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day vulnerability of peasant community
in Mabalane district, Mozambique

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SOCIO-SPATIAL ORGANIZATION AND PRESENT DAY VULNERABILITY OF PEASANT COMMUNITIES IN MABALANE DISTRICT, MOZAMBIQUE

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"How does climate change and the social pressures resulting from it contribute to and how are they affected by the other dimensions of the crisis, and what impact do they have on the options for political, economic and social transformation"

By

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INTRODUCTION

In Southern Africa, it is estimated that yields from rain-fed agriculture could be reduced by up to 50 percent between 2000 and 2020 (IPCC, 2007 in: De Schutter & Vanloqueren, 2011). Located in southern Mozambique, the zone under study is particularly arid, with an increased risk of drought, and very poor soils. The people living there typically produce only half of their annual food consumption needs, that is, enough for less than 6 months (FAO & WFP, 2005). Globalization of environmental discourses place natural hazards at the center of the vulnerability-food security debate. For instance through the pasteurization of a "desertification narrative" within national environmental-action plans (NEAPs) in African countries (Bassett & Zuéli, 2000). Indeed the worse effects of a changing climate are being felt by the most vulnerable. Yet, for decades the economic and political drivers of resource degradation have been debated (for instance, by Piers Blaikie since the 1980's). In this sense the notion of "social vulnerability" (as in Adger, 2000; Bohle, Downing, Michael, & Watts, 1994) enlightens the complex interplay underlying vulnerable societies. This

interplay, or a “causal structure of vulnerability”, results from the spheres of human ecology, political economy and entitlement (Bohle et al., 1994; Watts & Bohle, 1993).

Diversified risk-sharing arrangements to erratic climatic conditions have been developed historically by agro-pastoralists. For example, herd mobility is one key adaptation mechanism used by African pastoralists (Monbiot, 1994; Vierich & Stoop, 1990). When the system of practices - which confers the delicate society-environment relation - suffers stress, livelihoods are disrupted and security is lost (Adger, 2000). Nevertheless, they depend crucially on the nature of prevailing formal and informal rural institutions (Agrawal & Perrin, 2008). Hence, determinants of human security, or livelihood vulnerability, are "as temporally as they are spatially complex: past processes such as colonization and war shape present insecurities, and ongoing processes such as climate change and trade liberalization shape future insecurities" (Barnett & Adger, 2007).

Santos (1977) looks at the contribution of the category of socio-economic formation to a theory of space. According to him, mode of production, social formation and space are three interdependent categories. They refer to “historically determined variations in forms of existence” (Althusser, 1965 In: Santos, 1977). In this sense the organization of space is looked at as a social product (Soja, 1980). Hence, ‘socio-spatial organization’ positions the notion of the active production and social reproduction of space. From this perspective a focus of this work is at how peasant agro-pastoralists organize their space to respond to changing environments. The aim of this paper is to comprehend “the connections between abstract processes (structures), spaces of vulnerability (mechanisms) and actual conditions of famine, hunger and deprivation (events)” (Watts & Bohle, 1993). This is done by looking at how the livelihood system in two remote peasant communities in Mozambique have responded to their current state of livelihood vulnerability (triggered by climate change), in terms of production and symbolic reproduction.

Within the mode of production category, we situate the use of the term ‘peasant’ on Chayanov’s definition (Thorner, Kerblay, & Smith, 1986) which is similar to that used in Bebbington, 1999; Roesch, 1992; Scoones, 2009). Hence, a peasant farm is the economic unit that makes a living from the land, though its activities may also take place in non-agricultural sectors, mainly crafts and trades. These units are of both production and consumption and are composed of households that rely on a farm normally run by a family without hired outside wage labor. Peasants, Chayanov argues, are primarily interested in use value, that is about meeting needs, not making money through the commercialization of surplus as an end in itself (Thorner et al., 1986). For the communities studied a household stands for an aggregate of 6-8 members. Those who migrated to South Africa and return for periodic visits are counted as household members. Not considered are the ones who moved with their spouses to South Africa, or do not return periodically for visits.

MATERIAL AND METHODS

The main ethnic group in the study area is the Changana, speaking the Tsonga dialect of Xichangana. It is a patrilinear, patrilocal and patriarchal society. Hence, inheritance and land tenure moves through the male line: men, when married, settle in the neighborhood while women customarily move into the husbands’ area. District’s Population density is of 3,59 hab./km², which contrasts with a national density of 28.7/km². Illiteracy and poverty are over 70 % (MICOA, 2006). More than 80% of the houses are traditionally constructed with poles and mud, and 47% of the houses have thatched roofs (INE, 2008).

The area is physically and economically isolated, having limited access to market and credit facilities, as well as to information. Being a semi-arid region, it is characterized by bush savannah vegetation. Intermittent or periodic hazards affecting livelihoods are drought (i.e. extreme rain failure), high crop pest infestations (i.e. rodents, grass hoppers, maize stalk borers) or widespread animal disease, cholera in humans, and wind or flood damage to houses and crops (respectively about once in four years and once in 10 years) (FEWSNET, 2011:p.44-45).

The ten-year Mozambican War of Independence between the guerrilla forces of the Mozambique Liberation Front (FRELIMO - Frente de Libertação de Moçambique), and Portugal, resulted in a negotiated independence in 1975. FRELIMO was then the ruling party with a socialist project, when only two years later opposition began by the Mozambique Resistance Movement (RENAMO). Fighting ended in 1992 leaving households disposed of their livestock and widespread destruction of rural infrastructure. Multi-party elections have been held since 1994. Since then FRELIMO has been the ruling party.

This paper questions how households are addressing fluctuation in their livelihoods (Agrawal & Perrin, 2008) while unveiling the underlying complex structure and causes of present-day vulnerability (Bohle et al., 1994). In a previous manuscript (Levy et al., 2012) tools of people-centered livelihood analysis disclosed resettlement policies, civil war and increased climate variability as the main stressors on the existing social institutions. Moreover, these stressors exert pressure on an already vulnerable system. In this sense climate assumes a narrative redirecting attention to the long neglected remote rural smallholders.

Since the colonial era, and throughout the new independence government, only plantation agriculture has been promoted despite the fact that “officially, 70 % of the Mozambican population is rural and agriculture is the predominant economic activity in Mozambique. The smallholder sector accounts for 99 % of all farms” (Hanlon & Cunguara, 2010). On the other hand Structural Adjustment Programs in Sub-Saharan Africa,

"starved the peasant sector of capital investment and productive infrastructure, and economic liberalization exposed a weakened smallholder sector to competition from highly subsidized large-scale Northern farmers, while encouraging staple food import dependency in African cities as well as migration to the cities" (Bryceson, 2009).

In the Mabalane District low external input systems are predominant. Furthermore, Agrarian Services are deficient, especially due to difficult accessibility, while these are the areas where the population is most dependent on agriculture and livestock keeping. Hanlon & Cunguara (2010) indicate that only 8 to 14 % of the farmers received extension visits in Mozambique during the period of 1996 and 2008, with the trend declining. Looking at the Gaza Province, it has been concluded that since agricultural services in terms of expertise, inputs and marketing support has shifted from the sphere of state institutions to the private sector, access has declined for the smallholders (Eriksen & Silva, 2009).

Intensive data collection was carried out in two rural communities in the semi-arid zone in the south region of Mozambique, namely Mabomo and Mungaze in the District of Mabalane, Gaza Province (see Table 1). Multiple research methods of data collection enabled the complementation and triangulation of data, while eliciting grounded-based analysis by recording local perceptions of change. Fieldwork was conducted during 10 months divided into three phases between May 2010

and October 2011. Ethnographic field material consists of tape-recorded interviews, together with participant observation. While biographical interviews allowed some reconstruction of the past, focus group discussions (using tools of livelihood analysis, see Levy, Webster, & Kaufmann, 2012) proved to be important instruments for retrospective reflection. Complementarily a household survey sampled over 20% (n= 44) of the population. Moreover, archives from the District headquarters were also consulted, such as annual reports.

The research process followed a sequence whereby the first phase was based on participatory observation and some semi-structured interviews, functioning as an entry phase. Preliminary analysis of data from this first phase guided the selection of further qualitative and participatory methods of livelihood analysis that were applied in the second and more prolonged phase of data collection. The third phase of data collection aimed at clarification and further information on findings from the previous data collection. This was done through feedback focus groups and key informant interviews.

Table 1. Case study communities		
	Mabomo	Mungaze
No. of households	111	84
Market / train hub	30 km to Mabalane	50 km to Combomune
River access	Yes	No
Distance to District center	30 km	100 km
Production conditions	More intensive forms of production in the watered alluvia soils of the Limpopo Valley (<i>Mutanga</i>) for small vegetables watered gardens. Farm areas on the intermediary (<i>Banhine</i>) areas and the highlands (<i>Ntlavene</i>).	More traditional extensive forms of production in the Gaza hinterland: sandy (<i>Managa</i>) soils of low fertility and poor moisture retention capacity.
Livestock (2011)	1006 cattle, 799 goats, 146 sheep and 177 swine	137 cattle; 119 goats; 35 sheep; and 77 swine
General info	Daily cars to Mabalane/Chokwe. Has health post and maternity, bricked school building. 02 households have operating irrigation systems. No grinding millers. Cars: 3; Wagons:6 Bicycles: over 20; Shops: 5; Chain-saw: 4.	Depend on cars from the Park. No health post. School has only one teacher for 7 classes. Absence of bricked houses. No grinding millers. Cars: 0; Wagons: 0. Bicycles: 2; Shops: 1; Chain saw: 2

CHANGING LIVELIHOODS

Feliciano's 1975-1981 anthropological study reflects the contrast with the post-war socio-spatial organization of the Shangaan ethnic group in the study area. At that time it was characterized as "disperse and centrifuge, integrated in community networks" (Feliciano, 1998: 286). According to the author everyday life of households (*Muti*) was embedded in a complex set of rituals. It was only with the intensification of the armed conflict around 1984 that most households adopted the aldeias¹ format in search of security, backed up by local militias. This was the case for Mabomo. Inversely, Mungazi faced dispersion to Combomune, a village formed around the railroad hub. The livestock which had not yet been raided were left behind, and also the farms. A period of drought struck the zone and subsistence depended solely on food aid. Most of those who fled returned to Mungaze in the late 1990's: "This is the land our forefathers", says Alfeu, in 2010 officially recognized as the traditional leader in Mungaze. Moreover, in comparison to Combomune, "here our subsistence can be complemented with wild foods and game" others complement.

¹ The term aldeia and community will be used interchangeably. It stands for a rural locality, with a population smaller than a village.

During the pre-colonial period, legitimacy of traditional practices was grounded on a shared mythical worldview that penetrated all spheres of life. This legitimacy suffered a shock when traditional leaders were adapted to the function of regulos and hence, as watchmen for colonial control. Roesch (1992) indicates that RENAMO (FRELIMO's opposition party) used a neo-traditionalist culture of insurgency. This argument lays a foundation to the post-war apparent aversion by locals (and their need to be identified as FRELIMO supporters) to traditional practices. At this moment the spread of influence of Christian churches in the rural communities took place. It is only more recently that the national government adopted the discourse giving relevance to the role of customary law for the management of natural resources (Earle, Machiridza, Malzbender, Manzungu, & Mpho, 2006). Hence, the Decree 15/2000 formalizes 'traditional authority' (Buur & Kyed, 2006). In 2009-2010 in Mabomo and Mungaze the traditional leader was officially incorporated into the official government structure, in the position locally called 'terceiro escalão'².

The agricultural season of 2009-10 followed a sequence of dry years, as explained by Jossias from Mungaze: "In 2000 rained well and 2001 was good harvest. From then harvest is only decreasing. Since 2007 we have had nothing". Hence, the traditional leader was called to organize some ceremonies that year. For example, the ritual of *Kupahla mfula* requesting rains, and the *nkeIEkEle* which unblocks rains by cleaning the atmosphere from elements that 'dry the land' such as abortions or wrongly buried bodies. However, for these rituals to be successful, it was argued, all members of the community should have collaborated. In this sense, meetings were held in Mabomo, 2011, among the religious representatives (traditional, Zion, Assembly of God, Old Apostle) where the traditional leader requested mutual cooperation and respect for the ancestors, claiming a 'collective good' e.g. rains, de-worming of fields, harmony with ancestral spirits. Within local discourse it is alleged that magic-ritualistic practices, when properly done and on the right occasion, guarantees the necessary conjunction of forces and the spirits' protection. Hence, the success of production/reproduction of the socio-economic system: "In fact it is a general belief that the material activities are dependent on a network of forces from the ideal world" (Feliciano, 1998:434).

In order to present Mabomo and Mungaze's coping mechanisms Scoones' (2009) *livelihood strategies* structure is used. It is divided under three categories: (a) migration; (b) agricultural intensification and extensification; and (c) livelihood diversification. In this sense livelihood strategies are the combination of activities that households undertake in order to achieve their livelihood goals. They include productive activities, investment strategies and reproductive choices. According to (Corbett, 1988) the term 'strategy' most readily implies careful forward planning, while 'response' is used for each of the individual actions undertaken within a strategy. Hence, several responses, for example the sale of livestock, migration, or collection of wild foods, may be undertaken by different household members at the same time or sequentially, as part of the same overall strategy. Most commonly used is THE term 'coping mechanism', to describe what households do when faced with the threat of famine. As in Eriksen and Silva (2009), coping "signifies responses aimed at securing income, basic needs and a quality of life during a drought or other climate stressor". Migration, for example, "is a coping mechanism used throughout history by societies as part of their resource utilization strategies and as a means of coping with climate variability" (Adger, Huq, Brown, Conway, & Hulme, 2003). Figure 1 illustrates local livelihoods' strategies and responses showing that since

² Or third scale, whereby the first is the Zonal Chief, and the second the Community Chief – 'Chefe da Aldeia', popularly called "Leader". The local structure also counts with the Party's Representative and the Secretary.

Mabomo has access to the Limpopo River and is closer to market, its livelihoods 'choices set' is amplified in relation to Mungaze, which is more remote.

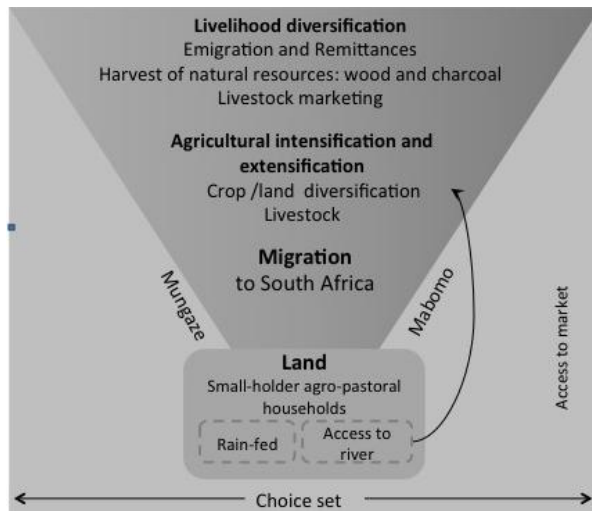


Figure 1. Livelihood responses in Mabomo and Mungaze. Adapted from (Eakin, 2005; Scoones, 2009).

MIGRATION

The economy of Gaza Province has been dominated by its labour reserve functions for the South African mining industry, spurred by expansion of the Witwatersrand goldmines. Male migrant labour has been an integral part of rural life in the region since the turn of the twentieth century (Brito, Famba, Munguambe, Ibraimo, & Julaia, 2009; First, 1983; Roesch, 1992). In the colonial times migration was an alternative to *chibalo*, forced labour in the colonizer's farms, however when returning from South Africa most of the returnee's payment was kept by the Portuguese. A 'life-cycle' for the men is explained by Samuel Baloi, an elder and the traditional chief in Mabomo: "*In our times the process of maturity was different. As soon as one was grown had to herd goats, then cattle. At some point one had to work in the mines of SA*" and also by Jossias Chaúque, also an elder, in Mungaze: "*Here in Mozambique, especially in the northern region of the Gaza province the usual was this, after some age to go to SA, so I was pressured for that*". Nowadays migration still is part of local livelihoods. With the exception of the few days around the Christmas holidays, in Mabomo and Mungaze there are few young men to be found. One exception is Zacarias, who on his way to South Africa, on foot, stepped on a mine and lost one leg "The reason I went to SA is to compare to the other so many young men of my age who could buy clothes for themselves".

Information from the Household Survey show that at least one (male) member is currently working with regularity in South Africa for 60 % (n=23) of the households in Mabomo and 50 % (n=21) in Mungaze. For the migrants whose household is based in Mozambique, the period spent working in South Africa lasts on average 11 years. Remittances play a relevant role in periods of scarcity for 48 % and 31 % of the households in Mabomo and Mungaze respectively. Remittances are received in cash with some regularity by 30 % of the respondents, while the majority are brought as goods (e.g. blankets, clothes, soap, plastic chairs, iron sheets). In Mabomo and Mungaze, respectively, 35 and 50 % of the respondents affirmed never to have received any type of remittances. Half of the migrants visit at least once a year or every second year. However, 20-30 % of migrants never came to visit.



Figure 2. Mrs Sara lives alone in Mungaze. Her husband and 5 sons died at home, after getting sick in South Africa.
Source: Levy, Mabalane 2009-10



Figure 3. Zacarias lost his leg in a mine when walking to South Africa. He lives with his widowed mother and sister-in-law.

In the studied areas more often are the cases where migration functioned to reinforce poverty. For example, in cases where the man is not able to send remittances and his support is missed in the household. Worse are the cases, when returnees come back home sick, exerting further pressure on the wives to feed and care for them. It is not uncommon to find women-headed households.

Two exceptional cases can be drawn from Mabomo, where the only two irrigated farms are owned by household-heads that divide their lives between South Africa and Mozambique. One of these farmers is Chadreque. Raised by his mother alone, he remembers that during his childhood they were very poor *"I had to sleep with my mother under a tree, with nothing to cover us (...) My mother had nothing"*. Nowadays he is a blacksmith in South Africa, a successful farmer and livestock keeper in Mabomo with three wives and two cars. His wealth, he explains, derives from learning the skill of blacksmith, despite the hardships that make so many to give up. The second irrigation farm, owned by David Simango, is a result of livestock prosperity and management since the family could save their herd from war raids. This initial capital enabled some of the family members to be trained in the construction business in South Africa. The profits from across the border are used by the household to invest in irrigation and farm inputs in Mozambique. These farms hire temporary labor and produce a surplus of vegetables and maize that is marketed locally. However, because the local market is not able to absorb the production and transport is a hindrance to expand the commerce, production is often wasted.

AGRICULTURAL INTENSIFICATION AND EXTENSIFICATION

The production system in Mabomo and Mungaze is predominantly characterized as low-input, and access to extension services is very low. Thus, 'agricultural intensification and extensification' is limited to on-farm techniques and livestock keeping. Farmers' options to adapt agriculture differ in the two communities studied with regard to its localization. In Mabomo, which is near the river, crop areas are diversified so as to explore microclimates while in Mungaze the practice is to cultivate farm areas as large as possible in order to maximize probability of harvest. However, the latter depends largely on availability of plough oxen. Another strategy to cope with uncertainty is through the diversification of crops and crop varieties. However, with regards to grain because local diet has been adopting maize as staple, only very few farmers actually plant sorghum varieties that are more

drought-resistant. The diversification of crop varieties is more common. For example, in Mabomo four types of sweet potatoes are cultivated in the low lands. Each type has advantages with regards to taste and drought-resistant traits. Different types of pumpkin, peanuts and watermelon are also cultivated in both communities.

Livestock is kept under communal grazing systems where animals depend mainly on grazing with little or no supplementary feeding. Elders identify a change in the use value of cattle from its sole role for *Lobolo*, the dowry of women. In the 1940's animal traction was introduced in the region. Thus plough oxen to cultivate the land became a key productive asset adding to households' buffering capacity against extended dry spells. The diagrams below illustrate the livestock composition in both communities in 2011. However one should take into account the social inequality within the community with regards livestock holding since in Mabomo less than five households concentrate bigger herds, while the majority of the herds are still in the post-war restocking phase.

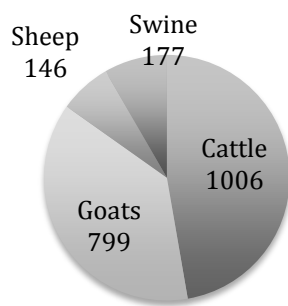


Diagram 1 Livestock composition in Mabomo

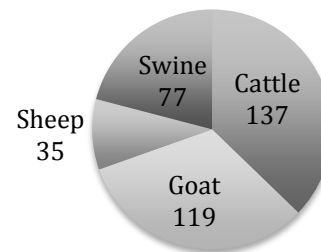


Diagram 2 Livestock composition in Mungaze

The comments below underline the importance of livestock as a social security resource. The context depicted is the year of 2010, after seasons of repeated crop failure:

“I had many goats but ended up selling them to acquire food. They are all over and now I have only 4 cattle” (Francisco, Mabomo May 2010).

“The goats are used for the meat but also to get small values for the hospital, to buy soap and some of the basic necessities. Cattle are used first in the farm to work, carry products, for *lobolo* and to sell when there is drought. So cattle are like a bank. Also for some social problems it is used. When there is no rain we cultivate in the river margins and make some gardens for tomato. Our goats are now over. Hence, my lady goes to the bush for charcoal extraction, as I am sick.” (Inacio, Mabomo May 2010).

“When you are hungry you seek these roots, *chukutzo*. There is no alternative, only if you have money you go to buy maize. We do not sell animals because we began to raise them just now so they need to multiply. Another thing that here at home we just began to do is charcoal” (Jacquelina, Mungaze May 2010).

The national cattle herd decreased by 80 %, due to civil war: from 1,4 million head in 1974 to 0,2 head in 1993. The post-war District cattle population recuperated from 10.356 head in 1996 to 29.401 in 2010 for a population of 5.399 households (District's Archives). Hence, small ruminants (goats and sheep) can be more readily marketed since they have a shorter reproduction cycle. Moreover, raising pigs has increased recently. District's swine population grew from 139 in 1996 to 4.944 in 2009 (District's Archives). The community veterinary in Mabomo, Pedro, explains that: “since 2000 people began to raise pigs. The reasons are double-fold: it reproduces much and it brings money in relation to goats when compared the cost of raising it and for what it is sold for”. In Mungaze pig

rearing began in 2004. Derived from the Household Survey, Table 1 and 2 inform on selling and consumption of livestock, respectively.

Table 2. Livestock sales, 2010

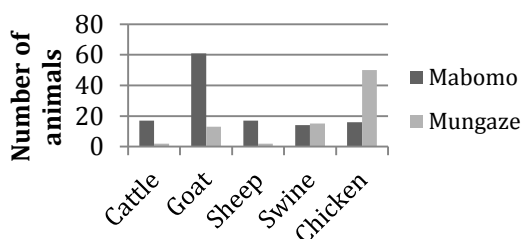
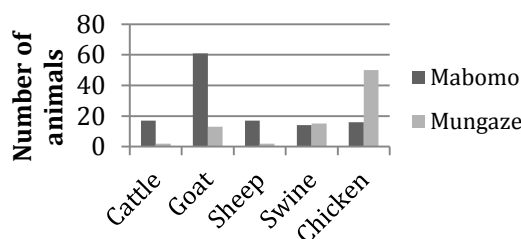


Table 3. Livestock consumption, 2010



n=23 households in Mabomo and n=21 households in Mungaze.

Source: Household Survey, 2011

There is no marketing of milk in the studied areas. Moreover, household consumption of milk – by 23% of the respondents in Mabomo and 35% in Mungaze – is derived from cattle, since goats are not milked. The predominance of dry years, it was argued, makes milking difficult since the animals are not able to produce enough for its calf.

LIVELIHOOD DIVERSIFICATION

Through focus group discussions three main subterfuges used on the household level, in times of agricultural production scarcity, were listed:

- (1) Reduction of household consumption of the staple food: Xima ('shee-ma'), which consists of maize flour boiled in water. The reduction is in terms of the quantity of meals/day, while the quantity eaten per meal is said to remain. It is argued that the primary concern is to maintain the household's income-generating capacity: its work force.
- (2) Diversification of consumption: *Caril* is the accompaniment for the xima. It is mainly made of leaves (pumpkin, sweet-potato or cassava) and added with peanuts or *kanhu* nuts. Alternatively, beans or meat can compose the xima meal. In times of scarcity fishing and hunting, gathering of wild fruits, roots and insects increases. For instance, the Mopane worms serve as alternative food intake.
- (3) Diversification of income: for example by selling small stock and forest products such as charcoal, wood tables and poles.



Figure 4. Pumpkin leaves and flowers
Source: Levy, Mabalane 2009-10



Figure 5. Preparing xima



Figure 6. Xima with mopane worms

The importance of livelihood diversification in table 3 depicts two scenarios: (1) means to acquire complementary food for the household during the lean season. In a year with regular rainfall the lean season's high peak is from November to February, when stocks run out for many households and staple food prices are highest; and (2) sources of cash to purchase food when food security is strongly threatened. This is a situation, for example, of seasons with successive crop failure.

Households may access different types of responses at the same time, for example by selling livestock, producing charcoal and receiving remittances.

Table 4 Households' livelihood diversification responses, in percentage

	1. Lean season					2. Successive crop failure			
	livestock	Charcoal	wood	remittance	donation	livestock	charcoal	wood	remittance
Mabomo	40	68	0	18	32	50	50	0	27
Mungaze	5	75	35	25	5	30	70	30	10

n=23 households in Mabomo and n=21 households in Mungaze

Source: Household Survey, 2011

During the lean season 40% of respondents in Mabomo and only 5% in Mungaze sell livestock in order to complement subsistence while 68% and 75% respectively also sell charcoal. However, when food security is severely threatened, as in scenario 2, the selling of livestock increases – more evidently in Mungaze, from 5 to 30% of households – while charcoal selling decreases slightly in importance. Following a sequence of crop failure seasons, the household survey registered that in 2010 the average annual cash amount used by a household, mainly to purchase food was 400€ in Mabomo and 200€ in Mungaze.

According to the household survey, in 2009 the selling of forest products was practiced by 95% of the households in Mabomo, and by 60% in Mungaze. In general, for over 70% of these households charcoal production has fully become a diversification activity rather than only a temporary subterfuge. In (Levy & Kaufmann, 2012) we emphasize the growing importance that charcoal has been assuming in Mabomo and Mungaze since 2005, as well as its devastating effects.

DISCUSSION

In Mozambique rural resettlement programs occurred under the policy of the colonial era, called 'aldeamentos': concentrated settlements serving counter-insurgency purposes during the war of independence (Coelho, 1998; Jundanian, 1974) and also under the villagisation policy (1977-82). The civil war reinforced dislocation as people moved from their homesteads to form communities in search of security, or even further to the nearby village, as in the case of the households from Mungaze that moved to Combomune. In refuge, socio-spatial practices were disrupted through movement, agriculture and livestock keeping were also limited. The post-war government encouraged the continuation of the villagisation policy. On the one hand the provision of social services (e.g. health posts and schools) to communities can be facilitated in relation to scattered homesteads. On the other hand livelihood activities and increased pressure on resources' use in such environmental conditions require institutions in place to assure sustainability.

The tradition-related sphere of local livelihoods was initially disregarded by the post-war government. In a peak of a climate-triggered crisis – in an already vulnerable society - ceremonies gained force in the communities studied. It confirms with Feliciano's (1998) assertion that magical-religious practices increase when the socio-economic system is threatened as a collective response. On the other hand religion is a mode of social integration (Bohman & Rehg, 2011). While villagisation gathered households in one area, the influence of Christian churches spread them in groups of influence. For example, traditional drinks – be it on someone's house at sunset or after a day of self-help work in someone's farm - are banned by the churches. However in these social gatherings social networks are constructed beyond the household level. Polygamy is also one issue within this debate.

Mabomo and Mungaze's livelihood coping mechanisms exhibit a general change in the notion of wealth, illustrated in the comment below:

"The livestock we had before the war was of admiration. What we have now is as if we are just to begin because if you gather the cattle of us all here, together it was of one person only at that time.(...) Because people had much cattle, they would marry many women. It was rare to find a man with only one wife. Now, to see if a person is wealthy, we can look at what the person does, the work, even not going inside ones' house. For example, how much charcoal one produces, how much wood. When sold, what the person buys, if one can buy a goat, or cattle" (Alberto, Mungaze March 2011).

Livestock numbers represented exchange through marriages, and therefore abundance, which is now observed on one's capacity to explore forestry resources and by its turn the purchase of livestock. In (Levy et al., 2012) we developed the argument that as households are organized in villages, the use of livelihood assets (water, tradition, forest, pasture) suffered a "normative" shock while new forms of regulation did not take place. Hence the reorganization of livelihoods seems to be leading to an unsustainable pathway. A practical example of household coping mechanism is the increased importance of small stock, in special of pigs, for marketing and by its turn, for purchase of food. Since households are not able to sustain the pigs in pens, the animals have to be kept free to search for food and result in the invasion of kitchens, and spread of diseases. The local leader instructed that livestock should be kept outside the main village area, which at most times, the leader knows himself, is almost impossible. Hence, some of the greater livestock keepers have moved to the outskirts of the village. Another important topic with regards to resources use is the forestry. While charcoal production has gained significant importance for food security , a lack of a plan for sustainable use of the resources is seen by the rapid scarcity of trees used for producers, and the increasing distance needed to production sites.

The still strong migration flow of peasants from the Limpopo Basin to South Africa shed light on the lack of opportunities in the rural areas. Remittances seem to play a minor role in assuring food security in Mabomo and Mungaze. The two examples of returned migrants that could invest in irrigation farms in Mabomo are exceptional cases and show that the gap between migration as "survival strategy" and to "allow significant family accumulation" depends on the possibility to enhance human capital (Bebbington, 1999).

Furthermore, despite the fewer livelihood options in Mungaze (as it is more remote, and has no access to the river and to market) food donation reaches the community much less often than it does in Mabomo. Even if charcoal production remains an important response, it was seen that in situations of critical food insecurity, Mungaze increases desperately the selling of livestock, even if these are still meager and in process of restocking. The importance of livestock for food security cannot be overemphasized. However means to develop it need institutional support.

The crisis of existing productive systems in semi-arid regions [of Brazil] require, as suggested by Castro (1996), the deconstruction of a geographical determinism regarding the drought phenomenon. By looking at the causal structure of social vulnerability (Bohle et al., 1994; Watts & Bohle, 1993) it is seen the negligence with respect to the enhancement of local adaptive capacities (Durham, 2004). The latter relates "to the economic, social, institutional, and technological conditions that facilitate or constrain the development and deployment of adaptive measures"(Smit & Pilifosova, 2001). Thus, the debate fundamentally surrounds involved social agents, where power structures - the so-called local oligarchies - define access to information and technologies on

adaptation strategies (Castro, 1996). Similarly, in the studied areas, the government restricts interventions to the attendance of immediate needs of the households, that is: facilitating donation programs, the ruling discourse of assistencialism. Maybe inadvertently, development agencies and relief programs become vehicles to marketization/commodification of collective action. Crisis assistance in the studied areas has been in the form of donations, mainly through the Food-for work program, which means that food is given through the participation in tasks defined as community work. As (Hanlon, 2012) argues, this contributes to the structural dependency on aid in Mozambique. In this sense, as analyzed by (Pijnenburg, 2004) such interventions enter the life-worlds of households and come to form part of the resources and constraints, of the strategies and practices they develop.

CONCLUSION

We sought to comprehend past and current practices (human ecology) through - lack of - access to resources (entitlements) and the drivers behind such pathways (political economy). Resettlement policies, civil war and climate variability are some of the main stressors on the existing social institutions in Mabomo and Mungaze. The first two stressors disrupted local socio-spatial organizations in terms of production and social reproduction, forming the base of current social vulnerability. Hence livelihoods became more susceptible to the impact of climate change. As a result, off-farm activities have gained greatly in importance as households become dependent on cash to purchase food. This process of 'depeasantization' (Bryceson, 2009) entails an increasing dependence on international staple food, and hence on room for crisis to hit also remote rural areas.

Two major coping mechanisms are functioning as economic forms to circumvent the risk of food insecurity: (a) Restructuration of the mode of production, where livestock holding is being re-signified both for agricultural activities and for exchange, (b) Overexploitation of forest resources, chiefly through rampant charcoal production since 2005. However these are merely coping strategies and not accompanied by the development of adaptive capacities. Hence, these are "short-term adjustments", and are "usually involuntary and invariably lead to a different subsequent state of vulnerability to future famine situations" (Adger, 2000; Corbett, 1988).

Moreover, the social formation has also experienced change, conditioned by the organization of space (Santos, 1977; Soja, 1980). Customarily, the normative base that guides the socio-spatial organization signifies the value of use and exchange of resources, but also secures its access and quality. Once repeated events disrupt this organization, while new institutions are not yet in place, a state of anomie reigns. It was observed that disrupted spaces increased social vulnerability and hence greater reliance on "survival oriented livelihood strategies" (Bebbington, 1999). Such unsustainable practices increase degradation not only of forestry resources, as it is IN the case of charcoal production, but of the multiplicity of interdependent assets that composes peasant agro-pastoralist production and social reproduction. However, the post-war era has been failing to implement effective institutions and organizations mediating livelihood pathways. We argue that such a process requires more than official posts, it requires social learning.

Elders explain that during the colonial era "stores" would exchange agricultural products, and function as seed banks. Forced labor, migration and physical punishments are some among the many scars of that time, printed out from the biographical interviews. Ruins from the Portuguese farms

depict a time when livestock would be better off than men nowadays are. These ruins are testimony that better conditions to develop livelihoods are possible. However, the post-independence scenario did not change much the situation of negligence suffered by smallholders. Rather than vesting food insecurity into a climatic-deterministic narrative alone, it is recognized the important role of institutions and organizations as mediating livelihood strategies and pathways through strengthening local adaptive capacities.

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