,5 to 1,5 ha, share-cropping with relatives	>1,5 ha	>2 ha	Sometimes rice plots >2ha
Land given in share cropping	/	sometimes	> 2 ha	> 20 ha
Appropriated non cultivated land	Sometimes small land for rice production from parents	Parts of close pasture and land for rice production		Communal pasture land (> 5000 ha)
			Small kijana	
Main crops	Rice, Manioc, Vegetables	Rice, Manioc, Lemon, Vegetables		Rice
Material	Few, often access trough other farmers	Complete material		
Cattle	0 to 2	2 to 4	5 to 15 Close pasture grazing	50 to 300 Extensive cattle keeping
Off farm jobs	Basket making, sale of palm leaves			?
Sale of labor	4 months during the dry season			No
	Collective work during rainy season (often)	Collective work during rainy season (rarely)		
Income/person (MGA) (prior to the company arrival on the basis of a significant example)	675 000	2 200 000	4 000 000	12 000 000

Table 1: Simplified typology of farming systems. Source: Authors

The agribusiness farm

In 2009, a European company established in the zone, aiming to cultivate 5000 hectares (ha) of jatropha to produce biofuel. The investor used to work in the European finance sector and hence have no experience in agriculture. He self-financed the first buildings and show-case plantations, but he is now actively seeking external funding from banks or investment funds to finance the whole project.

The company has simultaneously engaged in two parallel routes to negotiate land access: the informal one through negotiation with the mayor, head of the concerned villages and some inhabitants; and the formal one through the legal procedure required by the state land services (the red line in figure 1 and 3 showing the delimitation of the area about to be registered as a 30 years land lease). With the local permission and without any finalized legal authorization (cf. infra), the company developed the first plots. As numerous investments started recently in southern countries (Papazian, 2010; Nhamtubo and Salomão, 2010; Deininger et al., 2011), progress with implementation is limited and area in operation much smaller than the one targeted, due to unanticipated technical difficulties, lack of agronomical expertise, financial problem and negotiations or, even, tensions with local communities. By early 2011, 230 ha of Jatropha and 6 ha of Pepper have been cultivated. The company promised jobs (with priority access for villagers), services and infrastructure, like roads, schools or churches. In 2011, a small health post has been built, and a doctor and two school teachers were monthly paid.

I. Job opportunities and economic interactions

Labor exchange and mutual aid

At the national level, mutual aid system is still largely practiced. According to EPM (2006), farmers resort to labor exchange on 36% of the plots and to daily paid workers on 27% of the plots. In the area under concern, most *Betsileo* farmers also engage in two types of labor investment.

First, in a local mutual aid system ("*valintanana*"), groups of farmers (relatives and neighbors) help each other on the rice plots during the work peaks (transplanting and harvest)⁷. *Valintanana* literally means "giving a hand" and is based upon reciprocity relations. The owners provide meals and, in many cases, give a monetary compensation (2000 to 2500 MGA⁸ per worker a day – the interviewees explained that "it is a way to thank the workers, it is not really a wage – nobody would work for a wage of 2 000 MGA a day" – "it is a way to keep money inside the family network"). Smaller farmers regularly invest more labor force than they get in return but enjoy latter on other supports in return (rice, material for plowing etc...). Especially for the smallholders, this mutual aid system can act as an insurance system (Gannon and Sandron, 2006), as they "may eat next year the rice they are planting today on their neighbor's plot"⁹.

Secondly, most of the *Betsileo* farmers, having few on-farm activities during the dry season, leave Mivili during 4 months to look for jobs in Miassa (about 30 km far); the rice plain being irrigated and then cultivated all the year round. The daily wage is about 3 000 MGA.

Creation of new jobs for local farmers and immigrants

For the 230 ha of jatropha, the company employed the first year 160 seasonal jobs (3 months in average for nursery and transplantation works), and plan to hire about 20 full-time workers in the future. On the 6 ha pepper plantation, it employed 60 full-time workers. On the long run, the company will probably stop pepper production (developed to compensate the absence of jatropha production during the 3 first years). It will employ for the jatropha plantation 1 seasonal worker (6 months job) for every 1 or 2 ha¹⁰ and 1 full-time job per 10 ha - i.e. on the basis on the maximum hypothesis, an equivalent to 6 full time jobs per 10 ha. As harvesting is not mechanized, large jatropha plantation appears to be a labor intensive crop compare to other large scale plantations¹¹ (Deininger and Norton, 2009). In an effective 5000 ha plantation scenario, the company will employ 2500 to 5000 seasonal workers, and 500 permanent workers. As job opportunities near the villages are scarce especially during the dry season (no work on rice plots), those jobs are locally attractive even if the tasks are considered as difficult¹². The workers are successively hired for 15 days periods, (even full-time workers employed since 1 or 2 years) paid 3500 MGA a day (about 1,23 €)¹³, and most of them did not got any legal contract. The estimated number of jobs created is significant compared to the local population, estimated at about 300 to 400 persons per village (1500 to 2000 persons in the 5 nearby villages).

Who are the workers? Within the local population, interests to get jobs vary. During the dry season, most of the *Betsileo* farmers (small and large) are interested in working on the agribusiness plantations instead of emigrating to Miassa. During the rainy season, only small farmers sell their labor to the company and they do it when they have no more work on their farm. By contrast, *Sakalava* cattle herders do not look for the jobs as they are neither geographically accessible nor financially

⁷ As the water level of each plot determines the period of rice cultivation, work peaks differ from one plot to the other and range from November until June.

⁸ Ariary (MGA) is the currency of Madagascar. In early 2011 the change was 1 euro= 2850 MGA

⁹ A farmer of Mivili area – june 2011.

¹⁰ The future demand for labor force will depend on the future jatropha yields.

¹¹ Roughly, for 1 000 ha, oil palm in Indonesia requires 350 equivalent annual jobs, sugar ethanol manual, 700 jobs, sugar ethanol mechanized, 350 jobs, maize fully mechanized, 4 jobs.

¹² On the plantations laborers start early in the morning and work 8 hours without a break for food, which is considered as difficult compared to working hours on the local farmers' rice plots (6 hours, with a break for food)

¹³ For 6 days work a week, they are paid in 91 000 MGA a month (about 32€), similarly to the minimum wage of 91 520 MGA per month (April 2011).

interesting compared to cattle breeding (as they declared during interviews)¹⁴. As observed in the past and still nowadays (eg. Li, 2011 ; Deininger et al., 2011), the jobs created by the development of the large farm are partly filled by migrants. In Mivili, migrants are generally landless farmers who used to work as day laborer in the Miassa rice plain and came to work on the agribusiness plantations. In 2011, 40 men and women settled in the villages next to the plantations. Landless immigrants work on the plantations all year long, while the local farmers, even the smallholders, sell their labor force only when they have no work on their own plots. Encountering no local demand for permanent jobs and trying to reduce transaction costs (recruitment, selection, learning costs, ect.), the company starts then to give priority access to migrants. This prioritization might create social tensions on a long run.

Changes in work force allocation for *Betsileo* farmers

What changes do occur in work force allocation for local farmers?

During the dry season, the jobs offered the first year by the company replaced the ones occupied in the Miassa rice plain (both offer a similar daily wage¹⁵, but the former, despite their harder working conditions, are local and do not impose seasonal migration).

During the rainy season, almost all *Betsileo* farmers give priority to growing rice. They consider, as stated during interviews, that working on their own farm is economically more profitable than getting employed by the company (verified in our calculations¹⁶). In addition, in line with a “food first” strategy, local farmers prefer above all ensuring their self consumption of rice and diverse reciprocity transfers (young farmers who farm their parents’ plots provide them rice in exchange for land access).

When they have no work on their own rice plots, farmers are either carrying out other farming or non farming activities (leafy vegetable growing, basket making) or working on neighboring farms (mutual aid).

Since the company development, some are interested in selling labor to the plantations. Competition in work force allocation appears then between companies paid jobs and other prior activities. Some female farmers now prefer working for the company than making baskets or producing leafy vegetables. Their main arguments were that the jobs were more profitable – which was confirmed by our own calculations¹⁷ - and offered regular payments in cash. The leafy vegetable production profitability was moreover jeopardized by the **commoditization of the manure market**¹⁸. Indeed, before the arrival of the company, cattle owners gave manure for free to the women, as manure was available in large quantities in the cattle pens. With the company’s large demand for manure for *jatropha* fertilization, cattle owners start selling manure (they got then a new income source, but these latter was insignificant compared to their total income¹⁹).

Changes in mutual aid system on rice fields

Many smaller farmers took on jobs on the plantations and then invested less time on their relatives/neighbors’ plots. They opted for these jobs to have a 15 days cash wages even if they complain about the working conditions. Compared to the one on rice fields, they consider the company’s working conditions as harder, socially less valuable (based on hierarchical and not on reciprocity relations) and less paid (the company salary is higher per day but lower per hour). All the

¹⁴ As verified by our calculations, *Sakalava* cattle breeders have in general high revenues compared to the other farming systems (see table 1).

¹⁵ The daily wage in Miassa was 3000 MGA in 2010 and raised to 4000 MGA in 2011.

¹⁶ Revenues going from 6 471 to 12 689 MGA per working day.

¹⁷ Both activities do generate less than the daily wage of the company jobs (3500 MGA per day): 2308 MGA for basket making and 1100 MGA for vegetable production.

¹⁸ Value-added fell down to 523 MGA per hour. 1 are of vegetables production needs 20 bags of 50 kilo manure (30 000 MGA (10,5€) additional costs, while the value-added per are is only about 60 000 MGA (21€)).

¹⁹ The yearly value-added by a cattle herding system of 10 zebus (kept in pens) is about 2.8 millions MGA (about 980€). The manure sale adds about 90 000 MGA (32€) (60 bags sold for 1500 each) (+3% of the value-added, which increases the total revenue of the farming system by little less than 1%).

workers claim wage increase, better working conditions and labor contracts but until now without success.

The company has induced changes not only on the local labor market but also in the mutual aid system. In reciprocal and collective labor exchange, the farmers who invited their relatives/neighbors working on their plots start giving monetary compensation equal to the company's daily wage (ie an increase from zero or maximum 2500 MGA per day to 3500 MGA per day). Two major reasons, given by interviewees and reformulated here, can explain this evolution. First, local farmers have to be as attractive as the company to get workers during labor peaks (the company's implementation has increased the farmers' opportunity costs). Second, as many farmers have worked on the company plantations during the first labor peak (160 jobs), more cash was available to cover this higher compensation for relatives helping out on the rice plots. The implementation of the company will then possibly foster the transition, already ongoing, from reciprocity to commoditized labor relation (e.g. Gannon and Sandron, 2005; Sandron, 2008).

Income evolution

Based on the typology of farming system, the smaller farmers and the new migrants enjoyed an income increase thanks to new jobs opportunities (+24% for local seasonal workers and better access to cash in the most representative scenario²⁰, +50% for the migrants). Even if their income is still limited compared to others farmers/herders of the Mivili area, they are the one who have benefited in the first place from the company implementation and its indirect effects (wage increase and paid labor relations), all the more that they did not lose land access (cf infra). Hence, as observed in a case study in Senegal (Maertens and Swinnen, 2009), the more vulnerable households are net beneficiary of the large farm development. But these advantages can be counterbalanced in the midterm, if the fewer labor investment in mutual aid system induce less support from their social networks and then the deprivation of an important safety net; and in the long term, when company jobs are mainly proposed during the rainy season (jatropha harvesting tasks overlapping then on rice production tasks) and priority is given to seasonal/migrant labor.

Based on the typology of farming system, the bigger farmers are constrained to pay higher wages/monetary compensation and then face additional costs for the rice production (+ 50 000 to 100 000 MGA per ha, profit decrease from 5 to 15 % per ha). Only some of them manage to cover those extra-costs by taking on company daily jobs. In addition, they are the one who lose land access.

New practices – new shops

Until now, no technology transfers – yet regularly underlined as a major input of large farms development (Deininger and al., 2011) - has occurred from the company to the local population. Local population does innovate but they adopted new practices from the migrants – who rent land²¹ and cultivate onions – by developing onion crops. Thanks to higher or more regular cash income, some immigrants have developed small shops and other businesses (selling food, coffee or alcohol).

II. Access to land and control over this access

First negotiation

The investor has simultaneously engaged in two parallel routes to negotiate land access: the informal one and the formal one. Regarding this latter, state land services require that claimants obtain various authorisations in order to verify that the targeted land is neither titled (whether in the name of private landowners or of the state) nor occupied/certified. Indeed, according to the 2005 land laws, local rights are legally recognized and local governments, through the establishment of a local land registry office

²⁰ This is the case for farmers who worked during 4 months in the dry season on the plantations, and during 1 month in the rainy season. Farmers who worked only during the dry season increased their income by 13%, while full time workers enjoyed an increase of +44%. But working full time for the company implicates that the farmer has less time for rice production, what only very few farmers are willing to do.

²¹ No changes in the rental market have occurred yet.

(*guichet foncier*), can formalize private property rights and issue land certificates (*certificat foncier*)²². But in the case under concern, the local government has not yet such a local land office and no plots have been legally registered / certified. In addition, the investor delayed the full realization of the legal procedure, waiting for a more conducive political context²³. Hence, the state land service has not yet carried out the field visits to verify that the land about to be leased to the company was not encroaching on occupied land (enjoying a first legal protection) or certified land (enjoying a full legal protection)²⁴.

The investor has also conducted local negotiations to implement a bottom-up approach but, above all, to carry out, without delay, trial and show-case plantations in order to attract new funding to engage large-scale projects. He got informal agreement from the local mayors, the leaders of three *Betsileo* villages and some inhabitants. These latter welcomed the agribusiness farm in exchange of the promises of jobs and infrastructures, like roads, schools or churches. In addition - and it was most probably the main motive - they hoped that the *jatropha* plantations make a natural fence protecting their rice fields from the *Sakalava* cattle. They then agreed to temporarily give to the company a 50 ha plot located close to their villages (on the "*small kijana*" – the closest pasture areas). Some farmers also hoped that the *Sakalava* will displace their cattle, which could give them access to lowland suitable for rice production. They did not really know or understand that the company was looking for 5000 ha (most farmers stated during interviews that they think that the company will not extend the plantations and will cultivate only for a 5 years period) and has already initiated a formal procedure to get a legal land lease. In addition, if the company do negotiate with (most of) the *Betsileo* farmers, it unintentionally excluded the *Sakalava* cattle keepers. The company sealed the informal agreement by sacrificing cows as offerings for the ancestors and, above all, paid land taxes on the 5000 ha area to the mayor - 3000 ariary/ha (1 €) a total 15 million Ar per year (5200€) which is about a 50% increase of local government budget.

First claims from *Betsileo* landowners

Thanks to a local agreement and without any legal authorization, the company developed the first plots. As the project began developing, the investors came to face different *Betsileo* land ownership claims. Dealing only with the mayor, the company did not negotiate systematically access to all plots and farmed some non cultivated but already appropriated plots. The concerned landowners claimed then a land rent. Acting as brokers, the mayor tries to find trade-offs (see Burnod et al., 2012). As the local landowners do not pay their land fees on uncultivated land, the mayor suggested that, in exchange for the land use, the investor would pay the land fees in their place and in their name. The mayor argued that the landowner will get back his land after the company's departure. This induced no extra cost for the firm manager since he had already accepted to pay land fees on the whole targeted area. But these trade-offs are unfair for the local landowners. The latter do not perceive any rent (and they complain on that point) and they are not aware of the ongoing investor's legal procedure. Moreover, they may miss the opportunity to legally claim their rights. The land could be registered on the name of the state²⁵ and allocated to the investor while the local landowners could lose their legal status of landowner and become squatters.

²² In October 2011, 400 Malagasy municipalities, or one-fourth of the total number of municipalities at the country level, had set up land registry offices. The latter have received 120 000 applications and delivered approximately 60,000 certificates in about four years. Over the same period, the State land services have delivered by the means of registration an average of 1,500 land titles per year.

²³ After the 2009 coup, lots of investors have suspended the legal procedure fearing that the new regime refuses leasing land to foreign investors or signs contestable contracts.

²⁴ Nevertheless, analysis of other cases has revealed that field visits and procedure led by the state land service do not allow nor the identification neither the respect of existing local rights (Burnod et al., 2012). One main reason is that land services staff, decision makers or elected representatives (willfully) ignore the fact that the land is no more state land.

²⁵ To deliver a land lease to a foreign company, the state has first to register the plot on its own name.

Overlapping of jatropa plantations on *Sakalava* pastures

But above all, the established jatropa plantations are overlapping on the communal pasture land -the *big kijana* (see figure 1). The *Sakalava* herders, not included to the negotiating process, noticed that the first jatropa plantations encroached on their land. *Sakalava* cattle owners are then opposed to the jatropa plantation and its expansion, these latter jeopardizing their cattle farming system including 5000 heads, and hence, their income, and their socio-political power and identity. As first occupants of the zone, they claim to be the traditional landowners of the pasture, defined as « *their ancestors' land*».

III. *Rising social tensions*

Due to differential gains induced by job opportunities and new infrastructures as well as differential loses relative to access to land and other natural resources, tensions arise between different groups, experiencing (or expecting) different interactions with the company (see table 2).

	<i>Betsileo</i> farmers		<i>Sakalava</i> cattle farmers (4)	Immigrants
	Small farmers (1)	Large farmers and herders (2+3)		
Benefit from infrastructures	+/- 1 village only		No	No
Jobs – labor local market	+/- New job opportunities (but not guaranteed on the long run) Might change the mutual aid system	+/- Some jobs Higher expenses	No	+
Income	+ increase	- Decrease	-	+
Land use and access		- Lose access to land (small pastures)	- Lose access to large pasture	No
	+/- Lose access to small non cultivated plots But hope to gain access to new land			
Natural resources	- On the long run, competition for water use and palm trees exploitation			No
Changes of farming practices		- Changes in the herding system (small <i>kijana</i>)	- Jeopardizing of extensive cattle keeping	No
	+ Vegetable production and basket making stops due to better opportunities Onions production starts Hope for protection of their rice fields			
Globally and schematically	+	+/-	-	+

Table 2 : Global Interactions between the company and the main interest groups. Source: Authors

Increasing discontent from *Betsileo*

The *Betsileo* villagers, especially the larger farmer and cattle herder in the western area encounter first transformations of their farming system and natural resources use. The location of the jatropa plantations on the *small kijana* force them to make their cattle graze closer to their cultivated plots,

increasing the risks of crops damage. Also cattle must be kept at night in pens during the rainy season, increasing infection risks. Moreover, most of the *Betsileo* don't experience the expected protection of their rice fields, as the *Sakalava*'s cattle still cross the *Jatropha* plantations at night. Their discontent increases because the company went back on some promises (such as priority access to jobs for local or wage increase), farmed plots without prior consent, did develop infrastructures but only in one village, started pumping water²⁶ and uprooted palm trees (exploited for wood and leaves). Then, they start worrying about and claiming the cessation of plantation expansion.

Violent opposition from the *Sakalava*

Since long, sleeping tensions and struggle for power have shaped the social system of Mivili but the company development has awakened these tensions. The *Sakalava* enjoy more economic power, historical legitimacy and political influence in the area than the *Betsileo*, which allow them maintaining and protecting their grazing system from the onward movement of agriculture. When the company came, some of the *Betsileo* seized the opportunity to ally themselves with this foreign actor, regarded as more powerful than the *Sakalava* herders, in order to protect their fields from cattle and to bring forward their claims over land. In June 2011, the *Sakalava* cattle herders violently attacked one of the *Betsileo* villages that agreed to the company implementation, burned 16 houses – including the one of the village chief - and stole dozens of cows. Through a resort to violence, the *Sakalava* wanted to defend their customary ownership and reasserted their control over land access. Illicit mechanisms, such as violence and threat, can indeed represent alternative and effective ways of controlling or maintaining land access (Ribot and Peluso, 2003). This violent attack, not directly addressed to the investor considered as able to resort to the police/courts, sought to remind the *Betsileo* that they have no property rights on the communal pasture land.

Land Tenure insecurity and risk for all farming systems

All these tensions can potentially create (more) conflicts on a long-run and endanger the land rights and activities of all stakeholders.

They foreshadow that the investor may encounter difficulties maintaining their land access in the future even if they do obtain formal land lease. Property is only property if socially legitimate institutions sanction it (Lund, 2002). Hence, in a context of institutional and normative pluralism, investors' use rights sanctioned by law and state institutions are insufficient to stabilize property relations and confer secure land rights for investors. As stated by a herder “*official document do not protect neither against crop destruction by cattle nor against fire*” (Medernach, 2011). Physical fencing being costly and inefficient on such large tracks of land, the risk is that investor will have to resort to force (armed security staff²⁷) to maintain their rights.

The *Betsileo* crops are not yet locally protected (from cattle) and are exposed to an additional risk of future conflicts with herders (burn crops). Both *Betsileo* and *Sakalava* accuse the mayor of handing over their land on his own to collect the land taxes and claim a stronger land management at village level. In addition, some large *Sakalava* herders and *Betsileo* farmers start looking for legal protection of their land rights (on land located within the targeted 5000 ha) through legal land titling at the land state services. The absence of information on the new land laws and the absence of a local land office deprive the majority of local landowner to secure their land rights. Unawareness of law by local or willful ignorance of law by state representatives to keep legal control over land access (cf Burnod et al., 2012), prevent local people to seize the laws and to protect in the legal arena their rights. They even risk losing the possibility to resort to any legal registration if the land is finally registered in the name of the state.

²⁶ Intense irrigation of the pepper plantations has induced first signs of scarcity in some rice fields and on downstream waters.

²⁷ After the conflict between the *Sakalava* and the *Betsileo*, the company manager and the mayor have hired armed police officers to regularly supervise the buildings, villages and plantations

Discussion

Business farm development can indeed directly or indirectly create, inverse or strengthen some inequalities and awaken social tensions. Some groups (including state officials) benefit from jobs opportunities, infrastructure access or rents while others – and not systematically the more vulnerable - do not enjoy these advantages and lose land access. As observed in other countries (Fernandes et al. (2010), McCarthy (2010), Ariza et al., 2010), the Mivili case illustrates that any external actor is likely to create differential impacts and reactions and often also to disrupt or exacerbate power relations. As it clearly apparent on land issue, in order to analyze large-scale acquisition and farm development effects, one cannot just analyze the 'bundle of rights' on resource but must also take into account 'the bundle of powers' relative to control over these resources (Ribot and Peluso, 2003; Borrás and Franco, 2010). Changes will inevitably occur in these “bundles of power”, when transferring land to more powerful external actors, leading to social tensions and conflicts.

Hence what are the lessons? The study highlights that it is important to overcome the vision of a homogenous community to analyze the impact of the agribusiness farm implementation and to identify the different groups of interests. Therefore, before all eventual large-scale land transfer to an outsider (here a agribusiness company, but elsewhere a mining company or an NGO's promoting a biodiversity reserve), a better understanding of the farming system, the diversity of interests and the local land tenure is necessary.

But then, how to ensure better negotiation process, to secure local rights and to take in account the diversity of groups/authorities claiming control over land access? Most policy recommendations focus on the regulation of large scale land acquisitions and the legal recognition of land rights to secure customary rights. Yet, the Mivili case showed that despite the existence of a legal framework for large-scale land transfers in Madagascar (recognizing local's land rights), a gap with its effective application existed, and on the ground the customary rights were not protected. It is essential to make existing laws effective to enhance local community's real power over land control and management and their implication in policy dialogue.

Locating the negotiation process at the sole local level doesn't ensure the protection of (and even endanger) the rights of all stakeholders (Colin et al., 2009, Borrás and Franco, 2010). Often, the investor negotiate only with what, for them, are the “most visible” institutions, i.e. positive law institutions (Burnod et al., 2012) and local authorities or government cannot be considered automatically as representative of all local land users (German et al. 2011). Better legal empowerment (through information and certification), mediation by external actors and, above all time, might be necessary to smooth exchanges among various groups in terms of interests, resources and power – and inside and outside structured arena.

The question remains how large scale land investments can contribute to rural development without generating large land use competition? The Mivili case shows that a business farm does create job opportunities but induces exclusion and conflicts by requiring large tracks of land. The concept of “idle” or “available” land that need to be invested into, justifying large scale land transfers, need to be rethought in a context like in Mivili, where all land is already occupied, used, and even locally disputed. It is then questionable how these large scale land acquisitions could possibly lead to a *win-win* arrangement, without leaving any other groups behind as *looser*. Investment into agriculture is necessary - but to ensure it will be gainfull in terms of rural development, interests of the rural society as a whole, including future generations, need to be taken into account and protected (Merlet, 2012). Agribusiness company implementations might get accepted easily for short term benefits by a part of the population or state authorities, all the more when information about the extent of the project are lacking. One year after welcoming the company, farmers in Mivili regret to have “*given away the land of their children for their own short-term benefits*”. The results of this study let conclude that the transfers of large tracks of land to external investors don't seem to be an adapted and inclusive approach for rural development.

References

- Andrianirina R. et al. (2010). *Après Daewoo? État des lieux et perspectives des appropriations foncières à grande échelle à Madagascar*. International Land Coalition, pages 56.
- Borras, S., and Franco, J. (2010) Towards a Broader View of the Politics of Global Land Grab: Rethinking Land Issues, Reframing Resistance. ICAS Working Paper Series No. 001
- Borras, S., and Franco, J. (2012). Global Land Grabbing and Trajectories of Agrarian Change: A Preliminary Analysis. *Journal of Agrarian Change*, Vol. 12 No. 1, January 2012, pp. 34–59.
- Burnod, P., Gingembre, M., Andrianirina-Rastialonana, R. (2012), à paraître. Processus d'acquisition foncière à grande échelle à Madagascar : quelles réalités ? Quelles régulations sur le terrain ? in « Cahiers de l'Agriculture ».
- Burnod P., Gingembre M., Andrianirina Ratsialonana R., Ratovoarinony R. 2011. Do Investors Really Manage to Have Secure Land Rights? Land Deals and Competition Over Land Control in Madagascar. Annual World bank Conference on Land and Poverty, Brighton, Washington DC, April 23-26, 2012.
- Colin, J.-Ph, Le Meur, P.-Y., Leonard, E. (2009). Les politiques d'enregistrement des droits fonciers ; Du cadre légal aux pratiques locales, Paris: Karthala.
- Cotula, L., Vermeulen S., Leonard, R. and Keeley, J. (2009). Land grab or development opportunity? Agricultural investment and international land deals in Africa. London/Rome: IIED/FAO/IFAD.
- Deininger, K., Byerlee, D., Lindsay, J., Norton, A., Selod, H., Stickler, M. (2011). Rising Global Interest in Farmland. Can it yield sustainable and equitable benefits? The World Bank, Washington. Report 55600- GLB p264
- Deininger, K, Norton, A. 2009. Land Grab, Development Opportunity and Securing Rights, Interim findings from a global study, power point presentation, Annual World Bank Land Conference, Washington.
- Gannon, F et Sandron, F (2006). Echange, réciprocité et innovation dans une communauté paysanne. Une lecture conventionnaliste. *Économie rurale* 292/mars-avril 2006 p18.
- German, L., Schoneveld, G., and Mwangi, E. (2011). Processes of Large-Scale Land Acquisition by Investors: Case Studies from Sub-Saharan Africa. Paper presented at the International Conference on Global Land Grabbing (6-8 April 2011).
- Li, T.M. 2011. Centering Labor in the land grab debate. *The Journal of Peasant Studies*, 38(2):281–99.
- Lund, C. (2002) Negotiating property institutions: On the symbiosis of property and authority in Africa. In K. Juul and C. Lund (eds.) *Negotiating Property in Africa*. Portsmouth: Heinemann, 11–43.
- Maertens, M., Swinnen, J. 2009. Trade, Standards and Poverty : Evidence from Senegal. *World Development*, 37(1): 161–178.
- Medernach, K., (2011). Appropriations foncières à grande échelle – Quelles interactions au niveau local à Madagascar ? Mémoire de fin d'études, ISTOM-Observatoire du Foncier.
- Merlet, M. (2012) Investissement, mot magique mais mot piège. AGTER, Nogent-sur-Marne
- Nhantumbo, I. and Salomão, A., 2010 ? Biofuels, Land Access and Rural Livelihoods in Mozambique. London: IIED.
- Recensement de l'Agriculture (RA) 2004-2005/MAEP/DSI.
- Ribot, J. and Peluso, N. (2003). A Theory of Access. *Rural Sociology*, 68(2): 153-181.
- Sandron, F. 2008. Le Fihavanana à Madagascar :lien social et économique des communautés rurales. *Tiers Monde*, 195 : 507-522.
- Teyssier, A., Andrianirina Ratsialonana, R., Razafindralambo R., Razafindrakoto Y., (2009). Décentralisation de la gestion des terres à Madagascar : processus, enjeux et perspectives d'une nouvelle politique foncière. IRD / Karthala, p. 273-297.

- Von Braun, J. and Meinzen ~~Land (2009)~~ - 'Land Grab (2009)' by Foreign Investors in Developing Countries: Risks and Opportunities, IFPRI Policy Brief.
- Fernandes, B.M., A.W. Clifford and E.C. Gonçalves, 2010. 'Agrofuel Policies in Brazil: Paradigmatic and Territorial Disputes'. *Journal of Peasant Studies*, 37 (4): 793–819.
- Ariza-Montobbio, P., S. Lele, G. Kallis and J. Martinez-Alier, 2010. 'The Political Ecology of Jatropha Plantations for Biodiesel in Tamil Nadu, India'. *Journal of Peasant Studies*, 37 (4): 875–97.
- McCarthy, J., 2010. 'Processes of Inclusion and Adverse Incorporation: Oil Palm and Agrarian Change in Sumatra, Indonesia'. *Journal of Peasant Studies*, 37 (4): 821–50.