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# Managing the Family and the Market: A Case Study of Subsistence Farmers' Local Economic Activities

Erika Roos  
*SIT Study Abroad*

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Managing the family and the market:  
a case study of subsistence farmers' local economic activities



Erika Roos  
SIT Madagascar: National Identity and Social Change  
Spring 2012  
Academic Advisor: Madame Reine Razafimahefa

**Abstract**

This independent research project is a case study of subsistence farmers' agricultural and economic activities in Betafo, a district in the Vakinankaratra region of Madagascar. The project focuses on the various manners in which individual farming families engage in local market activity, and the impact of such activities on their socioeconomic livelihoods. Through a three-week ethnographic study involving in-depth interviews, participant observation, and site visits, the researcher gathered primary data from subsistence farmers in multiple villages of Betafo, as well as district officials and representatives of community organization.

The results of the research indicate that commercial agriculture and subsistence agriculture are quite interrelated, such that economic activity is a means of basic survival. Market participation is largely unregulated by government institutions and community organizations, and that transactions between individual farmers and their buyers are completed on a relatively informal, unfixed basis. Subsistence farmers' market participation is largely influenced by external factors such as collectors and large businesses, who generally determine product prices and therefore directly impact farmers' ability to generate revenue and meet their family's needs. Farmers' agricultural and economic activities are highly diverse; the crops and livestock that are grown and sold depend on factors such as soil conditions, time of year, and availability of land. Regardless of specific agricultural activities, however, rice cultivation and consumption is universally the central element of farmers' livelihoods, and the alimentary need for rice is essentially *the* driving force for agricultural and economic decisions.

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## Introduction

Subsistence agriculture is the form of livelihood in which individual farmers fundamentally fulfill their own family's alimentary needs. Characteristics commonly associated with subsistence agriculture are independence and self-sufficiency, such that families survive with minimal external market participation. In *Barriers to Exit from Subsistence Agriculture*, Cadot, Dutoit, and Olarreaga explain that “conceptually, subsistence agriculture is easy to define, by analogy with autarky—a situation where the farm household neither sells nor buys, but consumes everything it produces and, consequently, only that” (2010, p. 2). Subsistence agriculture is generally contrasted with commercial agriculture, in which farmers' agricultural activities are geared towards generating income through market participation. In this form of livelihood, it appears that farmers produce a surplus of goods, which are not only saved for their families' consumption but are channeled into external markets. While “subsistence agriculture” and “commercial agriculture” may be perceived to be mutually exclusive, it is not easy to make a clear distinction between the two. For instance, Cadot, Dutoit, and Olarreaga's definition of subsistence agriculture is qualified with an explanation that “where to draw the line between a ‘subsistence farm’ and a ‘market farm’ is a matter of judgment” (2010, p. 2). The extent to which subsistence agriculture and commercial agriculture are interrelated, and whether there is a transitory process between subsistence agriculture and commercial agriculture, are central points of exploration and discussion.

This research project seeks to gain a better understanding of the relationship between subsistence agriculture and commercial agriculture, as explored through the market activities of individual farming families. The researcher seeks to investigate the extent to which agricultural activities coincide with local market participation, and the

various ways in which farmers engage in economic activities as either buyers or sellers. The project also seeks to understand the extent to which farmers' socioeconomic livelihoods--that is, their ability to meet their family's basic daily needs--is dependent upon factors and forces from external markets.

Through a case study of subsistence farmers of Betafo, a district in the Vakinankaratra region of the Central Highlands of Madagascar, the research project seeks to better understand subsistence farmers' relationship to external economic systems. Questions that guide the project include: *Why do farmers become involved in market activity? To what extent do they participate as consumers, and to what extent do they participate as sellers? What resources are necessary in order to become a vendor? To what extent are market vendors autonomous, and to what extent do vendors help one another? To what extent do farmers have power and control over their economic decisions and activities? To what extent does their daily livelihood depend on economic activity? To what extent do farmers benefit from market activity, and to what extent do they suffer? Are farmers considered "subsistence farmers" if they are involved in market activity? Is it possible to be entirely self-sufficient, without any market involvement, or is commercial activity inseparable from subsistence agriculture?*

### **Background: the district of Betafo**

It is commonly said that eighty percent of the population of Madagascar are subsistence farmers living in villages. Among these rural areas is the district of Betafo,

located in the Vakinankaratra region of the Central Highlands of Madagascar. Due to the presence of highly fertile volcanic soil, Betafo appears to have favorable conditions that are conducive to prosperous economic activity and overall growth. Furthermore, Betafo is located twenty-two kilometers from Antsirabe, the second-largest urban center of Madagascar, and the existence of developed roads facilitates easy access to distant markets. While Betafo seems to have favorable physical resources that are critical for rural development, it needs improvement in technical and organizational processes concerning economic activity. The Betafo branch of Centre de Service Agricole (CSA), a non-governmental organization operating throughout Madagascar, summarizes Betafo's agricultural and economic circumstances as the following:

“The existence of numerous services and the dynamism of the population appear to be potentially important elements for the development of the district. The proximity to the city of Antsirabe and other markets facilitates the flow of products. Meanwhile, the lack of organization and professionalism of producers makes it difficult to manage agricultural prices.”

*(Source: CSA, “Etat des lieux du District de Betafo,” 2010, p. 15)*

Betafo's natural resources and access to local markets benefit farmers' potential socioeconomic livelihoods, and Betafo does not face some of the challenges and constraints that are present in other locations of Madagascar, such as poor infrastructure, sparse access to markets, and uncultivable terrain. Nevertheless, the market activities in Betafo remain relatively unstructured and informal, and there appears to be a lack of institutional oversight and regulation of the local economy.

## **Methodology**

During the three-week data collection period from April 1, 2012 to April 21, 2012, I had in-depth interactions and verbal communication with ten farmers in different



villages of Betafo, as well as structured interviews with four agricultural professionals in the Vakinankaratra region. Additionally, I have supplemented my primary data by exploring secondary resources, including publications on subsistence farming in East Africa, the Participatory Analysis for Community Action Manual of the United States' Peace Corps, and annual reports of the *Centre de Service Agricole* of Betafo.

In order to obtain a relatively immersive perspective into the lives of subsistence farmers, the primary focus population of the study, I spent a total of fifteen days living with two households in the Betafo district. I lived with a family in the Befotaka<sup>1</sup> village, in a commune adjacent to the commune of Betafo, for a period of ten days. A second, shorter village stay of five days took place with a family in the Mavozaza village, in the commune of Betafo. Both of the villages are located to the east of the Betafo town center. In addition, I conducted interviews and site visits with a host family in Andohajango village, in a commune to the west of central Betafo. Evidently, the depth and thoroughness of gathering data with host families was more intense than with families whom I merely visited. The information and insight gathered from participating in host families' daily routines over a continuous period of time is incomparable to data gathered from one-time interactions and conversations with farmers. Nonetheless, both forms of data collection have been informative and integral to my exploration of the research topic.

In this research project, I have chosen to incorporate specific accounts of my encounters with individual families, rather than to rely solely on generalized findings

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<sup>1</sup> In compliance with standards of ethics of the Institutional Review Board, the original names of all villages and individual farmers have been changed in this report. However, the name of the district, as well as the names of officials and representatives of organizations, have not been changed.

and analysis of data. I feel that it is integral to include individual stories in order to emphasize the “human” perspectives of the project, and to reinforce a dimension that cannot be captured or reproduced by broad statements and statistics. The project objectives and methodology were fundamentally based on the exploring a facet of “rural development” at in a highly specific context, and therefore my findings and analysis are heavily based on an intensive period of observations, communications, and ordinary interactions with a particular group of individuals in a small set of villages of Madagascar. I am fully aware of the microscopic magnitude of the project, but feel that the impact of concentrating on accounts from a small cluster of individuals is greater than the potential impact of any broad generalizations. I fully recognize that this research topic could theoretically be infinitely studied, and that this project comprises an impeccably minute slice of the universal exploration of “rural development.”

In addition to conducting in-depth interviews and observations, I had initially planned to utilize qualitative surveys in order to gather data about the types of agricultural activities and economic statuses of households in Betafo. I drafted a survey, which included questions about the amount of land owned, the types and quantities of crops grown and livestock raised, and the types, quantities, and prices of products sold in the local market. However, upon beginning the data collection process, I decided to discard the survey; it became apparent that most of the questions in the original survey were not entirely relevant to my research goals and interests, and that the questions that *were* relevant could be gathered through interviews. Moreover, I chose to conduct intensive, continuous data collection with fewer subjects than to gather broad, superficial information through brief interactions with a greater number of individuals. Indeed, the sources of quantitative data of this project is limited to a microcosm of

families in a single rural district of Madagascar. Yet, given the nature and the scope of my project, I felt that this was a more appropriate method of data collection than a holistic survey of a greater number quantity of families.

In order to conduct an ethically sound research project, I followed the requirements of the Institutional Review Board. Prior to initiating data collection with any subjects, I explained the topic of the research project, the objectives of the study, and the subjects' rights to privacy, confidentiality, and anonymity. Furthermore, I informed subjects that my data collection would consist of both oral communication and participant observation, and that data collection was a continuous, extended process. Subjects were informed about their right to withhold information and their right to refuse to answer any question. In order to prevent potential miscommunication, I carried paper copies of consent forms in both French and Malagasy, and utilized them as necessary. While written consent was not obtained, oral consent was obtained prior to the beginning of every instance of gathering data. Furthermore, in accordance with IRB, the original names of individual farmers and villages in this report have been changed.

While living in Betafo, I relied on a variety of methods of communication, from casual conversations to more rigid 'question-and-answer' dialogues. Because I lived with members of the population that I was studying, my daily activities and surroundings were essentially inseparable from my project; my observations, conversations, and activities often resulted in the discovery of findings and further points of inquiry. Throughout the immersive village stays, I often carried a notebook and actively recorded data in the presence of subjects. Furthermore, I openly shared a paper copy of my interview questions with my subjects, which seemed to help facilitate open dialogue and

trust. Nonetheless, since many of the interactions and observations were unscheduled, occurring in a 'natural' setting, I often collected data without the use of note-taking materials. In such circumstances, I felt that the presence of a notebook or an audio recording device would be detrimental to the authenticity of the events, in that they would have influenced the behaviors and responses of the individuals with whom I was interacting. I was willing to give up the opportunities to capture verbatim responses in order to keep the nature of interactions as 'normal' as possible. Thus, in many instances, data analysis was delayed, and it often consisted of paraphrasing conversations and reflecting on experiences.

In addition to gathering primary data from the point of view of subsistence farmers, I conducted structured interviews with Malagasy professionals in the field of agricultural development, including representatives from the *Centre de Service Agricole* (CSA) and the *Circonscription de Développement Rural* (CirDR), and with the Adjoint to the Chief of the District of Betafo. My communication with the professionals was entirely in French, and the interviews were much more rigid and formal than my processes of data collection in the actual villages. It was critical to gather data from the professionals' perspectives, but at the same time, the responses in the interviews felt quite prepared and synthesized in comparison to the responses from local farmers. The professionals' responses often felt less candid, and perhaps more censored, than those of actual farmers, but nonetheless, the statistical data and 'official' information from their interviews have been necessary components of the research project.

Undoubtedly, I encountered numerous obstacles during the fifteen-day period of living in villages. One challenge during the first village stay was limited mobility. Due to the fact that my village was several kilometers from the town center, as well as some

previous minor issues with security in Betafo, my host family was concerned about my safety and would not permit me to independently travel alone. For the majority of my time living in the village, this did not pose an issue because my data collection was concentrated within a small neighborhood, and my informants lived within one kilometer from my home base. However, as the project progressed, the need to visit the Betafo market arose, as well as the need to speak with officials in the town center. While I felt entirely capable of traveling into Betafo on my own, it was difficult to convey this to my host family. My data collection in Betafo was postponed until I moved into a second village, but even then, I was constantly accompanied by a member of my host family.

There were certainly advantages and disadvantages to gathering research while being accompanied by local resident of Betafo. On one hand, the presence of a local citizen seemed to help legitimize my identity and presence, and seemed to reduce general skepticism of my activities in Betafo. However, the lack of autonomy contributed to a reduced sense of planning and organizing in my daily objectives and activities, in that my data collection often depended upon the availability of the individuals who were accompanying me. While I appreciated their concerns and efforts to support my work, I did feel that it may have caused additional burdens that could have been mitigated, if not entirely avoided, in the first place. Nonetheless, I did understand that there are cultural differences in interactions with foreigners and guests, and as both foreigner *and* guest, it was necessary to observe local norms and expectations about my role and function in the Betafo community.

Another challenge during the data collection process was the frequency of rain storms. Because the data collection process took place during the rainy season in the Central Highlands of Madagascar, it rained heavily almost every day while I lived in the

villages. Prior to starting the project, I did not anticipate that this would be an issue, but in the first week I quickly realized that the presence of rain caused frequent delays and cancellations of interviews and meetings. Since my primary mode of travel within Betafo was by foot, it was essentially unfeasible to commute extensive distances when it rained. Thus, I navigated the challenge of unsuitable weather conditions by conducting most of my primary data collection in the mornings, and by using rainy afternoons to catch up on processing notes and analyzing data.

Before beginning the village home stays, I anticipated needing the assistance of a translator for dialogues in Malagasy and French. However, I lived in settings in which Malagasy was essentially the only language of communication, and it would have been logistically unfeasible to constantly have a translator on-site. Thus, I managed to overcome the language barrier and gather data without the use of a translator. In spite of my limited knowledge of Malagasy, my subjects and I were able to facilitate communication, and I was able to comprehend the data in Malagasy. In order to clarify my understanding of interviewees' responses, I repeated back their responses and often wrote them down directly into my notebook. When I had doubts about the meaning of a word or a phrase, I would clearly express my lack of understanding, which would signal the interviewee to further elaborate on their responses and to provide alternate explanations. Although it was more difficult to pose follow-up questions in Malagasy than in French, it was possible to do so, especially with the aid of a Malagasy-English dictionary. With adequate patience, time, and academic resources, I found that it was entirely possible, and even beneficial, to collect primary data without a translator. The absence of a third individual in the interviews and field observations fostered an intimate atmosphere and honest level of interaction that may have been compromised if

an outside person had been involved. Furthermore, by demonstrating my genuine efforts to learn Malagasy and to communicate in the language, I felt that I was able to convey my serious interest in the local culture and my objectives to better understand the locals' perspectives, which was beneficial to my identity as a student and a researcher.

In preparing to collect data with subsistence farmers, I initially created a list of interview questions in English and French. The interview guide included questions about the types and quantities of crops grown and livestock raised, the types and quantities of products sold at the market, the advantages and disadvantages of market activity, the rationale behind annual agricultural decisions, the needs of the individual families and level of satisfaction, and the role of outside organizations and support networks. Prior to beginning the interview process, I consulted with advisors and Malagasy individuals in Antananarivo, who not only helped me translate the questions into Malagasy but also provided insight on the quality of my questions. For example, I was warned that it could be difficult to obtain accurate information about specific quantities of goods and financial figures, in that respondents would be unwilling to disclose such information, or could exaggerate information. In order to avoid these potential obstacles, I was advised to find less direct ways of asking for such information, and to calculate the quantitative information during the analysis process following interviews.

Furthermore, I found that, throughout the primary data collection process, my list of interview questions was constantly modified, expanding and shrinking as I gauged the interviewees' reactions and responses to each question. As time went on, I noticed patterns about the types of questions that seemed more relevant than others, the

specific follow-up questions that were sparked by other questions, the questions that seemed repetitive, and the questions that seemed confusing or misunderstood. While it was certainly important to alter my interview questions as necessary, this led to a lack of uniformity and universality in the extensiveness and scope of information sought from each subject. Yet, I felt that this ‘trial-and-error’ process was essential to improving the quality of my research, and was a natural consequence of working with human subjects. A list of sample interview questions is available in the Appendix D of this report.

## **Findings and analysis**

### *The centrality of rice in subsistence farmers’ livelihoods*

Agricultural and economic activities and decisions are fundamentally based on individual families’ consumer needs for rice, since rice is the staple food of the Malagasy diet. Regardless of location in the greater Betafo community, it seems that essentially *all* subsistence farmers cultivate rice along with other crops. Justin Rakotondranaivo, an agricultural specialist and representative of CirDR in the Vakinankaratra region explained that “growing rice is quite compulsory” for farmers, not only for consumption but as a potential source of disposable income. Despite the necessity of growing rice, however, it is common that one’s own annual rice harvest is inadequate, and as a result, most farmers must purchase supplementary quantities of rice. Therefore, in order to meet the family’s needs for rice, subsistence farmers generally grow and sell other crops and animal products.

For example, Herizo’s family, of the village of Andohajango, considers themselves ‘rice farmers,’ but their principal crop for harvesting and selling is tomatoes. They also grow corn, soy, beans, leafy vegetables, onions, and potatoes as supplementary sources



of income. While Herizo's family saves a small portion of its diverse crops for its own consumption, the amount is trivial in comparison to what is sold. By selling the harvested crops to collectors, the family generates the income it needs to purchase supplementary rice. While the family grows and produces approximately nineteen ninety-kilogram sacks of unmilled rice annually, this is insufficient for the family's food needs. One of the reasons is that not all of the rice can be stored and used by the family; some is sold immediately after the harvest, when prices are still low. Herizo's wife, Perline, explained that "we sell rice until the tomatoes are ready to harvest and sell. We have to sell some rice after the harvest because we need money. That is the problem here in Madagascar: people don't have enough money" (personal communication, April 16, 2012). Meanwhile, collectors buy the rice at low prices, store the rice until demand rises and supply falls, and resell the rice for a high margin of profit, in a process referred to in Malagasy as *miantoka*.

Farmers sell rice at low prices, but later purchase rice during the *saison de soudure*. This is a period of three to four months immediately following planting of new rice, usually from November until February, in which farmers' individual supply of consumable rice is low, and market demand for rice is high. Such circumstances, in which farmers are subjected to selling rice after harvest and purchasing rice during the *saison de soudure*, seem to trap farmers in a state of constant socioeconomic distress. As a result, farmers experience a double burden of strenuous daily conditions, in which manual labor is extremely intensive and food is scarcer than usual. Manga, another farmer in Andohajango, described the direct consequences of the *saison de soudure*, in that "there is less rice on our plates, and we are not able to eat very much meat. Instead, it's normal for us farmers to eat cassava and dried corn" (personal communication, April

16, 2012). The Centre de Service Agricole of Betafo (CSA) reaffirms the prevalence of these circumstances, in that “corn is the principal food of the farmers of Vakinankaratra, especially during the period of hardship that coincides with the season of heavy agricultural work” (*Etat des lieux de Betafo*, 2010, p. 10).

In preparation for the *saison de soudure*, farmers seek to plan their agricultural activities and planting decisions, but nevertheless, there are constant potential threats to farmers’ agricultural activities, which can lead to unpredictable calamities and failures. Unfavorable weather, for instance, can destroy crop yields partially or entirely, which directly affects farmers’ ability to sell and buy products, which affects their ability to feed their families. For example, Manga worriedly recounted the consequences of a recent unprecedented hailstorm which ruined the majority of his rice crop. Manga elaborated on the grim reality that he envisioned for the upcoming months: “I’m afraid that this year, I must buy rice in November. With my land, I can usually harvest nineteen sacks of *akotry* (unmilled rice), but because of the hail, I will be lucky to harvest seven sacks. I’ve lost twelve sacks of rice” (personal communication, April 16, 2012). Even in times of unforeseen hardship, there are no formal structures or organizations that can offer assistance or support for recovery. Rather, it appears that farmers have no choice but to bear the painful socioeconomic consequences and start over with a new cycle of crops. As Manga added, “one must always cultivate crops in order to survive”--there are constant sources of struggle and poverty, and there is no space for idleness (personal communication, April 16, 2012). Even for farmers whose principal agricultural activity is the cultivation of rice, the uncertainty of myriad external forces is a constant challenge to their livelihoods and to their ability to meet day-to-day needs.

*The diversity and flux of agricultural and economic activities*

Subsistence farmers generally grow a wide variety of crops, based on the available land, soil conditions, and time of year. Thus, it is misleading to label individuals as ‘rice farmers’ or ‘potato farmers,’ in that their agricultural activities are almost certainly not limited to a single crop. While it appears that rice comprises each family’s most fundamental need, farmers typically cultivate a diverse set of crops. In Befotaka, a village in the eastern part of Betafo, farmers grow and raise similar products and livestock, which is primarily dictated by the soil conditions and relative scarcity of irrigation water. The soil is most suitable for growing starches such as potatoes, corn, and cassava, as well as beans and green peas, but is too dry for growing rice. It appears that potatoes are the primary source of income for many families in Befotaka, and farmers meet their family’s consumer needs for rice by selling most of their yields of potatoes and other root crops. Farmers in Befotaka generally sell their products to collectors who come directly to the villages on a daily basis during harvesting season. There are different collectors for different products, which subsequently are distributed to various destinations; a significant portion of potatoes grown in Befotaka, for example, are distributed to factories in major cities around Madagascar, where they are processed into potato chips and other packaged goods.

Lalao and Fenohery, subsistence farmers in Befotaka, own two hectares of *tanimbary*, on which they grow rice, and three hectares of *tanimboly*, on which they grow potatoes, carrots, beans, corn, soybeans, barley, and peas. While their *tanimboly* are located within minutes’ walking distance from their home, their *tanimbary* are located several kilometers away in another village; thus, their typical daily activities are

concentrated on their *tanimboly*, and they tend to the *tanimbary* on a less frequent basis. As Lalao explained, the *tanimbary* that they cultivate is “kely kely” (“small,”) and thus the quantity of rice they harvest each year is not enough to feed their family of four (personal communication, April 5, 2012). In order to generate the income necessary to buy rice, Lalao and Fenohery grow various crops and raise milk cows. While milk production is steady throughout the year, the crops vary by month; a chart describing their family’s annual agricultural activities is available in Appendix C of this report. In any given month, Fenohery and Lalao grow several different crops, such that there is a constant supply of crops to be harvested and sold. Furthermore, since potatoes are their main crop, they plant and harvest potatoes three times per year. According to Fenohery, his family’s annual yields of potatoes alone is over three tons, whereas their annual yields of other crops grown on *tanimboly* range from 100 kilograms to 300 kilograms. The vast majority of the crops are sold to local collectors in bulk quantities, immediately after harvest. Unlike rice, which is almost entirely harvested and kept for auto-consumption, the quantities of the *tanimboly* crops that are directly consumed by Fenohery and Lalao’s family is trivial. Lalao captured the importance of potatoes to her family’s livelihood by stating, “amidy ovy, mividy vary. Amidy ovy, manamboatra trano” (“Sell potatoes, buy rice. Sell potatoes, build a house.”) (personal communication, April 5, 2012). While the diversity of crops is a critical characteristic of their agricultural activities, it is evident that potatoes are a major, irreplaceable source of income and source of survival, without which the family would not be able to meet their needs.

Amina, another farmer in Befotaka, has two hectares of *tanimboly* and 1.5 hectares of *tanimbary*. She grows potatoes, beans, soybeans, corn, and some rice, and also raises four female cows. Every morning, she sells the cows’ milk, a total yield of

twenty liters, to collectors who come to the village. Her annual crop yields include approximately 500 kilograms of beans, 700 kilograms of soybeans, and twenty tons of potatoes, all of which are sold at various markets via collectors. Amina says she decides her agricultural activities based on market demands, not based on her own family's needs. They are also dictated by soil conditions and time of year, in that crops vary depending on whether it is dry season or rainy season. The rice and corn that she grows is predominantly saved for her family's consumption, but must be supplemented by additional quantities of rice bought at the Betafo market. Overall, Amina says that market participation is simple, and says that she does not usually encounter significant barriers in selling her yields. Nonetheless, she explains that the biggest disadvantage to market activity is the lack of farmers' power in negotiating selling prices, in that crops are sold at prices that are too low.

Another Befotaka farmer, Soa, has four hectares of *tanimboly* and one hectare of *tanimbary*. She grows potatoes, corn, sweet potatoes, taro, peas, beans, soybeans, rice, and carrots, and raises cows and chickens. She produces and sells five tons of potatoes annually, which is the crop with the greatest yield, and supplements her income by selling the hundreds of kilograms of other crops that she is able to harvest. Like Amina, Soa sells her produce to collectors who come to her village, but she periodically sells cows and chickens directly to buyers in the local markets in Betafo and Antsirabe. Soa estimates that she sells roughly three-fourths of her agricultural products while keeping the rest for her family's consumption. Her agricultural decisions are largely influenced by past years' yields, as well as the needs of both her own family and of the local market. She emphasizes that economic participation is difficult because her success in the market is highly dependent on factors beyond her control; for example, seasonal climate

directly impacts her crop output and her supply of goods available for sale. Like Amina, Soa affirmed the problem of having to sell goods at low prices. Yet, in spite of the challenges of subsistence agriculture, Soa expresses satisfaction in daily life; through economic participation, she is able to meet her family's basic needs, such as adequate food and children's school fees.

It appears, however, that the degree of choice in agricultural and economic activities increases with greater quantities of cultivable land. While most farmers in Befotaka seemed to have limited flexibility and choice in the diversity of their agricultural decisions, some farmers who own more land expressed preference in the types of crops they grow and sell. For example, Tanjona, a farmer in the eastern Betafo village of Mavozaza, justified his agricultural decisions by explaining that "tomatoes don't interest me, because they must be sold immediately. I prefer to grow potatoes, corn, beans, and rice, because they can be stored longer and sold at more profitable prices than products like tomatoes" (personal communication, April 18, 2012). It appears that Tanjona has relatively more flexibility in his agricultural activities than most farmers in the Betafo district; with ten hectares of rice fields and five hectares of other cultivable lands, he not only owns more land than the average farmer, but also owns land throughout multiple villages in Betafo. Thus, Tanjona is able to capitalize from the diversity and vast quantity of his available physical resources, which allows him to have preference and choice in his agricultural and economic activities than most subsistence farmers seem to have.

*The varying degrees of "local" market participation*

Economic activity is certainly not limited to the central Betafo market; rather, it appears that a substantial portion of transactions occur more locally within villages, which are perhaps more accessible and convenient for daily purchases than the main market. Small family-owned shops known as *epiceries* typically exist within close proximity of most farmers, where essential items such as rice, oil, dried fish, and soap, as well as fruits and vegetables, are available. Some *epiceries* also serve as collectors, in that they buy products such as soybeans and potatoes. The front panels of the *epiceries* often feature “MIVIDY SOJA ATO” signs handwritten in chalk, accompanied by a scale. It appears that the local farmers of Betafo villages participate quite frequently in economic activity through village *epiceries* and other small stands--perhaps more frequently than in central Betafo, which may be several kilometers away. For example Fenohery's family occasionally travels to the Betafo market for purchases that cannot be fulfilled more locally, such as bulk purchases of rice, as well as occasional meat and supplementary goods. However, daily portions of cooking oil, salt, sugar, and small quantities of basic meal goods are acquired at *epiceries*.

Fenohery's family also manages to sell products within Befotaka, in that collectors regularly come to the village to purchase and transport bulk quantities of goods. For example, Fenohery's family owns a female cow who produces ten liters of milk each day throughout the year, all of which is sold at 700 Ariary per liter. In addition to potatoes, milk serves as a critical source of income for the family, with which rice and other needs are later purchased. Each morning, a collector arrives to gather the local milk from multiple families into large plastic containers, and transports them to one of several milk processing machines in the greater Betafo community. The transactions between milk farmers and collectors are recorded in individual families'

notebooks, and the collectors pay the farmers periodically. Because such economic transactions can be handled within local neighborhoods, rather than in the distant Betafo market, farmers like Fenohery are able to save time. Nonetheless, farmers are subject to the prices set by collectors, who may raise the prices of milk by 200-300 Ariary per liter when reselling. Thus, while collectors may facilitate the process of selling milk in a time-efficient manner for farmers, it appears that the true profits from milk are rewarded to collectors, not the original farmers, who resell bulk quantities of milk at substantially elevated prices.

*Farmers, collectors, and unequal power dynamics*

It seems that most subsistence farmers in Betafo keep the rice that they grow for their own household's consumption. Nonetheless, despite the need for farmers to keep the rice they grow, it is often the case that farmers must sell some of their rice for instant cash. According to Justin Rakotondranaivo, farmers "are obliged to sell [rice]" for disposable income (personal communication, April 15, 2012). Farmers sell their rice to collectors who have the capacities to store rice until it can be resold in the off-season, when high demand and decreased supply drive up the market price of rice. This evidently puts farmers at a disadvantage, in that farmers who sell their rice at low prices during the harvesting season often must buy rice at elevated prices during the off-season, when availability of rice is low. It seems that there is a vicious cycle in which farmers continuously suffer net loss, while collectors manage to manipulate the prices of rice to their advantage. Due to the forces of supply and demand, and the seasonal fluctuations of rice prices, farmers are trapped in a system in which they can neither make profit nor provide an adequate supply of rice for their individual needs. It



essentially seems that subsistence farmers' economic livelihoods are at the mercy of collectors, who have the capacities to store rice and to sell it back at profit when demand is high and supply is low. It appears that the inequality of power and wealth between the farmers and collectors is reinforced by the existing economic structures and processes.

According to Rakotondranaivo, collectors tend to be wealthy to begin with; they may have financial capital, access to credit, and physical capital which allows them to store massive quantities of goods such as rice (personal communication, April 15, 2012). Rakotondranaivo explains that "becoming a collector is a matter of initiative" and that there is no formal process for becoming a collector. Collectors generally work independently but may belong to associations to coordinate their activities. According to Rakotondranaivo, "collectors are better organized than farmers" because they work together to set price ceilings; in other words, they agree on a uniform price for a particular product, eliminating choice of prices for farmers. Essentially, it appears that "collectors dominate farmers" through such price-setting tactics (Rakotondranaivo, personal communication, April 15, 2012).

The apparent advantage held by collectors is demonstrated by early-morning economic activities in the central Betafo market, particularly on Mondays and Thursdays. Twice a week, the center of Betafo serves as a large market, at which essentially all products are available to be purchased or sold. Individual farmers from the surrounding villages begin to gather at the town center as early as 2 AM with the crops they wish to sell to collectors, who purchase bulk quantities of products and generally re-sell them in other avenues, both locally and in more distant markets. At the early morning market, individual farmers gather in specific sections of the town square according to the types of produce they wish to sell. Collectors, who come not only from

Betafo but also from other cities such as Antananarivo, Morondava, and Fianarantsoa, approach individual vendors with flashlights, inspecting the available products and negotiating prices with the farmers. Prices are not fixed, and the supply of available goods tends to exceed demand, providing collectors with a relatively wide selection of farmers to choose from. Given that the market forces seem to favor the collectors over the farmers, the collectors are able to purchase products at low prices; for example, during the harvesting season for tomatoes, a six-to-eight-kilogram carton of tomatoes may be sold to collectors for 500 Ariary *per carton*, and then resold by collectors for 500 Ariary *per kilogram* (Tanjona, personal communication, April 18, 2012).

There is undoubtedly a theme of power inequality between collectors and their suppliers, the farmers. It seems that the socioeconomic livelihood of subsistence farmers is quite dependent on the collectors to whom they sell, and the farmers are at a disadvantage because they have little choice in negotiating the prices of their goods. This seems to reaffirm the obstacle expressed by farmers in Befotaka, which is that the selling prices of their crops is too low, and that they lack the power or the means to change the prices. For such reasons, it appears to be disadvantageous for farmers to sell to collectors, but they must do so for the sake of time efficiency. According to Rakotondranaivo, farmers would not be able to directly sell their entire yields at local markets, even if that would allow them to control their selling prices. Rather, it is more time-efficient to instantly sell their goods in a one-time transaction with collectors, even with the tradeoff of reduced prices.

Participation in market activity is generally a necessity rather than a choice; farmers ultimately need disposable income to buy essential items like rice, so they must sell what they can. Many farmers do directly sell their produce, such as at the main

Betafo market. According to Rakotondranaivo, all farmers “are authorized to sell” and that there are no formal processes for participating in central market activity as vendors. Nonetheless, Rakotondranaivo elaborates that farmers are fundamentally farmers, and that, since selling is “not their profession,” farmers should primarily focus on agricultural activities, not economic activities (personal communication, April 15, 2012). Thus, selling produce to collectors provides a relatively simple means of immediately selling goods. Perhaps it is less profitable for farmers to sell to collectors, but it saves crucial time that can be allocated for other labor, which ultimately may contribute to farmers’ production and sale of more crops. While it could be more profitable for farmers to sell their goods directly at the market, such that they have more control over selling prices, this requires a significant investment of time that could otherwise be allocated to other agricultural activities.

### *Small farmers, big businesses, and their economic relationships*

According to an official of the District of Betafo, all milk farmers in Betafo sold their milk to TIKO, the company owned by former president Marc Ravalomanana, until 2009. TIKO essentially had a monopoly on the dairy industry, and the average price of milk was a 300 to 500 Ariary per liter. With the onset of the political crisis, however, TIKO was disbanded; the fall of TIKO disrupted the local milk industry in Betafo, in that milk collection halted and farmers were forced to sell their cows (*Etat de Lieux du District de Betafo*, 2010, p. 13.) Since TIKO is no longer in control, independent collectors actively dominate the local milk industry. They travel throughout Betafo’s villages on a daily basis to purchase buckets of milk from individual farmers, and then transfer the milk to other vendors in Betafo, Antsirabe, and other provinces, at higher

prices than when TIKO was in power. According to the official, milk prices now average 800 to 900 Ariary per liter in the local market, with collectors potentially making profits of 100 to 200 Ariary *per liter* of milk. Following the fall of TIKO, the dairy enterprise Socolait has emerged as a dominant corporate power. While Socolait does not operate in the same monopolistic manner that TIKO did, it appears that Socolait is the main major company to which Betafo's milk products are sold. According to Tanjona, a farmer in the Mavozaza village, most of the milk processing plants in the Betafo district are owned and operated by Socolait, and Socolait is a convenient buyer of milk for local collectors. Although individual milk farmers may have little or no economic involvement with corporations like Socolait, it is evident that such companies are a key player in market activities. It seems that with every transaction, the price of goods rises, such that the original suppliers of the goods, the farmers, receive the least economic gain, while independent collectors and corporations reap greater marginal benefit.

Another agricultural product with strong corporate presence is barley, also known as *varimbazaha* ("foreign rice" in Malagasy). Grown in rice fields during the off-season, barley is another supplemental source of income for farmers in the Betafo district. MALTO, a major malt supplier that works in conjunction with the corporate beverage giant STAR Breweries, is the dominant buyer of barley in the Betafo district, according to Rakotondranaivo (personal communication, April 15, 2012). In order to promote barley production, MALTO allegedly provides farmers with pesticides and fertilizer in exchange for their annual harvests. Herizo, a farmer in the Andohajango village, verified that his family produces barley during the off-season of rice, which, unlike other crops, is sold to MALTO, rather than to individual collectors. According to Tanjona, another farmer in the village of Mavozaza, also sells barley to MALTO, and

claimed that all virtually farmers in Betafo who grow *varimbazaha* have contracts with MALTO and STAR Breweries (personal communication, April 18, 2012). Thus, it appears that STAR Breweries and MALTO are the major consumers of barley grown in Betafo, and that farmers' potential income from growing these products depend on the prices set by these major enterprises.

*Weak institutional support, strong informal networks*

Market activity in Betafo seems to occur without much institutional oversight at all; it seems to operate mostly on an individually-initiated, informal basis. It appears that neither government institutions nor non-governmental organizations are highly involved with local market activity and farmers' daily livelihoods. According to Solo Andrianaromanana, the Technical Assistant of the CSA of Betafo, non-governmental organizations like CSA offer services to facilitate relationships between local producers and potential consumer enterprises, conducts research for improved agricultural techniques, and reinforces farmers' accessibility to resources (personal communication, April 20, 2012). On the fundamental level of individual farmers' families, however, it does not appear that organizations like CSA are exceptionally active or supportive in agricultural activities. They do not appear to be effective in enacting 'rural development' projects and activities that truly benefit local constituents. Rather, it appears that individual farmers take care of their own needs without relying on outside organizations. Furthermore, individual networks among family members and neighbors appear to be stronger and more prevalent in daily activities, and seem to be more reliable sources of mutual support. Outside organizations tend to exist in the background, on a very macroscopic level, but in practice, they do not seem to have the

positive impact on farmers' lives that they allegedly strive to have. They merely seem to serve as symbols of infrastructure, which may superficially satisfy proponents of 'development,' but are not conducive to actual socioeconomic progress for local citizens.

Ultimately, it appears that institutional organizations and community associations do not provide any means of a 'safety net' for farmers in times of economic hardship or unforeseen catastrophes. In a mix of French and Malagasy, one farmer articulated a point that was echoed by most, in that poor weather and climate conditions are a "*tena grande problème*" ("*truly a big problem*") for annual crop yields and potential income, especially since such factors are beyond one's control (personal communication, April 7, 2012). External organizations such as CSA offer diagnostic services to measure changes in agricultural production and market activity, and conduct surveys to gauge the impact of crop loss and failure, but they do not offer support services to repair the consequences of such circumstances. In times of distress and hardship, it appears that farmers are more reliant on informal networks and relationships within their local communities, such as family members and neighbors, for mutual assistance in agricultural and economic activities.

### **Limitations of the study**

One of the primary limitations of the study is the time frame, in that four weeks of data collection and writing is insufficient for the investigation of any topic. Yet, even with a longer research period, the potential scope of the project would be quite extensive, and it would be impossible to exhaust any angle of this research.

Furthermore, the findings of this project are limited to an extremely small group of primary and secondary sources from a very limited setting. Depending on the further

aims of the study, it would be necessary to spend more time in each of the villages in which this project was initially conducted, or to commit time to other villages in the District of Betafo. Further data collection, either through follow-up interviews with pre-existing subjects, or through interviews with new subjects, would further contribute to the objectives of this project, and would perhaps foster a better understanding of the market activities of subsistence farmers in the Betafo area.

Another major limitation of the study has been my identity as an community outsider. Inevitably, my status as a *vazaha* (“foreigner”) resulted in some cultural misunderstandings about my background and intentions, which were essentially impossible to wholly eliminate. As a permanent outsider to the community, it was difficult to establish genuine rapport and fully open communication with locals. Additionally, a limitation in any qualitative research is the nature of human subjects and the potential for biases, both conscious and subconscious. Assumptions and preconceived notions, from both the researcher and the individual subjects, has undoubtedly affected the data collection process, the information gathered, and the findings that have emerged.

Furthermore, the depth of primary data and mutual understanding between the researcher (interviewer) and interviewees was somewhat compromised by the language barrier. While I was able to gather ample data through interviews conducted in Malagasy, the quality and quantity of follow-up questions was less than in interviews conducted in French. Nonetheless, I felt comfortable conducting interviews in Malagasy, in that it strengthened my capabilities and skills as a researcher in a new and foreign setting. By utilizing a myriad of interaction styles, including diagrams, body language, and repetition, I managed to mitigate the language barrier while still collecting useful

data. Furthermore, conducting all of the research without the use of a translator eliminated a potential source of third-party bias, in which primary data is modified, withheld, or otherwise compromised in the translation process. While conducting interviews in Malagasy may have posed a limitation to the research project, it also eliminated a potential limitation that would have existed if a translator were involved.

### **Questions for further investigation**

The majority of primary data was collected through interactions and interviews with multiple individuals at one time; due to the nature of the settings in which the research was conducted, I often spoke to several adult members of each family at the same time. It may be informative to interview family members separately, in order to investigate potential differences among husbands and wives, or among generations. Do men and women, for example, have different conceptions of their family's needs? Do they have different rationale for their agricultural and economic activities? How do they feel about the distribution of power and decision-making with regard to market participation?

This research project would benefit from further investigation of collectors' economic activities. The findings from this initial study clearly demonstrated the direct impact of independent collectors on subsistence farmers' activities and livelihoods. However, since the project was focused on subsistence farmers, it did not include an adequate sample size of collectors. In order to gain a more holistic perspective, it would be necessary to gather primary data through interviews and participant observations with local collectors in the district of Betafo. Some questions to guide this follow-up research would include: *How do individuals become collectors? Are collectors involved*



*in other agricultural or economic activities? How do collectors decide what to buy? How do they decide buying and selling prices? What are the benefits and challenges of being a collector? What is the socioeconomic relationship between farmers and collectors- is it mutually beneficial?*

## **Discussion**

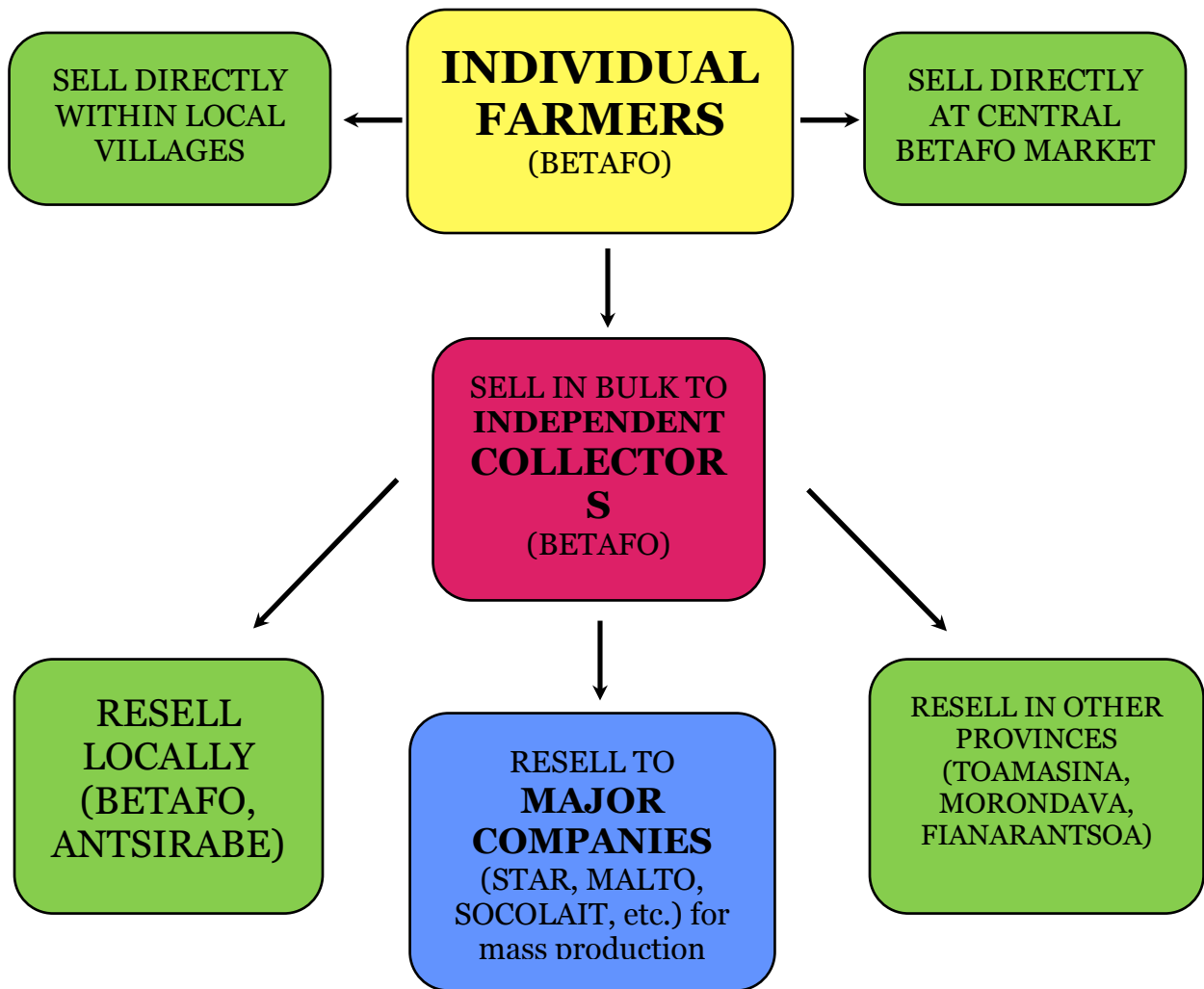
It seems too easy to romanticize the rural lifestyle--to conjure images of fertile lands and pure environment, a myriad of abundant harvests, and constant supplies of a fresh products. The reality, however, is that it is an incredibly difficult lifestyle, with constant risks, hardships, and lack of 'safety nets' in times of unforeseen failure. Even with enough to eat, there is little room for excess--it is a no-waste lifestyle, one in which needs are met on a day-by-day basis.

Commercial activity is a means of subsistence. Farmers must capitalize on market participation whatever extent that they can, in order to support their family's fundamental alimentary needs. Rice farming is exceptional to other agricultural activities, such that its primary purpose is for each family's own consumption, as opposed to sale. However, it seems that most other agricultural products are harvested and designated for various markets, and that the income generated from such economic activities is used to supplement family's demands for rice and other daily necessities. Thus, it appears that "subsistence agriculture" and "commercial agriculture" are not mutually exclusive, but are actually quite interdependent and inseparable. The threshold from which to distinguish one from the other is quite blurred, and the extent to which rural households are "subsistence farmers" or "commercial farmers" is as diverse as individual families are.

## References list

- Amina, personal communication, Befotaka, April 7, 2012.
- Andriamaromanana, S. Personal communication, Betafo, April 20, 2012.
- Cadot, Dutoit, and Olarreaga. (2010). *Barriers to Exit from Subsistence Agriculture*. CEPREMAP Working Papers, No. 1014. Accessed 1 April 2012 at <http://econpapers.repec.org/paper/cpmdocweb/1014.htm>.
- Centre de Service Agricole, *Etat des lieux du District de Betafo*, December 2010.
- Fenohery, personal communication, Befotaka, April 7, 2012.
- Herizo, personal communication, Andohajango, April 16, 2012.
- Lalao, personal communication, Befotaka, April 5, 2012.
- Manga, personal communication, Andohajango, April 16, 2012.
- Perline, personal communication, Andohajango, April 16, 2012.
- Rakotondranaivo, J. Personal communication, Antsirabe, April 15, 2012.
- Rasoarimanana, M. Personal communication, Betafo, April 16, 2012.
- Razafimahefa, R. "Le Développement Rural." Academic lecture, Antananarivo, March 12, 2012.
- Soa, personal communication, Befotaka, April 7, 2012.
- Tanjona, personal communication, Mavozaza, April 18, 2012.

Appendix A: Stages of local economic activities (Betafo)



## Appendix B: Sample of local market prices (Betafo, April 2012)

Product	The price at which farmers sell to collectors / the price at which collectors buy from farmers (April)	The price at which collectors re-sell on the market (April)
Rice	900 Ariary / kilogram	1100 Ariary / kilogram
Potatoes	500 Ariary / kilogram	700 Ariary / kilogram
Tomatoes	500 Ariary / kilogram	800 Ariary / kilogram
Cassava	300 Ariary / kilogram	350 Ariary / kilogram
Corn	300 Ariary / kilogram	400 Ariary / kilogram
Milk	700 Ariary / liter	900 Ariary / liter

*N.B. The prices shown in this chart were gathered through the researcher's participant observation and informal conversations with vendors at the central market in Betafo on Monday, April 16, 2012.*

Appendix C: Sample of annual agricultural activities (Fenhery's Family, Befotaka)

Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sep
RICE	RICE	RICE	RICE	RICE	RICE						
					POTATO 1	POTATO 1	POTATO 1	POTATO 1			
							POTATO 2	POTATO 2	POTATO 2	POTATO 2	POTATO 2
POTATO 3	POTATO 3	POTATO 3	POTATO 3	POTATO 3							
CORN	CORN	CORN	CORN	CORN	CORN	CORN					
BEANS 1	BEANS 1	BEANS 1	BEANS 1								
					BEANS 2	BEANS 2	BEANS 2	BEANS 2			
				CARROT S	CARROT S	CARROT S	CARROT S	CARROT S	CARROT S		
							PEAS	PEAS	PEAS (green/fr esh)	PEAS (dried)	
SOYBEA N	SOYBEA N	SOYBEA N	SOYBEA N	SOYBEA N	SOYBEA N	SOYBEA N	SOYBEA N				
							BARLEY	BARLEY	BARLEY	BARLEY	

## Appendix D: Sample interview questions

1. What are agricultural activities? What do you grow, and how much? What livestock do you raise? How do your activities vary by season or year?
  - 1.1. Qu'est-ce que vous cultivez, et combien?
  - 1.2. Inona avy ny fambolena ataonao ? Dia firy?
  - 1.3. Qu'est-ce que vous élevez, et combien?
  - 1.4. Miompy inona ianao? Dia firy?
2. What are your commercial activities? What products do you sell, how frequently do you sell, and in what quantities? To whom do you sell? Where do you sell?
  - 2.1. Qu'est-ce que vous vendez?
  - 2.2. Mivarotra inona ianao/ianareo?
  - 2.3. Combien de temps par semaine/mois/année vendez-vous les produits?
  - 2.4. Firy herinandro/volana/taona no mivarotra ny vokatra ianao?
  - 2.5. Quelle quantité de chaque culture/bétail vendez-vous (poids/kilos)?
  - 2.6. Firy kilao ny habetsaka ny vokatra na ny isan'ny biby fiompy amidinao?
  - 2.7. A qui vendez-vous?
  - 2.8. Iza no mividy ny vokatrao na biby fiompinao?
  - 2.9. Où vendez-vous?
  - 2.10. Aiza ho aiza no mivarotra ianao?
3. How much of your products does your family consume?
  - 3.1. Combien de vos produits (culture/bétail) consommez-vous (et votre famille)?
  - 3.2. Ampahafirin'ny vokatra na biby fiompy no lasa sakafonao (i.e. What percentage do you consume?)
4. How much of your crops/livestock are for sale?
  - 4.1. Combien de vos produits vendez-vous?
  - 4.2. Ampahafirin'ny vokatra na biby fiompy no varotanao?
5. How do you plan your annual agricultural activities?
  - 5.1. Comment planifiez-vous vos activités agricoles (annuelles)?
  - 5.2. Manahoana ny fandaminanao ny taon-pambolena?
6. Do you decide your agricultural activities based on your own family's needs for consumption?
  - 6.1. Est-ce que les activités agricoles dépendent des besoins alimentaires de votre famille?
  - 6.2. Miankina amin'ny filan'ny fianakavianao ve ny zavatra ambolenao sy ompiana?
7. What are your family's needs?
  - 7.1. Quels sont les besoins spécifiques de votre famille?
  - 7.2. Inona ny zavatra ilainy fianakavianao?
8. Are these needs being met by your current agricultural activity?
  - 8.1. Est-ce que vous êtes satisfaits de vos besoins par vos activités agricoles courantes?
  - 8.2. Afa-po amin'ny zavatra ambolenao sy ompiana ve ny fianakavianao? (Is your family satisfied?)
9. If not, how could your needs be met?
  - 9.1. Si non, comment pourriez-vous satisfaire les besoins?
  - 9.2. Raha tsia de manao inona ianao?

10. What, specifically, are the external factors/forces that influence your agricultural decisions?
  - 10.1. Quelles sont les forces/facteurs spécifiques qui affectent vos décisions agricoles?
  - 10.2. Misy antony manokana na avy any ivelany ve mety manova ny zavatra ambolenao sy ompianao?
11. How much *choice* or *preference* do you have in the decisions about your agricultural activities?
  - 11.1. Est-ce que vous avez la capacité de *choisir* vos activités agricoles?
  - 11.2. Manana safidy betsaka momba ny zavatra ambolenao sy ompianao ve ianao?
12. To what extent are the current year's agricultural decisions made based on your past agricultural activity/decisions?
  - 12.1. Est-ce que les décisions agricoles de cette année dépendent de vos activités agricoles du passé?
  - 12.2. Miankina amin'ny zavatra ambolenao sy ompianao tamin'ny lasa ve ny safidinao amin'ity taona ity?
13. To what extent are the current year's agricultural decisions made based on your future plans/expectations?
  - 13.1. Est-ce que les décisions agricoles de cette année dépendent de vos prévisions du futur?
  - 13.2. Miankina amin'ny zavatra ambolenao sy ompianao amin'ny ho avy ve ny safidinao?
14. Are there existing support programs/networks that help you in agricultural decision-making? If so, what are they? What are their effects?
  - 14.1. Est-ce qu'il y a des programmes d'appui ou des réseaux (formel ou informel) qui vous aident (pour les décisions agricoles)? Quels sont ses effets?
  - 14.2. Misy programan'NASA na tetikasa manampy anao amin'ny safidy amin'ny zavatra ambolenao sy ompianao ve? Inona izany?
15. What are the advantages of participating in commercial activity?
  - 15.1. A votre avis, quels sont les avantages de participer aux activités commerciales?
  - 15.2. Inona daholo ny tombontsoa azo avy amin'ny fivarotana ny zavatra ambolenao sy ompianao?
16. What are the disadvantages of participating in commercial activity?
  - 16.1. A votre avis, quels sont les désavantages de participer aux activités commerciales?
  - 16.2. Inona daholo ny lafy ratsy avy amin'ny fivarotana ny zavatra ambolenao sy ompianao?