

# Village Communists In AMBATOMANGA-MADAGASCAR Eat Mostly Homemade Food.

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## ABSTRACT

*The purpose of this research is to examine the similarities and differences between the two regions' eating habits and energy requirements. When food is plentiful, practically every family will have four or more courses each day. Scientists in the rural community of Ambatomanga in the province of Manjakandrina examined 980 households in 2018 to see how they dealt with agricultural plenty and shortage. The Fokontany Ambatomanga Chef -lieu of the Commune was situated in Section A, while the other four Fokontany villages were dispersed over B. Food intake was analysed using a 20-hour recall and frequency survey. To check whether there was a scientifically significant distinction among the two factors, we used the Student's t-test to evaluate the mean Completely randomized arrangement of them. After the crisis, Section A's population increased to 50% from 25%, while Section B's increased from 42% to 80%. Therefore, Section B residents have more variety in their home consumption alternatives than Section A residents. Overall, families' diets during the lean months in both Zones only manage a miserable 2.55 out of a potential 6. (2.58 in Section A and 5.56 in Section B). A score of 5.26 in Section A and 0.58 in Section B suggests a diet that is typically inadequate during the lean season for the average family. The caloric deficit in the two conditions was 14% and 11%, respectively, over the same time period. Consequently, we have unstable, imbalanced, and monotonous diets. Inadequate nutrition was associated with mothers' employment, economic security, food production, and nutrition knowledge. One of the barriers to sustainable development in the locations where we perform our research is the poor status of food intake, which in turn leads to a less active population. Consequently, in order to boost food patterns and strengthen appropriate nutrients within the Town center, it is suggested that market planting be established as an exercise in the multiple study locations; this will assist in broadening the diet of each residence and, finally, promote sustainable programmes and initiatives pertaining to farming and agriculture.*

**Keywords:** *Alimentaire, foods, dietary, nutritious, eating, famine*

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## 1. INTRODUCTION

Nutrition and food security are becoming more important issues for people all over the world. Since it was first included in the Universal Declaration of Human Rights in 1948, the human right to nourishment has been reaffirmed at every global summit [1]. Undernourishment is "the outcome of insufficient food intake, both systematically and objectively, connected with sickness and poor childcare practices" [2]. It is a severe public health concern and a cause of malnutrition. "While we produce enough food for everyone, undernutrition kills 3.1 million children below the age of 5 every year, accounting for over half (45%) of all causes of mortality; the great majority of these fatalities occur in nations with low or moderate Domestic Product (GDP)" [3].

While it contains many plants, malnutrition persists in Madagascar despite its abundance. " Continued issues with hunger and malnutrition are an insurmountable problem. Over half of the Malagasy population experiences temporary or permanent food insecurity, as estimated by the 2001 Census of Communes (RC) [4]. The regions of Toliara, Fianarantsoa, Antananarivo, and Toamasina have the highest concentrations of individuals who are struggling to put food on the table. [5].

The Ambatomanga Rural Commune's eating patterns have been the primary subject of our research (CR), since a healthy breakfast is the bedrock of illness avoidance and the key to living a long, healthy life.

Two of the five Started in the right direction in CR Ambatomanga were chosen to participate in this study. Take a look at Section A to see a slice of the regional capital of RC Ambatomanga, Fkt Ambatomanga. Soavina, Ambohitsimeloka, Ambohimbory, and Ambohibary are four enclaves and fringe areas that comprise Section B, which is a representative sample of the Commune's overall geography.

The two areas were placed in the same environment because they are both located in the Analamanga region, which is among the areas in the world worst hit by food insecurity. In contrast, the Commune's central town and the enclave have distinct lifestyles. Section A is a mixed-use community where most of the population works in government, runs small businesses, or is unemployed, whereas Section B is primarily agricultural. In other words, the central concern of this study is how to enhance and finally eliminate malnutrition among poor farmers in Antananarivo, which is a subset of the more significant issue of food consumption in rural families.

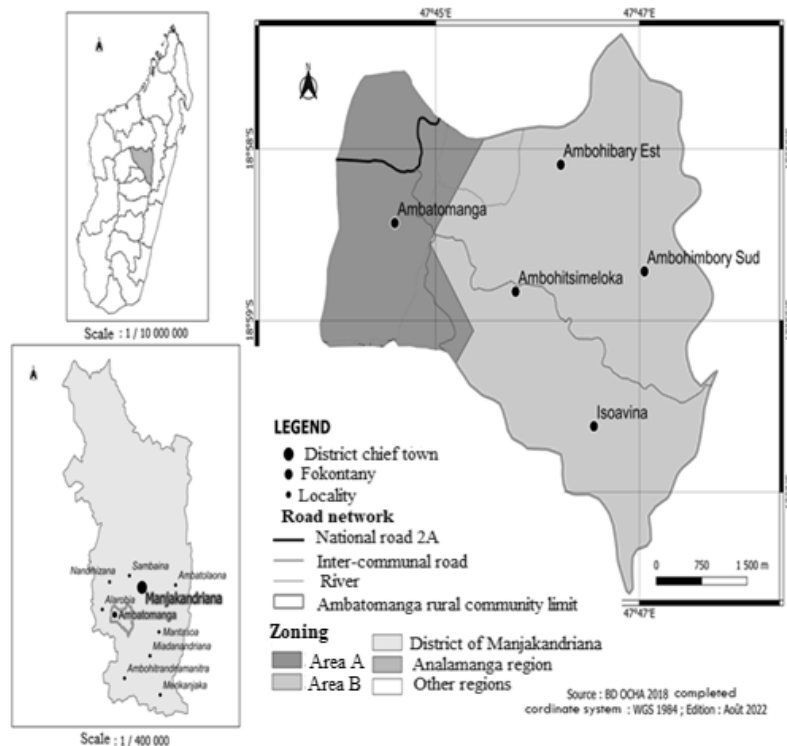
These speculations are proposed: There is a severe lack of food security in the RC of Ambatomanga, which is stated as H1. H2: "Compared to the surrounding Area, Commune's capital city has relatively high levels of food security for its residents. This article aims to provide a comprehensive picture of food consumption in two Areas at the family level so that these hypotheses may be tested. The goals of this study are threefold: The goals of this study were (a) to get an understanding of the nutritional diversity present in the RC of Ambatomanga's different regions, (b) to determine the energy needs of small households in the different sides, and (c) to compare the food consumption of the two regions.

The factors are taken into account while determining the dietary variety index, the metabolic absorbing index, and the housing utilization index in your two regions of interest are the next focus of our examination. Results are then presented and discussed. The last part is a brief overview.

## **2. METHODS**

### **2.1 Study site**

This research was undertaken in the four Districts in a specific fashion of the RC of Ambatomanga, which have been situated in the Manjakandriana region of the Analamanga province [6] (see Fig. 1).



**Fig -1:** Ambatomanga is a rural community in the Analamanga province.

## 2.2 Research Features

This research looks back over time to analyze changes in two distinct fields (Sections A and B). The first was the Period of Abundance, which ran from July 23 to August 21, 2018. (PA). The first, from November 8 to December 21, 2018, is Hunger Winter when food supplies are low because the harvest from the previous year has run out, but the harvest from the current year has not yet begun.

All of the residents of the Ambatomanga RC constitute the study population. All families with Communal members for at least a year are counted.

The research used a two-stage random sample strategy, with towns serving as the central unit and individual households serving as the correlation between self, to collect data that is both comprehensive and representative:

- To begin, the Ambatomanga RC randomly chose 8 of the 48 communities in the two areas.
- Secondly, using Fkt's list of enumerated households in each chosen village, randomly choose a sample of homes.

## 2.3. Approach to Collecting Data [7]

Dietary surveys as a means of measuring food intake: -an analysis of one's or a group's food intake and habits -We will go into further depth on the most common approaches of gathering historical data, Utilizing Particular Methods of Exploitation, -A plan for continuing the conversation based on the goals established at the outset.

The 24-hour recall approach has been used, in which the individual is questioned about everything he ate and drank (including any beverages, snacks, extra calories, or fat) even during the preceding day.

The method considers what has happened in the past. To estimate normal purchasing behavior, a frequent quiz asks participants to fill out a table with a list of foods and a marking to find the weekly ingestion pattern that part of this amazing to their tendencies for each meal.

## 2.4 Data analysis

After ensuring everything was in order, the household data was coded and imported into EXCEL 2010 and Epi Info utilizing an input mask effect created specifically for this purpose. After the numbers. Epi information and Statistical software version 20 are used for processing and exploitation once the data has been cleansed. Transcribing and analyzing the data gathered via interviews and focus groups is the first step in the analytical process. Two methods are used to make use of the dietary survey data:

### **A method based on nutritional analysis [8].**

This method converts consumption information into numerical values using nutrient composition information. According to the goal and setting, we shall use these estimates of dietary quantity in terms of vitamins. The specified amounts are first converted to the weights of the raw ingredients. The composition tables detail the calorie and nutritional density of 100 grams of the listed foods. Mineral intakes are calculated by tallying the numbers in each column, which reflect the foods chosen and the amounts ingested. Mealtime calorie counts are determined by looking up typical serving sizes in a food consumption table.

### **A method based on dietary profiles [8].**

The second method considers that one's food intake is intrinsically linked to their overall diet. Using nutritional history and periodicity questionnaires, a taxonomy of dietary behavior may be established. Nutritional cleanliness profiles are established using scores (of variety and difficulty...) or statistical approaches. The Dietary Intake Score is a holistic measure of an adult's or family's dietary habits, accounting for the diversity, frequency, and overall healthiness of the foods consumed. Specifically, Action Against Hunger's (ACF) standardized approach to score creation is used. The score is consistent with a diet high in both carbohydrates and proteins. Follow this formula [8] to determine your family's FCS:

This is the source that was used:

- If your family's food consumption score is below 1.5, your diet is considered to be very limited and unbalanced. If your family's FCS score is below 1.5, your diet is considered to be extremely limited and unbalanced.
- Households with a diet that includes three food groups if the food consumption score is between 1.5 and 2.5.
- Those with a Food Safety Commitment of 2.5 to 3.5 qualify for a four-food family diet.
- Households should have a significantly more varied and balanced diet with more than four items if SCA is more than 3.5.

## 2.5 Two sample t-test in statistical analysis [10]

The mean values of the Food Consumption Indices in the two Regions are compared to assess whether there is a statistically significant variation, and a descriptive analysis (Two sample t) is used. The Ho hypothesis posits that the FCS means of samples 1 and 2 are not significantly different.

- Ho was not accepted if  $p < 0.05$ .
- Ho acceptable if  $p > 0.05$

### 3. Research results AND DISCUSSION

#### 3.1 Food Intake in the Home

The FCS is a comprehensive survey of American households' food consumption behaviour. A number of food categories eaten is a good indicator of dietary variety at Home.

The amount and quantity of food kinds and food categories consumed by respondents are captured by this sort of assessment.

The end result is a score that represents the variety, but not usually the amount, of food consumed by an individual and is substantially connected with energy consumption by a person [11].

**Table 1:** The FCS rating allocation across the two locations

Intervals	Time periods of plenty			Season of Famine		
	Section A	Section B	Two Sections combined M=474	Section A	Section B	Two Sections combined M=458
Locations						
Population Ratio	m %	m %	m %	m %	m %	m %
FCS ≤ 1,6 Very poor diet	06 01,26	22 11,11	06 02,27	55 12,00	0 0	33 14,49
1,6 < FCS ≤ 2,6 Marginal or borderline diet	53 11,18	128 64,64	09 03,41	229 50	44 20,95	101 38,85
2,6 < FCS ≤ 3,6 Acceptable diet	264 55,69	54 27,27	144 54,54	159 34,72	120 57,14	105 40,38
FCS > 3,6 Good diet	69 14,56	04 02,02	23 08,71	25 05,45	46 21,90	21 08,07

M: Total number of staff

More than half of all families had a healthy diet throughout the harvest, with at least four food groups represented (grain, potatoes, veggies, beans, and fruits). As a result, both regions' diets are quite varied. Each day, people eat a lot of rice, as well as a lot of sugar, oil, and other sweeteners. Complete protein may be found in legumes. Vegetables are eaten around three or four times a week. Two animal items (meat or dairy) are ingested three to four times weekly, while milk is consumed almost daily. Dietary diversity is higher in Section B homes than in Section A ones; Section B has 79.04% of households with an appropriate diet, while Section A has just 63.25%.

Over fifty percent of families in both areas eat at least three different meal kinds at a time when food is scarcest (rice, vegetables or leaves, and seasonal fruits). Fewer foods are consumed outside the main diet, such as fruits, legumes, oil, sweets, and sometimes seafood or meat. It's worth noting that throughout the HS, the dietary standards of homes in the Commune's main town are higher than those

in the outlying Fkt, with 48.45 percent of principal town households reporting an adequate or decent diet, compared to 29.29 percent in the Fkt.

Dietary variety is higher in Section B than in Section A during the first period. Following are some of the reasons why diversifying in Section B is much more successful than in Section A:

It's common for families in rural Fkt to be self-sufficient since agriculture is the main source of income. Their diet is enhanced by the abundance of seasonal native foods (grains, potatoes, berries, tomatoes, seafood, etc.) accessible at this time.

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Most residents in the Commune's hub city do not work the land. Even though they have access to a wider variety of foods, their intake is limited by their lack of resources. This is a result of the enclave area having a lower FCS. Throughout the WP, conditions in Section B worsen. The isolationist circumstances affect the availability of local consumption items, the marketability of outputs, and the availability of inputs [12], explaining the region's low dietary diversity score. Currently, households have limited nutrition options due to food scarcity and poor availability [13].

-due to the state of local production, inefficient harvest handling, low resident living standards, high food costs, and unhealthy eating patterns [14]

-women in the Commune's capital city who are juggling many roles in the family and the local economy are unable to provide for their families nutritional needs.

While just 1% of homes in Antananarivo in 2004 [15] had a "poor" nutritional profile, 34% of families in our two research sites had a "borderline" dietary profile, suggesting that there has been a decline in dietary variety. It is not unexpected that other variables, such as history, customs, or advertising, impact consumption generally and the need for dietary diversity in particular [13], given that the mass of individuals in both Regions are impoverished. This provides an explanation for why both locations have such a poor score for nutritional variety. Over 77% of Malagasy rural families are impoverished, as reported by Razafindravonona (2003) [16].

Families in Section B have healthy eating habits and profiles. Households in this situation often rely on agriculture and livestock for a living, and as a result, their diets are highly influenced by the seasonal produce and meats that are readily available in their Area. Consequently, the varying success of the crop throughout the year allows for a more nutritious diet.

The bulk of the people who live in Section A, where food insecurity is severe, make their living as wage workers, day laborers, or small dealers. Since most households are unable to produce on their own because of a lack of property and the demands of their jobs, they must rely on income to meet their food requirements. Their buying power is the primary determinant of their diet, and there are few opportunities to improve their financial situation. As a result, grains and tubers make up the bulk of their diet, supplemented with fruits, vegetables, sugar, and oil on a rotational basis. They eat very little meat, nearly no fish, and minimal dairy. This means cereals provide the backbone of the diet, as they always have [17]. This finding agrees with research conducted by Andriamialison indicating that the diet of the Itasy region's Mananasy inhabitants has remained primarily unchanged and lacklustre in a variety [18].

### **3.2 Completeness of calorie requirements**

The daily calorie consumption and the rate of calorie absorption will be calculated to draw comparisons between the two settings. When the histograms sit above the x-axis, it means that the dietary intake meets the needs. Comparing communities based on their average protein and energy intake is also fascinating.

**Table 3:** Typical Household Energy Expenditure and Service in Both Regions

Places		Section A		Section B	
Intervals		Intervals of ressource	Season of Famine	Intervals of ressource	Season of Famine
Protein	Effective Ration	2500,42	2038	3254,06	1900,48
	Theoretical Ration	2300,41	2503,28	2587,60	2356,8
	Coverage Rate	<b>22,27</b>	<b>-14,56</b>	<b>46,17</b>	<b>-11,81</b>

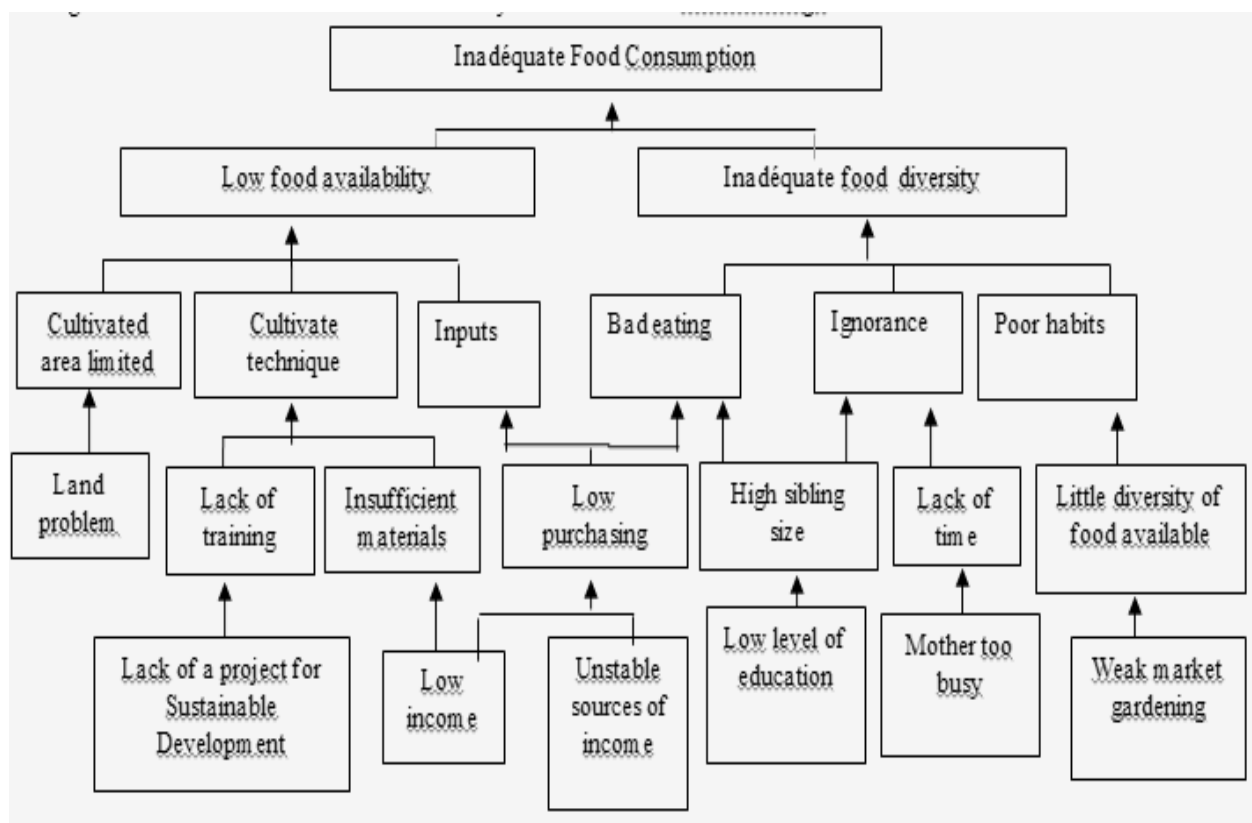
The PA ensures that calorie needs in both Areas are met and in certain cases, exceed needs. Effectively, a person in Region A receives 2642.41 Kcal each ration day, but the nominal ration is 2203.45 Kcal. The total daily calorie intake of 3191.05 Kcal in Section B is more than the minimum need of 2274.59 Kilocalories. (Table-3)

There is a basal metabolism of 13,52 percent from 2013 in Section A and 10,71 percent in Section B among HS families. In Section A, the theoretical need is 2201,27 Kcal, while the caloric intake is just 2037 Kcal. For Section B, the difference between the theoretical ratio of 2254.90 Kcal and the practical ratio of 1817.47 Kcal is -58.9%. T-tests for both periods show that the variations in effective caloric between the two Areas are highly relevant at the  $p=0,000$  level. (Table-3)

Our two research locations have enough daily calorie intake during PA, but this is not the case during HS (see Table II). When a person's daily caloric intake is less than 2100 Kcal, they are considered to be undernourished. [21]. Our findings indicate that despite experiencing food scarcity during the HS, the families we assessed in the two areas are not yet considered to be food insecure. During harvest time, our results appear to be superior to the national average. On the other hand, calorie consumption is too low. As of the year 2010, the Monitoring (Domestic Survey) established a minimum food basket need of 2133 Kilocalories for the whole country of Madagascar [21]. Reduced intake of carbohydrate-rich foods, including grains, tubers, and legumes, accounts for the SP's modest caloric deficit. Rice is the basic meal and a major source of calories, yet nearly no family has enough rice to last the whole year. Traditional methods of rice cultivation result in poor yields. This indicates that we cannot rely on grain alone as a food source. In the United States, the vast majority of farmers work as tenants or sharecropping. Low productivity may be attributed to a number of causes, including a lack of watered dams, global warming, and outdated materials and equipment. As a result, they have to spend a lot of money (6–10) of the year (out of a possible 12) just to purchase the rice they need to eat. Consequently, low-income families in Madagascar see a considerable drop in food and calorie intake during the HS [23] because of seasonal price variance and food unavailability. One of the issues blocking sustainable growth in our research regions is the poor status of food intake, which has led to a less actual population.

### 3.3 Examining the causes of malnutrition in Ambatomanga RC

Figure 3 demonstrates a cause-and-effect study of food intake in Ambatomanga RC



#### 4. CONCLUSION

Based on our research into food intake in these two regions, we know the following: - In both study areas, domestic diets are passably diverse. At the time of the harvest, families in Section B eat a wider variety of foods than those in Section A. During this time, residents in Section B have access to a sufficient variety of locally produced items, allowing them to better supplement their diets. However, things become much worse throughout HS here since, by then, families have spent all their money and have very little discretionary income left over to spend. Section A's food selection is limited because of a lack of available natural crops. When it comes to caloric consumption, both Areas have you covered throughout the PA and then some. Due to a lack of cereal self-sufficiency, families struggle to meet their calorie demands throughout HS. A pairwise comparison reveals a substantial gap between the two regions' mean FCS values.

Since of this, we can confirm that "the dietary intake situation is tenuous," accepting the first hypothesis but rejecting the second because homes in the remote Area have a more secure food supply than those in the Commune's administrative center. Regardless, undernourishment in these regions is often caused by poverty and a lack of nutritional information. One of the issues blocking sustainable growth in our research regions is the poor status of food intake, which has led to a less active population. It is recommended that the two study sites increase their market horticulture behavior in order to diversify their diets, improve essential nutrition in the Community, and increase the number of food groups consumed. There was a lack of detail on the dietary habits of households in the two Areas of the research. It gives a comprehensive picture of what people eat in rural areas. It would be fascinating to go even further into food production systems and reevaluate the influence this has on the financial and social well-being of the Commune's residents.



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