

"I went fishing"

5/19/00hrs Lavei lauça Tami banho Fui piscar	0/17/00hrs Fui na feira Comprei pão Reis 200 e Comprei Capulans Para minha esposa	3/00/15/00hrs Fui para Lauçang Comprei mala
Lavei lauça fui namorar no Gid	Fui piscar Nadei na represa Edraui o meu divão de camp	Fui assistir filme no Im Camada
Fui tomar banho na represa Edraui banho	Fui no campo para a festa fui a festa Edraui o divão de campo	Comprei uma bicicleta de viagem com mala e uma bicicleta
Lavei lauça na tamar banho	Trabalhei a noite para malha e para fazer utopias	Fui lavar roupa na represa Visitei os dentes Brimzui com meu amigo
Comprei na Cam banho	Joguei bola Tomei banho Lavei lauça	Fui lavar roupa na represa Edraui o meu divão de camp
		Fui lavar roupa na represa Edraui o meu divão de camp
		Fui lavar roupa na represa Edraui o meu divão de camp

"I took a bath in the dam"



FIELD DIARIES

Findings from field research in Nathepo-A and Inkomati
(Nampula, Mozambique), 2010-2013

Brad Paul, Director, Research & Analysis Unit
Ana Couvinhas, Researcher and Design Specialist
Belchion Lucas, Field Researcher & Community Liaison

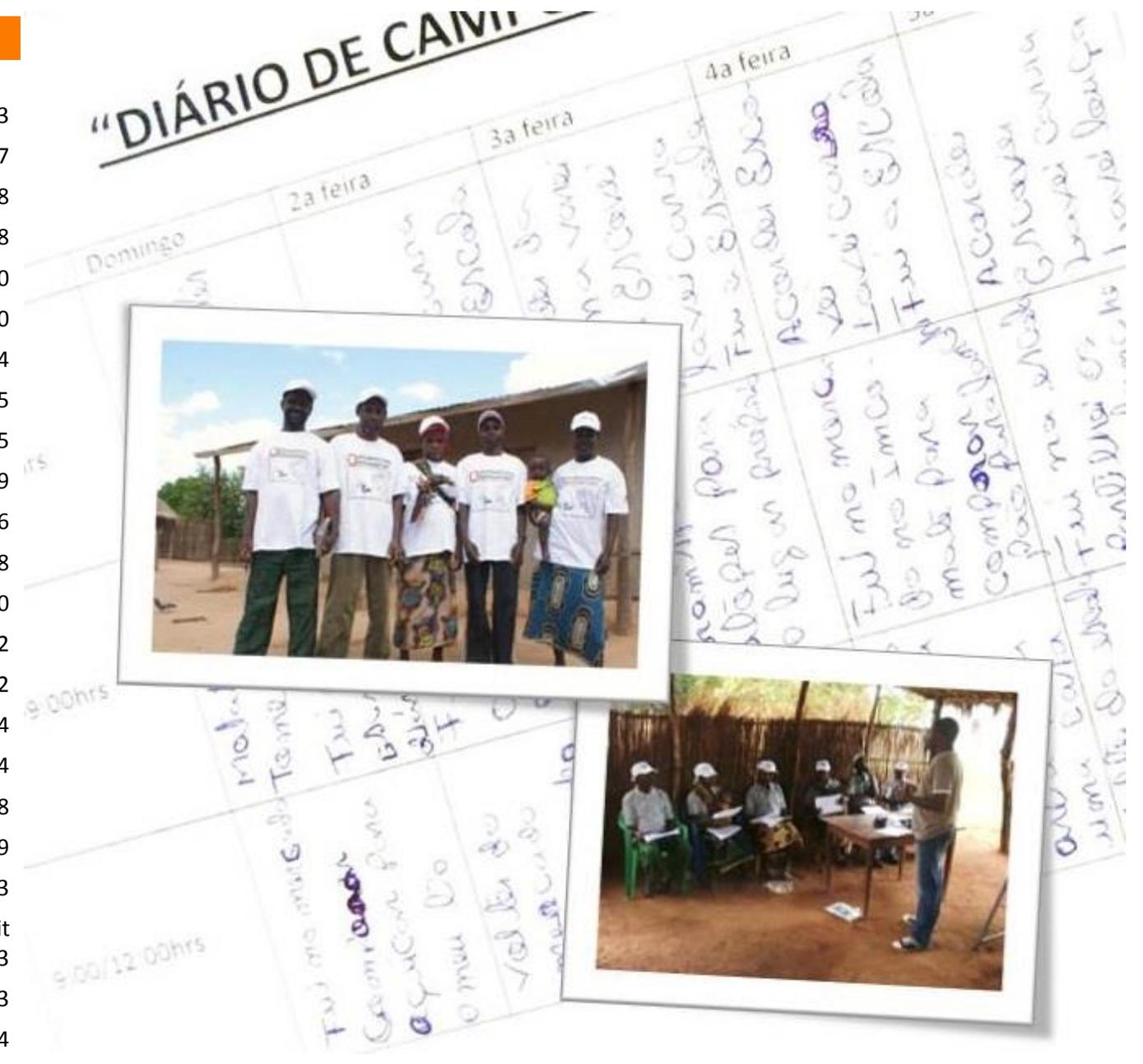


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"DIÁRIO DE CAMI"



FIELD DIARIES AND AGRO-FORESTRY VILLAGES¹

The recent rapid growth of the forestry industry in Mozambique is a complex and unfolding story bound together by challenges and promise. Since 2010, the forestry industry has invested over \$150 million dollars and added 5,100 new jobs. The Portucel company, in particular, has increased its hiring significantly, adding some 2,000 jobs, including approximately 600 women workers. These new jobs have generated more than \$50,000 per month (or \$600,000 annually) in wages for the rural communities in which the company operates.² Over the next decade, forestry companies plan to invest more than \$4 billion in the country, plant over 1 million hectares of trees and employ over 100,000 workers. Taken together, individuals and families living in new forestry villages will have an opportunity for wage paying work - often for the first time - in nurseries, in the planting and tending to trees, as laborers in saw and pulp mills, and in the construction of dams and other industry-related infrastructure.³

¹ Supported by the United States Department of Agriculture (USDA), the Agro-Forestry Village Project is designed to break the cycle of poverty for roughly 60,000 workers, farmers and their family members. This is to be achieved by building a competitive and environmentally sustainable plantation forestry sector that would generate a substantial amount of new employment in rural areas, drive continued expansion of the grain and livestock industries, and help to ensure that new investments in the poultry industry are initiated in areas with high potential for low-cost feed grain production to achieve maximum poultry industry competitiveness.

² TechnoServe, "USDA AFV Report #6 (April-September 2013)."

³ The examples of China, India and Ghana for reducing poverty through rural job creation are well known and within Mozambique, Niassa province provides an example of how forestry can serve the purposes of poverty alleviation. The World Bank, World Development Report 2008: Agriculture for Development (Washington, DC 2008), 45-49; Channing Arndt and Finn Tarp, *Implications of the Third National Poverty Assessment*, (Danida 2010); IOF Poverty Study, Changes in Poverty Headcount, 2002-2009. Republic of

To help understand something of the industry's impact, TechnoServe set up a pilot research project called the **Field Diaries**, which are daily journals, recorded by project village residents, of everyday life.⁴ A key aspect of the methodology is that the main actors of information collection are members of the community. Participants, selected by local leaders, write and keep a diary, listing all the activities that they and their family do during a month. These are then collected four times a year and timed in accordance with agricultural seasonality. This bottom up, localized approach to information gathering gives expression to what is important to people in their everyday life. That is, people self-identifying relevant activities and related time allocation.



Mozambique, Poverty Reduction Strategy Paper (International Monetary Fund, 2011), 7

⁴ Field Diary teams were set up in Inkomati, Nathepo, Namina, Lancheque, Nanrele, Murrothoni, Naculue (Nampula) and Chionjota and Caizizi (Niassa). Sites were selected for their proximity to both existing and future forestry plantations and/or nurseries. Two control villages were also selected as part of ongoing research.

The diaries provide useful information about habits, customs, hobbies, recreation, and farming practices. The central idea is that such chronicling allows us to learn more about the complexity of such places as Nathepo, the focus of this report. In this way, Field Diaries are an attempt to describe the early stages of a particular episode of rural industrialization through the everyday acts and choices of people, particularly forestry workers, as they shape and define work and economic and social life. Put simply, Field Diaries help us address the question, 'what happens when the company comes to town?'

The diaries are further strengthened by placing them within a broader context of documentary evidence, including additional field research and interviews with farmers, workers, managers, and community members. Other sources consulted include forestry industry archives, documents, and trade journals and together examined from a multi-disciplinary perspective. In addition to written sources, TechnoServe Mozambique has also provided photo cameras and training to the leaders of the volunteer groups that are working on the Field Diaries. In a sense, the *Foto Moçambique* project gives a visual representation of the diaries. That is, capturing everyday life through community photography.⁵ Together, the two methodologies form a "community x-ray," which features generally considered invisible to the human eye can be made visible.

In forestry, "layering" is a means of plant propagation in which a portion of an aerial stem grow roots while

⁵ On photography as a source of historical knowledge, see Raphael Samuel. *Theatres of Memory: Past and Present in Contemporary Culture* (Verso, 1994)

still attached to the parent plant and then detaches as an independent plant.

Economists have long been interested in studying behavioral change after interventions. But much of this information comes from surveys, which typically do not have very good data on time allocation. Similarly, monitoring and evaluation efforts by NGOs are primarily geared toward data collection in the service of satisfying donor requirements and often presented in numbers, i.e., the amount of jobs created, hectares of farm land under production, number of beneficiaries. But such numbers alone do not always reveal real situations and real impacts on lives. When a project is implemented, communities unavoidably experience small and big changes that can be positive and negative, evident or not, short term or long term. To understand something of its meaning, we are interested in the dynamics of work, the social context, and in the overlap of history and practice. Mostly, we are interested in the combination of these themes and the issues they raise.



Photo: Chris Tootell

Suely de Oliveira

Preenchido por: Jaime Alberto Umpetta Local: Al. Galvão Mês: junho

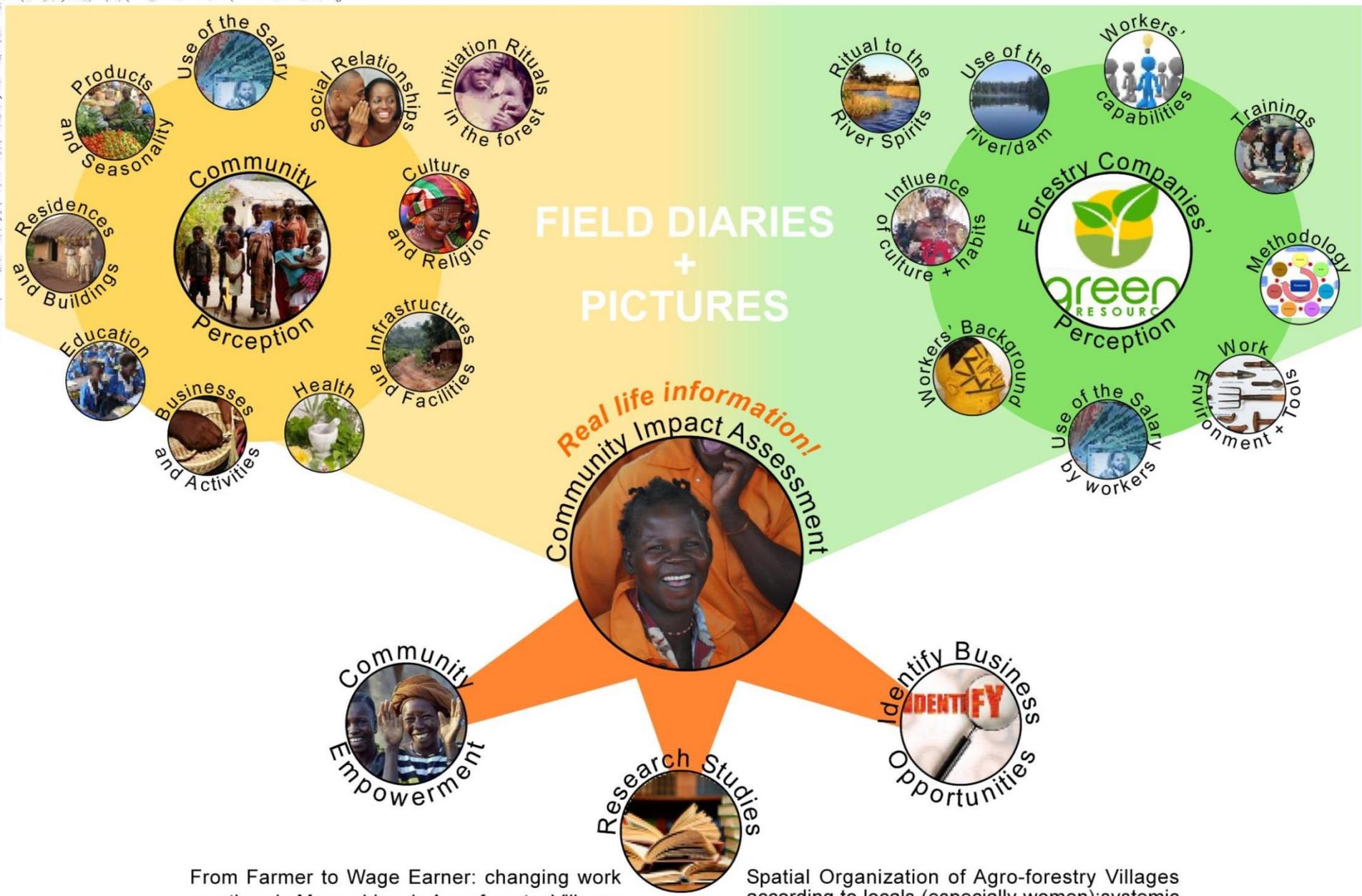
1010 A

Horas/Dias	Domingo	Segunda-feira
5:00 - 7:00	Acordei fui visitar o meu vizinho e logo preparei-me para a Igreja	Acordar e fui visitar o meu vizinho que se encontrava doente
7:00 - 9:00	Ficamos na Igreja e logo as 8 horas entramos para a celebração	Logo sai para ir cortar Capim para a cobertura da casa
9:00 - 12:00	Depois de saída fomos visitar os doentes ou seja visita domiciliar	Ainda estava a cortar Capim e depois das 10 horas voltei a casa
12:00 - 13:00	depois fui para casa e ao almoço saí logo para feira	Tomiei banho e fui almoçar e pus-me a descansar
13:00 - 15:00	Chegado a feira fiz as compras e diverti-me com meus amigos	Estava a descansar e depois das compras voltei ao Capim
15:00 - 17:00	Estava a beber cerveja com os meus amigos e conhecidos	estava a cortar Capim
17:00 - 19:00	Voltei para casa e fiquei lá com a família.	Voltei tomei banho e fiquei a conversar com a família.
19:00 - 21:00	depois de jantar fui dormir	jantei fui conversar com o meu vizinho
21:00 - 24:00	Estava a dormir	Depois fui dormir

Data de início de preenchimento desta semana: dia 02 / mês junho / ano 2013

página 1

Diários de Campo (Aldeias Agro-Florestais - AFV Project)



FIELD DIARIES
+
PICTURES

Real life information!
Community Impact Assessment

From Farmer to Wage Earner: changing work practices in Mozambique's Agro-forestry Villages

Spatial Organization of Agro-forestry Villages according to locals (especially women): systemic studies to identify new business opportunities



1. Site selection



2. Speak with community leader



3. Volunteer selection



4. Interview volunteers



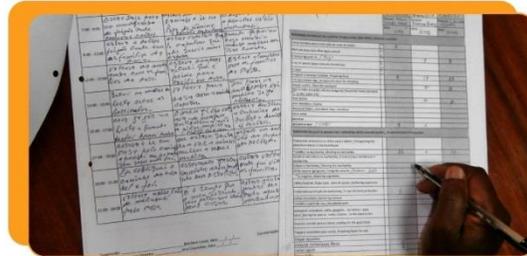
5. Trainings (journals + photos)



6. Volunteers do journals + photos



7. Data collection + Discussions



8. Interpretation + Data entry



9. Categorization of data



10. Analysis of data



11. Publish reports + Share research



12. Share with community and volunteers

LAND AND LABOR IN THE VILLAGE ECONOMY

Rural households are in decline. For the first time in human history more than fifty percent of the world's population is living in urban areas.⁶ Yet, in absolute terms, smallholder populations are growing and in the case of Mozambique, only a small percentage of the population lead lives characteristic of an industrial or urbanizing nation.⁷ Moreover, the national economy remains substantially rural-based and driven with agriculture contributing 32% of GDP.⁸ Understanding smallholder populations and the economies they live within therefore continues to be crucial to development theory and practice.

The village economy is centered on the household as the central unit of social and economic organization. It is both a unit of production and one of consumption and ownership.⁹ A household may enter into exchange relations with the market but it largely produce for its own subsistence and relies heavily on family or community labor. As such, surplus production is often distributed within the village economy horizontally in the manner of social credit and reciprocity. Households are connected through informal and formal networks of kinship, marriage, religion, customs, and economic interdependence. In the village economy, land is generally not a commodity to be bought or sold. Rather, land is transferred from

generation to generation and held as a basic unit of production and survival.¹⁰ The Mozambican land law of 1997 provides a legal framework for these customary practices, via state ownership, to ensure citizens ability to “use and exploit land.” This approach allows for the “popular” management of national land and natural resource assets and further assigns local legitimacy to major investment projects through a community consultation process.¹¹

It is commonplace to refer to the people who work and live in the Mozambican countryside as smallholders. But these communities are far more complex than such shorthand allows and increasingly include many who do not work in agriculture. While most village households are primarily engaged in agriculture, ancillary economic activities and wage labor arrangements, particularly of the seasonal variety, are not uncommon. These workers perform labor on other farms and are compensated through wages or some form of in-kind arrangement. Or they may be part of a growing presence in the Mozambican countryside of rural wage workers, including internal migrant workers, in sectors like cashew, banana, forestry, and other processing enterprises.¹² Within

each of these sub-categories, workers may or may not own any land, and when they do, it is not the single or central determinant in shaping their economic lives. Indeed, perhaps paradoxically, evidence from the Field Diaries seems to suggest that an increase in the number of household members working off the farm correlates with greater knowledge uptake and the adoption of new technologies in farming. The relationship between wage labor and improvements in farming may well be a rich area for further research.

To the extent we can construct a typology, a typical small holder in rural Nampula can be said to have been born into a multi-generational farm family, lives in a household of five members, and earns a meager living off roughly 1.4 hectares of land.¹³ But these demographic threads are confronted by what historian E.P. Thompson calls the “pursuit of the mythical ‘average’.”¹⁴ That is, the average sized farm, the average farmer, the average crop yield, the average profit or loss on sales. As Thompson points out, these “averages” are often the result of “lumping together” disparate geographies and social spaces. Instead, what we might propose is to further examine communities on a local, cultural and material basis.

Seasonal fluctuations in crops and related labor migration, plantation and nursery hiring patterns, and complex job categories further complicate averaging and statistical forms. As in most village economies there exist a fairly narrow set of work identities:

¹⁰ Higinio Marrule, “Land Poor in a Land Abundant Setting: Unraveling a Paradox in Mozambique” (M. Sc Thesis, Michigan State University, 1998); Centro de Promocao de Agricultura (CEPAGRI), *Strengthening Economic Evaluation and Data for Large Scale Investments in Mozambique*, April 2010; Community Consultation Process for Land Acquisition, Ministerial Decree 158/2011.

¹¹ Constitution of the Republic of Mozambique, Article 109, no 3, Article 110, no 1; National Land Law of 1997, Lei no 17/97; Gunilla Akesson et al, “Study on Community Land Rights in Niassa Province, Mozambique” (2009), 29

¹² Brad Paul, “Factories in the Field: Rural Transformation and the Organization of Work in Mozambique’s Cashew Triangle” (TechnoServe, 2008); International Organization for Migration, “An Assessment of Health Vulnerabilities Among Migrants in the Ports of Maputo, Beira and Nacala,

Mozambique” (2010); IOM, “An Assessment of Health Vulnerabilities Among Migrants in Northern Mozambique’s Cashew Industry” (2010)

¹³ Instituto Nacional de Estatistica, *Estatisticas do Distrito Nampula-Rapale* (Novembro 2012), 2, 26.

¹⁴ E.P. Thompson, *The Making of the English Working Class* (Vintage 1966), 213-214

⁶ Cities Alliance, *Livable Cities: The Benefits of Urban Environmental Planning* (Washington, DC, 2007), 1

⁷ Government of Mozambique, Ministry of Agriculture (MINAG) National Agricultural Survey, *Trabalho de Inquerito Agrícola*, 2008

⁸ International Monetary Fund, *World Economic Outlook Database* (September 2011)

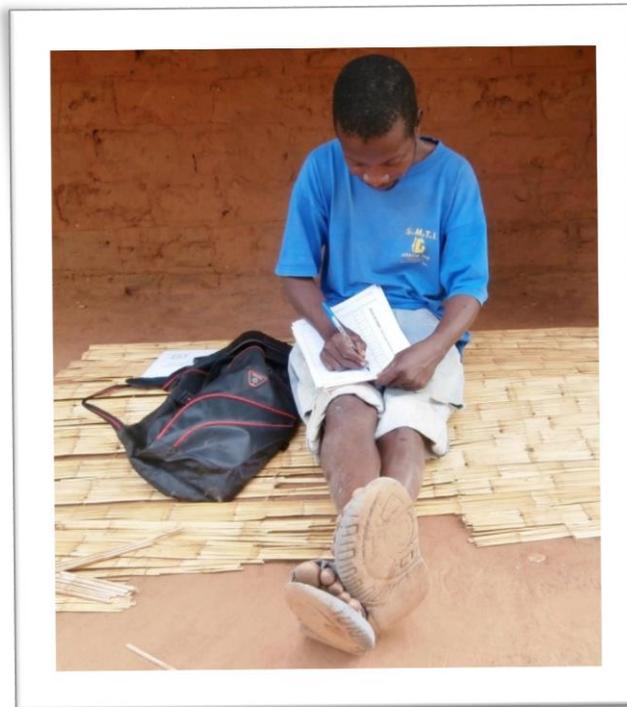
⁹ James Scott, *The Moral Economy of the Peasant, passim*

smallholder, wage earner, vendor/merchant, migrant/itinerate worker. These categories, of course, may also overlap at times as farmers may temporarily work for wages and workers may utilize free time to farm or participate in the market place. These categories of work also have multiple meanings in terms of independence and security.¹⁵ A smallholder might be independent and not subjected to the vagaries of the market place or have to sell his labor power to company or have a boss. Yet, the most independent may also be the least economically secure, lacking the security and purchasing power often enjoyed by wage earners.

With the introduction of rural wage labor the predominant work culture of small scale agricultural production is gradually being transformed from one governed by a set of established customary roles and rules to one meeting the requirements of flexibility, specialization and adaptation. It might be said that the labor process therefore shifts from autonomy and household production and control to one in the service of profit maximization and commodity production. Within the context of a village economy the impact of these changes can be disruptive and transformative. And while work is not the only concern- but rather among a host of other considerations and influences from family life, social obligations, and religious life- nursery and plantation labor requires a sea change in how people approach work in both its physical and social realm. In his classic study of early industrialization in England, historian E.P. Thompson writes that wage laborers who transition from farm to

factory “experience a distinction between their employers time and their “own time”. And the employer must use the time of his labour, and see it is not wasted: not the task but the value of time when reduced to money is dominant.”¹⁶

In exploring how people organize their time and work habits in the midst of change, we might better understand the transition from small scale agriculture to rural industrialization and the demands of the “shop floor” of plantation forestry labor. Put differently, how work changes, in its physical manifestations, and why people work, in the social realm.



¹⁶ E.P. Thompson, “Time, Work-Discipline and Industrial Capitalism,” *Past and Present*, 38 (1971)

ENTER AGRO-FORESTRY VILLAGES: NATHEPO-A AND INKOMATI

Observers would be forgiven for looking beyond the land encompassing most forestry plantations. Indeed, many of these communities are fairly “typical” rural villages that have changed little over the years. But the voices of the “anonymous” and the story of the everyday is as important as the places and events that often occupy the headlines or even the attention of donors and investors. For it is the “common” experience of work and social factors, when aggregated, that helps explain the multiple meanings and trajectory of economic life and development.

“Before, everything was slow and still. Now we can see trucks and excitement.”

Jacinto Alberto, Leader of Nathepo-A volunteer team

Nathepo, Nampula is one such place. Part of the administrative post of Namaita, Nathepo is comprised of the small communities of Nathepo-A and Inkomati.¹⁷ Nathepo-A is located immediately next to the nursery of the forestry company Lúrio Green Resources (LGR). Field Diary collection started here in 2010 in as it appeared that this would be a community experiencing the greatest impact as a result of LGR’s investment. However, when the company started to operate, there were numerous instances and accusations of theft and many employees from Nathepo-A were dismissed, forcing a shift in the company’s hiring patterns. As a result, most of the

¹⁷ Both communities are part of the Administrative Post of Namaita, Rapale District, Nampula province. In 2013, Rapale District had a population of 262,803.

Quinta-feira
sexta-feira
sábado
domingo
segunda-feira
terça-feira
quarta-feira



capulanas
(tradição alfabética)

Handwritten text in a cursive script, likely a diary entry, covering the right side of the page. The text is written on a background of faint, larger handwriting.



personal farm



Current workers of Lúrio Green Resources are residents of nearby Inkomati, and the Observatory team, therefore, started to collect Field Diaries from that area in 2013. Taken together, this study reflects comparison data for the last three years of Nathepo-A and general data about Inkomati community.

WORKPLACE ORGANIZATION

Forestry production operates seasonally and LGR assigns workers and organizes production according to particular tasks that maximize and align relative efficiencies. As such, LGR employees are mostly hired on long-term contracts and participate in a system of work rotation: *“Now that the small plants were transferred to the fields to be planted, women are cleaning the nursery area.”* The company also often organizes the workplace according to general features related to gender and other characteristics: *“women are more careful with small plants, while men are better for irrigation.”*¹⁸

2010:

47 workers - mainly seasonal (33 men and 14 women)

2013:

36 long-term workers (22 men and 14 women)

20 seasonal workers (dependent on the activities of the season)

The working day runs from 6:00 A.M. until 3:00 P.M. LGR attempts to reduce down time and rationalize production has resulted in a system in which the work schedule is defined by tasks. Contracts with employees

include a section indicating particular duties and daily goals. Under this arrangement the formal working day can be fluid and some workers return home early if they manage to finish daily tasks and meet targets. Nevertheless, absenteeism rates among workers remain high and are often linked to farming obligations, social, familial or religious reasons: for instance, the “death of a friend or family member or attendance at Mosque on Fridays.”¹⁹

WAGE WORK

Nursery and forestry plantation workers represent something of a middle ground between small holder and [traditional factory] worker. To some extent, they represent a class-in-the-making. To be sure, some nursery and plantation tasks closely resemble work on a machamba, in particular the clearing of land with basic hand tools. Unlike the requirements of factory discipline that involves new training and establishing different skill sets and work rhythms, forestry companies generally rely on adapting existing rural work traditions into new productive systems and settings. In other words, the same types of physical labor expended on a “machamba”- hoeing, weeding, and cutting- are moved into wage and commercial production setting.²⁰ The tasks are similar. What is fundamentally different is that people are selling their labor power and getting a wage for their time, as opposed to being engaged in family farming. Unlike so much of traditional factory labor these tasks are not a disruptive force in the work rhythms of rural laborers. Here the physical labor of small plot farming is

successfully translated to the organized production. But wage workers do not own their tools and the land is being cleared for commercial output not household agricultural production. That is, the return to workers is in the form of a wage not in their ability to extract value from the land in the form of food or market sales. Put differently, land and labor are in the service of commercial interests outside the household.

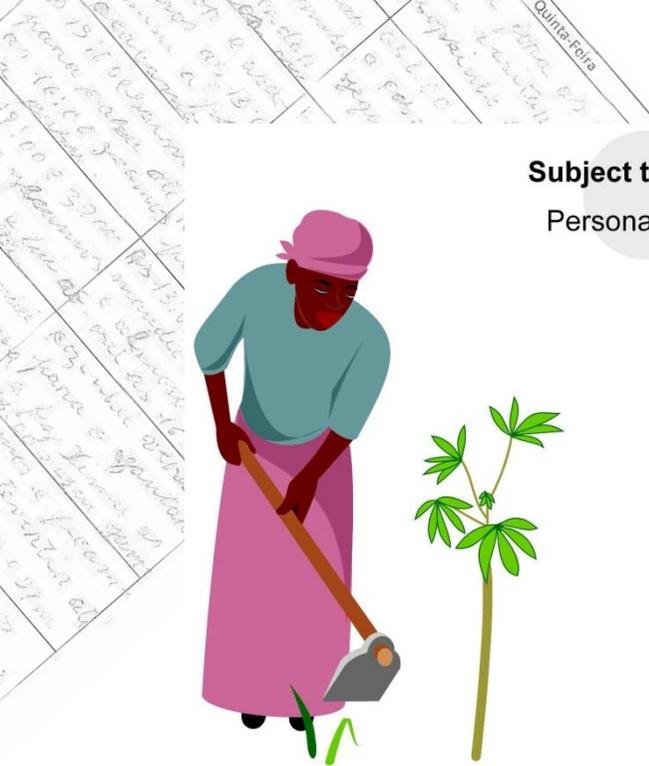
The number of forestry employees that previously worked for a company or in a wage labor position is small. According to Engineer Caetano Lundo, very few employees had ever been wage workers before coming to LGR. The only exceptions include the current foreman who held similar responsibilities in other companies.²¹ Moreover, only one worker had any academic training in the agricultural field before working for LGR: *“it helps him to be more versatile because he knows various fertilizers and irrigation techniques (...) He also has an important role of training workers of the same team.”* Training of employees occurs in the field. That is, learning by doing. Initially, Lúrio Green Resources placed workers in task rotation and according to seasonal demands. Over time, however, with increased training, performance and experience, the company has increasingly positioned workers according to skill and specialization. As such, LGR has embraced dual strategies for production; seasonal task rotation for one segment of workers and long term contracts and specialization for the most highly skilled. According to the LGR Engineer Félix Matavolo, seasonal workers *“get used to doing a certain activity and tend to lessen the execution of other tasks.”*

¹⁹ Interview with Félix Matavolo, LGR Engineer

²⁰ Green Resources, *Feasibility Study for Industrial Plantations in Mozambique*, July 2009, 48-53, 67, 72-76.

²¹ Interview with Caetano Lundo, LGR Engineer

¹⁸ Interview with Félix Matavolo, LGR Engineer



Smallholder Farmer

Subject to Nature
Personal output

Unpredictable income
Seasonally dependent

Work can be both restrictive and liberating

Freedom
Independent
Control own time
Empirical monitoring

Most independent = Least economically secure?

Flexibility and Adaptation

Better agricultural practices

Knowledge
Improved skills
Technology

Inflexible

Reducing poverty through rural job creation

Subject to labor market
Commercial output

Regular income
Financial security
More choices

Answer to a superior
Company rules
Fixed schedules
Monitored by superiors

Long-term work

Task rotation
Specialization



Wage Worker (Forestry)

Subcontracting

Maintain personal farms
Wage + Farm income

Seasonal work

Monotonous
Casual
Transitory

Immediate cash solution

Specific economic needs

On the other hand, long-term laborers demonstrate an *“adaptability proportional to the time of employment.”*²²

Use of Salaries

Employees’ receive a monthly salary and typical expenditures might include home construction and improvements, food, school fees for their children, and motorbikes. Due the time constraints of full time work, a number of LGR employees hire others to take care of their personal fields. These are often task-based contracts and can range from 300 to 1000 Meticais per assignment.²³ This is especially true of women workers who are saddled with additional domestic obligations. However, some male employees use the few hours of daylight after LGR work to support their wives in taking care of family farms: *“During the morning I work in the company and in the afternoon I take care of my farm. Before my wife helped me on the farm, but now she is pregnant. (...) I have vigor for both jobs!”* – Adriano.

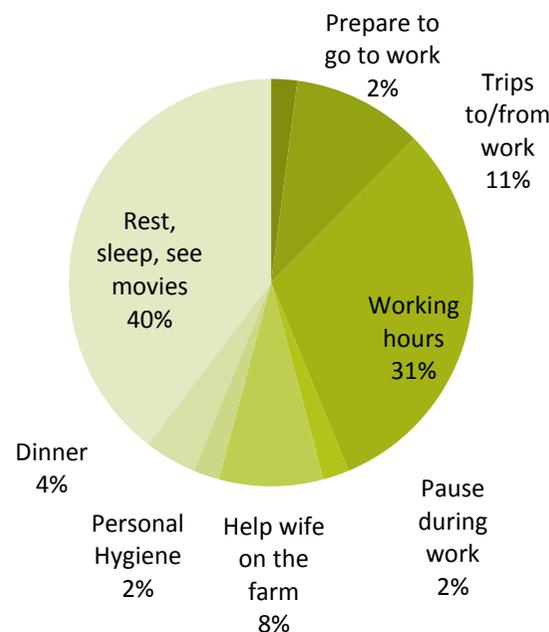
It is hardly surprising that some workers believe that the value of their labor does not correspond to what they view to be the company’s “profits,” especially when their wage is very low compared to superiors. When wage expectations are not met these temporary workers often decide to vote with their feet and return to their farms where income expectations are more easily squared with their own production. Earning an occasional salary provides the opportunity to purchase certain goods and access services, but for long-term

purposes, they prefer to rely on personal farms - like the *Makhuwa* saying, that puts emphasis on the volatility of cash: *“money is considered money when is in a bill. Once you change it into coins the money suddenly vanishes”*. As a result, smallholder farmers that embrace notions of self-sufficiency through their own farms tend to refuse orders from superiors and demonstrate less flexibility on adapting to company rules. As they have always been the managers of their own labor, is difficult to accept rigid work rules and time lines. By comparison, permanent wage laborers more generally adapt to company rules and hold the belief that working in the forestry company with a fixed wage provides greater mobility and freedom.

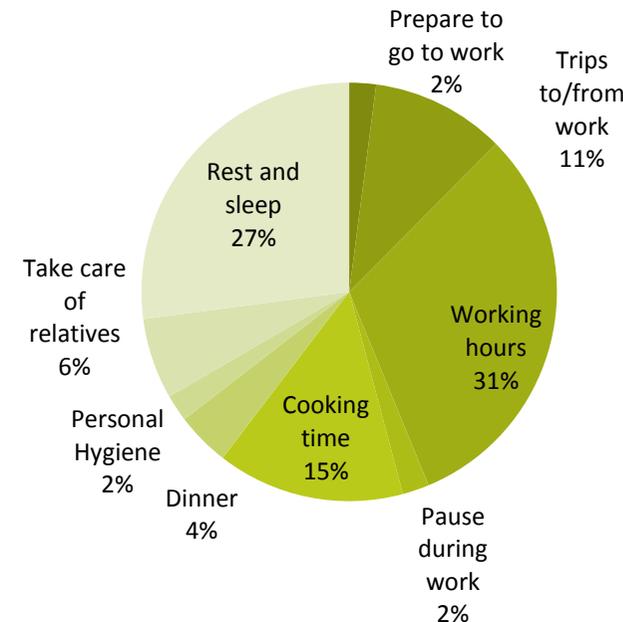
“In work places, usually you cannot find in the employees a dynamic concern for production (...) a task that could be made in hours usually takes months or even years. But why does this happens? It was caused by the colonialism (...) Makhuwas work as little as possible in order to bring fewer benefits to the colonialists. (...) The slowdowns represent a form of social criticism.” - *Além-mar magazine, Macuas: dignidade a reencontrar*

To be sure, responding to slow downs and addressing grievances forms an essential part of doing business in almost any sector. Beyond the prevailing issues of wages and conditions, however, Lúrio Green

Time allocation of LGR Nursery male employees - working days (24 hours)



Time allocation of LGR Nursery female employees - working days (24 hours)



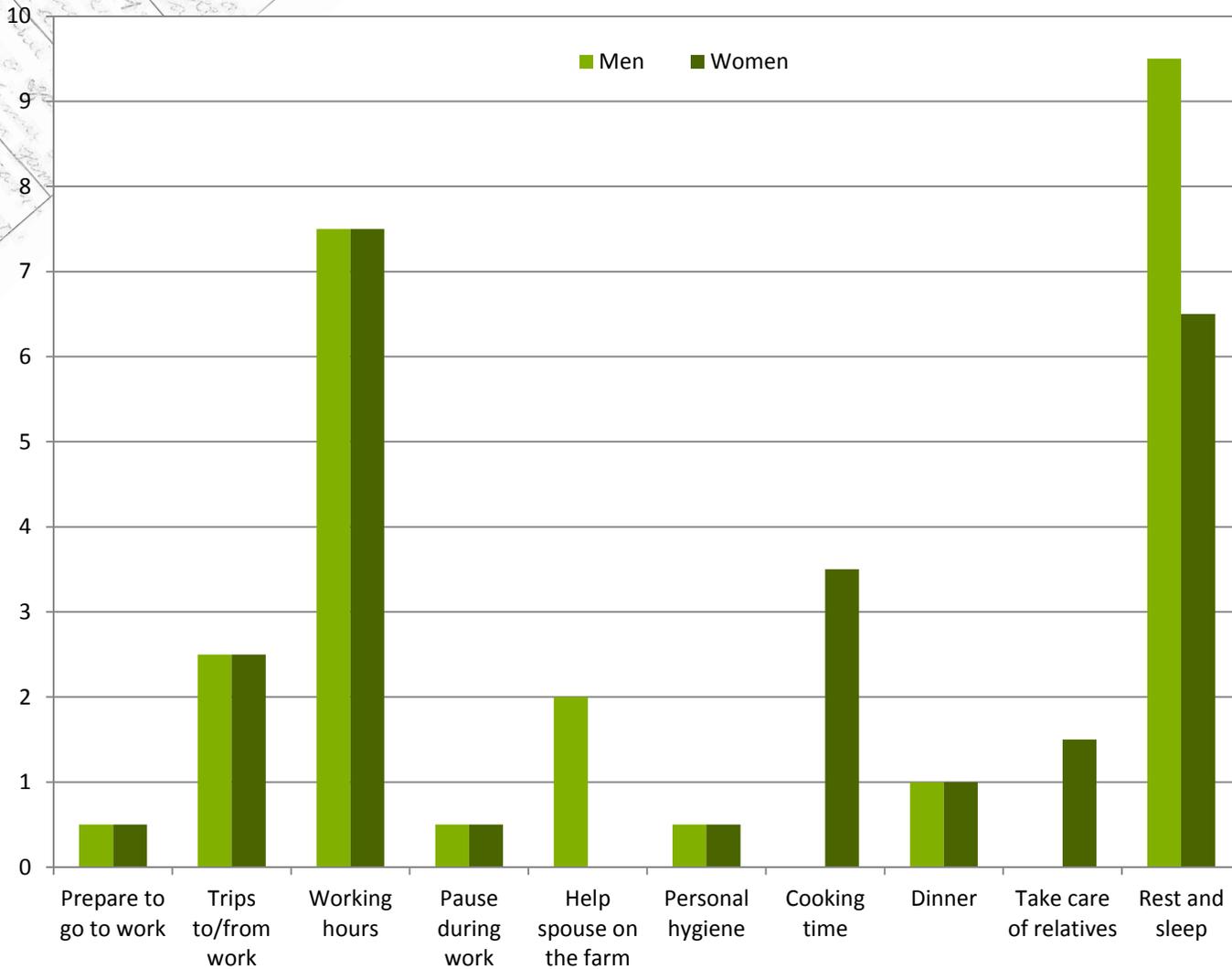
²² Interview with Félix Matavolo, LGR Engineer

²³ The exchange rate in Q4 2013 was approximately 30:1 MZN:USD; For more information about the use of the salary, see “Facts and considerations of Nursery employees”

Resources has attempted to create a range of facilities and incentives for employees, including a daycare center (for children of female employees), showers (to

be used after work), and dining hall (to provide meals to workers). The daycare room is also used for literacy classes after working hours.

Number of hours spent in daily activities during working days



"I am a seasonal worker and I want to become a permanent worker! I am already doing rituals with flour for that to happen."

Adriano Araujo, farmer and LGR seasonal worker

LGR NURSERY ACTIVITIES AND SEASONALITY

Working in the Forestry Company is like working in a farm. The Forestry Plantation is a farm! (...) People that cannot work in the Forestry Company cannot be farmers because tasks are nearly the same."

"It is better to work with tasks' rotation in order to learn more (...) as forestry tasks are the same as in the farms, I apply the techniques in my farm."

Adriano Araujo, farmer and LGR seasonal worker



Activities in the LGR Nursery		
Month	Activities	Preferred Gender ²⁴
September and October	Start of the productive season (need extra seasonal workers):	
	Fill the trays with substratum	Both
	Sow	Women
	Watering	Men
	Fertilizing	Men
	Transplanting the extra plants (there is a machine to sow but when it's broken needs to be done manually, which, afterwards, increases the need for transplanting)	Women
	Weeding	Women
November	Selection of the plants according to size	Women
December	Transportation of the plants to the plantation fields when they reach 13 to 15 cm	Both
From January to August	Preparation for the next productive season (no seasonal workers, only long-term employees) - e.g.:	
	Maintenance of the wooden structures	Men
	Make the substratum	Women
	Cleaning the fields	Men
	Maintenance of the pipes	Men

²⁴ According to workers' perceptions.

INKOMATI: SOME CONSIDERATIONS OF NURSERY WORKERS

“The big difference from before and now is that nowadays I can purchase things that I need (because I’m working in the nursery).”

Patrício, Farmer and LGR long-term employee

The workers of Lúrio Green Resources appear to be improving their lives: houses with tin roofs, televisions, motorbikes, and better clothes are some of the signs. These workers are helping drive overall economic growth of the community as new demand-driven food shops and other small businesses have opened. Most significantly perhaps, LGR workers have started to enter into subcontracting agreements and employ others to tend to their farms, thereby increasing job opportunities and the overall circulation of LGR money in the local economy.

“Frequently our workers employ people to take care of their farms. So our company increases the local employment even more than we thought.”

Félix Matavolo, LGR Engineer

LONG TERM AND SEASONAL EMPLOYMENT

Long-term employees

Amélia Eugénio has worked at the LGR Nursery since 2010. When she started work Alémia owned a small modest house, but within the past three years she has built a bigger house with a tin roof. Unlike most of her neighbors, Amélia’s new home also has electricity. Recently she has purchased a mobile phone in order to be in connection with work colleagues and LGR

managers. *“Is good to communicate and be in contact with others.”*

Wage = Bigger house
+ Tin roof
+ Electricity connection
+ Cellphone



Lúcia Ramos is a single mother and started to work in the LGR on the same year as Amélia. In three years she was able to save money and improve her house with a good bed plus mattress and dishes.

Lúcia started in the nursery before the implementation of the rotation system by LGR, so she has experienced both work systems. According to her, the rotation approach is better as it is less physically taxing and she is able to learn about different fields:

“Last month I learned how to use the hammer. Have you ever seen a woman carpenter? I didn’t, ha! I learned how to be a carpenter (...) so I did my own bathroom walls! I realized that men that used to build

for me were exploiting my money, ha! Now I do the buildings by myself!”

Wage = Bed (with mattress)
+ Kitchenware
+ “Capulanas”
+ Cellphone

Knowledge = learn to be a carpenter
(build walls with local materials)



Both Amélia and Lúcia use half of their salary to pay locals to take care of their farms in the mountains. However they explain that *“when someone else is farming our fields the production is not as good as when we were doing that by ourselves. (...) Still, is better to have both a job and the farm in order to have more income (...) when we need extra money we sell farm products – peanuts, cassava and beans.”* In turn, the money that is made from selling these particular

crops is then used to purchase vegetables: cabbage, carrots, and tomatoes.

According to these women, while relationships with neighbors that are not employed can be *“complicated”* there has not been any negative impact on their lives as a result of working in the nursery: *“not even a spell from Traditional medicine healers!”*

Seasonal Employee

Joaquim António worked in Lúrio Green Resources during three months in 2012 and six months in 2013 (completed by the time he was interviewed). All his life he has been a farmer and LGR is the first company in which he has ever worked. Joaquim is a seasonal worker and aims to become a full-time employee because the benefits of working in the Nursery are extremely evident.

With the very first salary, Joaquim purchased a mobile phone that has proven to be useful for communicating with friends and relatives that live far away. With his wages, Joaquim has further been able to support his wife, two daughters and two nieces with the purchase of new clothes, “capulanas” and food. Finally, at the end of every working month, Joaquim has purchased tin planks in order to replace the grass roof of his house: *“my plan is to buy 30 planks, I already bought 24! (...) All with my salary.”*

Wage = Cellphone + Tin roof + Clothes for the family + “Capulanas” for the wife + Food (e.g. vegetables) + Land and New house (next to the LGR Nursery)

Knowledge = Improved personal farms

Working in the LGR Nursery, Joaquim is also learning several new farming techniques *“In the Lúrio Green we learn how to work by daily goals, so now I’m using this technique in my farm and I’m reaching better results!”*

Joaquim aims to secure a full time contract and should he continue to work for LGR, he plans to build another house next to the nursery in order to spend less time on daily travel: *“currently I spend two hours walking to arrive to work and other two and a half to return home”.*



Similar to Amélia and Lúcia, Joaquim has experienced certain envy and tension with neighbors regarding his steady employment: *“my neighbors say that I’m receiving salary while they are suffering, but I’m working hard to have money. (...) They tried to put a spell on my family in order for us to be sick and not be able to work.”*

Purchasing Priorities

The number of households owning durable goods in Nathepo is very small. It is not a surprise, therefore, that once new workers receive a salary they often invest it in durable goods that provide more comfort to daily life. Generally, the priority is to purchase a cellphone (in order to be connected with others) and also build a tin roof for the house. Due to rot, rat nests, and fire risks, replacing the grass roof is important. According to the statistics of Rapale district in 2007, only **2% of the population had tin roofs.**

“Now there is gas selling on the road. It means that people are buying motorbikes! Usually a family buys motorbikes after purchasing household materials (e.g. tableware, furniture) and substituting the grass roof with tin roof.”

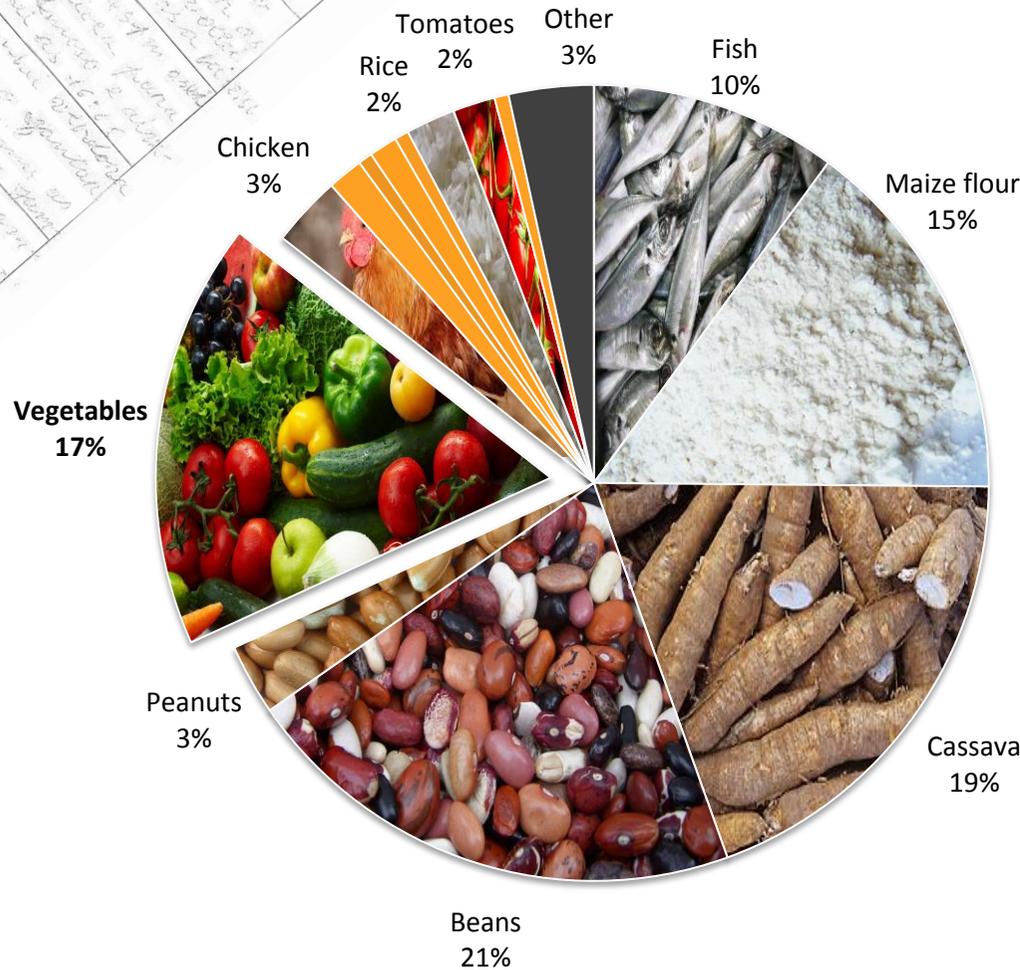
Belchion Lucas, Observatory team

Households Owning Durable Goods in Rapale District

Durable goods	Rapale District (%)
Radio	50.7
Television	0.4
Phone	0.1
Computer	0.0
Car	0.1
Motorbike	1.1
Bicycle	41.0
Nothing	35.9

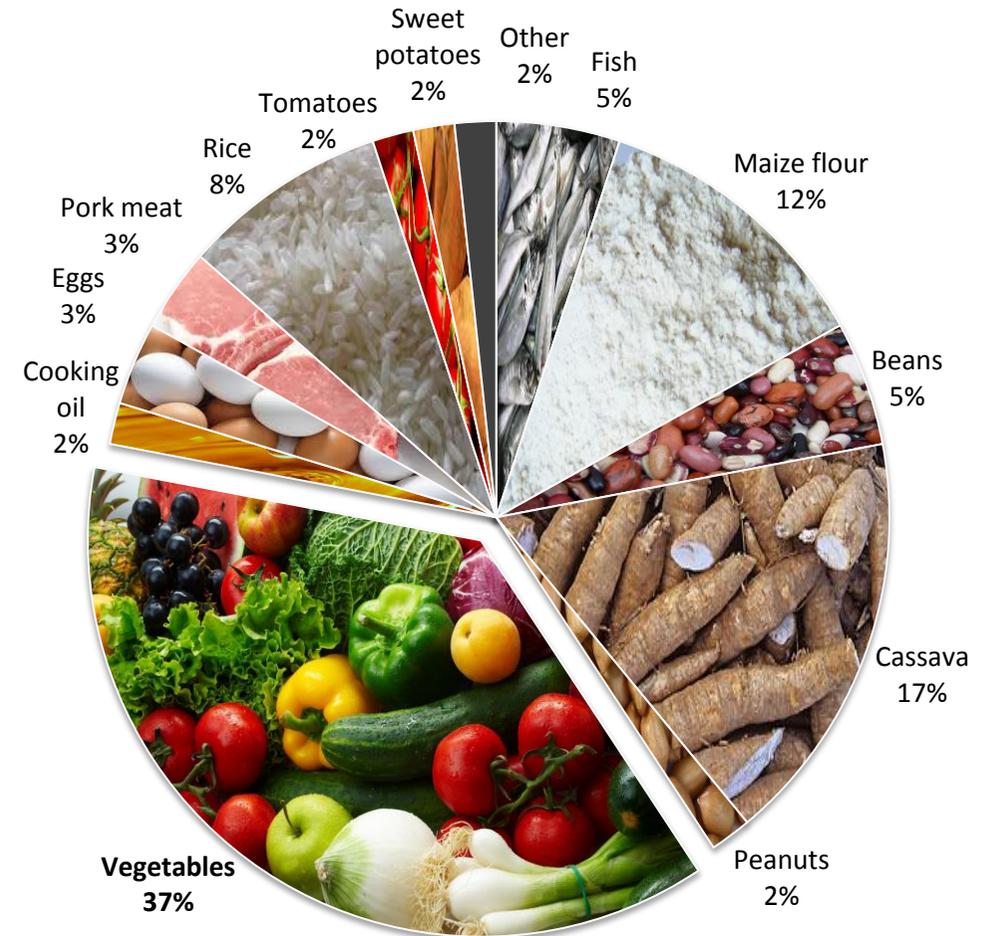
In: III Recenseamento Geral da População e Habitação, 2007

Food products purchased by small farmers, Inkomati residents (Oct/Nov 2013)

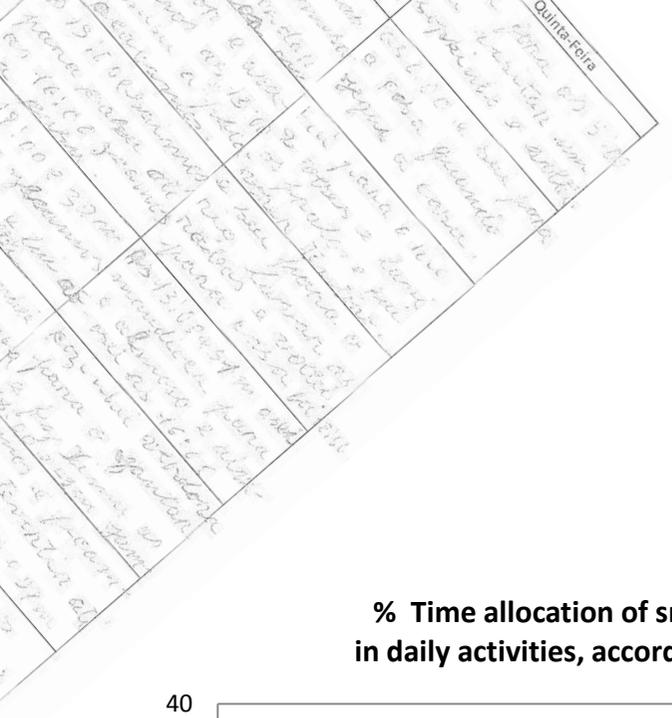


Food Products with 1% (each): cooking oil, local beer, eggs, cashew nuts and bananas

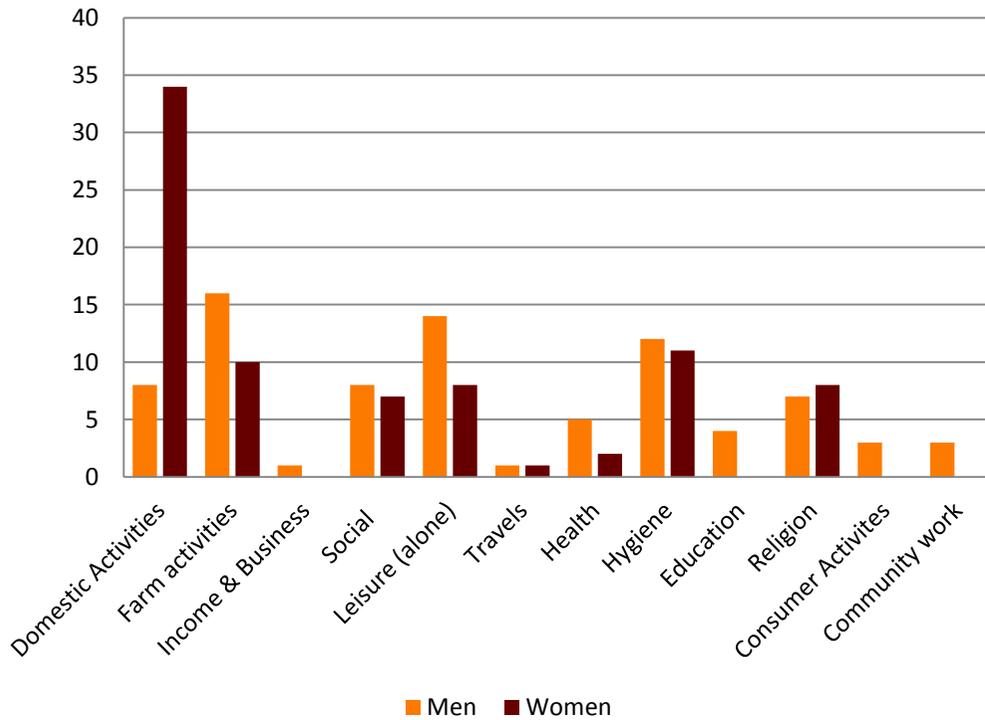
Food products purchased by workers, Inkomati residents (Oct/Nov 2013)



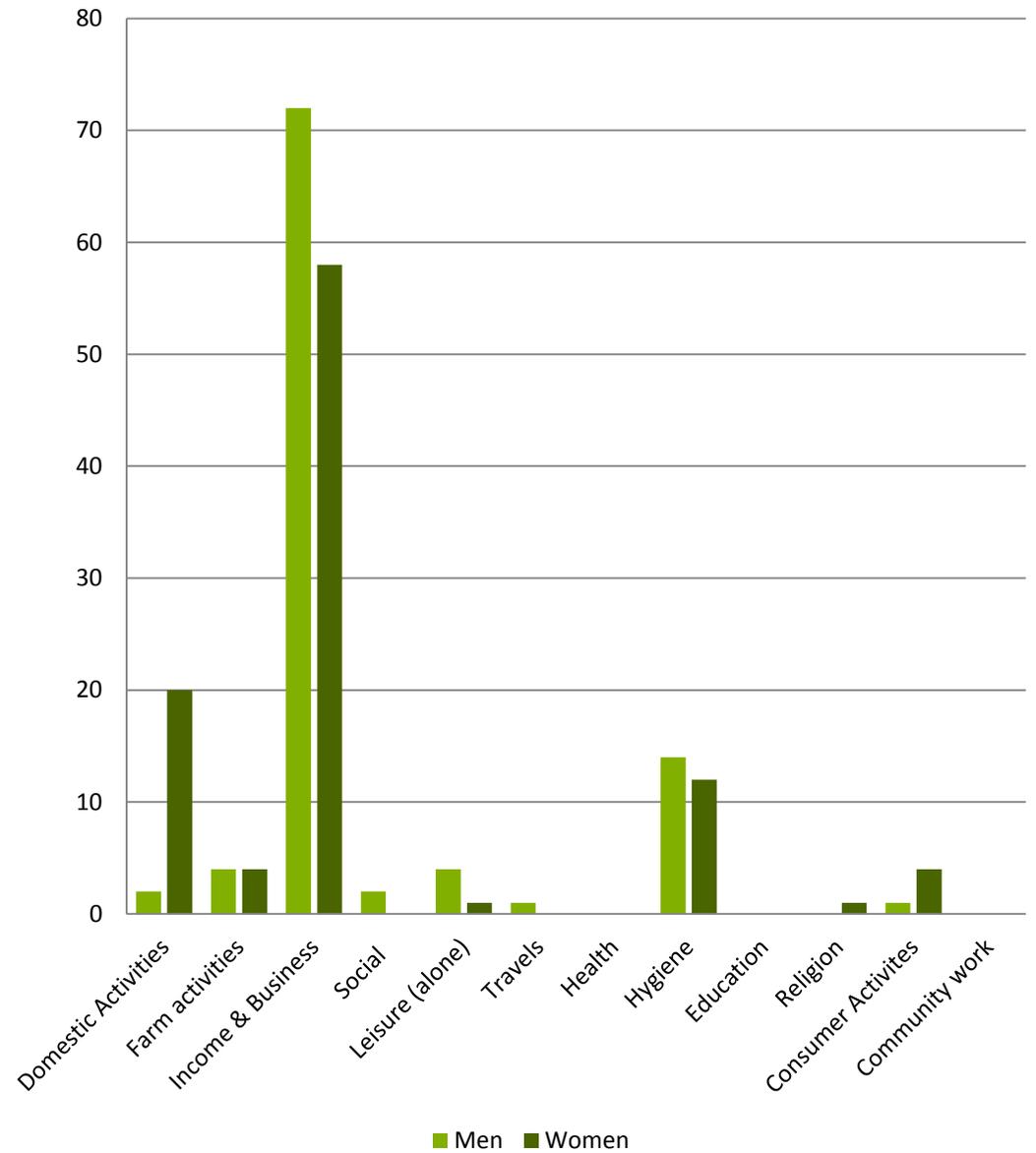
Other products: sugar cane, maize, sweet potatoes, sorghum, salt, rats, pork meat, goat meat, beef, rice flour and spaghetti



% Time allocation of small farmers in daily activities, according to gender



% Time allocation of forestry employees in working days, according to gender



NATHEPO-A • CONSIDERATIONS OF SMALLHOLDER FARMERS

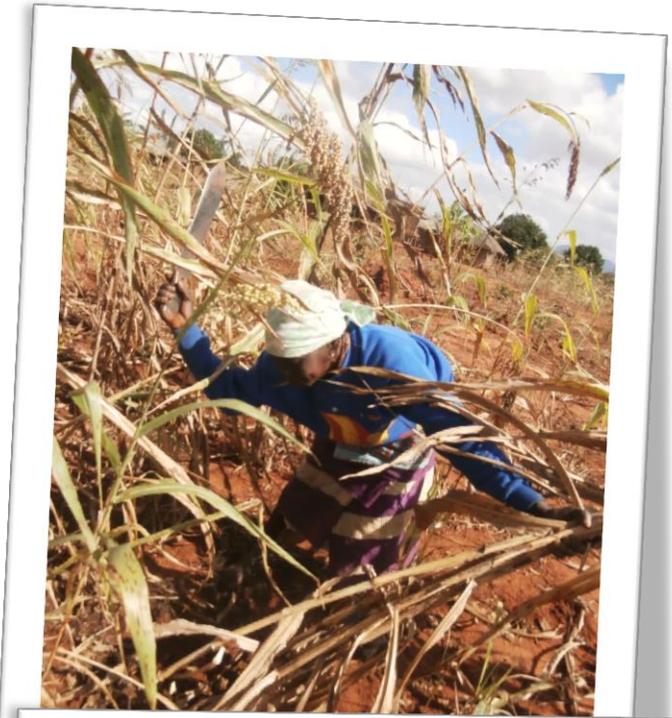
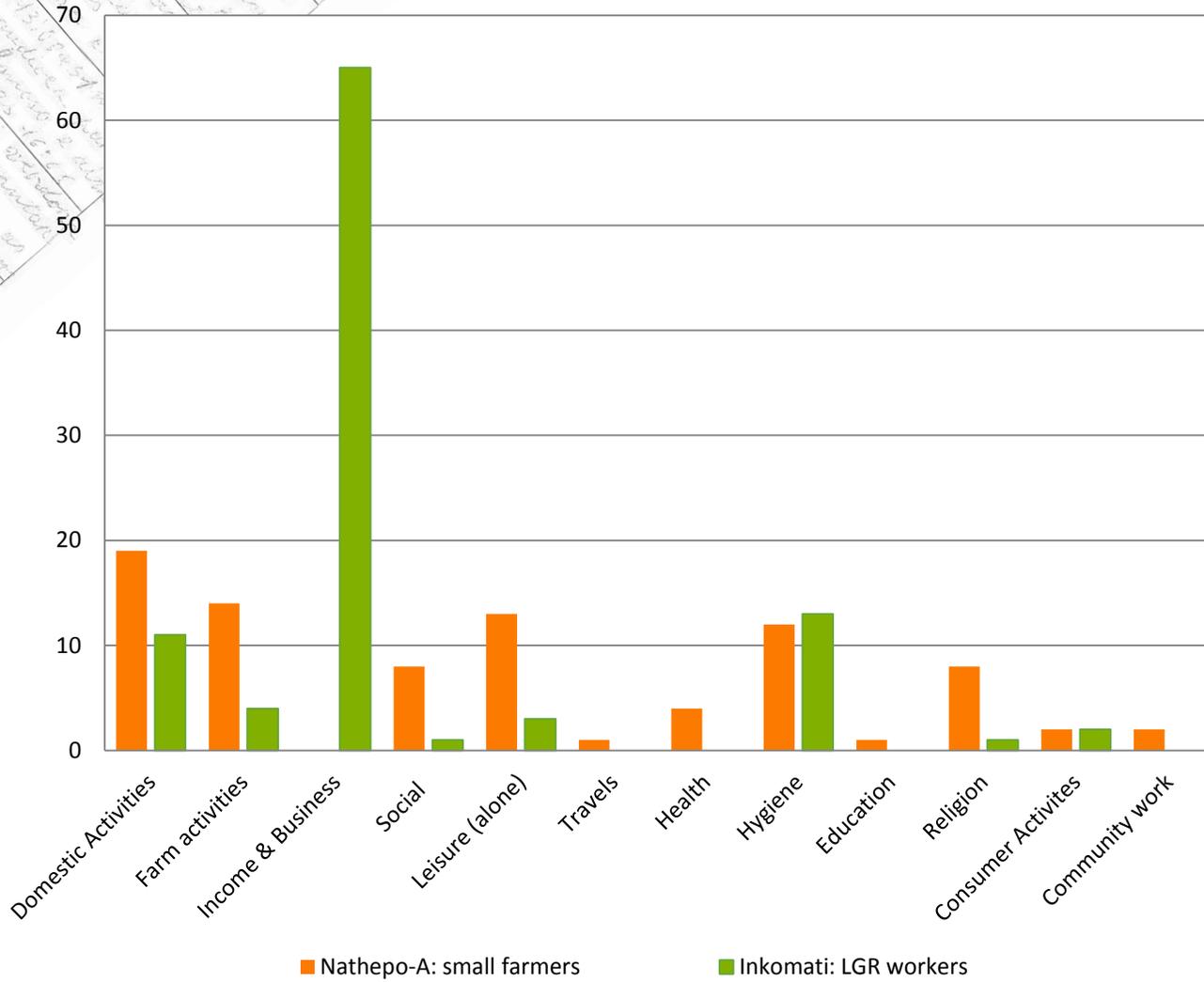
Smallholder Farmer Activity and Seasonality:

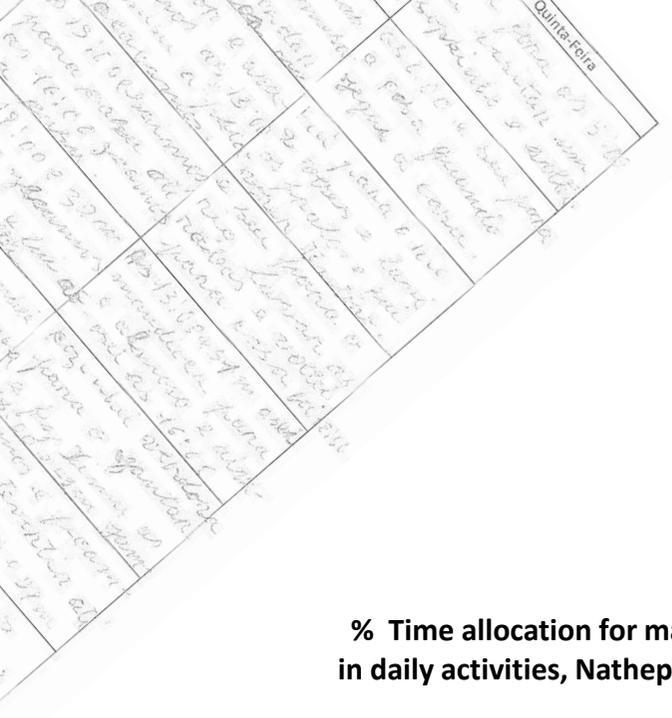
Opening a New Farm (especially for cassava, peanuts and beans)		
Month	Farm activities	Instruments
April - July	Cut down trees, Cut the trunks into pieces	Ax Big knife Hands
August - September	Burn the field, Pick up the trunks that did not burn and join them around a tree or any place and burn	Fire Hands
October - November	Clean the area, Cassava plantation	Hoe
December	Sow peanuts, beans, maize, etc.	Hoe
January	Sow beans	Hoe
February	Sow sesame (February), 1 st Farm weeding	Hoe
March	2 nd (and last) Farm weeding	Hoe
April	(Some crops are eaten fresh)	
May	Harvesting peanuts and beans, Farmers join together in groups and harvest with their hands, beat with sticks (hulling), clean with sieve	Hands, sieve, basket, sticks and bags
June	(generally this last task is made by women)	



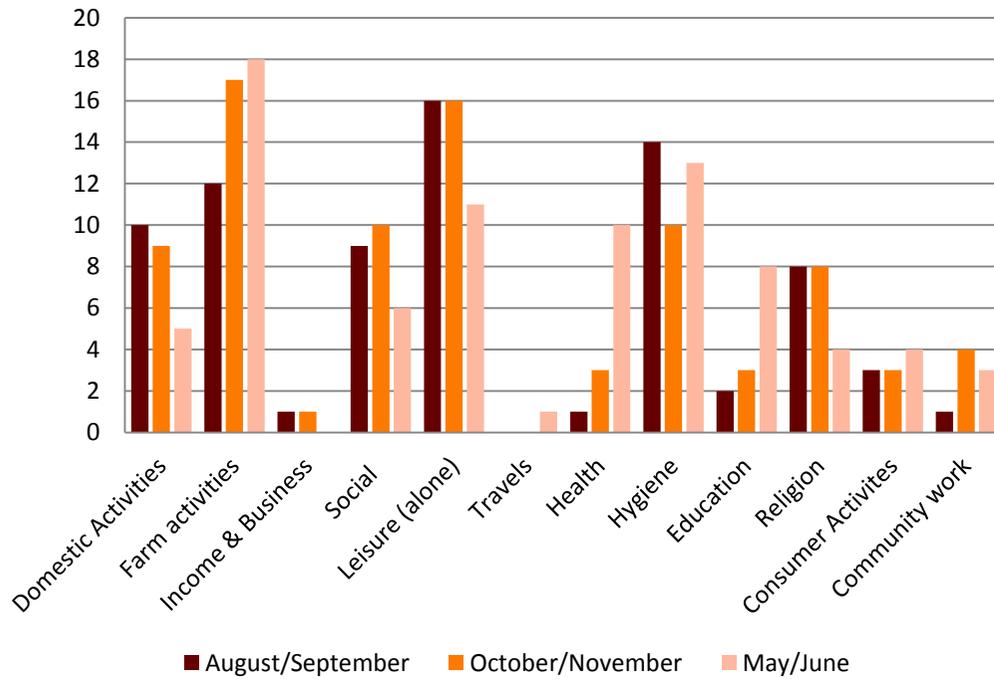
Handwritten notes in a notebook, including the date "Quinta-feira" and various entries in Portuguese.

% Time allocation in October/November

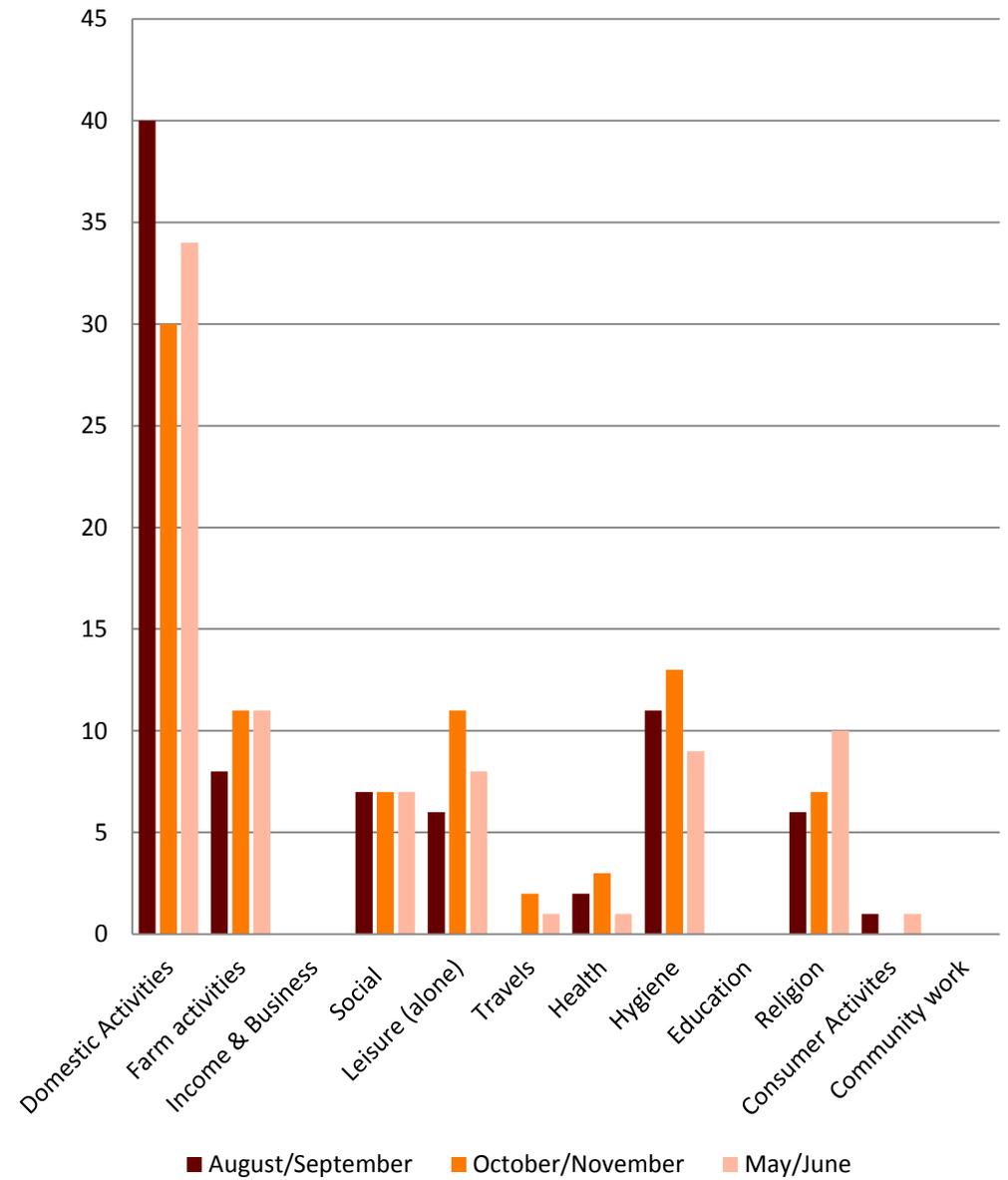


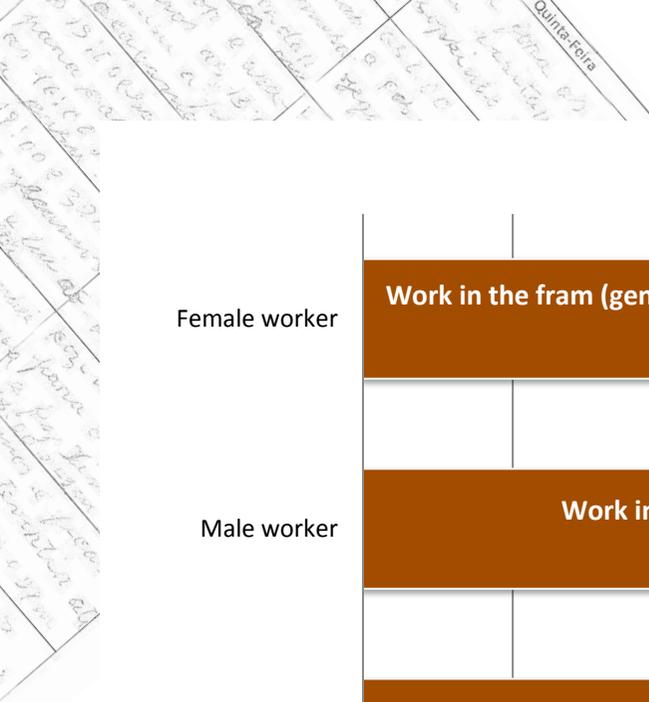


% Time allocation for male small farmers in daily activities, Nathepo-A - Seasonality

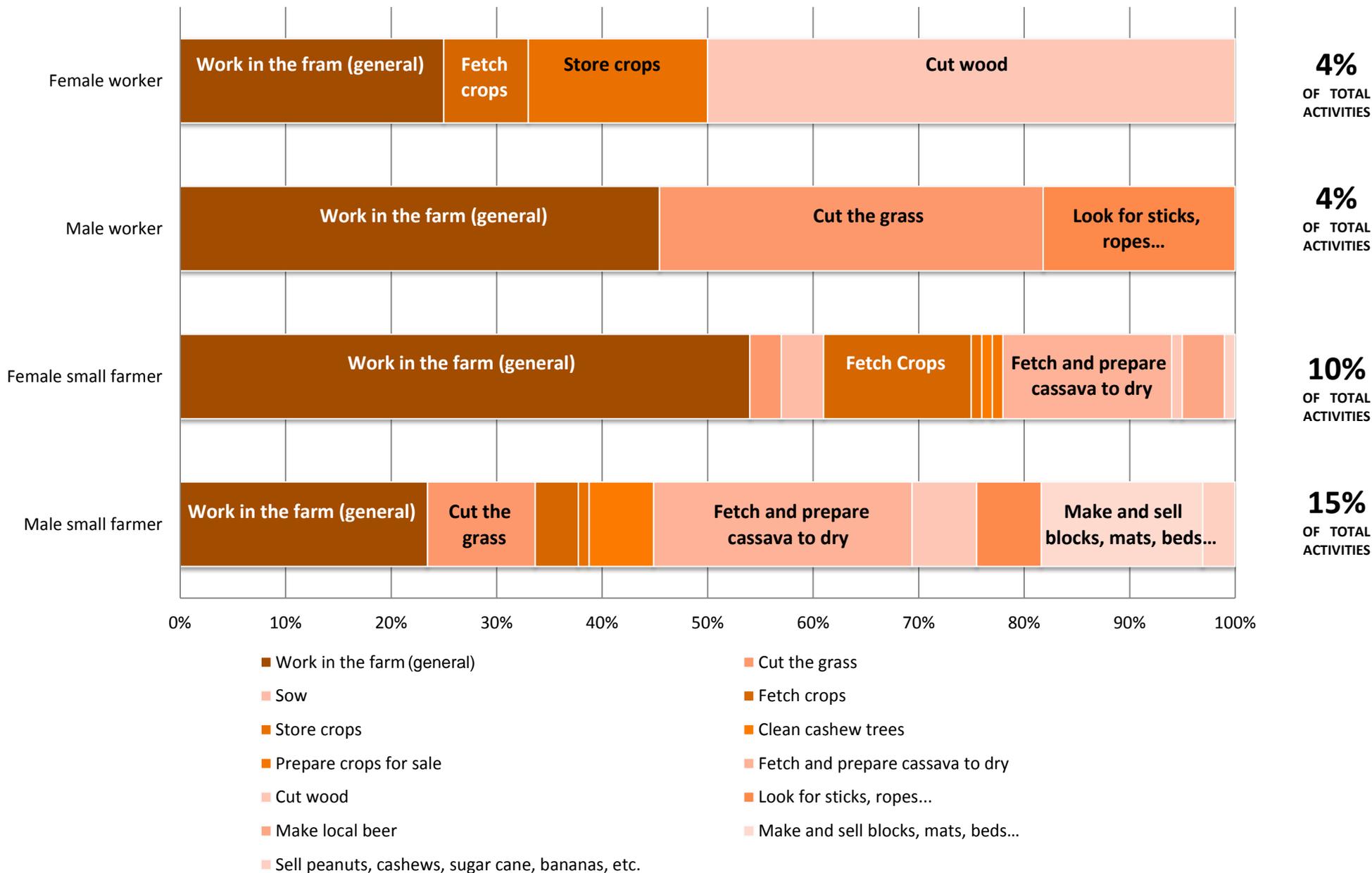


% Time allocation for female small farmers in daily activities, Nathepo-A - Seasonality

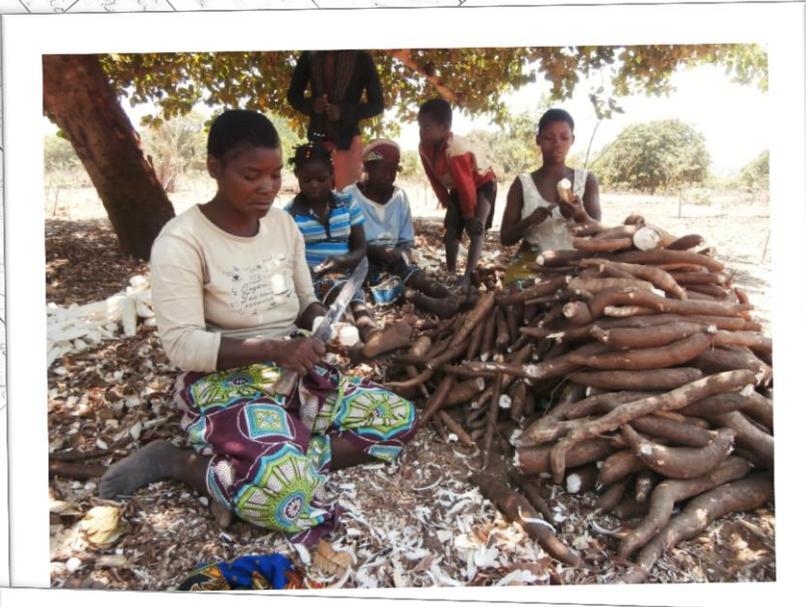




Income activities related to personal farming (%)



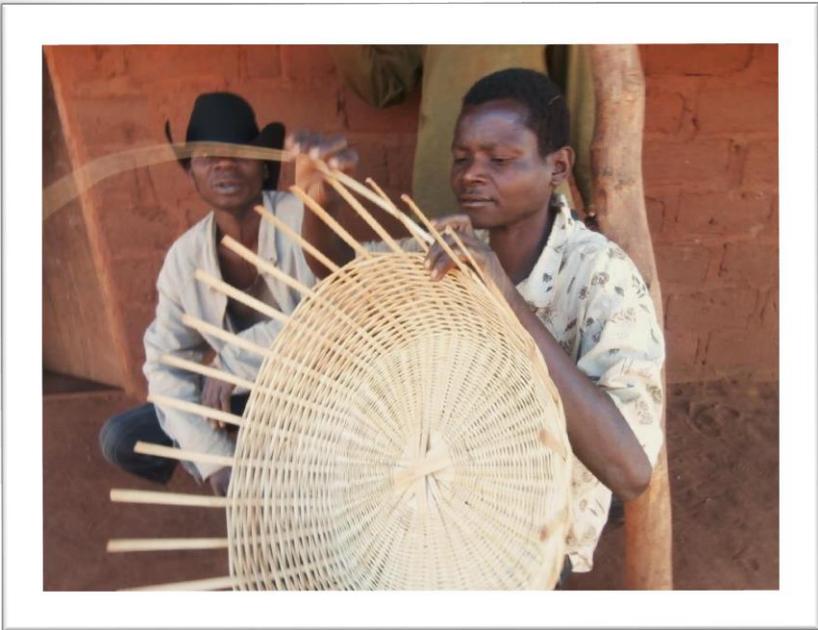
Quinta-feira
 15 de Novembro de 2013
 14:00 e 13:00
 13:00 e 12:00
 12:00 e 11:00
 11:00 e 10:00
 10:00 e 09:00
 09:00 e 08:00
 08:00 e 07:00
 07:00 e 06:00
 06:00 e 05:00
 05:00 e 04:00
 04:00 e 03:00
 03:00 e 02:00
 02:00 e 01:00
 01:00 e 00:00



Regular vegetable market



Activities related to cassava



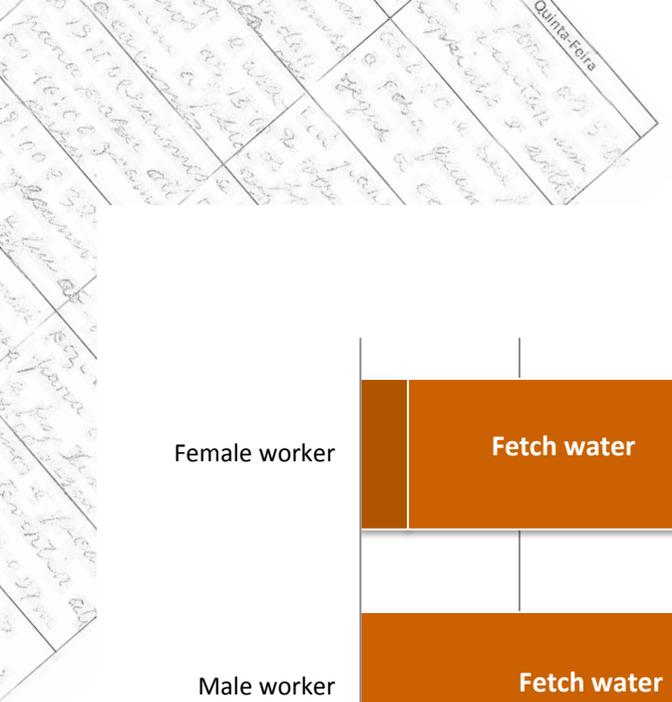
Handmade baskets

Quinta-feira
 15 de Novembro de 1911
 16 de Novembro de 1911
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 20 de Novembro de 1911
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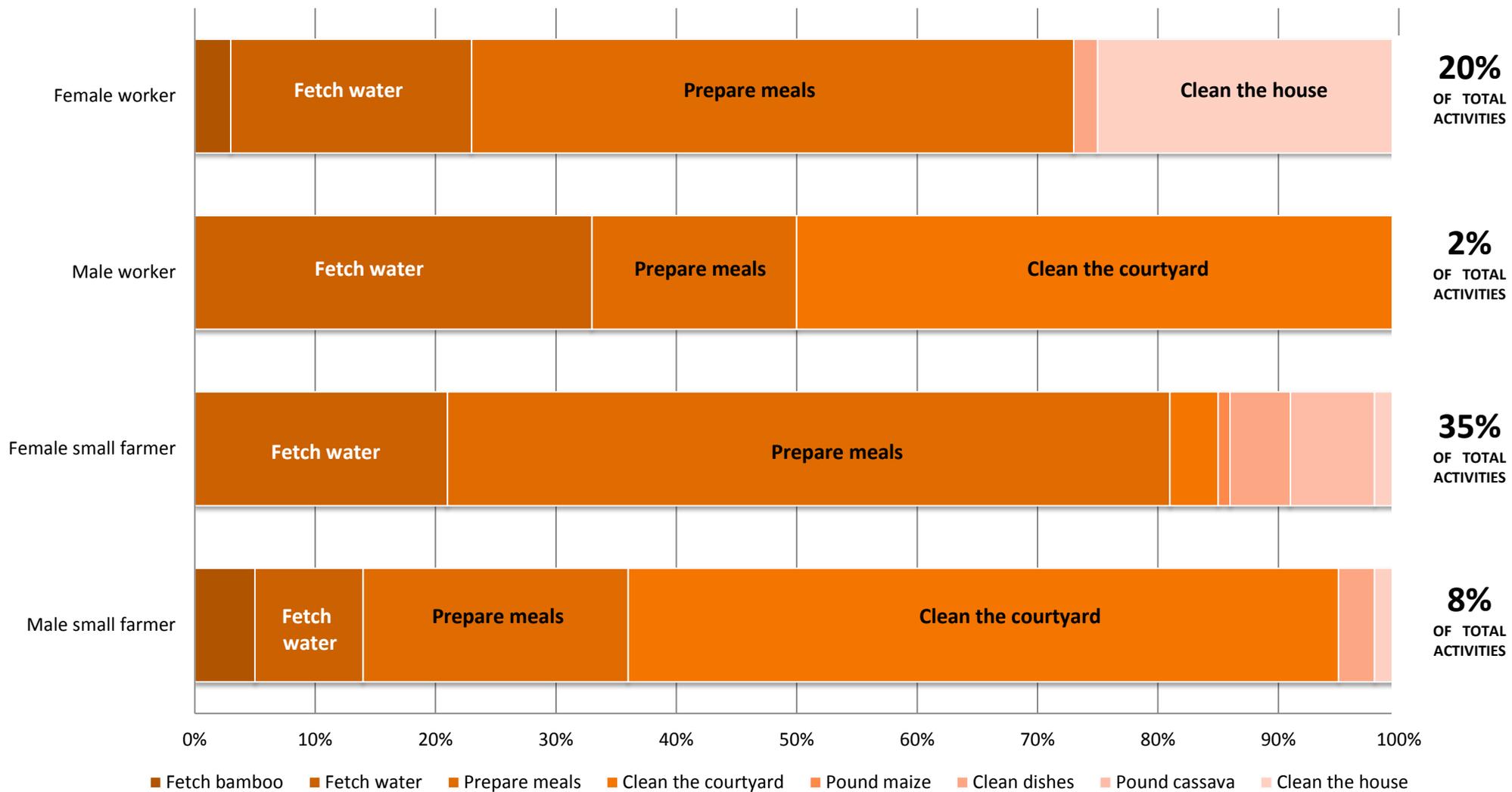
Vegetables and Rice Farming		
Month	Farm Activities	Instruments
April	Cut the grass that grows on the river side; Burn the area after two weeks, pick up the sticks that escape the fire and burn them again; Plow the land and organize the farm plan; Construct the traditional nursery and sow.	Big knife, Hoe
May	Planting in the trays; Watering.	Hoe, Sticks or fingers
June	Harvesting "china" cabbage, Onion, cabbage and tomatoes plantation.	Hands, Knife, Bowel or sieve
July	-	-
August	Onion, cabbage and tomatoes harvesting	Knife, Hands, Hoe
September		
October	-	-
November	-	-
December	Clean small area and make rice nursery, Plow the area.	Baskets, Hoe
January	Plant rice plants	Hoe
February	Weeding	Hoe
June	Rice harvest	Knife, Sieve, Leaves of banana trees, Baskets



Farming of "china" cabbage and rice harvesting



Domestic activities (%)



SMALL LOCAL BUSINESS & AGRICULTURE

One of the earliest written sources of information concerning agriculture in Nathepo can be found within the pages of a technical report addressing services available to fight Leprosy.²⁵ According to this document, part of the holistic approach to treating leprosy included the creation of a farm next to the Gafaria Hospital in which some patients worked in order to receive money and produce crops for patients and hospital staff.²⁶ One patient noted *"in Namaita, in the colonial time, we made our small self-subsistence farms, and also large farms that were run by priests, some of them were receiving monetary value, the priests offered us food and cleaning supplies (such as soap, clothing)."*

At present, the main businesses owned by Nathepo residents are seasonal stalls made of bamboo and clay where crops are sold. Farmers sell in the high season and purchase the same products in the lean season (for a higher price). Moreover, locals do not use conservation techniques and do not have refrigerators, so businesses are highly dependent on agricultural seasonality. However, some stall owners have recently been able to build stalls for their business due to the wage they received working in the LGR Nursery.

Here, people mainly produce cassava, peanuts and beans. It is difficult, however, for smallholder farmers to provide exact information about the dimensions of

the land they farm. Instead, a "hectare or two" often simply represents shorthand for a small plot. The production of grain and cassava is carried out by heavy clearing of land using hands, hoes and axes.²⁷ That is, through the use of hand technology. Beans and peanuts generally involve group labor for harvest²⁸

Typically, women work more hours in agricultural activities than men (see graphics related to households), but there are exceptions like cashew production. Men spend more time taking care of the cashew trees and this is largely due to the fact that cashews are a profitable crop. In Nathepo (and throughout Nampula in general) women are responsible for the crops for household consumption while men are responsible for the lucrative crops. In addition, some locals (especially men) have small craft businesses producing items like straw mats, sieves, baskets, and wood pounders.



²⁷ Belchion Lucas, TNS Field Notes, "Farmer Activities in the Field: Nanrele (Grain farm and Cassava)

²⁸ Belchion Lucas, TNS Field Notes, "Farmer Activities in the Field: Nanrele and Nathepo (Beans and Peanuts)

The most common dish in Mozambique is "xima" (maize purée). However, in Nathepo the land is not suitable to produce this crop. According to residents, half a decade ago in Nathepo-A, the productivity and variety of crops was higher than at present because the land was more fertile. It was once possible to produce maize right outside homes whereas now one needs to walk about 15 Km towards the mountains ("Nacuamo" and "Theone" areas) or in the small areas located next to "munches" (termite mounds). Lacking reliable maize, the local staple food is "caracata" (cassava purée). Producing this dish is fairly labor intensive (see related graphic on household production) with men fetching and transporting the cassava, while women plant, irrigate, peel and dry.

"The unproductivity of the land is not due to the field burning. It is because of the households – the constant use without fertilizers. It is like a car, after 6 years is tired". - Volunteers of Nathepo-A



²⁵ M.A. Palhota, *Leprosy in Namaita, Province of Nampula: A Reflection on Socio-cultural Representations*. Maputo (2012)

²⁶ A.H. Benfica, *História do Programa de Controlo de Leprosy em Moçambique*. Ministério da Saúde. Maputo (2007)

BUILDINGS, INFRASTRUCTURE AND FACILITIES

Namaíta is connected to the N1, the national road which links the country from Rovuma to Maputo. This road was recently repaired, facilitating the linkages and logistics between the village and other places. Residents use this road to travel to Nampula City, where they purchase products that are cheaper than in Nathepo: mainly maize flour, rice, cabbage, dried fish and cooking oil: *"5 liters in Nathepo cost 300 MZN while in the city the price is 210 MZN!"*

Almost all structures (shops and residences) are made of local materials: bamboo, clay ("Itupu"), and grass. The governmental statistics of 2007 for the Rapale district indicate that 97.3% of people live in houses made of local materials. A great indicator of community improvement is the amount of tin roofs, and in Nathepo some families are already substituting grass roofs with tin roofs, especially the employees of LGR Nursery.

Source of energy	Rapale District (%)
Electricity	0.6
Generator/Solar panel	0.1
Gas	0.2
Oil / Paraffin / Kerosene	57.1
Candle	0.5
Battery	0.7
Wood	40.6
Other	0.3

In: III Recenseamento Geral da População e Habitação, 2007

The main village and the Inkomati community are both connected to electricity. However, only residents that can afford the installation and regular payment of the electricity have energy in their homes. By comparison, the community of Nathepo-A lacks electricity altogether, so it must rely on other sources of energy.

Water access	Rapale District (%)
Piped water inside the house (network)	0.1
Piped water outside the house (network)	0.2
Fountains	1.5
Protected well	4.1
Open-air well	72.9
River/Lake	21.1
Raining water	0.0
Mineral water	0.0
Other	0.0

In: III Recenseamento Geral da População e Habitação, 2007

Sanitary service	Rapale District (%)
Toilet connected to septic tank	0.1
Improved latrine	1.0
Improved traditional latrine	2.1
Traditional latrine (not improved)	24.0
Without latrine	72.9

In: III Recenseamento Geral da População e Habitação, 2007

Inkomati households are located roughly 10 minutes from the market and access to well water is within 15 minutes walking distance. During the dry season (September through November) women need to walk for 30 minutes to reach the river. There, besides gathering water for home use they also wash clothes. When the river dries, women use the dam next to the LGR Nursery.



National Road N1 and businesses on the road side

RUMOR AND THE IMPORTANCE OF WATER

In Nathepo-A there is not an official well or a fountain. In order to obtain water people make traditional wells next to the river (distance of 7km) but usually the water is cloudy. Perhaps because of the lack of resources, Nathepo-A residents are very afraid of being forbidden to use the river and the dam. And, in the year of the study (2013) there were at least two rumors surrounding the issues of water access.

In the first instance, a rumor emerged related to the wall that LGR was building to protect the nursery from theft. As the nursery is attached to the dam, however, residents had concern: *“will we be able to do the River Spirits ritual in the end of 2013?”* Eventually it became clear that community access to the dam and river would not be restricted in any manner: *“We are building a wall around the nursery area because thieves were stealing wood. We found the wood being sold in the market. (...) But locals will continue to have access to the dam.”* - Félix Matavolo, LGR Engineer.



LGR fences being constructed (May 2013)

The second rumor concerning the dam in Nathepo-A circulated in mid-September, 2013: *“From today on we are forbidden to use the dam! There will be secret police there!”* This was not the case, but it sparked a dialogue about the correct use of local resources. Residents were informed that when they used the dam and the river to wash clothes, soap should be dispensed on the ground, not on the dam, to avoid the contamination of the water.



Women washing clothes in the dam next to LGR

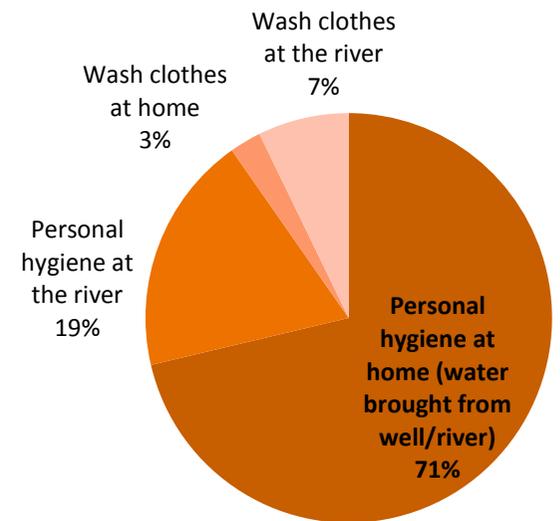
Why is important to be aware of rumors?

Gossip and rumors have great power and social implications. For small communities undergoing major change, the use of gossip and rumor might represent resistance, anxiety or even a form of social drama expressing everyday concerns.²⁹ In short, it often

²⁹ James Scott, *Domination and the Art of Resistance; The Hidden Transcript*, 142-143; Clifford Geertz, “Ritual and Social Change: A

serves as a “technique for summarizing public opinion.” For companies operating in small communities, there needs to be a serious effort to maintain healthy lines of communication with the people in the areas which they conduct business. As Luis White observes “the fact that it (gossip) is heard is more important than the fact that it is spoken.”³⁰

Time allocation in activities that require water* in Nathepo -A (2010-2013)

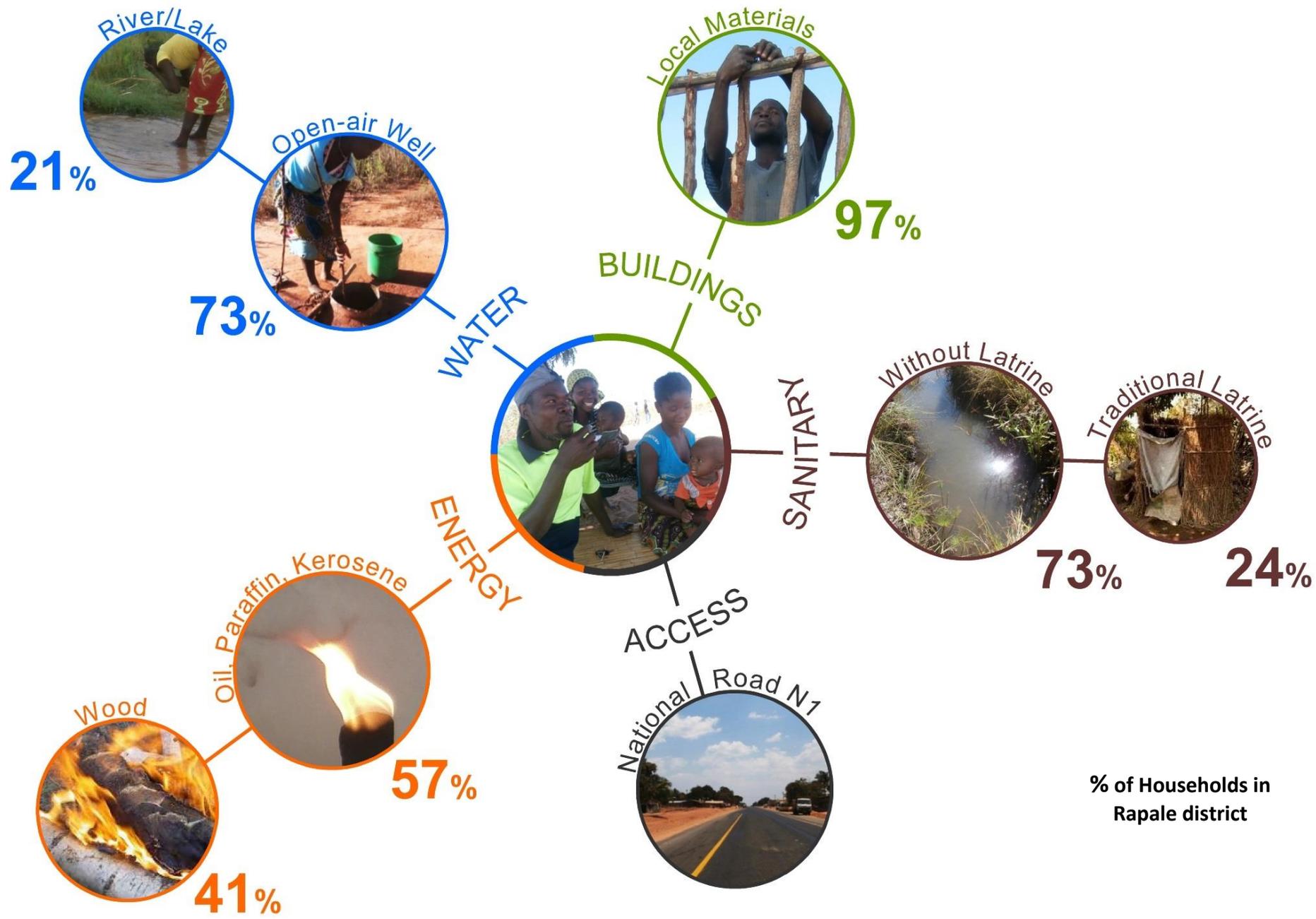


*11% of total activities

Javanese Example,” in *The Interpretation of Cultures* (New York, 1973), *passim*.

³⁰ White, Luise. *Speaking with Vampires: Rumor and History in Colonial Africa*. Berkeley: University of California Press, c2000 2000; John F. Szwed, “Gossip, Drinking and Social Control in a Newfoundland Parish,” *Ethnology* 5 (1966): 434-41

Handwritten notes from a field diary, including the name "Quinta-Feira" and various entries in Portuguese.



SOCIETY, CULTURE AND RELIGION

Makhuwa families are primarily matrilineal and new born are integrated into the mother's clan ("nihimo"). Every clan has a shared grandmother ("apipi") and all individuals with the same grandmother are considered relatives ("amusi"). Men cannot marry with women from the same "nihimo" because it would be considered incest.

Consequently, the pattern of social organization of the Namaita community is the family, oriented by the uncles from the mother's side. The local concept of *family* extends to the collective ("collective and enlarged families"³¹) and includes nieces, neighbors, and friends.

Uncles have a great influence on the life history of each individual. For example, if a man wants to marry a woman, the priority is to ask permission of her oldest uncle (from the mother's side). Also, if a significant problem needs to be solved within the marriage, the uncle will help the couple to find solutions.

"The Makhuwa society is certainly matrilineal but not matriarchal."

Além-mar magazine, Macuas: dignidade a encontrar

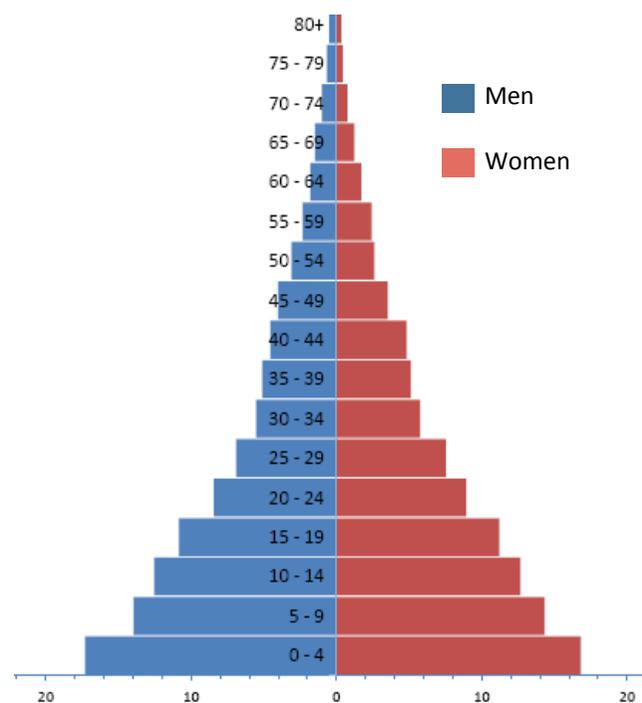
³¹ A. H. Benfica, *História do Programa de Controlo de Lepra em Moçambique*. Ministério da Saúde. Maputo, 2007

Marital status of residents in the Rapale district (2012)

Indicators	Rapale District (%)
Single	7.8
Married	24.7
Marital union	49.4
Divorced	10.8
Widower	7
Unknown	0.4

In: INE, DEMOVIS

Age of the inhabitants of Rapale district (2012)



In: Estatísticas do distrito de Nampula - Rapale, 2012

RELIGION AND SPIRITS

In Namaita, there is a widespread belief in the existence of a supernatural strength directly linked to the destiny of the community: health, disease, death, rain, luck, light and life.³² This belief system leads to the invocation of the spirits ("minepa") of ancestries to maintain order and socio-economic stability.

Indeed, people consider religion the source of support and solution to disease and economic and social problems. The belief in the supernatural can also reveal itself in rather heady class and cultural terms. According to several workers of the LGR Nursery, neighbors often try to put a spell on them so they do not earn money and "remain poor like everyone."

Catholicism as a strong faith in Nathepo's religious life centers largely on the creation of the Catholic Gafaria Hospital for Leprosy in 1957.³³ After Catholicism, Islam is the most practiced religion, followed by several smaller Christian denominations. The statistics of 2007 indicate that in Rapale, 49.5% of residents were Catholics and 28.7% Muslims.³⁴ Locally there appears to be little, if any, conflict between the religions: *"actually, there are also marriages between both Catholic and Islam religions that are called mixed marriages."*³⁵

³² Honwana (2002) cited in Palhota, *Lepra em Namaíta, Província de Nampula*

³³ M.A. Palhota, *Lepra em Namaíta, Província de Nampula: Uma Reflexão Sobre Representações Socioculturais*. Maputo (2012)

³⁴ J. Loureiro et al, *III Recenseamento Geral da População e Habitação em 2007*, Maputo (2012)

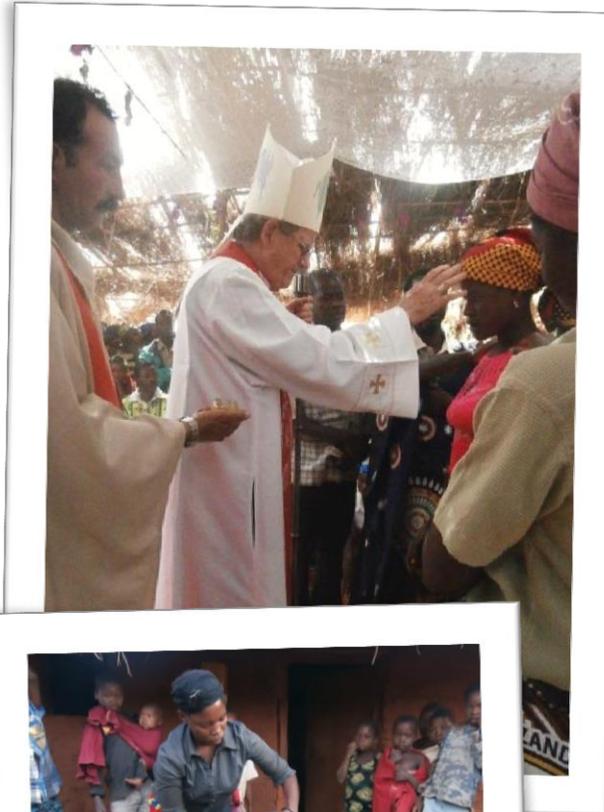
³⁵ Field Diary volunteer from Nathepo-A

Initiation Rituals

Female “initiation rituals” are often complex and involve a practice in which women must go to the river to catch a fish. This practice used to be conducted in the river that is currently attached to the forestry nursery. As a result, women must now go to another river in order to continue the practice because male [forestry employees] are not allowed to witness the rites. However, women still continue to conduct other activities in the river: fishing, washing clothes and bathing. For their part, male initiation rituals were always conducted in a place that is outside the forestry plantation area.

Ritual to the River Spirits

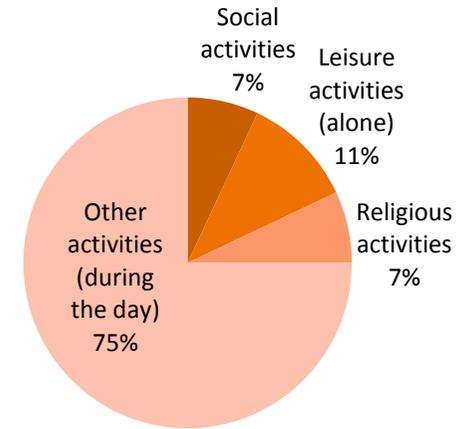
The New Year commemoration is based on the donation of food to the River Spirits. That is, people throw food to the dam in a show of appreciation for the River Spirits. The river provides water for human use, fish to eat, and nourishment for the farms. The offers are also an appreciation for the protection that the Spirits gave to the families during the year.



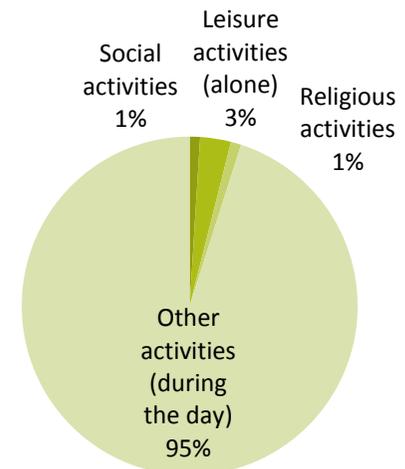
*“Christianity underwent a religion like medicine; the priests healed the body first and secondly the soul.”
Maria Palhota, “Lepra em Namaita”*



Time allocation of small farmers in social, leisure and religious activities



Time allocation of workers in social, leisure and religious activities



Social activities: walking with friends, visit relatives, talk with neighbors...
Leisure activities (alone): listen to the radio, watch a movie, rest at home...
Religious activities: going to church, going to traditional medicine healer, praying...



Social activities: traditional dances and games

EDUCATION

Some residents speak Portuguese, but Makhuwa is the most commonly spoken language. Namaita has two primary schools but according to Nathepo-A residents, the education system has weakened recently because *“the school program changes every year, as well as the materials needed to attend classes.”* Older brothers sometimes struggle to assist their younger brothers because the themes change frequently and *“is not possible to reuse the books that were purchased in the previous year.”* According to Jacinto Alberto from Nathepo-A, in the 1970s the education was better even if there were fewer schools. *“These-days, some students of the 7th grade don’t know how to write their names properly! I studied only until the 6th grade and I know how to read and write – for example, keeping the Field Diaries.”*

Illiteracy rate in Rapale district

Illiteracy rate (%)			
Age	Total	Men	Women
15-19	44.9	32.1	56.3
20-24	57.0	39.8	71.5
25-29	64.7	48.7	79.8
30-39	63.4	45.4	81.2
40-49	64.5	43.7	86.5
50-59	74.1	54.9	92.7
60 and more	80.0	68.0	95.5

In: INE, DEMOVIS

HEALTH AND NUTRITION

As Makhuwa society often attributes disease to evil spirits (“minepa sotakhala”), traditional medicine healers (“nculukana”) and curses (“muawelo”), people strive to overcome evil through healing rituals that restore harmony in the family. There are also good spirits (“minepha sottela”). Healing rituals are prepared by experts (“mukhulukano”) who possess special knowledge about the necessary elements of healing.³⁶ This knowledge can be hereditary or achieved through personal research and initiative (“mukhulikano”).³⁷ *“There are many experts here that not only heal, but also do divination to find the guilty. (...) They treat the disease with herbs, roots and other means (...). When I’m sick and I’m going to both traditional medicine healer and hospital, because sometimes there are diseases that do not heal in the hospital”*³⁸

During the colonial period, the Gafaria Hospital was functioning efficiently in Namaita, but following sixteen years of civil war in Mozambique the health system was destroyed. The situation was further compounded with the flight of technical and medical experts (mainly Portuguese) from the country.³⁹ And, while there is a hospital in Namaita, residents have expressed a frustration that medicine is frequently unavailable or often sold illegally on the black market.

³⁶ Palhota, *Lepra em Namaíta, Província de Nampula*.

³⁷ F.L. Martinez, *O Povo Macua e a sua cultura*. Lisboa: Instituto de Investigação Científica Tropical (1989).

³⁸ Palhota, *Lepra em Namaíta, Província de Nampula*.

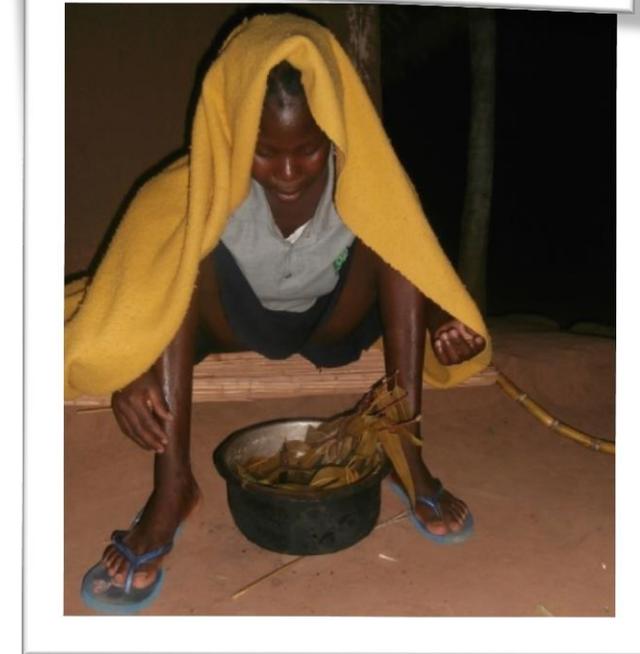
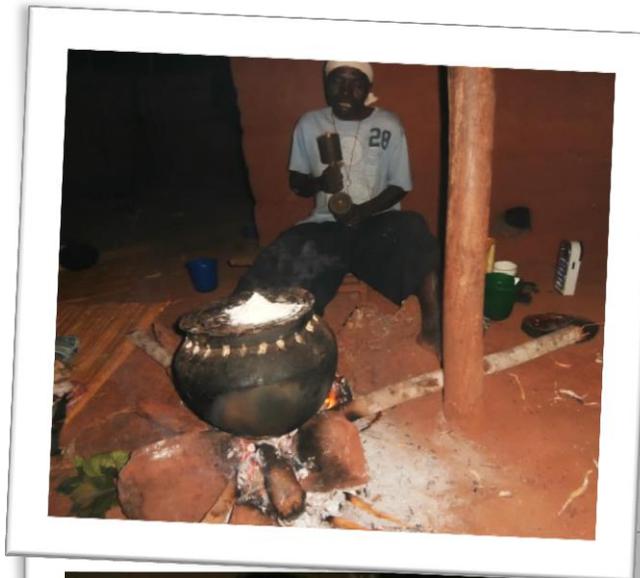
³⁹ C. Geffray. *Nem Pai Nem Mãe - crítica do parentesco: o caso macua*. Lisboa (2000).

In 1992, the Mozambican Health Services implemented a new approach that involved communities and families. This new approach saw trained volunteers (“activistas”) working alongside the hospital staff. These volunteers are usually members of the community (not necessarily health professionals), which support patient care and are trained to recognize diseases in order to advise sick people to go to the nearest hospital or a free medicine distribution post.

In 2002, posts (simple barracks made of grass and bamboo) were created for the distribution of free drugs in areas with confirmed cases of leprosy. And to make transportation easier, volunteers receive bicycles from the international NGO Dutch Leprosy Relief. One volunteer says: *“I am part of the group of volunteers and I appreciate dealing with sick people, but I have to be very patient, only being patient you can convince patients to take the free drugs”*⁴⁰



⁴⁰ Palhota, *Lepra em Namaíta, Província de Nampula*

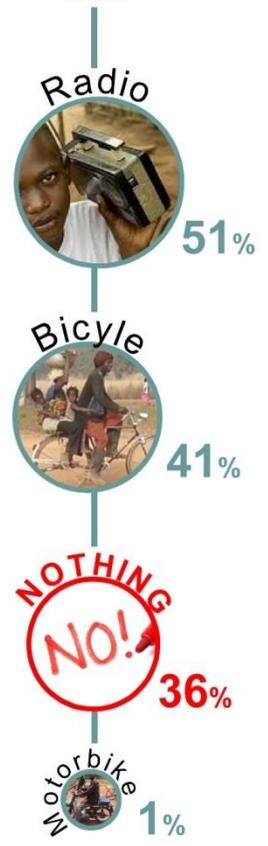
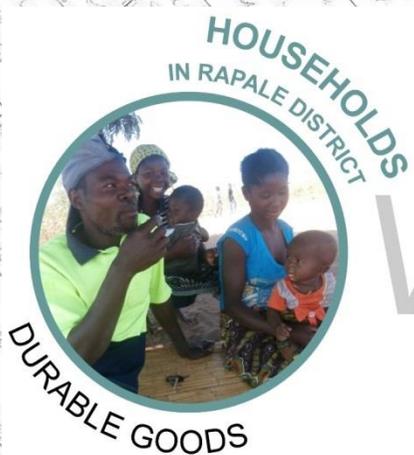
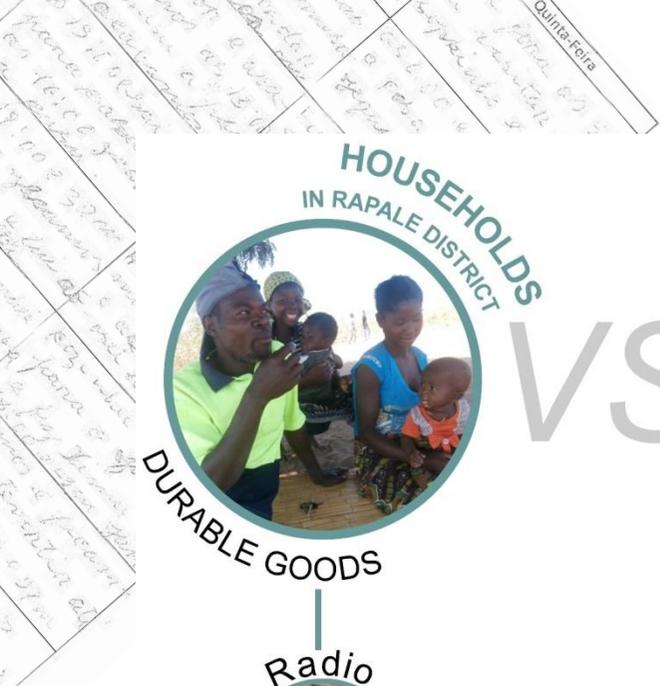


Traditional medicine healer doing a ritual and traditional medicine for malaria (“bafo”)

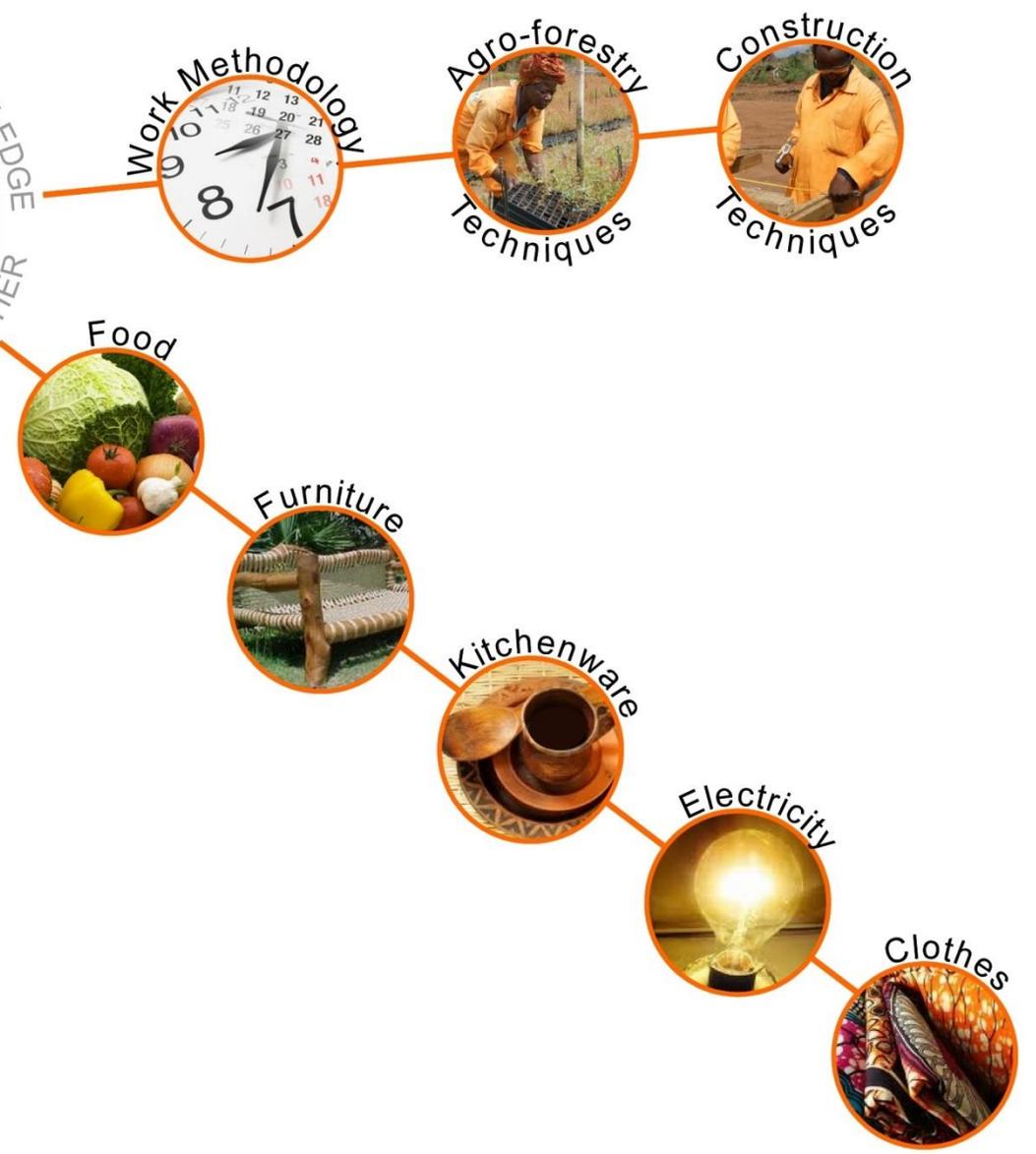
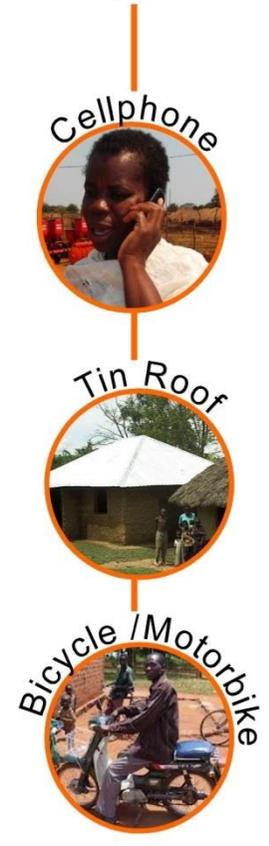
The staple diet in the area consists mainly of “xima” made from cassava and, to a lesser extent, maize, usually eaten with a small sauce made of green leafy vegetables and a bit of oil and salt. Energy- and nutrition-dense foods like meat, eggs, fish, oils, and nuts are eaten from time to time, and more so during the “high” season when families have their own crops and higher income to purchase foods from the markets. In the lean season, families might reduce their meals to compensate for food shortages. In extreme times or when a shock like a major medical expense or death of a family member hits, families might sell goods to purchase food and other household items.

Undernutrition in Nampula province is alarming high—more than half of the children less than 5 years old have stunted growth.⁴¹ This is an indication of long-term deprivation of an adequate diet and/or repeated illnesses that rob the body of needed nutrients and/or depress the appetite. The monotonous diet consisting mainly of starchy carbohydrates and inadequate amounts of protein, fats, and essential micronutrients, along with very poor access to sanitation and safe water sources; poor access to health services; and caretaking practices that do not quite reach the level needed, all lead to the high levels of malnutrition seen in this area.

⁴¹ The prevalence of moderate and severe stunting, measured by comparing height to his/her age, is 55.3% in Nampula Province. Source: Ministerio da Saude (MISAU), Instituto Nacional de Estatística (INE) e ICF International (ICFI). *Moçambique Inquérito Demográfico e de Saúde 2011*. Calverton, Maryland, USA: MISAU, INE e ICFI



VS



NATHEPO • SURPRISES & CURIOSITIES

Why men walk with empty hands?

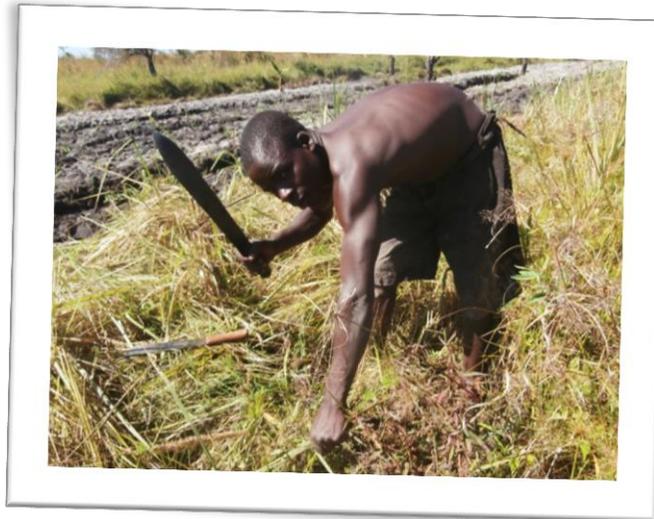
"What is the explanation for a pregnant woman to walk after her husband, carrying a child on the back, another child by the hand, and something heavy on the head?"

To understand this is needed to trace back to ancient times, when there were constant fights between tribes and dangerous beasts everywhere. During the trips, the man with a lance or other weapon, walked in front of the woman and children as an explorer, always ready for any eventuality. (...) The ancient needs became a custom." - *Além-mar magazine, Macuas: dignidade a reencontrar*



My tools, your tools!

The most important tool for rural men is the machete, so wives are strictly forbidden to lend the husband's machete to anyone. Only if the husband clearly expressed that she can lend to a certain person for a certain time: *"the husband never knows when he will need it, can be in a moment in which needs to protect his family"*. Also, women never transport machetes with their hand; they always use a "capulana" or another method. Similarly, it is understood that men should not lend a woman's cooking pans to a neighbor without the wife's consent.



A Farmer's fingerprint

Farmers use the stones from bridges to sharpen machetes.

Snack from Nature

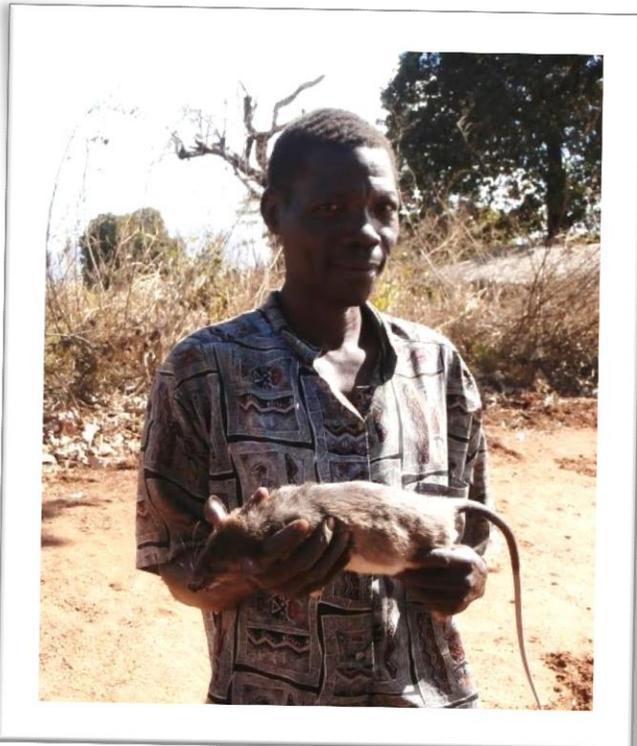
Nathepo residents enjoy a local delicacy of "mirophi" worms which grow on mango trees. There is a high demand: "we cannot sell this to you because we already have buyers!"



Delicious Rats

"I'm very happy because "thorro" is top quality meat! It is very hard to catch!" - This was the comment from the hunter, with a big smile on his face. Locally, "thorro" hunters have a great prestige because catching these big and clever rats can be a challenge. According to residents, "thorro" meat is *"similar to Hare meat but ever more tasteful. It doesn't need to be cooked with other ingredients like garlic or onion!"*

After a few minutes the hunter (pictured here) sold the "thorro" for 50 meticaís. Several people were interested in purchasing the delightful rat in order to have a special lunch.



BIOGRAPHIES OF THE RURAL VOLUNTEERS

INKOMATI (LGR EMPLOYEES)

LÚCIA COSTINHO RAMOS and AMÉLIA EUGÉNIO, LGR long-term employees, Field Diaries 2013

Lúcia Ramos is 39 years old and a single mother of three children; the youngest is 5 and the oldest 20 years old. During working days the oldest children cook and take care of the youngest. Lúcia is a Christian from the "Assembleia de Deus" Church. In her free time, she goes *"to the church in order to adore my God"*.

Amélia Eugénio is 36 years old. She is married to a farmer and they have six children - the youngest one is around 5 years old. Amélia is Catholic like the majority of people in Inkomati.

Lúcia and Amélia have worked in the LGR Nursery since 2010. Like many LGR employees, they combine formal employment with side ventures in farming or the informal economy. Both own farms in the mountains where they employ locals to produce mainly cassava, peanuts and beans. Lúcia has also a very small farm next to her house for home-based purposes. Each sell crops from their farms in order to earn extra income.

JOAQUIM AUGUSTO ANTÓNIO, LGR seasonal worker, Field Diaries 2013

Joaquim was born in 1986. In 2011, he married his wife, Deolinda, in the Catholic Church and they have two girls, age three and five. Joaquim is a farmer and also a seasonal worker at LGR since 2012. He has two

farms, the bigger one is on the mountains while the smaller one is next to his house. To reach the mountain farm he and his wife need to walk for 2 hours. There, Joaquim's family produces cassava, peanuts, and beans. In the small farm, 2km from home, he produces mainly cassava.

"Working in LGR is good. It can be hard for some people that are not used to work, especially in the beginning, but for me working there is good, and I aim to become a long-term employee. Adapting to different tasks is easy and I'm learning a lot!"

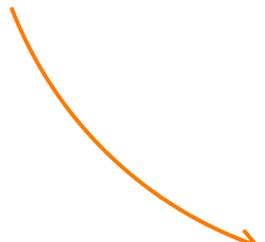
Joaquim was never employed at a company prior to LGR. Previously he served as a volunteer for a government initiative around reproductive wellbeing and children's health. In this capacity he taught people about the importance of taking children to the hospital and doing family planning. According to Joaquim, Inkomati is a good place to live: *"we have a main road, a market and a river that almost never dries."*



Joaquim receiving training about the "Field Diaries"



Print of Amelia's previous (small) house



Amelia's current house (employee of the Nursery)



NATHEPO-A (SMALLHOLDER FARMERS)

JACINTO ALBERTO, Leader of the volunteer team of Nathepo-A, Field Diaries 2010 - 2013

Jacinto was born into a poor family of Murrupula (Nampula province), and started pre-school in 1976 - "one year after the after independence."



When he was 11 years old, his mother died, increasing the family's financial difficulties.

As a teenager, Jacinto enrolled into a class for mechanical locksmiths in Nampula City - "it was the only course for poor, that didn't need a very high fee for attending classes. Poor people go to work with metal."

However, even with fees, Jacinto could not afford to continue, so he returned to the rural areas in 1990 and has survived on agricultural activities in Nathepo.

In 1993, Jacinto married Rosa Bernardo in the Catholic Church and they have four children (two who were

born deaf). Should he eventually pursue his studies, Jacinto would like to be accountant.

Currently to help make ends meet, Jacinto sells peanuts, cassava and wine in his small shop next to his house. Besides being a farmer and a wine dealer, Jacinto is the local leader of the Catholic Church of Namaita parish - "Priest is priest. Leader is leader."

Jacinto has said that he enjoys filling out the "Field Diaries" forms with his daily activities because it helps to keep life memories. He sometimes reads old diaries in order to remember something. "I explain to people what I do as a volunteer showing the field diaries."

MADALENA LUÍS, Nathepo-A, Field Diaries 2010 - 2013

Madalena was born in Alto de Ligonha in 1963. Her father worked in the city, so the family lived there and she studied in the same place until the 3rd grade. However, in order to continue her studies in the elementary school she went to live with her uncle. When Madalena's father died in 1971, she was taken to the Catholic Convent of Moiane where she grew up with the support of an Italian priest.

After concluding the 4th grade, in 1973, however, the priest returned to his country so Madalena was forced to return home and suspend her studies.

Back home and at the age of 11 her family forced her to marry - "I didn't want to marry because I wanted to study in order to be a midwife. (...) I had even studied and practiced how to be a midwife for one year in the Midwives Service with my aunt. But after that I stopped studying it because I was afraid that my aunt would want to kill me."

Madalena's had four children, but her marriage was marked by domestic violence and the couple eventually separated. In 2012, already in Nathepo-A, she married in the Catholic Church to a local men that she had dated for 10 years.



Madalena is a farmer and usually does not sell any products, only cassava and peanuts sporadically. She is a counselor of the Catholic Church and her responsibilities are to “inform how people should behave and how should be people’s posture inside the church.”

ADOLFO CONSTANTINO,
Nathepo-A, Field Diaries, 2010 - 2013

Adolfo was born in 1986. In 2001, while studying in the 6th grade, he lost his mother. A short time later,

his father re-married and his new wife expelled Adolfo from the home.



On concluding the 7th grade, he was forced to abandoned school because of the lack of money – his father had stopped supporting Adolfo financially. He married in 2012 and now has two children. His wife is a housekeeper and farmer.

Adolfo has restarted his studies and considers himself a farmer-student – “I am student and farmer at the same time.” He would like to be a nurse in order to “help his family and the community.”

Besides farm products, Jacinto also produces straw mats and straw baskets that he sells locally. In the first quarter of 2013, Adolfo produced 10 mats and sold at 70 Meticais each. He also sells peanuts when he needs to purchase materials for school.

MADALENA MIRANDA,
Nathepo-A, Field Diaries 2010-2013

Madalena was born in 1975. Her life is “very hard” because her father died in 1989 and her mother in 2001.

In 1988, Madalena finished the 6th grade, but and stop studying because the uncle of her father wanted her “to follow traditional purposes” – spells of local traditional medicine healers- not mainstream schooling.

Madalena is currently a farmer and sells dried cassava and cute beans.

Since 2006, she has an important role in the Catholic Church as catechist of 9 people. If Madalena had the opportunity to continue her studies, she would like to be a professor.



PHOTO PROJECT

TechnoServe Mozambique's **Foto Mozambique Project** provided training and one camera for each group of Field Diary volunteers in order to help document the activities described in the diaries. The majority of pictures used in this document was taken by the rural volunteers of "Field Diaries." In addition to assisting the Field Diary project, Foto Moçambique has set up community photography teams in the following communities: Ilha de Moçambique; Namaita and Lanchegue (Rapale District); Namina and Nanrale (Mecuburi District); and Suanjota in Niassa province.



TECHNO SERVE MOZAMBIQUE RESEARCH & ANALYSIS UNIT (THE OBSERVATORY)

OBSERVATORY

TechnoServe Mozambique is experimenting with new approaches to research, monitoring and evaluation, and seeks to benefit from and contribute to critical thinking about development itself. The Research and Analysis Unit, or "Observatory" team, is comprised of research and communications professionals who seek to understand the impact of our work from the perspective of beneficiaries. By combining expert analytical and communicative skills, the R&A Unit is able to inform clients of all backgrounds, along with our project teams, industry innovators and government leaders, on our findings about what creates genuine impact and on emerging best practice in development.

The Observatory Team is:

Brad Paul, Director
Ana Couvinhas, Researcher and Design Specialist
Mily Devji, Monitoring and Evaluation Manager
Belchion Lucas, Field Researcher & Community Liaison
Paula Mota, Communications Manager

For more information about the **Field Diaries** please contact Brad Paul and Ana Couvinhas: bpaul@tns.org / acouvinhas@tns.org / design.afc@gmail.com

For detailed information about the **Foto Mozambique Project** please contact Belchion Lucas: blucas@tns.org

As a thank you for their participation, the TechnoServe team provides volunteers with prints of the pictures taken, and t-shirts and hats with the message: "I help the community!"

ACKNOWLEDGEMENTS

We would like to thank the international donor community- including USDA, Irish Aid, the Kingdom of the Netherlands, USAID, Bill and Melinda Gates Foundation, and Solidaridad- who together have supported TechnoServe Mozambique's overall M&E, knowledge management and research work; the Field Diary teams of volunteers who provided key insights and dedicated time to keeping the daily journals; the volunteers from Universidade Católica de Moçambique who entered the data; Pilale Isequal and Elias Macaucau of Eduardo Mondlane University who helped translate the diaries, identify categories and enter data; the staff from Lúrio Green Resources who were always available to answer our questions; Jake Walter, Eurico Cruz, Jane Grob, Diogo Lucas, Daria Gage, Todd Kirkbride, Lauren Miller, Brandon Ho, Tina Lloren, and Iris Yan for overall feedback and support.

ANNEX

Indicative map of Nathepo-A:

